# **TECHNICAL REPORT**



## for the 2014 Pennsylvania System of School Assessment

Provided by Data Recognition Corporation

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## Glossary of Common Terms

The following table contains some terms used in this technical report and their meanings. Some of these terms are used universally in the assessment community, and some of these terms are used commonly by psychometric professionals. A glossary of accommodation terms as applied to the PSSA is provided in Chapter Ten.

Table G-1. Glossary of Terms

| Term                            | Common Definition   |
|---------------------------------|---|
| Ability                         | In Rasch scaling, ability is a generic term indicating the level of an individual on the construct measured by an exam. As an example for the PSSA, a student's reading ability is measured by how the student performed on the PSSA Reading test. A student who answered more items correctly has a higher ability than a student who answered fewer items correctly.  |
| Adjacent<br>Agreement           | A score/rating difference of one (1) point in value usually assigned by two different raters under the same conditions (e.g., two independent raters give the same paper scores that differ by one point).  |
| Alternate<br>Forms              | Two or more versions of a test that are considered exchangeable, i.e., they measure the same constructs in the same ways, are intended for the same purposes, and are administered using the same directions. More specific terminology applies depending on the degree of statistical similarity between the test forms (e.g., parallel forms, equivalent forms, and comparable forms) where parallel forms refers to the situation in which the test forms have the highest degree of similarity to each other.   |
| Average                         | A measure of central tendency in a score distribution that usually refers to the arithmetic mean of a set of scores. In this case, it is determined by adding all the scores in a distribution and then dividing the obtained value by the total number of scores. Sometimes people use the word average to refer to other measures of central tendency such as the median (the score in the middle of a distribution) or mode (the score value with the greatest frequency).   |
| Bias                            | In a statistical context, bias refers to any source of systematic error in the measurement of a test score. In discussing test fairness, bias may refer to construct-irrelevant components of test scores that differentially affect the performance of different groups of test takers (e.g., gender, ethnicity, etc.). Attempts are made to reduce bias by conducting item fairness reviews and various differential item functioning (DIF) analyses, detecting potential areas of concern, and either removing or revising the flagged test items prior to the development of the final operational form of the test (see also Differential Item Functioning). |
| Constructed-<br>Response Item   | See Open-Ended Item.  |
| Content<br>Validity<br>Evidence | Evidence regarding the extent to which a test provides an appropriate sampling of a content domain of interest (e.g., assessable portions of a state's Grade 6 mathematics curriculum in terms of the knowledge, skills, objectives, and processes sampled).  |

Table G-1 (continued). Glossary of Terms

| Term                                       | Common Definition   |
|--|---|
| Core-Linking<br>Item                       | Items that are utilized during the linking process (see also Linking). They are a subset of the PSSA operational items and so they 1) are the same on all test forms for any grade/subject-area test and 2) contribute to student total raw scores and scaled scores.   |
| Criterion-<br>Referenced<br>Interpretation | When a score is interpreted as a measure of a student's performance with respect to an expected level of mastery, educational objective, or standard. The types of resulting score interpretations provide information about what a student knows or can do with respect to a given content area.   |
| Cut Score                                  | A specified point on a score scale such that scores at or above that point are interpreted or acted upon differently from scores below that point (e.g., a score designated as the minimum level of performance needed to pass a competency test). One or more cut scores can be set for a test that results in dividing the score range into various proficiency level ranges. Methods for establishing cut scores vary. For the PSSA, three cut scores are used to place students into one of four performance levels (see also Performance Level Setting). |
| Decision<br>Consistency                    | The extent to which classifications based on test scores would match the decisions based on scores from a second, parallel form of the same test. It is often expressed as the proportion of examinees who are classified the same way from the two test administrations.   |
| Differential Item<br>Functioning<br>(DIF)  | A statistical property of a test item in which different groups of test takers (who have the same total test score) have different average item scores. In other words, students with the same ability level but different group memberships do not have the same probability of answering the item correctly (see also Bias).  |
| Distractor                                 | An incorrect option in a multiple-choice item (also called a foil).   |
| Equating                                   | The strongest of several linking methods used to establish comparability between scores from multiple tests. Equated test scores should be considered exchangeable. Consequently, the criteria needed to refer to a linkage as equating are strong and somewhat complex (equal construct and precision, equity, and invariance). In practical terms, it is often stated that it should be a matter of indifference to a student if he/she takes any of the equated tests (see also Linking).  |
| Equating Block (EB) Items                  | The PSSA uses multiple test forms for each grade/subject-area test. Each form is composed of operational (OP) items, equating block (EB) items, and field-test (FT) items. EB items are utilized during the linking process (see also Linking). Each test form includes a set of EB items. EB items are not part of any student scores.   |
| Error of<br>Measurement                    | The amount by which the score actually received (an observed score) differs from a hypothetical true score (see also Standard Error of Measurement).  |
| Exact Agreement                            | When identical scores/ratings are assigned by two different raters under the same conditions (e.g., two independent raters give a paper the same score).  |

Table G-1 (continued). Glossary of Terms

| Term                      | Common Definition  |
|---------------------------|--|
| Field-Test<br>(FT) Items  | The PSSA uses multiple test forms for each grade/subject-area test. Each form is composed of operational (OP) items, equating block (EB) items, and field-test (FT) items. An FT item is a newly developed item that is ready to be tried out to determine its statistical properties (see also <i>P</i> -value and Point-Biserial Correlation). Each test form includes a set of FT items. FT items are not part of any student scores.   |
| Frequency                 | The number of times that a certain value or range of values (score interval) occurs in a distribution of scores.   |
| Frequency<br>Distribution | A tabulation of scores from low to high or high to low showing the number and/or percent of individuals who obtain each score or who fall within each score interval or category.  |
| Infit/Outfit              | Statistical indicators of the agreement of the data and the measurement model (see also Outfit/Infit).   |
| Item<br>Difficulty        | For the Rasch model, the dichotomous item difficulty represents the point along the latent trait continuum where an examinee has a 0.50 probability of making a correct response. For a polytomous item, the difficulty is the average of the item's step difficulties (see also Step Difficulty).   |
| Key                       | The correct response option or answer to a test item.  |
| Linking                   | A generic term referring to one of a number of processes by which scores from one or more tests are made comparable to some degree. Linking includes several classes of transformations (equating, scale alignment, prediction, etc.). Equating is associated with the strongest degree of comparability (exchangeable scores). Other linkages may be very strong but fail to meet one or more of the strict criteria required of equating (see also Equating).  |
| Logit                     | In Rasch scaling, logits are units used to express both examinee ability and item difficulty. When expressing examinee ability, a student who answers more items correctly has a higher logit than a student who answers fewer items correctly. Logits are transformed into Scaled Scores through a linear transformation. When expressing item difficulty, logits are transformed <i>p</i> -value (see also <i>P</i> -value). The logit difficulty scale is inversely related to <i>p</i> -values. A higher logit value would represent a relatively harder item, while a lower logit value would represent a relatively easier item. |
| Mean                      | Also referred to as the arithmetic mean of a set of scores, is found by adding all the score values in a distribution and dividing by the total number of scores. For example, the mean of the set {66, 76, 85, 97} is 81. The value of a mean can be influenced by extreme values in a score distribution.  |

Table G-1 (continued). Glossary of Terms

| Term                     | Common Definition   |
|--------------------------|---|
| Measure                  | In Rasch scaling, measure generally refers to a specific estimate of an examinee's ability (often expressed as logits) or an item's difficulty (again, often expressed as logits). As an example for the PSSA, a student's reading measure might be equal to 0.525 logits. Or, a PSSA Reading test item might have logit equal to -0.905.   |
| Median                   | The middle point or score in a set of rank-ordered observations that divides the distribution into two equal parts such that each part contains 50 percent of the total data set. More simply put, half of the scores are below the median value and half of the scores are above the median value. As an example, the median for the following ranked set of scores {2, 3, 6, 8, 9} is 6.  |
| Multiple-<br>Choice Item | A type of item format that requires the test taker to select a response from a group of possible choices, one of which is the correct answer (or key) to the question posed (see also Open-Ended Item).   |
| N-count                  | Sometimes designated as $N$ or $n$ , it is the number of observations (usually individuals or students) in a particular group. Some examples include the number of students tested, the number of students tested from a specific subpopulation (e.g., females), the number of students who attained a specific score, etc. In the follow set $\{23, 32, 56, 65, 78, 87\}$ , $n = 6$ .  |
| Open-Ended<br>Item       | An open-ended (OE) item—referred to by some as a constructed-response (CR) item—is an item format that requires examinees to create their own responses, which can be expressed in various forms (e.g., written paragraph, created table/graph, formulated calculation, etc.). Such items are frequently scored using more than two score categories, that is, polytomously (e.g., 0, 1, 2, and 3). This format is in contrast to when students make a choice from a supplied set of answers options (e.g., multiple-choice (MC) items which are typically dichotomously scored as right = 1 or wrong = 0.) When interpreting item difficulty and discrimination indices it is important to consider whether an item is polytomously or dichotomously scored. |
| Operational<br>Item      | The PSSA uses multiple test forms for each grade/subject-area test. Each form is composed of operational (OP) items, equating block (EB) items, and field-test (FT) items. OP items are the same on all forms for any grade/subject-area test. Student total raw scores and scaled scores are based exclusively on the OP items.  |
| Outfit/Infit             | Statistical indicators of the agreement of the data and the measurement model. Infit and Outfit are highly correlated, and both are highly correlated with the point-biserial correlation. Underfit can be caused when low-ability students correctly answer difficult items (perhaps by guessing or atypical experience) or high-ability students incorrectly answer easy items (perhaps because of carelessness or gaps in instruction). Any model expects some level of variability, so overfit can occur when nearly all low-ability students miss an item while nearly all high-ability students get the item correct.   |

Table G-1 (continued). Glossary of Terms

| Term                                | Common Definition  |
|-------------------------------------|--|
| Percent Correct                     | When referring to an individual item, the percent correct is the item's <i>p</i> -value expressed as a percent (instead of a proportion). When referring to a total test score, it is the percentage of the total number of points that a student received. The percent correct score is obtained by dividing the student's raw score by the total number of possible points and multiplying the result by 100. Percent Correct scores are often used in criterion-referenced interpretations and are generally more helpful if the overall difficulty of a test is known. Sometimes Percent Correct scores are incorrectly interpreted as Percentile Ranks. |
| Percentile                          | The score or point in a score distribution at or below which a given percentage of scores fall. It should be emphasized that it is a value on the score scale, not the associated percentage (although sometimes in casual usage this misinterpretation is made). For example, if 72 percent of the students score at or below a Scaled Score of 1500 on a given test, then the Scaled Score of 1500 would be considered the 72nd percentile. As another example, the median is the 50th percentile.   |
| Percentile Rank                     | The percentage of scores in a specified distribution falling at/below a certain point on a score distribution. Percentile Ranks range in value from 1 to 99, and indicate the status or relative standing of an individual within a specified group by indicating the percent of individuals in that group who obtained equal or lower scores. An individual's percentile rank can vary depending on which group is used to determine the ranking. As suggested above, Percentiles and Percentile Rank are sometimes used interchangeably; however, strictly speaking, a percentile is a value on the score scale.   |
| Performance<br>Level<br>Descriptors | Descriptions of an individual's competency in a particular content area, usually defined as ordered categories on a continuum, often labeled from Below Basic to Advanced, that constitute broad ranges for classifying performance. The exact labeling of these categories, and narrative descriptions, may vary from one assessment or testing program to another.   |
| Performance<br>Level Setting        | Also referred to as standard setting, a procedure used in the determination of the cut scores for a given assessment that is used to measure students' progress towards certain performance standards. Standard setting methods vary (e.g., modified Angoff, Bookmark Method, etc.), but most use a panel of educators and expert judgments to operationalize the level of achievement students must demonstrate in order to be categorized within each performance level.   |
| Point-Biserial<br>Correlation       | In classical test theory this is an item discrimination index. It is the correlation between a dichotomously scored item and a continuous criterion, usually represented by the total test score (or the corrected total test score with the reference item removed). It reflects the extent to which an item differentiates between high-scoring and low-scoring examinees. This discrimination index ranges from $-1.00$ to $+1.00$ . The higher the discrimination index (the closer to $+1.00$ ), the better the item is considered to be performing. For multiple-choice items scored as 0 or 1, it is rare for the value of this index to exceed 0.5.  |

Table G-1 (continued). Glossary of Terms

| Term                          | Common Definition   |
|-------------------------------|---|
| P-value                       | An index indicating an item's difficulty for some specified group (perhaps grade). It is calculated as the proportion (sometimes percent) of students in the group who answer an item correctly. <i>P</i> -values range from 0.0 to 1.0 on the proportion scale. Lower values correspond to more difficult items and higher values correspond to easier items. <i>P</i> -values are usually provided for multiple-choice items or other items worth one point. For openended items or items worth more than one point, difficulty on a <i>p</i> -value-like scale can be estimated by dividing the item mean score by the maximum number of points possible for the item (see also Logit).  |
| Raw Score                     | Sometimes abbreviated by RS—it is an unadjusted score usually determined by tallying the number of questions answered correctly, or by the sum of item scores (i.e., points). (Some rarer situations might include formula-scoring, the amount of time required to perform a task, the number of errors, application of basal/ceiling rules, etc.). Raw scores typically have little or no meaning by themselves and require additional information—like the number of items on the test, the difficulty of the test items, norm-referenced information, or criterion-referenced information.   |
| Reliability                   | The expected degree to which test scores for a group of examinees are consistent over exchangeable replications of an assessment procedure, and therefore, are considered dependable and repeatable for an individual examinee. A test that produces highly consistent, stable results (i.e., relatively free from random error) is said to be highly reliable. The reliability of a test is typically expressed as a reliability coefficient or by the standard error of measurement derived by that coefficient.  |
| Reliability<br>Coefficient    | A statistical index that reflects the degree to which scores are free from random measurement error. Theoretically, it expresses the consistency of test scores as the ratio of true score variance to total score variance (true score variance plus error variance). This statistic is often expressed as correlation coefficient (e.g., correlation between two forms of a test) or with an index that resembles a correlation coefficient (e.g., calculation of a test's internal consistency using Coefficient Alpha). Expressed this way, the reliability coefficient is a unitless index. The higher the value of the index (closer to 1.0), the greater the reliability of the test (see also Standard Error of Measurement). |
| Scaled Score                  | A mathematical transformation of a raw score developed through a process called scaling. Scaled scores are most useful when comparing test results over time. Several different methods of scaling exist, but each is intended to provide a continuous and meaningful score scale across different forms of a test.   |
| Selected-<br>Response<br>Item | See Multiple-Choice Item.   |

Table G-1 (continued). Glossary of Terms

| Term                                      | Common Definition  |
|---|--|
| Spiraling                                 | A packaging process used when multiple forms of a test exist and it is desired that each form be tested in all classrooms (or other grouping unit (e.g., schools)) participating in the testing process. This process allows for the random distribution of test booklets to students. For example, if a package has four test forms labeled A, B, C, and D, the order of the test booklets in the package would be A, B, C, D, A, B, C, D, A, B, C, D, etc.   |
| Standard<br>Deviation (SD)                | A statistic that measures the degree of spread or dispersion of a set of scores. The value of this statistic is always greater than or equal to zero. If all of the scores in a distribution are identical, the standard deviation is equal to zero. The further the scores are away from each other in value, the greater the standard deviation. This statistic is calculated using the information about the deviations (distances) between each score and the distribution's mean. It is equivalent to the square root of the variance statistic. The standard deviation is a commonly used method of examining a distribution's variability since the standard deviation is expressed in the same units as the data.                                      |
| Standard Error<br>of Measurement<br>(SEM) | The amount an observed score is expected to fluctuate around the true score. As an example, across replications of a measurement procedure, the true score will not differ by more than plus or minus one standard error from the observed score about 68 percent of the time (assuming normally distributed errors). The SEM is frequently used to obtain an idea of the consistency of a person's score in actual score units or to set a confidence band around a score in terms of the error of measurement. Often a single SEM value is calculated for all test scores. On other occasions, however, the value of the SEM can vary along a score scale. Conditional standard errors of measurement (CSEMs) provide an SEM for each possible scaled score. |
| Step Difficulty                           | Step difficulty is a parameter estimate in Master's partial credit model (PCM) that represents the relative difficulty of each score step (e.g., going from a score of 1 to a score of 2). The higher the value of a particular step difficulty, the more difficult a particular step is relative to other score steps (e.g., is it harder to go from a 1 to a 2, or to go from a 2 to a 3).   |
| Strand                                    | On score reports, a strand often refers to a set of items on a test measuring the same contextual area (e.g., Number Sense in Mathematics). Items developed to measure the same reporting category would be used to determine the strand score (sometimes called "subscale" score).  |
| Technical<br>Advisory<br>Committee (TAC)  | A group of individuals, most often professionals in the field of testing, who are either appointed or selected to make recommendations for and to guide the technical development of a given testing program.  |
| Validity                                  | The degree to which accumulated evidence and theory support specific interpretations of test scores entailed by the purposed uses of a test. There are various ways of gathering validity evidence.  |

## Preface: An Overview of Assessments from 2003 to the Present

The period from 2003 through 2006 brought significant structural changes to the test blueprint for the Pennsylvania System of School Assessment (PSSA). These changes necessitated extensive test development and field testing activity along with phased-in implementation of the operational assessment. Included in this process was the development and implementation of assessments at additional grade levels.

For mathematics and reading, content changes for Grades 5, 8, and 11 were developed in 2003, field tested in spring 2004, and implemented in spring 2005. The 2005 PSSA Technical Report for Reading and Mathematics provides a description of test development activities including a review of open-ended tasks and multiple-choice items, field testing, selection of items, statistical analysis of assessment data, reliability, validity, standard setting, and other technical characteristics of the operational 2005 PSSA. Test development for the new grade levels of 4, 6, and 7 began in 2004, with field testing in 2005, and full implementation in 2006. Similarly, the 2006 PSSA Technical Report for Reading and Mathematics: Grades 4, 6, and 7 provides a complete description of test development activities, item review, field testing, statistical analysis, item selection, and technical characteristics of the operational 2006 PSSA for these grade levels. In 2007, the Grade 3 reading and mathematics assessment became DRC's responsibility and is covered in the 2007 PSSA Technical Report for Reading and Mathematics, along with the remaining grades.

Changes implemented in the writing assessment of spring 2006 were designed to sharpen the focus on what is assessed with respect to Academic Standards 1.4 and 1.5. To support this effort, a shift in grade levels assessed was made, moving from Grades 6 and 9 to Grades 5 and 8, thereby aligning assessment to the end of elementary and middle school years. The writing testing window was changed from fall to February 2006 for Grades 5 and 8, making it consistent with Grade 11. Mode-specific scoring guidelines replaced domain scoring, and the introduction of stimulus-based passages and associated multiple-choice items measuring revising and editing expanded the basis of the conventions score. An account of the development of writing prompts and stimulus-based, multiple-choice items, review processes, field testing and item analysis, standard setting, and other technical characteristics of the operational 2006 PSSA may be found in the 2006 PSSA Technical Report for Writing.

The introduction of an operational science assessment in 2008 moved closer to reality with a major standalone field test at Grades 4, 8, and 11 in April–May of 2007. A description of the development of science scenarios and related multiple-choice, short answer open-ended, and extended open-ended questions, item review processes, statistical analysis of field-test data, and selection of items for the 2008 operational science test may be found in the 2008 PSSA Preliminary Technical Report for Science. Subsequently, the first operational science assessment took place in the spring of 2008, along with standard setting and reporting of results.

With the exception of some shifting of test windows, the spring assessments of 2009, 2010, 2011, and 2012 were conducted without change in content structure of the PSSA test instruments.

A transition to begin measuring the Pennsylvania Core Standards (PCS) in Mathematics and English Language Arts was initiated with standalone and embedded field-test events in 2013 for Grades 3, 4, and 5. The transition continued in 2014 with standalone field tests in Grades 6, 7, and 8 and embedded field tests in Grades 3 through 8. As a part of this transition, starting in

spring 2013, the Grade 11 PSSA and the Grade 12 PSSA Retest were dropped in favor of the Keystone Exams in Algebra I, Biology, and Literature.

The following pages provide an overview of the year-to-year changes to the PSSA. Tables and descriptions show the subject areas assessed, time of year the testing activity took place, and the type of testing that occurred (e.g., operational, field testing, Grade 12 retest) for each year.

To access any of the PSSA technical reports referenced in the Preface, please go to the Pennsylvania Department of Education website, www.education.state.pa.us. Click on the green check mark icon labeled "State Assessment System," then select "Pennsylvania System of School Assessment (PSSA)," then select "PSSA Technical Reports" under "Other Materials" in the yellow box on the right.

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2003–04 SCHOOL YEAR

Table P-1 outlines the operational assessments and field tests administered during the 2003–04 school year. (A spring operational assessment in mathematics and reading took place at Grades 3, 5, 8, and 11.)

As a result of new Assessment Anchor Content Standards (Assessment Anchors) developed by the Pennsylvania Department of Education (PDE) during 2003, new test items were developed (see Chapter Two of the 2005 PSSA Technical Report for Reading and Mathematics). Following the spring operational assessment, a separate, standalone field test of new items for Grades 5, 8, and 11 was conducted. Note that Grade 11 students also took an operational writing assessment in February, and Grades 6 and 9 students participated in a fall writing assessment. Lastly, Grade 12 students who as 11th graders in the preceding spring failed to attain at least the Proficient level in any subject area were offered an opportunity to retest.

Table P-1. Operational Assessment and Field Testing During the 2003–04 School Year

| Grade | Assessment Activity  | Date                      |
|-------|--|---------------------------|
| 3     | Operational mathematics and reading with embedded field test (conducted by CTB/McGraw-Hill)  | April 2004                |
| 5     | Operational mathematics and reading  | April 2004                |
| 3     | Standalone field test in mathematics and reading   | April/May 2004            |
| 6     | Operational writing  | October 2004              |
| 0     | Operational mathematics and reading  | April 2004                |
| 8     | Standalone field test in mathematics and reading   | April/May 2004            |
| 9     | Operational writing  | October 2004              |
|       | Operational mathematics and reading  | April 2004                |
| 11    | Standalone field test in mathematics and reading   | April/May 2004            |
|       | Operational writing  | February 2004             |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2003 failed to reach at least the Proficient level in mathematics, reading, or writing | October/<br>November 2004 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2004–05 SCHOOL YEAR

Table P–2 displays the operational assessments and field tests that took place during the 2004–05 school year. The operational assessment at Grades 5, 8, and 11 used items chosen from the spring 2004 field test. This was the first operational assessment that reflected the Pennsylvania Assessment Anchors and Eligible Content. Fulfilling the No Child Left Behind Act of 2001 (NCLB) requirement that states must implement a test at Grades 3–8, a major field test in mathematics and reading was administered at Grades 4, 6, and 7. Item development for these new grade levels took place during 2004.

The Grades 6 and 9 writing assessment was reevaluated in favor of moving the writing assessment to Grades 5 and 8. This accounts for the separate (standalone) field test at these grade levels. There was also a test administration change from October to February. In addition, the writing assessment underwent changes to align the test to the Academic Standards for writing. New writing prompts and stimulus-based multiple-choice items were also field tested at Grade 11 as part of the operational assessment, hence the reference to an embedded field test. No assessment activity of any kind occurred at Grade 9. As in fall 2003, the retest opportunity at Grade 12 continued.

Table P-2. Operational Assessment and Field Testing During the 2004–05 School Year

| Grade | Assessment Activity  | Date                         |
|-------|--|------------------------------|
| 3     | Operational mathematics and reading with embedded field test (conducted by CTB/McGraw-Hill)  | April 2005                   |
| 4     | Standalone field test for mathematics and reading  | April 2005                   |
| 5     | Operational mathematics and reading with embedded field test   | April 2005                   |
| 3     | Standalone field test in writing   | February 2005                |
| 6     | Standalone field test for mathematics and reading  | April 2005                   |
| 7     | Standalone field test for mathematics and reading  | April 2005                   |
| 8     | Operational mathematics and reading with embedded field test   | April 2005                   |
| 8     | Standalone field test in writing   | February 2005                |
| 11    | Operational mathematics and reading with embedded field test   | April 2005                   |
| 11    | Operational writing with embedded field test   | February 2005                |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2004 failed to reach at least the Proficient level in mathematics, reading, or writing | October/<br>November<br>2004 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2005–06 SCHOOL YEAR

Table P–3 shows the assessment activities that occurred during the 2005–06 school year. Note that the reading and mathematics operational assessments ran consecutively in Grades 3–8 and Grade 11. For Grades 4, 6, and 7, it was the first year for operational assessments. Field testing for mathematics and reading was embedded as part of the operational assessment at each grade level. At Grade 3, the reference to field testing with items developed by DRC reflects the transition of shifting the assessment from CTB/McGraw-Hill to DRC in 2007. As in previous years, the retest opportunity at Grade 12 continued.

The first operational assessments for writing at Grades 5 and 8 took place in the 2005–06 school year, while the Grade 11 writing assessment continued in the same February testing window. For all three grade levels, the operational writing assessments featured mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis shift in writing modes assessed. See the 2006 PSSA Technical Report for Writing: Grades 5, 8, and 11 for further information about the new writing assessments. Since extensive field testing in February 2005 produced a pool of prompts for use over several years, no additional writing prompts were field tested in 2006. However, new multiple-choice items were field tested in the 2006 writing assessment.

Table P-3. Operational Assessment and Field Testing During the 2005–06 School Year

| Grade | Assessment Activity  | Date                         |
|-------|--|------------------------------|
| 3     | Operational mathematics and reading with embedded field test of DRC-written items (conducted by CTB/McGraw-Hill)   | April 2006                   |
| 4     | Operational mathematics and reading with embedded field test   | March 2006                   |
| 5     | Operational mathematics and reading with embedded field test   | March 2006                   |
| 3     | Operational writing with embedded field test   | February 2006                |
| 6     | Operational mathematics and reading with embedded field test   | March 2006                   |
| 7     | Operational mathematics and reading with embedded field test   | March 2006                   |
| 8     | Operational mathematics and reading with embedded field test   | March 2006                   |
| 8     | Operational writing with embedded field test   | February 2006                |
| 1.1   | Operational mathematics and reading with embedded field test   | March 2006                   |
| 11    | Operational writing with embedded field test   | February 2006                |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2005 failed to reach at least the Proficient level in mathematics, reading, or writing | October/<br>November<br>2005 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2006–07 SCHOOL YEAR

Table P–4 shows the assessment plan for the 2006–07 school year. Note that the mathematics and reading assessments ran consecutively in Grades 3–8 and Grade 11. For Grades 4, 6, and 7, it was the second year for operational assessments and the first year in which these grade levels were included in the adequate yearly progress (AYP) calculations. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. This was the first year in which DRC was responsible for the Grade 3 assessment, as the transition from CTB/McGraw-Hill was complete. As in previous years, the retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued in the same February testing window featuring the mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed, which were introduced in 2006. Since extensive field testing in February 2005 produced a pool of prompts for use over several years, no additional writing prompts needed to be field tested in 2007. However, new multiple-choice items were field tested in the 2007 writing assessment.

Following the spring operational assessments in writing, reading, and mathematics, a separate, standalone field test in science was administered for Grades 4, 8, and 11 with full implementation scheduled for 2008.

Table P-4. Operational Assessment and Field Testing During the 2006–07 School Year

| Grade | Assessment Activity  | Date                      |
|-------|--|---------------------------|
| 3     | Operational mathematics and reading with embedded field test   | March 2007                |
| 4     | Operational mathematics and reading with embedded field test   | March 2007                |
| 4     | Standalone field test in science   | April/May 2007            |
| 5     | Operational mathematics and reading with embedded field test   | March 2007                |
| 5     | Operational writing with embedded field test   | February 2007             |
| 6     | Operational mathematics and reading with embedded field test   | March 2007                |
| 7     | Operational mathematics and reading with embedded field test   | March 2007                |
|       | Operational mathematics and reading with embedded field test   | March 2007                |
| 8     | Operational writing with embedded field test   | February 2007             |
|       | Standalone field test in science   | April/May 2007            |
|       | Operational mathematics and reading with embedded field test   | March 2007                |
| 11    | Operational writing with embedded field test   | February 2007             |
|       | Standalone field test in science   | April/May 2007            |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2006 failed to reach at least the Proficient level in mathematics, reading, or writing | October/<br>November 2006 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2007–08 SCHOOL YEAR

Table P–5 shows the assessment plan for the 2007–08 school year. Note that the mathematics and reading assessments ran consecutively in Grades 3–8 and Grade 11. For Grades 4, 6, and 7, it was the third year for operational assessments and the second year in which these grade levels were included in the AYP calculations. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. This was the second year in which DRC was responsible for the Grade 3 assessment. As in previous years, the retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued in the same February testing window featuring the mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed, which was introduced in 2006. Since extensive field testing in February 2005 produced a pool of prompts for use over several years, no additional writing prompts needed to be field tested in 2007. However, new multiple-choice items were field tested in the 2008 writing assessment.

Joining the spring operational assessments in writing, reading, and mathematics was science at Grades 4, 8, and 11. See the 2008 PSSA Technical Report for Science: Grades 4, 8, and 11 for further information about the new science assessments.

Table P-5. Operational Assessment and Field Testing During the 2007–08 School Year

| Grade | Assessment Activity  | Date                      |
|-------|--|---------------------------|
| 3     | Operational mathematics and reading with embedded field test   | March/April 2008          |
| 4     | Operational mathematics and reading with embedded field test   | March/April 2008          |
| 4     | Operational science with embedded field test   | April/May 2008            |
| 5     | Operational mathematics and reading with embedded field test   | March/April 2008          |
| 3     | Operational writing with embedded field test   | February 2008             |
| 6     | Operational mathematics and reading with embedded field test   | March/April 2008          |
| 7     | Operational mathematics and reading with embedded field test   | March/April 2008          |
|       | Operational mathematics and reading with embedded field test   | March/April 2008          |
| 8     | Operational writing with embedded field test   | February 2008             |
|       | Operational science with embedded field test   | April/May 2008            |
|       | Operational mathematics and reading with embedded field test   | March/April 2008          |
| 11    | Operational writing with embedded field test   | February 2008             |
|       | Operational science with embedded field test   | April/May 2008            |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2007 failed to reach at least the Proficient level in mathematics, reading, or writing | October/<br>November 2007 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2008–09 SCHOOL YEAR

Table P–6 shows the assessment plan for the 2008–09 school year. The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued with a February testing window featuring mode-specific scoring guidelines; stimulus-based multiple-choice items; and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was incorporated in the 2009 assessment along with a set of embedded field test multiple-choice items.

The second operational assessment in science took place in April/May. Similar to the other operational assessments, field testing for science was embedded as part of the operational assessments at each grade level.

Table P-6. Operational Assessment and Field Testing During the 2008–09 School Year

| Grade | Assessment Activity  | Date                      |
|-------|--|---------------------------|
| 3     | Operational mathematics and reading with embedded field test   | March 2009                |
| 4     | Operational mathematics and reading with embedded field test   | March 2009                |
| 4     | Operational science with embedded field test   | April/May 2009            |
| 5     | Operational mathematics and reading with embedded field test   | March 2009                |
| 5     | Operational writing with embedded field test   | February 2009             |
| 6     | Operational mathematics and reading with embedded field test   | March 2009                |
| 7     | Operational mathematics and reading with embedded field test   | March 2009                |
|       | Operational mathematics and reading with embedded field test   | March 2009                |
| 8     | Operational writing with embedded field test   | February 2009             |
|       | Operational science with embedded field test   | April/May 2009            |
|       | Operational mathematics and reading with embedded field test   | March 2009                |
| 11    | Operational writing with embedded field test   | February 2009             |
|       | Operational science with embedded field test   | April/May 2009            |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2008 failed to reach at least the Proficient level in mathematics, reading, or writing | October/<br>November 2008 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2009–10 SCHOOL YEAR

Table P–7 shows the assessment plan for the 2009–10 school year. A notable change from previous years was that all assessments and make-ups were completed during the testing window from April through the first week of May.

The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was included in the 2010 assessment along with a set of embedded field test multiple-choice items.

The operational assessment for science at Grades 4, 8, and 11 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice (Grades 8 and 11) and open-ended (Grade 11 only) questions. Field testing was embedded as part of the operational assessments at each grade level.

Table P-7. Operational Assessment and Field Testing During the 2009–10 School Year

| Grade | Assessment Activity   | Date                      |
|-------|---|---------------------------|
| 3     | Operational mathematics and reading with embedded field test  | April/May 2010            |
| 4     | Operational mathematics and reading with embedded field test  | April/May 2010            |
| 4     | Operational science with embedded field test  | April/May 2010            |
| 5     | Operational mathematics and reading with embedded field test  | April/May 2010            |
| 3     | Operational writing with embedded field test  | April/May 2010            |
| 6     | Operational mathematics and reading with embedded field test  | April/May 2010            |
| 7     | Operational mathematics and reading with embedded field test  | April/May 2010            |
|       | Operational mathematics and reading with embedded field test  | April/May 2010            |
| 8     | Operational writing with embedded field test  | April/May 2010            |
|       | Operational science with embedded field test  | April/May 2010            |
|       | Operational mathematics and reading with embedded field test  | April/May 2010            |
| 11    | Operational writing with embedded field test  | April/May 2010            |
|       | Operational science with embedded field test  | April/May 2010            |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2009 failed to reach at least the Proficient level in mathematics, reading, science, or writing | October/<br>November 2009 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2010–11 SCHOOL YEAR

Table P–8 shows the assessment plan for the 2010–11 school year. A change from the previous year is an earlier testing window, beginning in mid-March for mathematics and reading, late-March to April for writing, and early April for science. A make-up period extended into mid-April for all assessments.

The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was included in the 2011 assessment along with a set of embedded field test multiple-choice items.

The operational assessment for science at Grades 4, 8, and 11 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice (Grades 8 and 11) and open-ended (Grade 11 only) questions. Field testing was embedded as part of the operational assessments at each grade level.

Table P–8. Operational Assessment and Field Testing During the 2010–11 School Year

| Grade | Assessment Activity   | Date                      |
|-------|---|---------------------------|
| 3     | Operational mathematics and reading with embedded field test  | March/April 2011          |
| 4     | Operational mathematics and reading with embedded field test  | March/April 2011          |
| 4     | Operational science with embedded field test  | March/April 2011          |
| 5     | Operational mathematics and reading with embedded field test  | March/April 2011          |
| 3     | Operational writing with embedded field test  | March/April 2011          |
| 6     | Operational mathematics and reading with embedded field test  | March/April 2011          |
| 7     | Operational mathematics and reading with embedded field test  | March/April 2011          |
|       | Operational mathematics and reading with embedded field test  | March/April 2011          |
| 8     | Operational writing with embedded field test  | March/April 2011          |
|       | Operational science with embedded field test  | March/April 2011          |
|       | Operational mathematics and reading with embedded field test  | March/April 2011          |
| 11    | Operational writing with embedded field test  | March/April 2011          |
|       | Operational science with embedded field test  | March/April 2011          |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2010 failed to reach at least the Proficient level in mathematics, reading, science, or writing | October/<br>November 2010 |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2011–12 SCHOOL YEAR

Table P–9 shows the assessment plan for the 2011–12 school year. The testing window for mathematics and reading began in mid-March, while writing and science began in mid to late April. The make-up period for mathematics and reading extended into late March, while writing and science extended into early May.

The mathematics and reading assessments continued to be operational for Grades 3–8 and Grade 11. Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. As in previous years, the fall retest opportunity at Grade 12 continued.

The operational assessment for writing at Grades 5, 8, and 11 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts was included in the 2012 assessment along with a set of embedded field test multiple-choice items.

The operational assessment for science at Grades 4, 8, and 11 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice (Grades 8 and 11) and open-ended (Grade 11 only) questions. Field testing was embedded as part of the operational assessments at each grade level.

Table P-9. Operational Assessment and Field Testing During the 2011–12 School Year

| Grade | Assessment Activity   | Date                      |
|-------|---|---------------------------|
| 3     | Operational mathematics and reading with embedded field test  | March 2012                |
| 4     | Operational mathematics and reading with embedded field test  | March 2012                |
| 4     | Operational science with embedded field test  | April 2012                |
| 5     | Operational mathematics and reading with embedded field test  | March 2012                |
| 3     | Operational writing with embedded field test  | April 2012                |
| 6     | Operational mathematics and reading with embedded field test  | March 2012                |
| 7     | Operational mathematics and reading with embedded field test  | March 2012                |
|       | Operational mathematics and reading with embedded field test  | March 2012                |
| 8     | Operational writing with embedded field test  | April 2012                |
|       | Operational science with embedded field test  | April 2012                |
|       | Operational mathematics and reading with embedded field test  | March 2012                |
| 11    | Operational writing with embedded field test  | April 2012                |
|       | Operational science with embedded field test  | April 2012                |
| 12    | Retest opportunity for students who as Grade 11 students in the spring of 2011 failed to reach at least the Proficient level in mathematics, reading, science, or writing | October/<br>November 2011 |

#### TRANSITION TO THE PENNSYLVANIA CORE STANDARDS

The 2012–13 school year began the initial transition for the PSSA Mathematics, Reading, and Writing tests to align to the newly developed Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards (PCS). The two-stage transition from the Legacy PSSA Mathematics, Reading, and Writing tests to the new PCS-based PSSA tests was proposed to occur during the operational 2013–14 and 2014–15 administrations, with Grades 3, 4, and 5 part of the first phase, and Grades 6, 7, and 8 part of the second phase. (The final decision was made for a single operational transition, to occur during the operational 2014–15 administration.)

As a part of the PCS transition, the Legacy PSSA Reading test and the Legacy PSSA Writing test will be phased out and will be replaced with an English Language Arts test aligned to the PCS. As part of this transition, there was a standalone field test at Grades 3, 4, and 5 for the Writing component of the English Language Arts test. This standalone field test included standalone multiple-choice items (as opposed to stimulus-based multiple-choice items on the Legacy Writing test) and writing prompts at Grades 3, 4, and 5. In addition, at Grade 3 there were openended items on the standalone ELA Writing test. This standalone field test took place during a two-week testing window in early to mid February 2013. A similar standalone field test took place in February 2014 for Grades 6, 7, and 8. The Reading component of the new PCS ELA test was embedded in the 2013 Reading field test in Grades 3 through 5; additional items for the Reading component of the new PCS ELA test were embedded in the 2014 Reading field test in Grades 3 through 5. The Reading component of the new PCS ELA test in Grades 6 through 8 were embedded in the 2014 Reading field test.

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2012–13 SCHOOL YEAR

Table P-10 shows the assessment plan for the 2012–13 school year. PDE modified the order of the testing windows for writing, reading and mathematics, and science. Writing took place earlier than reading and mathematics instead of at the same time as science. The testing window for writing began mid-March; mathematics and reading began early to mid-April, while science began mid- to late April. The make-up period for writing extended into mid- to late March, while mathematics, reading, and science extended into early May. These operational assessments were all offered in an online format in addition to the paper/pencil format used in previous assessments.

An additional change from previous years was the removal of Grade 11 from the Mathematics, Reading, Science, and Writing. As Grade 11 was no longer a part of the assessments, the fall retest opportunity at Grade 12 was no longer available. Operational tests continued to be available for Mathematics and Reading at Grades 3–8, Science at grades 4 and 8, and Writing at grades 5 and 8.

Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. The embedded field-test items for Grades 3, 4, and 5 were aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards, while the embedded field-test items for Grades 6, 7, and 8 continued to be aligned to the previous Assessment Anchor Content Standards.

The operational assessment for Science at Grades 4 and 8 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing was embedded as part of the operational assessments at each grade level.

The operational assessment for Writing at Grades 5 and 8 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. An embedded field test of writing prompts along with a set of embedded field test multiple-choice items was included in the 2013 assessment at Grade 8. The operational assessment at Grade 5 included placeholder multiple-choice items for consistency in the length of the multiple-choice section of the assessment; however, students responded to only two writing prompts at Grade 5, as a field-test writing prompt was not needed due to the standalone field test at that grade.

Table P-10. Operational Assessment and Field Testing During the 2012–13 School Year (Planned)

| Grade | Assessment Activity  | Date          |
|-------|--|---------------|
| 3     | Operational mathematics and reading with embedded field test (field test aligned to the PCS) | April 2013    |
|       | Standalone field test in ELA: writing (aligned to the PCS)                                   | February 2013 |
|       | Operational mathematics and reading with embedded field test (field test aligned to the PCS) | April 2013    |
| 4     | Operational science with embedded field test   | April 2013    |
|       | Standalone field test in ELA: writing (aligned to the PCS)                                   | February 2013 |
|       | Operational mathematics and reading with embedded field test (field test aligned to the PCS) | April 2013    |
| 5     | Operational writing  | March 2013    |
|       | Standalone field test in ELA: writing (aligned to the PCS)                                   | February 2013 |
| 6     | Operational mathematics and reading with embedded field test                                 | April 2013    |
| 7     | Operational mathematics and reading with embedded field test                                 | April 2013    |
| 8     | Operational mathematics and reading with embedded field test                                 | April 2013    |
|       | Operational writing with embedded field test   | March 2013    |
|       | Operational science with embedded field test   | April 2013    |

#### ASSESSMENT ACTIVITIES OCCURRING IN THE 2013–14 SCHOOL YEAR

Table P–11 shows the assessment plan for the 2013–14 school year. The 2013–14 school year continued the transition for the PSSA Mathematics, Reading, and Writing tests to align to the newly developed Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards (PCS), as field-test items were aligned to the PCS-aligned Assessment Anchors and Eligible Content. The operational assessments in Mathematics, Reading, and Writing were composed of items that align to both the PCS and the existing Assessment Anchors and Eligible Content. Reporting in 2013–14 continued to use the previous content structure. The transition from the Legacy PSSA Mathematics, Reading, and Writing tests to the new PCS-based PSSA tests will occur during the operational 2014–15 administration.

As a part of the PCS transition, the Legacy PSSA Reading test and the Legacy PSSA Writing test will be phased out and will be replaced with an English Language Arts test aligned to the PCS. As part of this transition, there was a standalone field test at Grades 6, 7, and 8 for the Writing component of the English Language Arts test. This standalone field test included standalone multiple-choice items (as opposed to stimulus-based multiple-choice items on the Legacy Writing test) and writing prompts at Grades 6, 7, and 8. This standalone field test took place during a two-week testing window in early to mid-February. The Reading component of the new PCS ELA test was embedded in the 2014 Reading field test for Grades 6, 7, and 8 and in the 2013 and 2014 Reading field test for Grades 3, 4, and 5.

Writing took place after reading and mathematics but before science. The testing window for mathematics and reading began mid-March; writing began late March to early April; and science began late April. The make-up period for mathematics and reading extended into early April, while the make-up period for writing extended into early to mid-April and science extended into early May. These operational assessments continued to be offered in an online format in addition to the paper/pencil format used in previous assessments.

Field testing for mathematics and reading continued to be embedded as part of the operational assessments at each grade level. The embedded field-test items were aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 included multiple-choice and open-ended questions. Students responded to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing was embedded as part of the operational assessments at each grade level.

The operational assessment for writing at Grades 5 and 8 continued to feature mode-specific scoring guidelines, stimulus-based multiple-choice items, and a grade-specific emphasis in writing modes assessed. Students responded to only two writing prompts, as a field-test writing prompt was not needed due to the upcoming transition to the ELA assessments.

Table P-11. Operational Assessment and Field Testing During the 2013–14 School Year (Planned)

| Grade | Assessment Activity  | Date             |
|-------|--|------------------|
| 3     | Operational mathematics and reading with embedded field test | March 2014       |
| 4     | Operational mathematics and reading with embedded field test | March 2014       |
| 4     | Operational science with embedded field test                 | April/May 2014   |
| 5     | Operational mathematics and reading with embedded field test | March 2014       |
| 3     | Operational writing  | March/April 2014 |
| 6     | Operational mathematics and reading with embedded field test | March 2014       |
| 0     | Standalone field test in ELA: writing                        | February 2014    |
| 7     | Operational mathematics and reading with embedded field test | March 2014       |
| /     | Standalone field test in ELA: writing                        | February 2014    |
|       | Operational mathematics and reading with embedded field test | March 2014       |
| 8     | Operational writing with embedded field test                 | March/April 2014 |
|       | Operational science with embedded field test                 | April/May 2014   |
|       | Standalone field test in ELA: writing                        | February 2014    |

#### ASSESSMENT ACTIVITIES PLANNED FOR THE 2014–15 SCHOOL YEAR

Table P–12 shows the assessment plan for the 2014–15 school year. The 2014–15 school year completes the transition for the PSSA Mathematics, Reading, and Writing tests to align to the newly developed Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards (PCS), as both operational and field-test items will be aligned only to the PCS-aligned Assessment Anchors and Eligible Content. Reporting in 2014–15 will also transition to the new content structure. The transition from the Legacy PSSA Mathematics, Reading, and Writing tests to the new PCS-based PSSA Mathematics and ELA tests will occur during the operational 2014–15 administration.

The testing window for English Language Arts will be in mid-April followed by the testing windows for Mathematics in mid- to late April and then Science in late April to early May. These operational assessments will continue to be offered in an online format in addition to the paper/pencil format used in previous assessments.

Field testing for mathematics and reading will continue to be embedded as part of the operational assessments at each grade level. The embedded field-test items will continue to be aligned to the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Core Standards.

The operational assessment for science at Grades 4 and 8 will include multiple-choice and open-ended questions. Students will respond to standalone multiple-choice and open-ended questions (all grades) as well as scenario-based multiple-choice questions (Grades 8 only). Field testing will be embedded as part of the operational assessments at each grade level.

Table P-12. Operational Assessment and Field Testing During the 2014–15 School Year (Planned)

| Grade | Assessment Activity                              | Date           |
|-------|--|----------------|
| 3     | Operational mathematics with embedded field test | April 2015     |
|       | Operational ELA with embedded field test         | April 2015     |
| 4     | Operational mathematics with embedded field test | April 2015     |
|       | Operational ELA with embedded field test         | April 2015     |
|       | Operational science with embedded field test     | April/May 2015 |
| 5     | Operational mathematics with embedded field test | April 2015     |
|       | Operational ELA with embedded field test         | April 2015     |
| 6     | Operational mathematics with embedded field test | April 2015     |
|       | Operational ELA with embedded field test         | April 2015     |
| 7     | Operational mathematics with embedded field test | April 2015     |
|       | Operational ELA with embedded field test         | April 2015     |
| 8     | Operational mathematics with embedded field test | April 2015     |
|       | Operational ELA with embedded field test         | April 2015     |
|       | Operational science with embedded field test     | April/May 2015 |

# Chapter One: Background of the Pennsylvania System of School Assessment (PSSA)

This brief overview of the Pennsylvania System of School Assessment (PSSA) summarizes the history of the current program's development process, the program's intent and purpose, recent changes to the program, and the student population that participates in the assessments. Pennsylvania's involvement in state-wide assessment actually began in the 1969–70 school year with a purely school-based assessment known as *Educational Quality Assessment* (EQA), which continued through the 1987–88 school year. A state-mandated student competency testing program called *Testing for Essential Learning and Literacy Skills* (TELLS) also operated from the school years of 1984–85 through 1990–91.

#### THE PENNSYLVANIA SYSTEM OF SCHOOL ASSESSMENT

The Pennsylvania System of School Assessment program was instituted in 1992 as a school evaluation model with reporting at the school level only. Test administration took place in February/March, and school district participation was every third year based on the strategic planning cycle. Mathematics and reading were assessed at Grades 5, 8, and 11; districts could choose to participate in the writing assessment at Grades 6 and 9. The State Board of Education's revisions to Chapter Five in November 1994 brought major changes to the PSSA, beginning with the spring 1995 assessment. These changes included the following:

- All districts were required to participate in the mathematics and reading assessment each year.
- Student-level reports were generated in addition to school reports.
- The Grades 6 and 9 writing assessments became mandatory on a three-year cycle corresponding with the district's strategic planning cycle.

Yearly administration of the PSSA in 1996, 1997, and 1998 continued at the assessed grades for mathematics and reading, utilizing essentially the same test structure, reporting practices, and testing window. Writing assessment continued on the established mandatory cycle; however, an increasing number of districts chose to participate every year on a voluntary basis.

#### Pennsylvania Academic Standards and the PSSA

A major structural change took place in test content with the State Board of Education's adoption of the Pennsylvania Academic Standards for Reading, Writing, Speaking and Listening, and Mathematics in January 1999 (Pennsylvania State Board of Education, 1999). The Academic Standards, which are part of *Chapter 4 Regulations on Academic Standards and Assessment*, detailed what students should know (knowledge) and be able to do (skills) at various grade levels. Subsequently, the State Board approved a set of criteria defining Advanced, Proficient, Basic, and Below Basic levels of performance. Mathematics and reading performance level results were reported at both the student and school levels for the 2000 PSSA. At that point, the PSSA became a standards-based, criterion-referenced assessment measuring student attainment of the Academic Standards while simultaneously determining the extent to which school programs enabled students to achieve proficiency of the Academic Standards. The regulations also stipulated that appropriate results be broadly disseminated to an array of audiences including students, parents, educators, citizens, and state policymakers, including the State Senate, the General Assembly, and the State Board. School reporting was to include the aggregate

performance of all students and for relevant subgroups, such as those students with an Individualized Education Plan (IEP). Finally, the data was intended to inform educators regarding school program strengths and weaknesses in order to guide the improvement of curricula and instructional strategies. The data was also intended to be used in the development of strategic plans.

The mathematics and reading assessments from 2001 through 2004 underwent various content enhancements to improve alignment to the Academic Standards. For example, the reading assessment transitioned to utilizing more passages of shorter length and fewer items to improve the range of topics to which students responded. Various reporting modifications were introduced to more effectively communicate results.

## ASSESSMENT ANCHOR CONTENT STANDARDS, CONTENT STRUCTURE, AND NEW GRADE LEVELS FOR MATHEMATICS AND READING

Assessment in 2005 was marked by major structural changes to the PSSA. Assessment Anchor Content Standards (Assessment Anchors) developed during the previous school year to clarify content structure and improve articulation between assessment and instruction were implemented in terms of test design and reporting. At the same time, field testing of mathematics and reading occurred at Grades 4, 6, and 7. As specified by PL 107–110, the *No Child Left Behind Act of 2001* (NCLB), states, school districts, and schools must achieve a minimum level of improvement each year, known as adequate yearly progress, or AYP. Accordingly, the third year of calculations for AYP were conducted and reported for Grades 5, 8, and 11.

The 2006 operational mathematics and reading assessment incorporated Grades 4, 6, and 7 for the first time. The assessed grade levels for 2006 included Grades 3–8 and 11. The fourth year of calculations for AYP were conducted and reported for Grades 5, 8, and 11 and, for the first time, Grade 3.

In 2007 the operational mathematics and reading assessment continued in Grades 3–8 and 11. AYP calculations for Grades 4, 6, and 7 took place in 2007 when they were assessed for the second time.

The operational mathematics and reading assessments of 2008, 2009, 2010, 2011, and 2012 continued in Grades 3–8 and 11, utilizing the same content structure. AYP calculations continued for all grades. The operational mathematics and reading assessments continued for Grades 3–8 in 2013 utilizing the same content structure. As a part of the transition to align to the Pennsylvania Core Standards, the operational mathematics and reading assessments for Grades 3–8 in 2014 aligned to both the previous Assessment Anchors (those aligned to the Pennsylvania Academic Standards) and the newly developed Assessment Anchors aligned to the Pennsylvania Core Standards.

The validation of performance levels for mathematics and reading, utilizing the Bookmark method, took place during the summer of the following years: 2005 (Grades 5, 8, and 11), 2006 (Grades 4, 6, and 7), and 2007 (Grade 3). See Chapter Thirteen for a brief summary.

More information regarding the 2014 mathematics and reading tests may be found in Chapter Two and in the following Pennsylvania Department of Education publications available on the PDE website: 2013–2014 PSSA Assessment Handbook, 2009–2010 PSSA Reading Item and Scoring Sampler Supplement (one per assessed grade level), and 2009–2010 PSSA Mathematics Item and Scoring Sampler Supplement (one per assessed grade level). These

handbooks can be accessed by going to www.education.state.pa.us. Click on the green check mark icon labeled "State Assessment System," then select "Pennsylvania System of School Assessment (PSSA)," then select "Archived Materials" under "Other Materials" in the yellow box on the right.

#### Core Recycling for Mathematics and Reading

In 2009, PDE made a temporary change to the PSSA test plan for reading and mathematics in order to create required cost savings due to state-level budget concerns. A recycling plan was proposed and accepted that significantly decreased the volume of new item development over a two-year period in 2011 and 2012 and required that a portion of the core from the 2013 administration would be composed of items recycled from prior core administrations. Under this plan, the reduced number of new items in 2011 and 2012 resulted in a reduced number of field-test forms in 2011 and 2012 from nine down to five. These changes impacted the test design for 2013 and 2014.

In order to use items that aligned to both sets of Assessment Anchors (those aligned to the Pennsylvania Academic Standards and those aligned to the Pennsylvania Core Standards), the existing pool of items was first analyzed to determine alignments to the Pennsylvania Core Standards Assessment Anchors. The mathematics core for 2014 was then built with the standard core-to-core links from the 2013 core as well as from items recycled from previous cores but not designated as core-to-core links, from the existing item bank, and from items appearing in the embedded field-test positions from the 2013 embedded field test. Because the embedded field test in 2013 for Grades 3, 4, and 5 included items developed for assessments aligned to the Pennsylvania Core Standards, only those items that were determined to align to both sets of Assessment Anchors were considered usable on the core for those grades.

The reading core for 2014 was built with the standard core-to-core links from the 2013 core. The remainder of the core was built from items appearing in the embedded field-test positions from the 2013 embedded field test (Grades 6–8 only), from the existing item bank, or from items recycled from the 2010, 2011, or 2012 cores.

The 2014 PSSA had nine field-test forms per grade in Grades 3–5 and twenty field-test forms per grade in Grades 6–8, each with a normal core, normal core-to-core link, and normal equating block (per form).

More information regarding the 2014 operational layout and core recycling for mathematics and reading can be found in Chapter Three.

#### THE PENNSYLVANIA SCIENCE ASSESSMENT

In accordance with the NCLB requirement to implement an operational science assessment in 2008, a major test development effort in science took place during 2006, followed by a large-scale, standalone field test in April/May of 2007. A full implementation of an operational science assessment at Grades 4, 8, and 11 first occurred in April/May 2008. The 2009 PSSA operational science assessment continued with the same content structure and testing window as in 2008.

Several historical milestones were significant to the development of a science test in Pennsylvania. These include the following:

- The adoption of Act 16 or Pennsylvania Senate Bill 652 in 2000, which redefined the PSSA "as a test developed and implemented by the Department of Education to determine only academic achievement relating directly to objective Academic Standards in the areas of reading, mathematics, and science." (See the Science Assessment Handbook, PDE, November 2006.)
- Pennsylvania State Board of Education adoption of the *Science and Technology Standards* on July 12, 2001, and the *Environment and Ecology Standards* on January 5, 2002.

Aligned to the *Pennsylvania Science Assessment Anchor Content Standards* and Eligible Content, the science test is designed to measure and report results in four major categories:

- The Nature of Science
- Biological Sciences
- Physical Sciences
- Earth and Space Sciences

Students use their content knowledge and science process skills to answer a set of multiple-choice items and open-ended questions that are standalone or related to a scenario. A science scenario consists of a description of a class project, an experiment, or other research and typically contains text, graphs, charts, and/or tables. Science test questions at Grade 4 consist of standalone multiple-choice and 0–2-point short answer open-ended items. At Grade 8, multiple-choice questions consist of both standalone and scenario-based items. All open-ended items at Grade 8 are standalone 0–2-point questions. More information may be found in Chapter Two and in the following Pennsylvania Department of Education publications available on the PDE website: 2013–2014 PSSA Assessment Handbook and 2009–2010 PSSA Science Item and Scoring Sampler Supplement (one per assessed grade level). These handbooks can be accessed by going to www.education.state.pa.us. Click on the green check mark icon labeled "State Assessment System," then select "Pennsylvania System of School Assessment (PSSA)," then scroll down to "Science Resources." The establishment of performance levels for science, utilizing the Bookmark method, took place during the summer of 2008. See Chapter Thirteen of this technical report for a brief summary.

#### THE PENNSYLVANIA WRITING ASSESSMENT

In 1990, the state initiated an on-demand writing assessment in which students wrote an essay in response to a particular topic or prompt. With the advent of the Pennsylvania Academic Standards in 1999, major changes took place in the writing assessment, including alignment to the Academic Standards, as well as changes in scoring method, prompts, testing date, and reporting. These changes, which are summarized below, were implemented in the 2000–01 school year and were followed by performance level reporting in the 2001–02 school year.

- The writing assessment became mandatory for all districts every year.
- Administration of the Grades 6 and 9 writing assessment was changed from February to October.

- Scoring changed to a four-point scale for each of five domains (focus, content, organization, style, and conventions).
- Prompts were different for Grade 6 and Grade 9 rather than being identical at the two grade levels.
- Within a grade level, all students responded to two common prompts.
- The reporting model was greatly revised, and individual student reports were issued for the first time.
- A writing assessment for Grade 11 was administered for the first time in February 2001.
- In 2002, performance levels were adopted for writing and implemented in the reporting of total writing results for the February Grade 11 and fall 2002 Grades 6 and 9 writing assessment.

In 2003 and 2004 writing continued to be assessed with a February window for Grade 11 and a fall window for Grades 6 and 9.

In 2005 Grade 11 continued to be assessed in February; however, major field testing took place at Grades 5 and 8 in anticipation of implementation of an operational writing assessment in 2006. Consequently, a fall 2005 operational writing assessment did not take place.

The 2006 PSSA operational writing assessment featured additional revisions that included the following enhancements:

- Testing previously done in Grades 6 and 9 shifted to Grades 5 and 8 to provide better alignment to the end of elementary school and middle school.
- Grades 5 and 8 joined Grade 11 in a February testing window rather than the October window used previously for Grades 6 and 9.
- Students responded to two writing prompts, which were evaluated in terms of (1) a mode-specific scoring guideline and (2) a conventions scoring guideline, instead of the former domain scoring.
- Stimulus-based revising/editing multiple-choice items were incorporated to provide a more reliable and valid measure of the Conventions Academic Standard.

The 2007 and 2008 PSSA operational writing assessments continued with the same structure and February testing window as in 2006.

Although the 2009, 2010, 2011, and 2012 PSSA operational writing assessments continued with the same structure as in previous years, students also responded to an embedded field-test prompt. In addition, adjustments were made to the testing window in 2010 as it was shifted from February to April/May. In 2013, the PSSA operational writing assessment continued for Grades 5 and 8; however, only students in Grade 8 responded to an embedded field-test prompt. The embedded field-test prompt was also removed from Grade 5 in 2014 in anticipation of the transition to a single English Language Arts assessment aligned to the Pennsylvania Core Standards that will occur in 2015. Instead, students in Grades 3–5 participated in a standalone field test in February 2013, and students in Grades 6–8 participated in a similar standalone field test in February 2014.

The validation of performance levels for writing, utilizing the Body of Work method, took place during the summer of 2006. See Chapter Thirteen for a brief summary.

More information may be found in Chapter Two and in the following two Pennsylvania Department of Education publications available on the PDE website: 2013–2014 PSSA Assessment Handbook and 2009–2010 PSSA Writing Item and Scoring Sampler Supplement (one per assessed grade level). These handbooks can be accessed by going to www.education.state.pa.us. Click on the green check mark icon labeled "State Assessment System," then select "Pennsylvania System of School Assessment (PSSA)," then select "Archived Materials" under "Other Materials" in the yellow box on the right.

# Chapter Two: Overview of the PSSA Framework

# PENNSYLVANIA ACADEMIC STANDARDS, ASSESSMENT ANCHOR CONTENT STANDARDS, AND ELIGIBLE CONTENT

## PSSA Mathematics, Reading, and Science

The PSSA Assessment Anchor Content Standards and Eligible Content are based on the Pennsylvania Academic Standards. Although the Academic Standards indicated what students should know and be able to do, educator concerns regarding the number and breadth of Academic Standards led to an initiative by the Pennsylvania Department of Education (PDE) to develop Assessment Anchor Content Standards (Assessment Anchors) to indicate which parts of the Academic Standards (Instructional Standards) would be assessed on the PSSA. Based on recommendations from Pennsylvania educators, the Assessment Anchors were designed as a tool to improve the articulation of curricular, instructional, and assessment practices. The Assessment Anchors clarify what is expected across each grade span and focus the content of the standards into what is assessable on a large-scale test. The Assessment Anchor documents also serve to communicate Eligible Content, also called assessment limits, or the range of knowledge and skills from which the PSSA would be designed.

The Assessment Anchor's coding is read like an outline. The coding includes the content, grade level, Reporting Category, Assessment Anchor, descriptor (Sub-Assessment Anchor), and Eligible Content. Thus, S.4.A.1.3.1 would be Science, Grade 4, Reporting Category A, Assessment Anchor 1, descriptor (Sub-Assessment Anchor) 3, and Eligible Content 1.

Each of the Assessment Anchors has one or more descriptors (Sub-Assessment Anchors) and Eligible Content varying to reflect grade-level appropriateness. The Assessment Anchors form the basis of the test design. In turn, this hierarchy is the basis for organizing the total content scores (based on the core [common] sections).

A draft version of the Assessment Anchors and Eligible Content for mathematics and reading was submitted to Achieve, Inc., Washington, D.C., for a special analysis to evaluate the degree of alignment with the Academic Standards. Preliminary feedback enabled PDE to make adjustments to improve the alignment as the Assessment Anchors took final form. These adjustments were reflected operationally starting with the 2007 PSSA. Achieve, Inc., also conducted a preliminary review of the science anchors in 2003 and produced a follow-up report on the anchors in 2005.

The complete set of Assessment Anchors and Eligible Content aligned to the Pennsylvania Academic Standards can be referenced at PDE's website: www.education.state.pa.us. Click on the green check mark icon labeled "State Assessment System," then select "Pennsylvania System of School Assessment (PSSA)," then select "Assessment Anchors" under "Other Materials" in the yellow box on the right.

## **PSSA Writing**

Assessment Anchors and Eligible Content aligned to the Pennsylvania Academic Standards were not developed for the writing content area. Instead, the PSSA writing program is aligned directly to the Academic Standards at 1.4 (Types of Writing [Mode]) and at 1.5 (Quality of Writing). In 1999, Pennsylvania adopted academic standards for writing (*Academic Standards for Reading, Writing, Speaking, and Listening*) that describe what students should know and be able to do with the English language at a grade level. Within the framework of the assessment, the writing prompts are measured under Academic Standards 1.4.A Narrative, 1.4.B Informational, and 1.4.C Persuasive, thus providing the responses to the eligible modes the prompts are designed to elicit. The writing prompts are also measured under Academic Standards 1.5.A–F Quality of Writing. The stimulus-based multiple-choice items are measured under the Academic Standards 1.5.E Revising and 1.5.F Editing.

# PENNSYLVANIA CORE STANDARDS, ASSESSMENT ANCHORS, AND ELIGIBLE CONTENT

# PSSA Mathematics and English Language Arts

With Pennsylvania's decision to adopt the Pennsylvania Core Standards based on the Common Core State Standards, committees of Pennsylvania educators met in October 2011 to write, review, and approve the Assessment Anchors and Eligible Content statements. To provide initial focus, each content and grade-span committee was presented with materials specific to the content and grade span in question, including a basic blueprint structure, the Pennsylvania Academic Standards, the Pennsylvania Assessment Anchors and Eligible Content aligned to the Pennsylvania Academic Standards, the Common Core State Standards, and draft Eligible Content statements. Committees then completed an iterative process of reviewing and revising the draft Eligible Content statements followed by discussions across grade-span committees to ensure vertical articulation across the grades. The results from the committee work were evaluated by national, state, and local subject experts, and, following revisions, they were ultimately validated by another committee of Pennsylvania educators. Following committee approval, the Pennsylvania Core Standards-aligned Assessment Anchors and Eligible Content for English Language Arts and Mathematics were approved by the State Board of Education in September 2013.

## **OVERVIEW OF THE 2014 PSSA**

## Mathematics Assessment Measures

The PSSA mathematics assessment has five major reporting categories: Numbers and Operations, Algebraic Concepts, Geometry, Measurement, and Data Analysis and Probability. By organizing the Assessment Anchors into a five-category reporting structure, there is a similarity to the categories used by the National Council of Teachers of Mathematics (NCTM) and the National Assessment of Educational Progress (NAEP).

The PSSA mathematics assessment employs two types of test items: multiple choice and open ended. These item types assess different levels of knowledge and provide different kinds of information about mathematics achievement. Psychometrically, multiple-choice items are very useful and efficient tools for collecting information about a student's academic achievement. Open-ended performance tasks generally generate fewer scoreable points than multiple-choice items in the same amount of testing time; however, they provide tasks that are more realistic and

better sample higher-level thinking skills. Furthermore, well-constructed scoring guides have made it possible to include open-ended tasks in large-scale assessments such as the PSSA. Trained scorers can apply the scoring guides to efficiently score large numbers of student papers in a highly reliable way. The design of the PSSA attempts to achieve a reasonable balance between the two item types.

## MATHEMATICS MULTIPLE-CHOICE ITEMS

The majority of the mathematics items included on the PSSA are multiple-choice (selected-response) items. This item type is especially efficient for measuring a broad range of content. In the PSSA mathematics assessment, each multiple-choice item has four response options, only one of which is correct. The student is awarded one point for choosing the correct response. Distractors typically represent incorrect concepts, incorrect logic, incorrect application of an algorithm, or computational errors.

Multiple-choice items are used to assess a variety of skill levels, from short-term recall of facts to problem solving. PSSA items involving application emphasize the requirement to carry out some mathematical process to find an answer, rather than simply recalling information from memory.

## **OPEN-ENDED TASKS FOR MATHEMATICS**

Open-ended, or constructed-response, tasks require students to read a problem description and to develop an appropriate solution. The open-ended items are designed to take about 10 minutes per item. Most of the open-ended items have several components to the overall task that may enable students to enter or begin the problem at different places. In some items, each successive component is designed to assess progressively more difficult skills or higher knowledge levels. Certain components ask students to explain their reasoning for engaging in particular mathematical operations or for arriving at certain conclusions. The types of tasks utilized do not necessarily require computations. Students may also be asked to perform such tasks as constructing a graph, shading some portion of a figure, or listing object combinations that meet specified criteria.

Open-ended tasks are especially useful for measuring students' problem-solving skills in mathematics. They offer the opportunity to present real-life situations that require students to solve problems using mathematics abilities learned in the classroom. Students must read the task carefully, identify the necessary information, devise a method of solution, perform the calculations, enter the solution directly in the response space, and, when required, offer an explanation. This provides insight into the students' mathematical knowledge, abilities, and reasoning processes.

The open-ended mathematics items are scored on a 0–4 point scale using an item-specific scoring guideline. The item-specific scoring guideline outlines the requirements for each score point. Item-specific scoring guidelines are based on the *General Description of Mathematics Scoring Guidelines for Open-ended Items*. The general guidelines describe a hierarchy of responses, which represent the five score levels. See Appendix A or the *Mathematics Item and Scoring Samplers* available on the PDE website.

## Reading Assessment Measures

The PSSA reading assessment has two major reporting categories: Comprehension and Reading Skills, and Interpretation and Analysis of Fictional and Nonfictional Text. These two reporting categories are derived from the Reading Academic Standards 1.1, 1.2, and 1.3. Standards 1.6, 1.7, and 1.8 are not addressed on the PSSA because they are not specific to reading comprehension and can be more accurately evaluated at the school level. Standards 1.4 and 1.5 are addressed on the PSSA writing assessment.

The reading assessment employs two types of test items: multiple choice and short answer, or constructed response<sup>1</sup>. The items are designed to measure students' comprehension of the content contained in the reading passages.

## READING MULTIPLE-CHOICE ITEMS

Multiple-choice (selected-response) items measure how well students comprehend the overall meaning of a passage or make basic inferences about it. At times, asking students to choose a preferred answer is the best way to determine whether they have gleaned certain information from a story. Such information may include setting, central idea, or main events and their sequence.

Each reading multiple-choice item has four response options, only one of which is correct. The student is awarded one point for choosing the correct response. Incorrect response choices, or distractors, typically represent some kind of misinterpretation, predisposition, unsound reasoning, or casual reading.

## SHORT-ANSWER OR OPEN-ENDED TASKS FOR READING

Constructed response tasks require written responses and are designed to address comprehension of text in ways that multiple-choice items cannot. These short written responses require about 10 minutes per item, and allow a student to prepare an answer using supporting details or examples derived from the text. Prior to 2013, these test questions were called "open ended" items due to the many possible responses students could construct compared to the four static options available in a multiple-choice item. In Grades 3-5, these items began to be labeled as shortanswer items during the 2013 administration. In Grades 6-8, these reading items continued to be called open-ended items for the 2013 administration. All grades transitioned to the short-answer label beginning with the 2014 administration. The shift in labeling, from "open-ended" to "shortanswer," was implemented to draw a greater contrast to the new "Text-Dependent Analysis" questions which require substantial student writing. By comparison, responses to the shortanswer items are simpler and require less explication and almost no analysis.

<sup>&</sup>lt;sup>1</sup> Additionally, the 2014 reading assessment in grades 3–8 included two additional item types in field-test positions only: evidence-based selected response items (two-part items that require a student to select an answer to a comprehension question in part one and to select one or more pieces of evidence to support their answer in part two) and text-dependent analysis questions (which require students to write an essay analyzing a passage or passage set to be scored using a holistic scoring guideline). These item types will be discussed in more detail in a future technical

The reading short-answer items are scored on a 0–3 point scale using an item-specific scoring guideline. This scale is consistent with the scale used on the National Assessment of Educational Progress (NAEP). The change from the former 0–4 point scale improves the alignment with the types of tasks required. Each task is text-dependent and is carefully constructed with the scoring guideline reflecting the task requirements. All item-specific scoring guidelines are based on the *General Scoring Guidelines for Short-answer Reading Items*. The general guidelines describe a hierarchy of responses, which represent the four score levels. See Appendix A or the *Reading Item and Scoring Samplers* available on the PDE website.

## Science Assessment Measures

The PSSA science assessment has four major reporting categories: The Nature of Science, Biological Sciences, Physical Sciences, and Earth and Space Sciences. These categories are similar to those used by the National Assessment of Educational Progress (NAEP) and The Third International Mathematics and Science Study (TIMSS). However, the PSSA organizes the categories differently. The science assessment anchors cover seventeen major categories from two sets of standards: Science and Technology Standards (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, and 3.8) and Environment and Ecology Standards (4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, and 4.9).

The science assessment employs two types of test items: multiple choice and open ended. These item types assess different levels of knowledge and provide different kinds of information about science achievement. The design of the operational 2014 PSSA for science achieves a reasonable balance between the two item types.

#### SCIENCE MULTIPLE-CHOICE ITEMS

The majority of the science items included on the PSSA are multiple-choice (selected-response) items, either as standalone multiple-choice items or as scenario-based multiple-choice items. (Scenario-based multiple-choice items are found in Grade 8 only.) Multiple-choice items are especially efficient for measuring a broad range of content. In the PSSA science assessment, each multiple-choice item has four response options, only one of which is correct. The student is awarded one point for choosing the correct response. Distractors typically represent incorrect concepts, incorrect logic, or incorrect application of a scientific principle.

Multiple-choice items are used to assess a variety of skill levels, from short-term recall of facts to the application of science content. PSSA items involving application emphasize the requirement to utilize science content to find an answer rather than simply recalling information from memory.

#### **OPEN-ENDED ITEMS FOR SCIENCE**

At all grades, standalone open-ended science items require students to read a description of a scientific problem and to develop an appropriate solution. Standalone open-ended items require about five minutes per task.

Open-ended tasks are especially useful for measuring students' skills in science. These tasks may present real-life situations that require students to solve problems using science abilities learned in the classroom. Students must read a task carefully, identify the necessary information, devise a method of solution, enter the solution directly into the answer document, and, when required, offer an explanation. This provides insight into students' science knowledge, abilities, and reasoning processes.

The open-ended science items are scored on a 0–2 point scale with an item-specific scoring guideline, and each task is carefully constructed with a scoring guideline reflecting the task requirements. The general guidelines describe a hierarchy of responses, which represent the three score levels. Each item-specific scoring guideline outlines the requirements at each score point, and each item-specific scoring guideline is based on the *Science Scoring Guidelines for Open-ended Items*. See Appendix A or the *Science Item and Scoring Samplers* available on the PDE website.

## SCIENCE SCENARIOS FOR GRADE 8

In addition to standalone multiple-choice and open-ended items, the science assessment includes scenarios at Grade 8. In consideration of the multidisciplinary and interdisciplinary nature of science content, science scenarios create stronger connections between The Nature of Science/Science Content and the multiple-choice items associated with a scenario. As a result, science scenarios allow the assessment to efficiently address and utilize the connections among the science content domains. A science scenario contains text, graphics, charts, and/or tables, and uses these elements to describe the results of a class project, an experiment, or other similar research. Students use the information found in a science scenario as a platform from which to answer multiple-choice questions. Scenarios and questions reach beyond simple fact recollection; they are designed to challenge students to think and to apply the knowledge and skills learned in their classrooms. Scenarios are designed to reflect multi-dimensional classroom activities that incorporate higher cognitive levels of understanding. Science scenarios challenge students to interpret stimulus content and to apply existing knowledge to new data while using science knowledge and process skills to arrive at their answers.

# Writing Assessment Measures

#### WRITING MULTIPLE-CHOICE ITEMS

Each multiple-choice item on the writing test is associated with a passage containing embedded errors. Starting with the 2006 operational assessment and continuing through the 2014 assessment, four multiple-choice items are associated with each passage. Multiple revising and editing instances are incorporated within each passage and require that a student demonstrate both passive (recognizing and identifying grammatical and mechanical errors in text, such as misspellings, errors in word choice, errors in verb tense, or pronoun usage) and active (choosing the appropriate correction of an embedded error, such as deleting an irrelevant detail, changing the sequence of details, or placing correct marks of punctuation) revising and editing skills.

All multiple-choice items have four response options that include only one correct answer. The student is awarded one raw score point for choosing the correct response. Incorrect response choices, or distractors, typically represent some kind of misinterpretation or predisposition, unsound reasoning, or casual reading of the item and/or stimuli.

#### WRITING PROMPTS

At each assessed grade level, students respond to writing prompts developed to measure composition of writing as specified in the Academic Standards 1.4.A-C and further clarified in Academic Standards 1.5 A–F. A student response to a prompt requires approximately 60 minutes per prompt, though students are allowed more time to finish their responses if necessary. The writing prompts were field tested in a standalone field test in 2005 and in embedded field-test positions in 2009, 2010, 2011, 2012, and 2013 with only one field-test prompt being administered per student in the embedded field test. (The 2005 field test yielded enough prompts that no additional writing prompts were field tested in 2006, 2007, or 2008. In anticipation of the transition to an ELA assessment in 2015, no embedded field-test prompts were included in the 2013 administration for Grade 5 or in the 2014 administration for either grade.) Prompt modes and prompts were spiraled across the total number of available forms. Spiraling is accomplished by administering each student one of many available field-test prompts in a sequential manner. For example, the first student received Prompt 1, the second student Prompt 2, and so on until every prompt was administered. If there were more students than prompts, the sequence was repeated starting with the first prompt until every student was assigned a prompt. This process ensured that each prompt was administered to approximately equal and representative student populations in regard to demographics like gender, ethnicity, school size, and location in the state.

**Activity** Administration Grade 5 **Grade 8** Grade 11 2005 Standalone FT Standalone FT Embedded FT 2006 None None None 2007 None None None 2008 None None None 2009 Embedded FT Embedded FT Embedded FT 2010 Embedded FT Embedded FT Embedded FT 2011 Embedded FT Embedded FT Embedded FT 2012 Embedded FT Embedded FT Embedded FT 2013 Embedded FT None No Assessment 2014 None None No Assessment

Table 2–1. Writing Prompt Field Test Implementation

See Chapter Five for more information about the writing prompt field tests.

Beginning with the operational assessment in 2006 and continuing through 2014, students in Grade 5 responded to two pre-selected operational prompts chosen from across the three modes: narrative, informational, and persuasive. (See Table 2–2 for more information about the modes selected for operational use during a given administration.) The narrative prompt can be story/fiction or personal narrative/recount, which aligns with Academic Standard 1.4.A. The informational prompt can be sequence (process analysis) or simple definition, which aligns with

Academic Standard 1.4.B. The persuasive prompt can be problem/solution or evaluation, which aligns with Academic Standard 1.4.C.

Beginning with the operational assessment in 2006 and continuing through 2014, students in Grade 8 responded to two operational prompts: informational and persuasive. The informational prompt can be sequence (process analysis), illustration, conceptual definition, cause/effect, classification, or compare/contrast, which aligns with Academic Standard 1.4.B. The persuasive prompt can be problem/solution or evaluation, which aligns with Academic Standard 1.4.C.

Beginning with the field test in 2005 and continuing through 2014, the responses to writing prompts were scored twice using two different scoring guidelines developed especially for the PSSA. The first score is based on the application of a mode-specific scoring guideline, and the second score is based on the application of a conventions scoring guideline. The mode-specific scoring guideline is designed to evaluate first-draft, on-demand responses. It identifies the essential criteria for successfully responding to a particular mode of writing relating to the core areas of writing: focus, development of content, organization, and style. In contrast, the conventions scoring guideline measures the demonstrated level of control of sentence formation, grammar, usage, spelling, and punctuation. For more information on the application of the new scoring guidelines, see Appendix A or the current *Writing Item and Scoring Sampler*, available on the PDE website.

Table 2–2. Writing Prompt Operational Mode Summary

| A denimination |  | <b>Operational Modes</b>     |                |
|----------------|--|------------------------------|----------------|
| Administration | Grade 5  | Grade 8                      | Grade 11       |
| 2006           | Narrative,   | Informational,               | Informational, |
|                | Informational                                      | Persuasive                   | Persuasive     |
| 2007           | Informational,                                     | Informational,               | Informational, |
|                | Persuasive   | Persuasive                   | Persuasive     |
| 2008           | Narrative,   | Informational,               | Informational, |
|                | Persuasive   | Persuasive                   | Persuasive     |
| 2009           | Informational,                                     | Informational,               | Informational, |
|                | Persuasive   | Persuasive                   | Persuasive     |
| 2010           | Narrative,   | Informational,               | Informational, |
|                | Informational                                      | Persuasive                   | Persuasive     |
| 2011           | Informational,                                     | Informational,               | Informational, |
|                | Persuasive   | Persuasive                   | Persuasive     |
| 2012           | Narrative,   | Informational,               | Informational, |
|                | Persuasive   | Persuasive                   | Persuasive     |
| 2013           | Narrative, Informational, Informational Persuasive |                              | No Assessment  |
| 2014           | Informational,<br>Persuasive                       | Informational,<br>Persuasive | No Assessment  |

# Chapter Three: Item Development Process

The core portion of the 2014 PSSA operational administration is made up of items that were field tested primarily in the 2013 PSSA administration with the exception of reading Grades 3–5, mathematics Grades 3–5, and writing Grade 5. Therefore, the activities that led to the 2014 PSSA operational administration began with the development of the test items that appeared in the field-test portion of the 2013 operational administration. In turn, items that appeared on the field-test portion of the 2013 operational administration were developed during and prior to 2012. (See Table 3–1 for a graphic representation of the basic process flow and overlap of the development cycles.)

Table 3-1. General Development Timeline Pattern of the PSSA

|                              |   |  | <b>Events Oc</b>   | ccurring in Cale   | ndar Year  |  |  |
|------------------------------|---|--|--|--|--|--|--|
| Operational<br>Admin<br>Year | 2008  | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   |
| 2008                         | Operational<br>Core Admin<br>with embedded<br>matrix items→ | Core-to-Core<br>Link   |  |  |  |  |  |
| 2009                         | Field Test →  | Operational<br>Core Admin<br>with embedded<br>equating block<br>items→ | Core-to-Core<br>Link   |  |  |  |  |
| 2010                         | Initial Item Development →                                  | Field Test<br>→  | Operational<br>Core Admin<br>with embedded<br>equating block<br>items→ | Core-to-Core<br>Link   |  |  |  |
| 2011                         |   | Initial Item Development →   | Field Test<br>→  | Operational<br>Core Admin<br>with embedded<br>equating block<br>items→ | Core-to-Core<br>Link   |  |  |
| 2012                         |   |  | Initial Item Development →   | Field Test<br>→  | Operational<br>Core Admin<br>with embedded<br>equating block<br>items→ | Core-to-Core<br>Link   |  |
| 2013                         |   |  |  | Initial Item Development →   | Field Test<br>→  | Operational<br>Core Admin<br>with embedded<br>equating block<br>items→ | Core-to-Core<br>Link   |
| 2014                         |   |  |  |  | Initial Item Development →   | Field Test<br>→  | Operational<br>Core Admin<br>with embedded<br>equating block<br>items <sup>2</sup> |

<sup>&</sup>lt;sup>2</sup> Core-to-core links will not appear on the 2015 assessments for mathematics and ELA.

Table 3–2. General Timeline Associated with the 2013 Field Test and 2014 Operational Assessment of Mathematics and Reading at Grades 3, 4, 5, 6, 7, and 8

| Time Frame                      | Assessment                    | Activity  |
|---------------------------------|-------------------------------|---|
| January 2012–<br>July 2012      | '13 FT for '14 OP             | Item development for items to embed in 2013 operational test                    |
| March 2012–<br>May 2012         | '12 FT for '13 OP             | 2012 embedded field test in 2012 operational test                               |
| July 2012                       | '13 FT for '14 OP             | Item review for the embedded field test in 2013 operational assessment          |
| July 2012                       | '12 FT for '13 OP             | Statistical review of 2012 field-tested items                                   |
| September 2012–<br>January 2013 | '13 OP & '13 FT<br>for '14 OP | Forms construction for 2013 operational assessment with embedded field test     |
| January 2013–<br>June 2013      | '14 FT for '15 OP             | Item development for items to embed on 2014 operational assessment <sup>3</sup> |
| March 2013–<br>May 2013         | '13 FT for '14 or<br>'15 OP   | 2013 embedded field test in 2013 operational test                               |
| June 2013                       | '14 FT for '15 OP             | Item review for the embedded field test in 2014 operational assessment          |
| July 2013                       | '13 FT for '14 or<br>'15 OP   | Statistical review of 2013 field-tested items                                   |
| September 2013–<br>January 2014 | '14 OP & '14 FT<br>for '15 OP | Forms construction for 2014 operational assessment                              |
| March 2014–<br>May 2014         | '14 OP & '14 FT<br>for '15 OP | 2014 operational assessment   |

## MATHEMATICS AND READING

A series of major activities took place from 2011 through 2013 that led to the 2014 PSSA in mathematics and reading that is dual aligned to both the Pennsylvania Academic Standards and Pennsylvania Core Standards. These activities include the development of the Pennsylvania Core Standards Assessment Anchors and Eligible Content; test item development; content review; bias, fairness, and sensitivity review; field testing of items in spring 2013; item review with data; alignment of items in the existing pool to the PCS-based Assessment Anchors; and final selection of items to compose the 2014 PSSA.

These activities are described in some detail in this chapter as well as in Chapters Four and Five. It should also be noted that test items for the 2013 field test were developed by Data Recognition Corporation (DRC) and WestEd.

<sup>&</sup>lt;sup>3</sup> Items embedded as field-test items on the Reading/Mathematics forms for Grades 3–8 are aligned to the Pennsylvania Core Standards; the first operational assessment aligned to only Pennsylvania Core Standards in ELA and Mathematics will take place in 2015.

# Test Content Blueprint for 2014 Mathematics and Reading Assessment

The 2014 PSSA is based on the Pennsylvania Academic Standards as well as the Pennsylvania Core Standards. The 2014 PSSA reflects the Assessment Anchors (PDE 2004; PDE 2013), which were designed as a means of improving the articulation of curricular, instructional, and assessment practices. Due to the transition from the Pennsylvania Academic Standards to the Pennsylvania Core Standards (which will be complete for the 2015 assessment), the 2014 PSSA aligns to both sets of Assessment Anchors. The reporting and test design maintain the content structure found in the Assessment Anchors aligned to the Pennsylvania Academic Standards to the extent possible while ensuring that every test question included on the 2014 PSSA is also aligned to the Assessment Anchors aligned to the Pennsylvania Core Standards. (This requirement was intended to ensure that schools/districts are not penalized for completing their transition to instruction based on the Pennsylvania Core Standards prior to the 2014–2015 school year.) The Assessment Anchors serve to clarify the standards assessed on the PSSA and to communicate assessment limits, or the range of knowledge and skills from which the PSSA was designed. Relevant to item development are the refinement and clarification embodied in the Assessment Anchors.

The Assessment Anchors aligned to the Pennsylvania Academic Standards were developed during 2003; items aligned to these Assessment Anchors were field tested in 2004 for Grades 3, 5, 8, and 11 and in 2005 for Grades 4, 6, and 7. The PSSA for Grades 3, 5, 8, and 11 in 2005 through 2013 followed a revised blueprint and testing plan to reflect the Assessment Anchors and item distribution. The first operational administration of the PSSA for Grades 4, 6, and 7 took place in 2006. It followed the revised blueprint and testing plan, and it reflected the Assessment Anchors and item distribution revised plan first applied to the PSSA for Grades 3, 5, 8, and 11 in 2005 and continued through 2013. This plan continued to be applied to the PSSA for Grades 3–8 in 2014 to the extent possible while using only items that also aligned to the Assessment Anchors aligned to the Pennsylvania Core Standards.

# Operational Layout and Core Recycling for 2014 Mathematics and Reading

The mathematics and reading PSSA plan was developed through the collaborative efforts of Data Recognition Corporation (DRC) and the National Center for Improvement of Educational Assessment (NCIEA). The plan was subsequently evaluated and approved by PDE. At Grades 4–8, the mathematics and reading assessments are combined in one test booklet and one separate answer booklet. The test booklet contains mathematics multiple-choice items and reading passages with multiple-choice items. The answer booklet contains scannable pages for multiple-choice (MC) responses, open-ended (OE) mathematics items with response spaces, short-answer (SA) reading items with response spaces, and demographic data collection areas. At Grade 3, the mathematics and reading assessments are combined into one integrated test/answer booklet. Each MC item is worth 1 point. Mathematics OE items receive a maximum of 4 points (on a scale of 0-4) and reading short-answer (SA) items receive a maximum of 3 points (on a scale of 0–3). Each test form contains common items (identical on all forms) along with equating block (containing equating items) and embedded field-test items. The common items consist of a set of core items taken by all students. These core items also include core-to-core linking items, which are items that also appeared on the previous year's core form. The equating block items and the embedded field-test items are unique, in most instances, to a form. That is, there can be instances in which an equating block or embedded field-test item appears on more than one form.

The 2014 PSSA had nine field-test forms per grade in Grades 3–5 and twenty field-test forms per grade in Grades 6–8 with a normal core, normal core-to-core link, and normal equating block (per form). All of the forms contain the common items identical for all students and sets of generally unique items that fulfill two purposes:

- **1.** Field testing new items (FT items)
- 2. Using items from the previous years' assessments for the purpose of linking equating block (EB) items

Tables 3–3 through 3–6 display the test design for mathematics and reading for each form. The column entries for these tables denote the following:

- Grade level
- Number of unique common, or core, MC items
- Number of core-to-core linking MC items
- Number of equating block MC items
- Number of embedded MC field-test items
- Number of unique common, or core, OE or SA items
- Number of core-to-core linking OE or SA items
- Number of equating block OE or SA items
- Number of embedded OE, SA, or TDA field-test items
- Total number of MC and OE, SA, or TDA items in the form
- Total number of operational points (derived from Core MC, Core-to-Core MC, Core OE or SA, and Core-to-Core OE or SA only) for producing a student score

Table 3-3. Mathematics Test Plan 2014

| Grade   | Total<br>Core<br>MC (all<br>forms) | Total<br>Equating<br>Block<br>MC (all<br>forms)* | Total<br>Embedded<br>Field Test<br>MC (all<br>forms) | Total MC<br>(Core, EB,<br>& Field<br>Test)<br>positions<br>(all forms) | Total<br>Core<br>4-point<br>OE (all<br>forms) | Total<br>Equating<br>Block OE<br>(all<br>forms)* | Total<br>Embedded<br>Field Test<br>OE (all<br>forms) | Total OE<br>(Core, EB,<br>& Field<br>Test)<br>(all forms) | Total No.<br>of Items<br>per Op.<br>Form<br>MC/OE | Total No.<br>of Core<br>Points per<br>Op. Test |
|---------|------------------------------------|--|--|--|---|--|--|---|---|--|
| 3, 4, 5 | 60                                 | 18   | 90   | 168  | 3   | 0  | 9  | 12  | 72/4  | 72   |
| 6, 7, 8 | 60                                 | 40   | 200  | 300  | 3   | 0  | 20   | 23  | 72/4  | 72   |

<sup>\*</sup> Some of the equating block items may not be unique.

Table 3–4. Mathematics Operational Core Test Plan 2014

| Grade                   | Unique<br>Core MC<br>per Form | Core-to-Core<br>Equating<br>(from 2013)<br>MC per Form | Unique Core<br>4-point OE<br>per Form | Core-to-Core<br>(from 2013)<br>Equating OE<br>per Form | Total<br>Number of<br>Core Items<br>(MC/OE) | Total Core<br>Points per<br>Test |
|-------------------------|-------------------------------|--|---------------------------------------|--|---|----------------------------------|
| 3, 4, 5, 6,<br>7, and 8 | 44                            | 16   | 1                                     | 2  | 60/3  | 72                               |

The mathematics core for 2014 was built with the standard core-to-core links from the 2013 core. The remainder of the core was built from items appearing in the embedded field-test positions from the existing item bank or from the 2013 embedded field test (only when necessary for Grades 3–5). Sixteen MC items and two OE items were moved from the previous core to the current year core to serve as linking items. All core linking items appeared in the same relative position as they appeared in the most recent administration. Eighteen MC items from 2013 (field test) were pulled forward into 2013 to form an Equating Block (EB). Two EB MC items appeared on each form. The EB items in Grades 6–8 were not unique. EB items did not contribute to student or school/district scores as the goal for the equating block is to increase the total available equating points.

No. of No. of No. of Total No. of No. of No. of No. of No. of Total No. Estimated Unique **Embedded** Core-to-No. of Unique Core-to-**Equating** Embedded **Equating** of Items No. of Core Core FT Core Grade Core MC Block MC FT MC Block SA Passages Core MC per Op. SA/TDA 3-pt. SA 3-pt. SA **Points** per Op. per Op. per Op. per Op. per Op. Form per Op. per Op. per Op. per Op. per Op. Form Form Form MC/SA **Form Form** Form Form Form **Form** Test 8\* 22-29 11 - 1810\* 1 1 0 1 7 3 58/3 46 (3 passages) (2 passages) (1 passage) (1 passage) 22-29 11\_18 2\* 10\* 4 and 5 2 2 0 1 58/5 7 52 (3 passages) (2 passages) (1 passage) (1 passage) 6, 7, 22-29 11 - 1810\* 2 2 0 58/5 8 52 and 8 (4 passages) (2 passages) (1 passage) (1 passage)

Table 3–5. Reading Test Plan 2014 per Operational Form

The reading core for 2014 was built with the standard core-to-core links from the 2013 core. The remainder of the core was built from items appearing in the embedded field-test positions from the 2013 embedded field test (Grades 6–8 only), from the existing item bank, or from items recycled from the 2010, 2011, and 2012 cores that were not designated as core-to-core links. The core-to-core link consists of two reading passages with eleven to eighteen MC items and two SA items (one SA item at grade 3) moved from the previous core to the current year core to serve as linking items. Approximately 16 MC items from the 2013 (field test) were pulled forward into 2014 to form an Equating Block (EB). One passage equal to approximately eight equating block MC items appeared on each form. Up to two equating block passages were alternated across the forms. EB items did not contribute to student or school/district scores as the goal for the equating block is to increase the total available equating points.

**Table 3–6. 2014 Mathematics and Reading Core Points** 

| Content<br>Area | MC<br>Items                               | Grade             | OE Items                            | Total<br>Score |
|-----------------|---|-------------------|-------------------------------------|----------------|
| Mathematics     | <b>athematics</b> 60 3, 4, 5, 6, 7, and 8 |                   | 3 items $\times$ 4 points=12 points | 72             |
| Dan din n       | 40  | 3                 | 2 items $\times$ 3 points=6 points  | 46             |
| Reading         | 40  | 4, 5, 6, 7, and 8 | 4 items × 3 points=12 points        | 52             |

<sup>\*</sup> Average

For more information concerning the process used to convert the operational layout into forms (i.e., form construction), see Chapter Six. For more information about operational layout across forms and across years (i.e., form equivalency) see Chapter Ten.

# Linking for 2014 Mathematics and Reading Assessment

Linking provides a statistical bridge between assessment administrations. The 2014 administration is linked back to the 2013 administration through the use of linking items in the core (core-to-core linking items) and the equating block (equating items).

#### **MULTIPLE-CHOICE ITEMS**

For Grades 3–8, mathematics used 16 core-to-core linking MC items and 18 equating block MC items per grade, and reading used 11 to 18 core-to-core linking MC items and 16 equating block MC items per grade.

## **OPEN-ENDED/SHORT-ANSWER ITEMS**

For Grades 3–8, mathematics used two 4-point core-to-core linking OE items and no [zero] equating block OE items per grade. For Grade 3, reading used one 3-point core-to-core linking SA item and no [zero] equating block SA items. For Grades 4–8, reading used two 3-point core-to-core linking SA items and no [zero] equating block SA items. Table 3–7 shows the 2014 linking points plan for mathematics and reading.

| Content     | Grade                   | No. of<br>Core-to-<br>Core<br>MC | No. of<br>Equating<br>Block<br>MC | No. of<br>Core-<br>to-Core<br>OE/SA | No. of<br>Equating<br>Block<br>OE/SA | Max. No. of Linking Points per Op. Test* |
|-------------|-------------------------|----------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|--|
| Mathematics | 3, 4, 5, 6, 7,<br>and 8 | 16                               | 2*                                | 2 (4 pt)                            | 0                                    | 34*                                      |
|             | 3                       | 11–18                            | 8*                                | 1 (3 pt)                            | 0                                    | 29*                                      |
| Reading     | 4, 5, 6, 7,             | 11–18                            | 8*                                | 2 (3 pt)                            | 0                                    | 32*                                      |

Table 3–7. 2014 Mathematics and Reading Linking Points Plan

The topic of *linking* will be detailed thoroughly in Chapter Fifteen.

and 8

# Test Sessions and Timing for 2014 Mathematics and Reading Assessment

The testing window for the 2014 operational assessment, including make-up sessions, extended from March 17 through April 4, 2014. The mathematics and reading assessments consisted of six sections. Test administration recommendations called for each section to be scheduled as one assessment session, although schools were permitted to combine multiple sections in a single session. Administration guidelines stipulated that the sections be administered in the sequence in which they were printed in the test booklets. Table 3–8 outlines the assessment schedule and estimated times for each section, as well as the number and types of items tested for each grade level. The estimated Student Testing Times shown on the next page do not include time for administrative tasks that occur during the pre- and post-administration activities. These times are

<sup>\*</sup>Not all equating block items will be unique to each form as some may appear on more than one form.

estimated separately. Times are approximate and are supplied to test administrators for scheduling purposes only.

Table 3–8. Mathematics and Reading—2014 Administration and Testing Times

|                  | Suggested Times<br>(In Minutes) |                                |                 | Grade Level                   |                     |                     |                     |                     |                     |  |
|------------------|---------------------------------|--------------------------------|-----------------|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|
| Test<br>Section  | ion                             | tive<br>st)                    | ting            | Number of Items and Item Type |                     |                     |                     |                     |                     |  |
| &<br>Content     | Administration (Total)          | Administrative<br>(Pre & Post) | Student Testing | 3                             | 4                   | 5                   | 6                   | 7                   | 8                   |  |
| 1                | 70 to                           | 15 to                          | 55 to           | 24 MC                         | 24 MC               | 24 MC               | 24 MC               | 24 MC               | 24 MC               |  |
| Mathematics      | 85                              | 20                             | 65              | 2 CR                          | 2 CR                | 2 CR                | 2 CR                | 2 CR                | 2 CR                |  |
| 2<br>Reading     | 75 to<br>95                     | 15 to 20                       | 60 to<br>75     | 25<br>MC/SR<br>1 CR           | 23<br>MC/SR<br>2 CR | 25<br>MC/SR<br>2 CR | 21<br>MC/SR<br>2 CR | 20<br>MC/SR<br>2 CR | 21<br>MC/SR<br>2 CR |  |
| 3<br>Mathematics | 65 to<br>80                     | 15 to<br>20                    | 50 to 60        | 24 MC<br>1 CR                 | 24 MC<br>1 CR       | 24 MC<br>1 CR       | 24 MC<br>1 CR       | 24 MC<br>1 CR       | 24 MC<br>1 CR       |  |
| 4<br>Reading     | 65 to<br>105                    | 15 to 20                       | 50 to<br>85     | 18<br>MC/SR<br>1 CR           | 18<br>MC/SR<br>1 CR | 18<br>MC/SR<br>1 CR | 18<br>MC/SR<br>1 CR | 18<br>MC/SR<br>1 CR | 18<br>MC/SR<br>1 CR |  |
| 5<br>Mathematics | 65 to<br>80                     | 15 to<br>20                    | 50 to 60        | 24 MC<br>1 CR                 | 24 MC<br>1 CR       | 24 MC<br>1 CR       | 24 MC<br>1 OE       | 24 MC<br>1 OE       | 24 MC<br>1 OE       |  |
| 6<br>Reading     | 55 to<br>90                     | 15 to<br>20                    | 40 to<br>70     | 15<br>MC/SR<br>1 CR           | 17<br>MC/SR<br>2 CR | 15<br>MC/SR<br>2 CR | 19<br>MC/SR<br>2 CR | 20<br>MC/SR<br>2 CR | 19<br>MC/SR<br>2 CR |  |

During the assessment, students may request an extended assessment period if they indicate that they have not completed the task. Such requests are granted if the test administrator finds the request to be educationally valid. See Chapter Seven for more information about testing sessions.

# Reporting Categories and Points Distributions for 2014 Mathematics and Reading Assessments

Since the 2005 assessment, the mathematics assessment results have been reported in five categories that approximately correspond to those advocated by the National Council of Teachers of Mathematics (NCTM). The code letters for these Assessment Anchor categories are A–E and correspond to the following:

- **A.** Numbers and Operations
- **B.** Measurement
- **C.** Geometry
- **D.** Algebraic Concepts
- **E.** Data Analysis and Probability

The traditional distribution of mathematics items into these five categories is shown in Table 3–9.

|       | Reporting Categories         |                |             |                          |                                  |  |  |  |  |  |  |  |
|-------|------------------------------|----------------|-------------|--------------------------|----------------------------------|--|--|--|--|--|--|--|
| Grade | A: Numbers and<br>Operations | B: Measurement | C: Geometry | D: Algebraic<br>Concepts | E: Data Analysis and Probability |  |  |  |  |  |  |  |
| 3     | 40%-50%                      | 12%-15%        | 12%-15%     | 12%-15%                  | 12%-15%                          |  |  |  |  |  |  |  |
| 4     | 43%-47%                      | 12%-15%        | 12%-15%     | 12%-15%                  | 12%-15%                          |  |  |  |  |  |  |  |
| 5     | 41%-45%                      | 12%-15%        | 12%-15%     | 13%-17%                  | 12%-15%                          |  |  |  |  |  |  |  |
| 6     | 28%-32%                      | 12%-15%        | 15%-20%     | 15%-20%                  | 15%-20%                          |  |  |  |  |  |  |  |
| 7     | 20%-24%                      | 12%-15%        | 15%-20%     | 20%-27%                  | 15%-20%                          |  |  |  |  |  |  |  |
| 8     | 18%-22%                      | 12%-15%        | 15%-20%     | 25%-30%                  | 15%-20%                          |  |  |  |  |  |  |  |

Table 3–9. Mathematics Reporting Categories

Due to the dual alignment of the items found in the 2014 operational assessment, these target distributions could not be met at every grade. Prior to the selection of the 2014 form, content specialists conducted a thorough review of both sets of Assessment Anchors and Eligible Content and the items in the existing pool to identify items that aligned to both. Using only items aligned to both sets of Assessment Anchors and Eligible Content, content specialists attempted to meet the reporting category-level blueprint to the extent possible. In situations where this was not feasible due to shifts in content covered at a particular grade from the Pennsylvania Academic Standards to the Pennsylvania Core Standards, adjustments to the blueprint were made to maintain the original test length while ensuring a true dual alignment of every operational and linking item. For the final distribution of items and points across reporting categories at each grade level, see Appendix B.

The reading assessment results will be reported in two broad categories:

- **A.** Comprehension and Reading Skills
- **B.** Interpretation and Analysis of Fictional and Nonfictional Text

Assessment Anchors associated with Comprehension and Reading Skills are coded with an initial letter A, and those related to Interpretation and Analysis of Fictional and Nonfictional Text are coded with an initial letter B. The distribution of items into these two categories across genres is shown in Table 3–10.

**Reporting Categories B:** Interpretation and Analysis of A: Comprehension % of Passages % of Passages Grade and Reading Skills Fictional and (Genre) (Genre) % Range **Nonfictional Text Fiction** Nonfiction % Range 20%-40% 3 60%-80% 50%-70% 30%-50% 4 60%-80% 20%-40% 50%-70% 30%-50%

20%-40%

30%-50%

30%-50%

40%-60%

50%-70%

40%-60%

40%-60%

40%-60%

30%-50%

40%-60%

40%-60%

40%-60%

Table 3–10. Reading Reporting Categories and Genre

Both the mathematics and reading content area reporting categories are further subdivided for specificity and Eligible Content or limits. Each subdivision is coded by adding an additional numeral, such as A.1. These subdivisions are called Assessment Anchors and Eligible Content.

# Assessment Anchor Content Standards Subsumed within Reporting Categories for 2014 Mathematics and Reading Assessment

For mathematics, there are 16 Assessment Anchor Content Standards (Assessment Anchors) aligned to the Pennsylvania Academic Standards that occur at all grade levels (Grades 3–8), although they are not all assessed at each grade level. More specifically, the number targeted for assessment by grade level are 10 at Grade 3; 12 at Grade 4; 13 at Grade 5; 12 at Grade 6; 14 at Grade 7; and 13 at Grade 8.

For reading, there are five Assessment Anchors aligned to the Pennsylvania Academic Standards that vary to reflect grade-level appropriateness. Within the Comprehension and Reading Skills Reporting Category, two Assessment Anchors pertain to understanding fiction text and understanding nonfiction text. Within the Interpretation and Analysis of Fictional and Nonfictional Text Reporting Category, three Assessment Anchors pertain to Components of Text, Literary Devices and Concepts, and Organization of Nonfiction Text.

Mathematics and reading scores are based on the core (common) sections. Also reported are the student's mathematics and reading performance levels. See Appendix B for a summary by grade level and content.

5

6

7

8

60%-80%

50%-70%

50%-70%

40%-60%

## **SCIENCE**

In 2003, the existing Science, Technology, Environment, and Ecology (STEE) test was deferred, and PDE began efforts to develop a new science assessment. In the winter of 2006, a series of cognitive labs or item pilots were conducted across Pennsylvania with the primary focus of ascertaining language and contextual issues within the draft open-ended test items (Grade 4), scenario-based multiple-choice items (Grades 8 and 11), and scenario-based open-ended items (Grade 11), as well as determining the relative difficulty of the test items, the time required to complete the individual tasks, and the opportunity to know factors related to the implementation of the new science Assessment Anchors and Eligible Content by the participating schools. (See the section on the science cognitive labs discussed later in this chapter.)

Following the series of successful cognitive labs or item pilots, DRC developed another set of test items for the proposed voluntary, standalone field test. During the development phase, PDE made the determination to change the designation of the field test from a voluntary assessment to a census-based assessment. Leading up to the administration of the standalone field test, both content review and bias, fairness, and sensitivity review were conducted in Pennsylvania with Pennsylvania educators. In the spring of 2007, the initial standalone field test was administered to the census populations at Grades 4, 8, and 11, followed by a rangefinding for the open-ended items. After the scoring was completed, an item review with data was conducted for the field-test items administered in 2007. Table 3–11 shows a timeline for development of the science assessment.

**Table 3–11. Science Development Implementation Timeline** 

| Year          | Event  |
|---------------|--|
| 2003          | STEE test put on hold  |
| 2004–<br>2005 | New assessment plan developed by PDE   |
| 2006          | Item Pilot (Cognitive Labs) to try out scenario-based science items  |
| 2007          | Initial Standalone Field Test for Grades 4, 8, and 11  |
| 2008          | Initial Operational Administration with core, matrix, and embedded field-test positions                          |
| 2009          | Second Operational Administration with core, equating block, and embedded field-test positions                   |
| 2010–<br>2014 | Continuation of Operational<br>Administration with core, equating<br>block, and embedded field-test<br>positions |

## Test Content Blueprint for the 2014 Operational Science Test

The PSSA is based on the Pennsylvania Academic Standards as defined by the Eligible Content. The PSSA science assessment for 2014 reflects the Assessment Anchor Content Standards, which were designed as a means of improving the articulation of curricular, instructional, and assessment practices. The Assessment Anchors serve to clarify the Academic Standards assessed on the PSSA and to communicate assessment limits, or the range of knowledge and skills from which the PSSA would be designed. Relevant to item development are the refinement and clarification embodied in the Assessment Anchors (PDE, 2004).

The Assessment Anchors are rooted in the Academic Standards adopted by the State Board of Education in January of 2002, and the standards—under two documents: *Science and Technology Standards* and the *Environment and Ecology Standards*—cover seventeen major categories describing what students need to know. Rather than attempting to report results for all seventeen standards, the categories are organized into only four. These categories are similar to those used by the National Assessment of Educational Progress (NEAP) and The Third International Mathematics and Science Study (TIMSS). However, the PSSA organizes the categories differently.

Achieve, Inc. conducted a preliminary review of the anchors in 2003 and produced a follow-up report on the anchors in 2005. More information about the Assessment Anchors and the Eligible Content can be found by referencing the Pennsylvania Science Assessment Anchors located on PDE's website at www.education.state.pa.us.

More information on the Assessment Anchors can be found in Chapter Two.

# Operational Layout for 2014 Science

The seventh operational administration of the PSSA science test took place in 2014. Critical to the preparation for this operational assessment, the design of the operational assessment had to be configured to meet NCLB requirements as well as other test development and psychometric requirements. The preliminary science PSSA plan was developed in 2004 through the collaborative efforts of DRC and PDE based on the recommendations of the Pennsylvania Technical Advisory Committee (TAC). At Grades 4 and 8, the science assessment consists of one test booklet and one separate answer booklet. The test booklet contains multiple-choice items and at Grade 8 contains stimulus scenario text. The answer booklet contains scannable pages for multiple-choice (MC) responses (answer grids), open-ended (OE) items with response spaces, and demographic data collection areas.

All MC items are worth 1 point. Standalone OE items receive a maximum of 2 points (on a scale of 0–2). Each test form contains common items (that are identical on all forms) along with equating block (equating items) and embedded field-test items. The common items consist of a set of core items taken by all students. The equating block items and the embedded field-test items are unique, in most instances, to a form. That is, there can be instances in which an equating block or embedded field-test item appears on more than one form.

At Grades 4 and 8, the 2014 PSSA science assessment is composed of 12 forms per grade. All of the forms contain common items identical for all students and sets of generally unique items that fulfill two purposes:

- 1. Field testing new items
- 2. Using items from the previous years' assessments for the purpose of linking

Tables 3–12 through 3–14 display the 2014 operational test design for science.

Table 3-12. 2014 Science Test Plan per Operational Form

| Grade | No. of Unique<br>Core MC per<br>Op. Form | No. of<br>Core-to-<br>Core MC<br>per Op.<br>Form | No. of<br>Equating<br>Block MC per<br>Op. Form | No. of<br>Embedded<br>FT MC per<br>Op. Form | No. of<br>Unique<br>Core OE<br>per Op.<br>Form | No. of Core-<br>to-Core OE<br>per Op.<br>Form | No. of<br>Equating<br>Block OE<br>per Op.<br>Form | No. of<br>Embedded FT<br>OE per Op.<br>Form | Total No. of<br>Items<br>per Op.<br>Form<br>MC/OE | Total No. of<br>Core Points<br>per Op<br>Test* |
|-------|--|--|--|---|--|---|---|---|---|--|
| 4     | 42                                       | 16   | 2  | 8   | 3 (2 pt)                                       | 2 (2 pt)                                      | 0   | 1 (2 pt)                                    | 68 MC<br>6 OE                                     | 68   |
| 8     | 38 +<br>4 scenario-<br>based             | 16   | 2  | 6 +<br>4 scenario-<br>based                 | 3 (2 pt)                                       | 2 (2 pt)                                      | 0   | 1 (2 pt)                                    | 70 MC<br>6 OE                                     | 68   |

<sup>\*</sup>Some equating block items may not be unique to each form.

Since an individual student's score is based solely on the common (or core) items, the total number of operational points is 68 for both grades. The total score is obtained by combining the points from the core MC and OE portions of the test as follows:

Table 3-13. 2014 Science Core Plan per Grade

| Grade | Standalone<br>MC Items | Scenario-based<br>MC Items | Standalone OE<br>Items | Scenario-based<br>OE Items | Total<br>Points |
|-------|------------------------|----------------------------|------------------------|----------------------------|-----------------|
| 4     | 58                     | 0                          | 5 (2 pt)               | 0 (4 pt)                   | 68              |
| 8     | 54                     | 4                          | 5 (2 pt)               | 0 (4 pt)                   | 68              |

For more information concerning the process used to convert the operational layout into forms (i.e., form construction), see Chapter Six. For more information about operational layout across forms and across years (i.e., form equivalency), see Chapter Ten.

# Linking for 2014 Science Assessment

Linking provides a statistical bridge between assessment administrations. The 2014 administration is linked back to the 2013 administration through the use of linking items in the core (core-to-core linking items) and the equating block (equating items).

#### **MULTIPLE-CHOICE ITEMS**

For Grades 4 and 8, science used 16 core-to-core linking MC items and 24 equating block MC items per grade.

#### **OPEN-ENDED ITEMS**

For both grades, science used two 2-point core-to-core linking OE items and no [zero] equating block OE items per grade.

| Grade | No. of<br>Core-to-<br>Core MC | No. of<br>Equating<br>Block MC | No. of<br>Core-to-<br>Core OE | No. of<br>Equating<br>Block OE | Max. No. of Linking Points per Op. Test* |
|-------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|--|
| 4     | 16                            | 24*                            | 2 (2 pt)                      | 0                              | 44*                                      |
| 8     | 16                            | 24*                            | 2 (2 pt)                      | 0                              | 44*                                      |

Table 3–14. 2014 Science Linking Points Plan

The topic of *linking* is discussed thoroughly in Chapter Fifteen.

# Test Sessions and Timing for 2014 Science Assessment

The testing window for the 2014 operational assessment extended from April 28 through May 9, 2014, including make-up sessions. The science assessments consisted of two sections in each grade. Test administration recommendations call for each section to be scheduled as one assessment session, although schools are permitted to combine both sections in a single session. Administration guidelines stipulate that the sections be administered in the sequence in which they are printed in the booklets. Table 3–15 and Table 3–16 outline the assessment schedule and estimated times for each section and the number and types of items tested for each grade level. The estimated student testing times did not include time for administrative tasks that occur during the pre- and post-administration activities.

**Table 3–15. Science – 2014 Administration and Testing Times** 

|                 | Suggested Times<br>(In Minutes) |                             |                 | Grade Level<br>Number of Items<br>and Item Type |               |
|-----------------|---------------------------------|-----------------------------|-----------------|---|---------------|
| Test<br>Section | Administration (Total)          | Administrative (Pre & Post) | Student Testing | 4   | 8             |
| 1               | 60<br>to<br>80                  | 15<br>to<br>20              | 45<br>to<br>60  | 34 MC<br>3 OE                                   | 35 MC<br>3 OE |
| 2               | 2 60 15<br>to to<br>80 20       |                             | 45<br>to<br>60  | 34 MC<br>3 OE                                   | 35 MC<br>3 OE |

During the assessment, students were allowed to request an extended assessment period if they indicated that they had not completed the task. Such requests were granted if the assessment administrator found them to be educationally valid. See Chapter Seven for more information about testing sessions.

<sup>\*</sup>Not all equating block items will be unique; some may appear on more than one form.

# Reporting Categories and Points Distributions

The science assessment results will be reported in four categories, coded as A through D:

- **A.** The Nature of Science
- **B.** Biological Sciences
- C. Physical Sciences
- **D.** Earth and Space Sciences

The distribution of science items into these four categories is shown in Table 3–16.

**Reporting Categories** Grade A: The Nature **B:** Biological D: Earth and C: Physical of Science **Sciences Sciences Space Sciences** 4 ~50% ~17% ~17% ~17% 8 ~17% ~50% ~17% ~17%

**Table 3–16. Science Reporting Categories** 

The Reporting Categories are further subdivided for specificity and Eligible Content limits. Each subdivision is coded by adding an additional numeral, such as A.1. These subdivisions are called Assessment Anchors, Descriptors (Sub-Assessment Anchors), and Eligible Content.

# Assessment Anchor Content Standards Subsumed within Reporting Categories for 2014 Science Assessment

Distributed across the four Reporting Categories are a dozen Sub-Reporting Categories. Each of the 12 Assessment Anchors exists at each grade level, with the Assessment Anchors and Eligible Content varying to reflect grade-level appropriateness. The numbers of Assessment Anchors targeted by grade level are 21 at Grade 4 and 23 at Grade 8.

Total science scores reported at the student level are based on the core (common) sections. School- and district-level scores are reported at the Eligible Content level under the Assessment Anchors and are based on the core (common) positions. See Appendix B for a summary by grade level and subject.

## 2006 Science Item Pilot

Prior to the initial field test in 2007, DRC, in collaboration with PDE, conducted a science cognitive lab/item pilot in selected schools throughout the Commonwealth from February 27 through March 17, 2006. A sample of 507 students from urban, suburban, and rural school districts from across the Commonwealth participated in the PSSA Science Item Tryout Project. The impetus for this study was Pennsylvania's response to the mandatory science assessment component of the No Child Left Behind legislation to create a rigorous science test for Grades 4, 8, and 11 by 2008. The primary purpose of the cognitive lab or item tryout was to pilot the use of the new science scenarios at Grade 8 and Grade 11 and to pilot the multiple-choice items at Grade 4.

The project involved development of science scenarios, refinement of science test items, creation of survey questions, and design of interview protocols to be administered using a cognitive laboratory technique. The cognitive laboratory technique was developed in the early 1980s through an interdisciplinary effort by survey methodologists and psychologists (Willis, 1999; Erickson and Simon, 1993). Different models of the cognitive process to solve a test item have evolved over the years, but all have four major processes in common: 1) comprehension of the question, 2) retrieval of relevant information, 3) decision process, and 4) response process (Tourangearu, 1984).

In the development and execution of the cognitive laboratory project, DRC customized the techniques employed specifically to meet PDE's goal and expectations. The goal of the project was to gather relevant information about the thinking processes of students enrolled in science in Grades 4, 8, and 11 in order to create a better science assessment for Pennsylvania students.

# Logistics and Demographics

PDE provided DRC with a list of the Science, Technology, Environment, and Ecology Assessment Advisory Committee (STEEAAC) members who agreed to participate and to facilitate the PSSA Science Item Tryout Project in their respective districts. Disbursed throughout Pennsylvania, participating districts provided a representative sample of students enrolled in science in Grades 4, 8, and 11 in urban, suburban, and rural schools. Participating districts are listed in Table 3–17.

Table 3–17. Participating Districts by Region

| <b>Region of Commonwealth</b> | School District  |  |  |
|-------------------------------|--|--|--|
| Western                       | Athens Area Grove City Area Penn Hills Pittsburgh Public Schools             |  |  |
| Central                       | Manheim Township Newport State College Area West Shore Wilkes-Barre Area     |  |  |
| Eastern                       | Haverford Township Lower Merion Mid-Valley Philadelphia City SD Upper Merion |  |  |

# Process and Procedures for the 2006 Item Pilot

Two parallel forms of the science assessment were designed for each grade level, with a designated administration time of thirty minutes. No attempt was made to replicate the design of a PSSA science operational test for the cognitive lab or pilot test because of testing-time limitations and the objectives of this study. The items were representative of items from each of the proposed PSSA's four reporting strands (i.e., The Nature of Science, Biological Sciences, Physical Sciences, and Earth and Space Sciences). All test items were approved by PDE before inclusion in the PSSA Science Item Tryout Project.

In Grade 4, each form of the test consisted of 10 multiple-choice items, 70 percent of which included graphs, graphics, charts, or tables with relevant information associated with the item. All four reporting strands were assessed in each Grade 4 test form. In Grades 8 and 11, age/grade-appropriate science scenarios were developed. The scenarios included graphics, charts, tables, graphs, and diagrams to support the scenario text. A set of test items associated with each science scenario was developed. In Grade 8, each test form included items from all four reporting strands. In Grade 11, scenarios in test Form A assessed the biological, earth and space, and nature of science reporting strands, while test Form B assessed the physical, earth and space, and nature of science reporting strands.

Scenarios and questions reached beyond simple fact recollection; they were designed to challenge students to think and to apply knowledge and skills learned in their classrooms. The science scenarios were based on Pennsylvania Assessment Anchors and Eligible Content. Scenarios were designed to reflect multi-dimensional classroom activities that incorporate higher cognitive levels of understanding. Each scenario was stimulus-based and included passages with graphics, charts, graphs, or a combination of all three media. Science scenarios challenged students to interpret passage content while using science knowledge and process skills to determine their answers.

# Implementation and Test Administration for 2006 Item Pilot

Two classrooms within one geographic region participated in the project each day. At least two test development specialists were present at all but one school district during the pilot study project sessions; in addition, representatives from PDE attended most sessions. The PSSA Science Item Tryout Project field work occurred during a three-week window, beginning on February 27 and concluding on March 16, 2006.

### WRITING

# Test Content Blueprint for 2014 Writing Assessment

As indicated in Chapter One and Chapter Two, the PSSA is based on the Pennsylvania Academic Standards for Reading, Writing, Speaking, and Listening. The writing test specifically measures Pennsylvania Academic Standards 1.4 (Types of Writing) and 1.5 (Quality of Writing). The Reading, Writing, Speaking, and Listening Standards were designed to show what students should know and be able to do with the English language at each grade level. The Standards establish an outline for what can be assessed on the PSSA writing test and help to communicate the range of knowledge and skills from which the PSSA items would be designed.

The PSSA writing test for Grades 5, 8, and 11 in 2006 through 2012 followed this content blueprint and testing plan in order to reflect the Pennsylvania Academic Standards. The PSSA writing test in 2013 continued to follow this blueprint and testing plan for Grades 5 and 8. The 2014 writing assessment continues to follow this blueprint and testing plan, but is aligned to the Language and Writing Eligible Content of the Pennsylvania Core Standards-aligned Assessment Anchors and Eligible Content in addition to the Pennsylvania Academic Standards.

# Operational Layout for 2014 Writing

The PSSA operational layout was developed through the collaborative efforts of Data Recognition Corporation (DRC), the National Center for Improvement of Educational Assessment (NCIEA), and the Pennsylvania Department of Education. The layout was subsequently evaluated and approved by PDE. The writing test book is scannable and includes fields for student demographic data, stimuli (i.e., embedded error passages) linked to multiple-choice (MC) items, and writing prompts (WP). Each MC item is worth 1 point. Responses to WP items receive a maximum of 4 points (on a scale of 1–4) for demonstrating control in a given mode and also receive a maximum of 4 points (on a scale of 1–4) for demonstrating control of conventions. The writing scoring guidelines have a 1, 2, 3, and 4 score point, but there is no zero score point. Blanks and other non-scoreable responses are the only situations in which a student's raw score is zero.

## **MULTIPLE-CHOICE ITEMS**

Each test form contains a common set of operational items (i.e., each student is tested on an identical set of core items). Due to the transition to an ELA assessment planned for 2015, embedded field-test items were not included in the 2014 assessment for either Grade 5 or Grade 8.

#### WRITING PROMPTS

Each 2014 test form contains two common operational writing prompts. The core prompts are taken by all students at a grade level. The 2006 through 2008 operational forms did not contain matrix or embedded field-test writing prompts; however, in order to begin building a bank of usable prompts for use in future operational administrations, writing prompts began to appear in field-test positions starting again in 2009. Grade 5 did not require embedded field testing in 2013, so the embedded field-test writing prompt section was omitted in 2013. Neither grade required embedded field testing in 2014, so the embedded field-test writing prompt section was omitted for both grades in 2014. For more information on the field-test process that occurred for the development of the writing prompts used operationally in 2014, see Chapter Five.

## **Forms**

The 2014 writing PSSA is composed of one form at Grade 5 and one form at Grade 8.

Table 3–18 and Table 3–19 display the design for the writing test forms. The column entries for these tables denote the following:

- Number of core Revising and Editing (R&E) stimulus-based MC items
- Number of embedded field-test R&E stimulus-based MC items
- Total number of R&E stimulus-based MC items
- Number of pre-equated core 4-point writing prompts (WP)

- Number of field-test WP
- Total number of MC and OE items in the form (Total Items MC/WP)

Table 3–18. 2014 Writing Test Plan per Operational Form per Grade

| Grade | No. of Core<br>R&E Stimulus-<br>based MC<br>Items per Form | No. of FT R&E<br>Stimulus-based<br>MC Items<br>per Form | Total No. of<br>R&E MC<br>Items per<br>Form | No. of<br>Pre-equated<br>Core 4-point<br>WP per Form | No. of FT<br>WP per<br>Form | Total No. of<br>Items per Op.<br>Form (MC/WP) |
|-------|--|---|---|--|-----------------------------|---|
| 5     | 12   | 0   | 12  | 2  | 0                           | 12/2  |
| 8     | 12   | 0   | 12  | 2  | 0                           | 12/2  |

Since an individual student's score is based solely on the common, or core, items, the total number of operational points is 100. The total score is obtained by combining the points from the core MC and WP portions of the test as displayed in Table 3–19.

Table 3–19. Maximum Eligible Core Points for Writing Prompts

| Multiple-                            | Writin   | Totals   |               |  |
|--------------------------------------|--|--|---------------|--|
| choice                               | Conventions Mode                                     |  | 2 0 00020     |  |
| 12                                   | 8  | 80   | 100           |  |
| 12 items × 1<br>point each<br>(12×1) | 2 items, each worth a maximum of 4 points each (2×4) | 2 items, each worth a maximum of 4 points each.  The raw score is then multiplied by 10.  (2×4)×10 | (12 + 8 + 80) |  |

# Linking for 2014 Writing Assessment

The matter of linking for the PSSA writing assessment is covered in Chapter Fifteen.

# Test Sessions and Timing

The testing window for the 2014 operational assessment was from March 31 through April 11, 2014, including make-up sessions. The writing assessment consisted of three sections in each grade. Test administration required each complete section to be scheduled as one assessment session, although schools were permitted to combine multiple sections as a single session. Administration guidelines stipulated that the sections be administered in the sequence in which they were printed in the test book. Table 3–20 outlines the assessment schedule and estimated times for each section.

Table 3–20. Writing

| Section | Contents           | Administration<br>(Total in minutes) | Administrative (Pre & Post in minutes) | Student Testing in minutes |
|---------|--------------------|--------------------------------------|--|----------------------------|
| 1       | 12 Multiple-choice | 40 to 55                             | 15 to 20                               | 25 to 35                   |
| 2       | 1 Writing Prompt   | 70 to 85                             | 15 to 20                               | 55 to 65                   |
| 3       | 1 Writing Prompt   | 70 to 85                             | 15 to 20                               | 55 to 65                   |

# Reporting Categories and Point Distribution for 2014 Writing Assessment

The writing assessment results will be reported in two categories:

- 1. Composition Academic Standard 1.4, Types of Writing
- 2. Revising and Editing Academic Standard 1.5, Quality of Writing

Academic Standards A, B, and C are associated with Composition. Academic Standards E and F are associated with Revising and Editing. The distribution of core items into these two categories is shown in Table 3–21. See also Appendix B for a summary by grade level and subject.

Table 3–21. Core Points Distribution

| Reporting Category                    | Composition         | Revising and Editing | Total |  |
|---------------------------------------|---------------------|----------------------|-------|--|
| Academic Standards                    | 1.4.A, 1.4.B, 1.4.C | 1.5.E and 1.5.F      |       |  |
| Multiple-choice Items                 | N/A                 | 12                   | 12    |  |
| Writing Prompt 1                      | 4 (Mode)            | 4 (Conventions)      | 8     |  |
| Writing Prompt 2                      | 4 (Mode)            | 4 (Conventions)      | 8     |  |
| Raw Subtotal                          | 8                   | 8 20                 |       |  |
| Weighting Factor applied to Raw Score | ×10                 | ×1                   |       |  |
| Total Possible Points                 | 80                  | 20                   | 100   |  |

For more information concerning the process used to convert the operational layout into forms (i.e., form construction), see Chapter Six. For more information about operational layout across forms and across years (i.e., form equivalency), see Chapter Ten.

## TEST DEVELOPMENT CONSIDERATIONS: ALL ASSESSMENTS

Alignment to the Pennsylvania Academic Standards-aligned Assessment Anchors and Eligible Content (or, in the case or writing, strong alignment with the PSSA Academic Standards), alignment to the Pennsylvania Core Standards-aligned Assessment Anchors and Eligible Content, grade-level appropriateness (reading/interest level, etc.), depth of knowledge, cognitive level, item/task level of complexity, estimated difficulty level, relevancy of context, rationale for distractors, style, accuracy, and correct terminology were major considerations in the item development process. The *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999) and the *Principles of Universal Design* (Thompson, Johnstone, & Thurlow, 2002)

guided the development process. In addition, DRC's manual, Fairness in Testing: Guidelines for Training on Bias, Fairness, and Sensitivity Issues was used for developing items. All items were reviewed for fairness by bias and sensitivity committees and for content by Pennsylvania educators and field specialists. Items were also reviewed for adherence to the Principles of Universal Design by representatives from the National Center for Educational Outcomes (NCEO). In addition, the items were reviewed for adherence to the guidelines outlined in the Pennsylvania publication Principles, Guidelines and Procedures for Developing Fair Assessment Systems: Pennsylvania Assessment Through Themes (PATT).

## Bias, Fairness, and Sensitivity: All Assessments

At every stage of the item and test development process, DRC employs procedures that are designed to ensure that items and tests meet Standard 7.4 of the Standards for Educational and Psychological Testing (AERA, APA, NCME, 1999).

Standard 7.4: Test developers should strive to identify and eliminate language, symbols, words, phrases, and content that are generally regarded as offensive by members of racial, ethnic, gender, or other groups, except when judged to be necessary for adequate representation of the domain.

To meet Standard 7.4, DRC employs a series of internal quality steps. DRC provides specific training for test developers, item writers, and reviewers on how to write, review, revise, and edit items for issues of bias, fairness, and sensitivity (as well as for technical quality). Training also includes an awareness of and sensitivity to issues of cultural diversity. In addition to providing *internal* training in reviewing items in order to eliminate potential bias, DRC also provides *external* training to the review panels of minority experts, teachers, and other stakeholders.

DRC's guidelines for bias, fairness, and sensitivity include instruction concerning how to eliminate language, symbols, words, phrases, and content that might be considered offensive by members of racial, ethnic, gender, or other groups. Areas of bias that are specifically targeted include, but are not limited to, stereotyping, gender, regional/geographic, ethnic/cultural, socioeconomic/class, religious, and biases against a particular age group (ageism) or persons with disabilities. DRC catalogues topics that should be avoided and maintains balance in gender and ethnic emphasis within the pool of available items and passages.

## Universal Design: All Assessments

As stated above, the Principles of Universal Design were incorporated throughout the item development process to allow participation of the widest possible range of students in the PSSA. The following checklist was used as a guideline:

- Items measure what they are intended to measure.
- Items respect the diversity of the assessment population.
- Items have a clear format for text.
- Stimuli and items have clear pictures and graphics.
- Items have concise and readable text.

- Items allow changes to other formats, such as Braille, without changing meaning or difficulty.
- The arrangement of the items on the test has an overall appearance that is clean and well organized.

A more extensive description of the application of the Principles of Universal Design is described in Chapter Four.

# Depth of Knowledge: All Assessments

An important element in statewide assessment is the alignment between the overall assessment system and the state's standards. A methodology developed by Norman Webb (1999) offers a comprehensive model that can be applied to a wide variety of contexts. With regard to the alignment between standards statements and the assessment instruments, Webb's criteria include five categories, one of which deals with content. Within the content category is a useful set of levels for evaluating depth of knowledge (DOK). According to Webb (1999), "depth-of-knowledge consistency between standards and assessments indicates alignment if what is elicited from students on the assessment is as demanding cognitively as what students are expected to know and do as stated in the standards" (p. 7–8). The four levels of cognitive complexity (i.e., depths of knowledge) are as follows:

- Level 1: Recall
- Level 2: Application of Skill/Concept
- Level 3: Strategic Thinking
- Level 4: Extended Thinking

Depth-of-knowledge levels were incorporated in the item writing and review process, and items were coded with respect to the level they represented. Generally, multiple-choice items are written to DOK levels 1 and 2, and constructed-response items are written to DOK level 3.

# Passage Readability

Evaluating the readability of a passage is essentially a judgmental process by individuals familiar with the classroom context and what is linguistically appropriate at a given grade level as described in the section on reading passage selection later in this chapter. Although various readability indices were computed and reviewed, it is recognized that such methods measure different aspects of readability and are often fraught with particular interpretive liabilities. Thus, the commonly available readability formulas were not used in a rigid way, but more informally to provide for several snapshots of a passage that senior test development staff considered along with experience-based judgments in guiding the passage selection process. In addition, passages were reviewed by committees of Pennsylvania educators who evaluated each passage for readability and grade-level appropriateness.

## Test Item Readability: All Assessments

Careful attention was given to the readability of the items to make certain that the assessment focus of the item did not shift based on the difficulty of reading the item. Subject areas such as mathematics or science contain many content-specific vocabulary terms. As a result, readability formulas were not used. However, wherever it was practicable and reasonable, every effort was made to keep the vocabulary one grade level below the tested grade level for non-reading tests.

There was a conscious consideration made to ensure that each test question was evaluating a student's ability to build toward mastery of the mathematics standards or the science standards versus the student's reading ability. Resources used to verify the vocabulary level were the *EDL Core Vocabularies* and the *Children's Writer's Word Book*.

In addition, every test question is brought before several different committees composed of grade-level experts in the field of mathematics education and science education. They review each question from the perspective of the students they teach, and they determine the validity of the vocabulary used and work to minimize the level of reading required.

Vocabulary was also addressed at the Bias, Fairness, and Sensitivity Review, although the focus was on how certain words or phrases may represent a possible source of bias or issue of fairness or sensitivity.

## TEST DEVELOPMENT PROCESS: ALL ASSESSMENTS

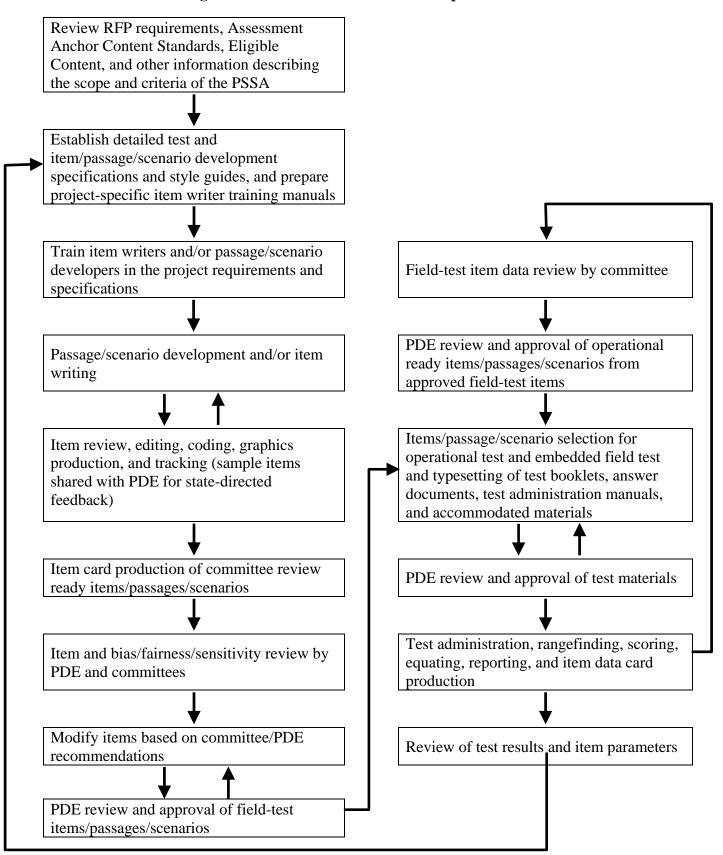
The test development process for passages, scenarios, and items followed a logical timeline, which is outlined below in Figure 3–1. On the front end of the schedule, tasks were generally completed with the goal of presenting field-test candidate items to committees of Pennsylvania educators. On the back-end of the schedule, all tasks lead to the field-test data review.

Figure 3–1. Item and Test Development Cycle and Timeline

| Steps in Development Cycle                          | Timeline Before | /Afte | er New Item Review |
|---|-----------------|-------|--------------------|
| Development planning                                | Fall            | Û     | -12 to -9 months   |
| Reading passage selection                           | Fall            | Û     | -12 to -9 months   |
| Item writer training                                | Fall/Winter     | Û     | -9 months          |
| Initial item authoring                              | Winter/Spring   | Û     | -9 to -4 months    |
| Internal reviews and PDE reviews                    | Spring/Summer   | Û     | -8 to -1 month     |
| Bias, Fairness, and Sensitivity Review              | Summer/Fall     | Û     | +/- 0 months       |
| New Item Content Review                             | Summer/Fall     | ⇒     | +/- 0 months       |
| Post-review resolution and clean-up                 | Summer/Fall     | Û     | +1 to +2 months    |
| Build test forms                                    | Fall            | Û     | +2 to +4 months    |
| Internal form reviews and PDE reviews               | Fall/Winter     | Û     | +3 to +4 months    |
| Form printing, packaging, and shipping              | Winter/Spring   | Û     | +4 to +8 months    |
| Test administration                                 | Spring          | Û     | +9 months          |
| Material/data processing, rangefinding, and scoring | Spring/Summer   | Û     | +10 to +12 months  |
| Field-Test Item Data Review                         | Summer          | ⇒     | +12 months         |
| Select operational items                            | Summer/Fall     | Û     | +13 to +15 months  |

The process flowchart in Figure 3–2 illustrates the interrelationship among the steps in the process that occur in a normal year of development (i.e., when the items for field testing are primarily from new development, as opposed to being selected from an existing item bank). In addition, a detailed process table describing the item and test development processes also appears in Appendix C.

Figure 3-2. DRC Item and Test Development Process



The following paragraphs describe the processes which lead up to the operational test in a normal round of development. These processes were used to develop all the 2013 field-test items used as operational items in the 2014 administration.

# Item Development Planning Meeting: All Assessments

Prior to the start of any item development work, DRC's test development staff meets with PDE's assessment office to discuss the test development plans for the next PSSA administration, including the test blueprint, the field-test plan (including development counts), procedures, timelines, etc. With a complete development cycle lasting several years (from item authoring through field test, data review, and operational usage), the initial planning begins well in advance of the anticipated administration. For the 2014 operational administration, the initial planning meeting for the item authoring process for the 2013 field test occurred in fall 2011. Item authoring began early in 2012, with the item review meetings occurring in July 2012. See Table 3–2.

## Item Writer Training: All Assessments

Item writers were selected and trained for the content areas of mathematics, reading, science, and writing. Qualified writers were college graduates with teaching experience and a demonstrated base of knowledge in the content area. Many of these writers were content assessment specialists and curriculum specialists. The writers were trained individually and had previous experience in writing multiple-choice and open-ended items. Prior to developing items for the PSSA, the cadre of item writers was trained with regard to the following:

- Pennsylvania Academic Standards, Assessment Anchors, and Eligible Content
- Pennsylvania Core Standards, Assessment Anchors, and Eligible Content
- Webb's Four Levels of Cognitive Complexity: Recall, Basic Application of Skill/Concept, Strategic Thinking, and Extended Thinking
- General Scoring Guidelines for Each Content Area
- Specific and General Guidelines for Item Writing
- Bias, Fairness, and Sensitivity Guidelines
- Principles of Universal Design
- Item Quality Technical Style Guidelines
- Reference Information
- Sample Items

## Reading Passage Selection

The task of searching for passages was conducted by DRC professionals with classroom experience in reading/language arts. These professionals also underwent specialized training (provided by DRC) in the characteristics of acceptable passages. Guidelines for passage selection included appropriate length, text structure, density, and vocabulary for the grade level. A judgment was also made about whether the reading level required by a particular passage was at the independent level, that is, where the average student should be able to read 90 percent of words in the text independently. Passage finders were given the charge to search for a specified number of passages for each genre. Generally, at least twice as many passages as needed were sought. Most passages acquired for the 2013 field test were authentic in that they were culled from published materials. Approval to reprint was secured from the publishers. Passages underwent an internal review by several test development content editors to judge their merit with regard to the following criteria:

- Passages have interest value for students.
- Passages are grade-appropriate in terms of vocabulary and language characteristics.
- Passages are free of bias, fairness, and sensitivity issues.
- Passages represent different cultures.
- Passages are from a variety of sources.
- Passages are able to stand the test of time.
- Passages are sufficiently rich to generate a variety of MC and CR items.
- Passages are complete with all necessary permissions documentation.
- Passages avoid dated subject matter unless a relevant historical context is provided.
- Passages should not require students to have extensive background knowledge in a certain discipline or area to understand a text.

Once through the internal review process, those passages deemed potentially acceptable were reviewed by the Reading Content Committee and Bias, Fairness, and Sensitivity Committee for final approval.

# Item Authoring and Tracking: All Assessments

Initially, items are generated with software-prepared PSSA Item Cards, which allows for preliminary sorting and reviewing. Although very similar, the PSSA Item Card for Multiple-Choice Items differs from the PSSA Item Card for Constructed-Response Items in that the former has a location at the bottom of the card for comments regarding the distractors. Examples of these two cards are shown in Appendix D. In both instances a column against the right margin includes codes to identify the subject area, grade level, content categories, passage information (in the case of reading), item type, depth of knowledge (cognitive complexity), estimated difficulty, answer key (for MC items), and calculator use (for mathematics items).

All items undergoing field testing in 2013 were entered into the DRC Item Development and Educational Assessment System (IDEAS), which is a comprehensive, secure, online item banking system. It accommodates item writing, item viewing and reviewing, and item tracking and versioning. IDEAS manages the transition of an item from its developmental stage to its approval for use within a test form. The system supports an extensive item history that includes item usage within a form, item-level notes, content categories and subcategories, item statistics from both classical and Rasch item analyses, and classifications derived from analyses of differential item functioning (DIF). A sample IDEAS Data Card is presented in Appendix D.

## Internal Reviews and PDE Reviews: All Assessments

To ensure that the items produced were sufficient in number and adequately distributed across subcategories and levels of difficulty, item writers were informed of the required quantities of items. As items were written, an item authoring card was completed. It contained information about the item, such as grade level, content category, and subcategories. Based on the item writer's classroom teaching experience, knowledge of the content-area curriculum, and cognitive demands required by the item, estimates were recorded for level of cognitive complexity and difficulty level. Items were written to provide for a range of difficulty.

As part of the item construction process, each item was reviewed by content specialists and editors at DRC, at WestEd, or at both companies (depending on the grade level and content). Content specialists and editors evaluated each item to make sure that it measured the intended Eligible Content and/or Assessment Anchor Content Standard. They also assessed each item to make certain that it was appropriate for the intended grade and that it provided and cued only one correct answer (MC items only). In addition, the difficulty level, depth of knowledge, graphics, language demand, and distractors were also evaluated. Other elements considered in this process include, but are not limited to Universal Design, bias, source of challenge, grammar/punctuation, and PSSA style.

Following this internal process, items were reviewed by content specialists at the Pennsylvania Department of Education. PDE staff then consulted with DRC and WestEd about any general issues or concerns (e.g., style, format, interpretation of Assessment Anchors and Eligible Content) and about edits to specific items. Following PDE's review, the items were prepared for the content review meetings conducted with Pennsylvania educators.

## Item Content Review in Summer 2012: All Assessments

Prior to the 2013 field testing, all newly developed test items were submitted to content committees for review. The content committees consisted of Pennsylvania educators from school districts throughout the Commonwealth of Pennsylvania, some with postsecondary university affiliations. The primary responsibility of the content committee was to evaluate items with regard to quality and content classification, including grade-level appropriateness, estimated difficulty, depth of knowledge, and source of challenge. With source of challenge, items are identified where the cognitive demand is focused on an unintended content, concept, or skill (Webb, 2002). In addition, source of challenge may be attributed if the reason that an answer could be given results from a cultural bias, an inappropriate reading level, or a flawed graphic in an item, or if an item requires specialized, non-content related knowledge to answer. Source of challenge could result in a student who has mastered the intended content or skill answering the item correctly or a student who has not mastered the intended content or skill answering the item correctly. Committee members were asked to note any items with a source of challenge and to suggest revisions to remove the source of challenge. They also suggested revisions and made

recommendations for reclassification of items. In some cases when an item was deleted, the committee suggested a replacement item and/or reviewed a suggested replacement item provided by the facilitators. The committee also reviewed the items for adherence to the Principles of Universal Design, including language demand and issues of bias, fairness, and sensitivity.

The content review was held June 11–13, 2012, for science; June 11–15, 2012, for ELA: writing Grades 6–8; June 18–20, 2012, for mathematics Grades 3–5; June 18–22, 2012, for ELA: reading Grades 3–5; June 25–26, 2012, for writing Grade 8; and June 25–27, 2012, for mathematics Grades 6–8 and reading Grades 6–8. Committee members were approved by PDE, and PDE-approved invitations were sent to them by DRC. PDE also selected internal staff members for attendance. The meeting commenced with a welcome by PDE and DRC. This was followed by an overview of the test development process by DRC. PDE, along with DRC, also provided training on the procedures and forms to be used for item content review.

DRC content assessment specialists facilitated the reviews and were assisted by representatives of PDE and WestEd. Committee members, grouped by grade level and content area, worked through and reviewed the items for quality and content, as well as for the following categories:

- Assessment Anchor Alignment (classified as Full, Partial, or No)
- Content Limits (classified as Yes or No)
- Grade-Level Appropriateness (classified as At Grade Level, Below Grade Level, or Above Grade Level)
- Difficulty Level (classified as Easy, Medium, or Hard)
- Depth of Knowledge (classified as Recall, Application, Strategic Thinking)
- Appropriate Source of Challenge (classified as Yes or No)
- Correct Answer (classified as Yes or No)
- Quality of Distractors (classified as Yes or No)
- Graphics (classified as Yes or No) in regards to appropriateness
- Appropriate Language Demand (classified as Yes or No)
- Freedom from Bias (classified as Yes or No)

The members then came to consensus and assigned a status to each item as a group: Approved, Accepted with Revision, Move to Another Assessment Anchor or Grade, or Rejected. All comments were recorded, and a master rating sheet was completed. Committee facilitators recorded the committee consensus on the Item Review Rating Sheet. A sample form and rating criteria may be found in Appendix E.

Security was addressed by adhering to a strict set of procedures. Items in binders were distributed for committee review by number and signed for by each member on a daily basis. All attendees, with the exception of PDE staff, were required to sign a confidentiality agreement. All materials not in use at any time were stored in a locked room. Secure materials that did not need to be retained after the meetings were deposited in secure barrels and the contents were shredded.

## Bias, Fairness, and Sensitivity Reviews in July 2012: All Assessments

Prior to 2013 field testing, all newly developed test items for science and writing were also submitted to a Bias, Fairness, and Sensitivity Committee for review. This took place from June 11–15, 2012, and June 20–22, 2012, for reading, mathematics, science, writing, and English Language Arts. The committee's primary responsibility was to evaluate items with regard to bias, fairness, and sensitivity issues. They also made recommendations for changes or deletion of items in order to remove the potential for issues of bias, fairness, and/or sensitivity. Included in the review were proposed reading passages. An expert, multi-ethnic committee composed of men and women was trained by a DRC test development lead to review items for bias, fairness, and sensitivity issues. Training materials included a manual developed by DRC (DRC, 2003–2012). Members of the committee also had expertise with special-needs students and English Language Learners. PDE staff members were also trained and participated in the review. All reading, mathematics, science, and writing items were read by a cross-section of committee members. Each member noted bias, fairness, and/or sensitivity comments on tracking sheets and on the item, if needed, for clarification. Committee members individually categorized any concerns as related to ageism, disability, ethnicity/culture, gender, religion, socioeconomic status, or stereotyping. These categories were then the framework through which recommendations for modification or rejection of items occurred during the subsequent committee consensus process. The committee then discussed each of the issues as a group and came to consensus as to which issues should represent the view of the committee. All consensus comments were then compiled, and the suggested actions on these items were recorded and submitted to PDE. This review followed the same security procedures as outlined above, except that the materials were locked up and stored at the DRC offices in Harrisburg. Table 3-22 shows the gender and race/ethnicity composition for the members of the bias committee who reviewed the PSSA items and passages for bias, fairness, and sensitivity.

Table 3–22. Demographic Composition of the 2012 Bias, Fairness, and Sensitivity Committee

| Member # | Gender            | Race/Ethnicity  | Background                                      |
|----------|-------------------|---|---|
| 1.       | Female            | Hispanic American   | Migrant Education Student<br>Support Specialist |
| 2.       | Female            | Hispanic American   | Community Leader                                |
| 3.       | Male              | Hispanic American   | Special Education/ELL/PATTAN Representative     |
| 4.       | Female            | Asian American  | Retired Educator/National<br>Consultant         |
| 5.       | Male              | Asian American  | Educator/National Consultant                    |
| 6.       | Female            | Caucasian American  | Educator/Special Education                      |
| 7.       | Female            | Caucasian American  | Educator/Special Education                      |
| 8.       | Female            | Caucasian American  | Educator/Special Education                      |
| 9.       | Male              | Caucasian American  | University Professor                            |
| 10.      | Female            | African American  | Educator/Instructional Specialist               |
| 11.      | Female            | African American  | Retired Educator                                |
| 12.      | Male              | African American  | Retired Superintendent/National Consultant      |
| Totals   | 8 Females 4 Males | 3 Hispanic Americans<br>2 Asian Americans<br>4 Caucasian Americans<br>3 African Americans |   |

The results from the Bias, Fairness, and Sensitivity Committee review of mathematics are summarized in Table 3–23.

Table 3–23. Number of Items—2012 Bias, Fairness, and Sensitivity Committee Review for Mathematics

|       | Mathematics Items              |                |                        |          |  |  |
|-------|--------------------------------|----------------|------------------------|----------|--|--|
| Grade | Total items reviewed per grade | Accepted As Is | Accepted With Revision | Rejected |  |  |
| 3     | 276                            | 274            | 2                      | 0        |  |  |
| 4     | 277                            | 267            | 10                     | 0        |  |  |
| 5     | 277                            | 276            | 1                      | 0        |  |  |
| 6     | 112                            | 108            | 4                      | 0        |  |  |
| 7     | 112                            | 108            | 4                      | 0        |  |  |
| 8     | 115                            | 112            | 3                      | 0        |  |  |
| Total | 1,169                          | 1,145          | 24                     | 0        |  |  |

The results from the Bias, Fairness, and Sensitivity Committee review of reading are summarized in Table 3–24.

Table 3–24. Number of Items—2012 Bias, Fairness, and Sensitivity Committee Review for Reading

|       | Reading Passages and Items  |                                |                   |                        |          |
|-------|-----------------------------|--------------------------------|-------------------|------------------------|----------|
| Grade | Total passage sets reviewed | Total items reviewed per grade | Accepted As<br>Is | Accepted With Revision | Rejected |
| 6     | 13                          | 141                            | 141               | 0                      | 0        |
| 7     | 12                          | 119                            | 119               | 0                      | 0        |
| 8     | 13                          | 141                            | 141               | 0                      | 0        |
| Total | 38                          | 401                            | 401               | 0                      | 0        |

The results from the Bias, Fairness, and Sensitivity Committee review of science are summarized in Table 3–25.

Table 3–25. Number of Items—2012 Bias, Fairness, and Sensitivity Committee Review for Science

|       | Science Items                      |                                |                   |                        |          |
|-------|------------------------------------|--------------------------------|-------------------|------------------------|----------|
| Grade | Total scenarios reviewed per grade | Total items reviewed per grade | Accepted As<br>Is | Accepted With Revision | Rejected |
| 4     | n/a                                | 168                            | 166               | 2                      | 0        |
| 8     | 7                                  | 242                            | 242               | 0                      | 0        |
| Total | 7                                  | 410                            | 408               | 2                      | 0        |

The results from the Bias, Fairness, and Sensitivity Committee review of writing are summarized in Table 3–26.

Table 3–26. Number of Items—2012 Bias, Fairness, and Sensitivity Committee Review for Writing

|       | Writing Items, Passages, and Prompts |   |                   |                        |          |
|-------|--------------------------------------|---|-------------------|------------------------|----------|
| Grade | Total passages reviewed per grade    | Total items or prompts reviewed per grade | Accepted As<br>Is | Accepted With Revision | Rejected |
| 8     | 13                                   | 90  | 90                | 0                      | 0        |
| Total | 13                                   | 90  | 90                | 0                      | 0        |

The results from the Bias, Fairness, and Sensitivity Committee review of ELA: Reading are summarized in Table 3–27.

Table 3–27. Number of Items—2012 Bias, Fairness, and Sensitivity Committee Review for ELA: Reading

|       | Writing Items, Passages, and Prompts |   |                   |                        |          |
|-------|--------------------------------------|---|-------------------|------------------------|----------|
| Grade | Total passages reviewed per grade    | Total items or prompts reviewed per grade | Accepted As<br>Is | Accepted With Revision | Rejected |
| 3     | 27                                   | 290                                       | 289               | 1                      | 0        |
| 4     | 31                                   | 324                                       | 312               | 1                      | 11       |
| 5     | 33                                   | 305                                       | 305               | 0                      | 0        |
| Total | 91                                   | 919                                       | 906               | 2                      | 11       |

The results from the Bias, Fairness, and Sensitivity Committee review of ELA: Writing are summarized in Table 3–28.

Table 3–28. Number of Items—2012 Bias, Fairness, and Sensitivity Committee Review for ELA: Writing

|       | Writing Items, Passages, and Prompts      |                   |                        |          |  |
|-------|---|-------------------|------------------------|----------|--|
| Grade | Total items or prompts reviewed per grade | Accepted As<br>Is | Accepted With Revision | Rejected |  |
| 3     | 267                                       | 249               | 18                     | 0        |  |
| 4     | 264                                       | 251               | 13                     | 0        |  |
| 5     | 262                                       | 258               | 2                      | 2        |  |
| Total | 793                                       | 758               | 33                     | 2        |  |

# Chapter Four: Universal Design Procedures Applied in the PSSA Test Development Process

Universally designed assessments allow participation of the widest possible range of students and contribute to valid inferences about participating students. Principles of Universal Design are based on the premise that each child in school is a part of the population to be tested and that testing results should not be affected by disability, gender, race, or English language ability (Thompson, Johnstone & Thurlow, 2002). At every stage of the item and test development process, including the 2013 field test, procedures were employed to ensure that items and subsequent tests were designed and developed using the elements of universally designed assessments developed by the National Center for Educational Outcomes (NCEO).

Federal legislation addresses the need for universally designed assessments. The No Child Left Behind Act (Elementary and Secondary Education Act) requires that each state must "provide for the participation in [statewide] assessments of all students" [Section 1111(b)(3)(C)(ix)(I)]. Both Title 1 and IDEA regulations call for universally designed assessments that are accessible and valid for all students, including students with disabilities and English Language Learners. The benefits of universally designed assessments not only apply to these groups of students, but to all individuals with wide-ranging characteristics.

DRC's test development team was trained in the elements of Universal Design as it relates to developing large-scale statewide assessments. Team leaders were trained directly by NCEO, and other team members were subsequently trained by team leaders. Committees involved in content review included some members who were familiar with the unique needs of students with disabilities and English Language Learners. Likewise some members of the Bias, Fairness, and Sensitivity Committee were conversant with these issues. What follows are the Universal Design guidelines followed during all stages of the item development process for the PSSA.

### **ELEMENTS OF UNIVERSALLY DESIGNED ASSESSMENTS**

After a review of research relevant to the assessment development process and the Principles of Universal Design (Center for Universal Design, 1997), NCEO has produced seven elements of Universal Design as they apply to assessments (Thompson, Johnstone & Thurlow, 2002). These elements served to guide PSSA item development.

### • Inclusive Assessment Population

The PSSA target population includes all students at the assessed grades attending Commonwealth schools. For state, district, and school accountability purposes, the target population includes all students except those who will participate in accountability through an alternate assessment.

### Precisely Defined Constructs

An important function of well-designed assessments is that they actually measure what they are intended to measure. The Pennsylvania Assessment Anchor Content Standards (Assessment Anchors) provided clear descriptions of the constructs to be measured by the PSSA at the assessed grade levels. Universally designed assessments must remove all non-construct-oriented cognitive, sensory, emotional, and physical barriers.

### • Accessible, Non-biased Items

DRC conducted both internal and external reviews of items and test specifications to ensure that they did not create barriers because of lack of sensitivity to disability, culture, or other subgroups. Items and test specifications were developed by a team of individuals who understand the varied characteristics of items that might create difficulties for any group of students. Accessibility is incorporated as a primary dimension of test specifications, so accessibility was woven into the fabric of the test rather than being added after the fact.

### Amenable to Accommodations

Even though items on universally designed assessments are accessible for most students, there are some students who continue to need accommodations. This essential element of a universally designed assessment requires that the test is compatible with accommodations and a variety of widely used adaptive equipment and assistive technology. (See the section on Assessment Accommodations later in Chapter Four.)

### • Simple, Clear, and Intuitive Instructions and Procedures

Assessment instructions should be easy to understand, regardless of a student's experience, knowledge, language skills, or current concentration level. Questions that are posed using complex language can invalidate the test if students cannot understand how they are expected to respond to a question. To meet this guideline, directions and questions were prepared in simple, clear, and understandable language that underwent multiple reviews.

### Maximum Readability and Comprehensibility

A variety of guidelines exist to ensure the maximum readability and comprehensibility of a test. These features go beyond what is measured by readability formulas. Readability and comprehensibility are affected by many factors, including student background, sentence difficulty, text organization, and others. All of these features were considered as item text was developed.

Plain language is a concept now being highlighted in research on assessments. Plain language has been defined as language that is straightforward and concise. The following strategies for editing text to produce plain language were used during the editing process of the new PSSA items:

- Reduction of excessive length
- Use of common words
- Avoidance of ambiguous words
- Avoidance of irregularly spelled words
- Avoidance of proper names
- Avoidance of inconsistent naming and graphic conventions
- Avoidance of unclear signals about how to direct attention

### • Maximum Legibility

Legibility is the physical appearance of text, the way that the shapes of letters and numbers enable people to read text easily. Bias can result when tests contain physical features that interfere with a student's focus on or understanding of the constructs that test items are intended to assess. A style guide developed and updated annually (DRC, 2004–2012) was utilized, with PDE approval, which included dimensions of style consistent with universal design.

#### GUIDELINES FOR UNIVERSALLY DESIGNED ITEMS

All test items written and reviewed adhered closely to the following guidelines for Universal Design. Item writers and reviewers used a checklist during the item development process to ensure that each aspect was attended to. For more information on the checklist, see the Universal Design section in Chapter Three of this report.

- 1. Items measure what they are intended to measure. Item writing training included ensuring that writers and reviewers had a clear understanding of Pennsylvania's Academic Standards and the Assessment Anchors. During all phases of test development, items were presented with content-standard information to ensure that each item reflected the intended Assessment Anchor. Careful consideration of the content standards was important in determining which skills involved in responding to an item were extraneous and which were relevant to what was being tested. In certain types of items an additional skill is necessary, such as the mathematics test, which requires the student to read.
- 2. Items respect the diversity of the assessment population. To develop items that avoid content that might unfairly advantage or disadvantage any student subgroup, item writers, test developers, and reviewers were trained to write and review items for issues of bias, fairness, and sensitivity. Training also included an awareness of, and sensitivity to, issues of cultural and regional diversity.
- **3.** Items have a clear format for text. Decisions about how items are presented to students must allow for maximum readability for all students. Appropriate fonts and point sizes were employed with minimal use of italics, which is far less legible and is read considerably more slowly than standard typeface. Captions, footnotes, keys, and legends were at least a 12-point size. Legibility was enhanced by sufficient spacing between letters, words, and lines. Blank space around paragraphs and between columns and staggered right margins were used.
- **4. Stimuli and items have clear pictures and graphics.** When pictures and graphics were used, they were designed to provide essential information in a clear and uncluttered manner. Illustrations were placed directly next to the information to which they referred, and labels were used where possible. Sufficient contrast between background and text, with minimal use of shading, increased readability for students with visual impairments. Color was not used to convey important information.

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<sup>&</sup>lt;sup>4</sup> While font size follows specific requirements during online setup of an assessment, the screen resolution used at the local level can impact whether the effective font size is visible to the student.

- **5. Items have concise and readable text.** Linguistic demands of stimuli and items can interfere with a student's ability to demonstrate knowledge of the construct being assessed. During item writing and review, the following guidelines were used:
  - Simple, clear, commonly used words were used whenever possible.
  - Extraneous text was omitted.
  - Vocabulary and sentence complexity were appropriate for the grade level being assessed.
  - Technical terms and abbreviations were used only if they were related to the content being measured.
  - Definitions and examples were clear and understandable.
  - Idioms were avoided unless idiomatic speech was being assessed.
  - The questions to be answered were clearly identifiable.
- **6.** Items allow changes to format without changing meaning or difficulty. A Braille version of the PSSA was available at each assessed grade. Attention was given to using items that allow for Braille. Specific accommodations were permitted, such as signing to a student, the use of oral presentation under specified conditions, and the use of various assistive technologies. A Spanish version of the PSSA mathematics and PSSA science test was available for use by English Language Learners who would benefit from this accommodation. In the online format, permitted accommodations included text-to-speech audio, a color overlay, contrasting text options, and American Sign Language videos.
- 7. The test has an overall appearance that is clean and organized. Images, pictures, and text that may not be necessary (e.g., sidebars, overlays, callout boxes, visual crowding, shading) and that could be potentially distracting to students were avoided. Also avoided were purely decorative features that did not serve a purpose. Information was organized in a left-right, top-bottom format.

### ITEM DEVELOPMENT

DRC and WestEd work closely with the Pennsylvania Department of Education to help ensure that PSSA tests comply with nationally recognized Principles of Universal Design. The implementation of accommodations on large-scale statewide assessments for students with disabilities is supported in the development of the PSSA. In addition to the Principles of Universal Design as described in the Pennsylvania Technical Report, DRC and WestEd apply to each content-area assessment the standards for test accessibility as described in *Tests Access: Making Tests Accessible for Students with Visual Impairments—A Guide for Test Publishers, Test Developers, and State Assessment Personnel* (Allman, 2004). To this end, DRC and WestEd embrace the following precepts:

- Test directions are carefully worded to allow for alternate responses to open-ended questions.
- During item and bias reviews, test committee members are made aware of the Principles of Universal Design and of issues that may adversely affect students with disabilities with the goal of ensuring that PSSA tests are free from bias for all students.

- With the goal of ensuring that the PSSA tests are accessible to the widest range of diverse student populations, PDE instructs DRC and WestEd to limit item types that are difficult to format in Braille and that may become distorted when published in large print. DRC and WestEd are instructed to limit the following on the PSSA:
  - Mathematics: Complicated tessellations; charts or graphs that extend beyond one page
  - Reading: Graphics and illustrations that are not germane to the content presented
  - All content areas: Unnecessary boxes and framing of text, unless enclosing the
    text provides necessary context for the student; use of italics (limited to only
    when it is absolutely necessary, such as with variables)

### **ITEM FORMATTING**

For all content areas, DRC formats PSSA tests to maximize accessibility for all students by using text that is in a size and font style that is easily readable. DRC limits shading, graphics, charts, and the number of items per page so that there is sufficient white space on each page. Whenever possible, DRC ensures that graphics, pictures, diagrams, charts, and tables are positioned on the page with the associated test items. DRC uses high contrast for text and background where possible to convey pertinent information. Tests are published on dull-finish paper to avoid the glare encountered on glossy paper. DRC pays close attention to the binding of the PSSA test booklets to ensure that they lie flat for two-page viewing and ease of reading and handling.

DRC ensures consistency across PSSA assessments by following these Principles of Universal Design:

- High contrast and clarity is used to convey detailed information.
- Typically, shading is avoided; when necessary for content purposes, 10 percent screens are used as the standard.
- Overlaid print on diagrams, charts, and graphs is avoided.
- Charts, graphs, diagrams, and tables are clearly labeled with titles and with short descriptions where applicable.
- Only relevant information is included in diagrams, pictures, and graphics.
- Symbols used in keys and legends are meaningful and provide reasonable representations of the topics they depict.
- Pictures that require physical measurement are true to size.

### ASSESSMENT ACCOMMODATIONS

While universally designed assessments provide for participation of the widest range of students, many students require accommodations in order to participate in the regular assessment. Clearly, the intent of providing accommodations for students is to ensure that students are not unfairly disadvantaged during testing and that the accommodations used during instruction, if appropriate, are made available as students take the test. The literature related to assessment accommodations is still evolving and often focuses on state policies regulating accommodations rather than on providing empirical data that supports the reliability and validity of the use of accommodations. On a yearly basis, the Pennsylvania Department of Education examines accommodations policies and current research to ensure that valid, acceptable accommodations are available for students. Accommodations manuals for the PSSA titled 2014 Accommodations Guidelines and Accommodations Guidelines for English Language Learners were developed for use with the 2014 PSSA.

The manuals can be accessed by going to www.education.state.pa.us. Click on the green checkmark icon, then select "Pennsylvania System of School Assessment (PSSA)."

In addition, Spanish-language versions, translated from the original English versions, were made available for both the mathematics and science PSSA. The Spanish-translation versions are discussed in Chapter Six.

# Chapter Five: Field Test Leading to the 2014 Core

Generally, all non-linking core items appearing on the 2014 assessments (with the exception of reading and mathematics Grades 3, 4, and 5) came from the 2013 embedded field-test positions. Prior to 2009, PSSA test forms contained common items that were identical on all forms along with matrix/embedded field-test items. On the 2009 administration, equating block positions (equating items) replaced matrix positions. The common items consisted of a set of core items taken by all students. The matrix and field-test items were embedded and were unique, in most instances, to a form; however, there were instances in which a matrix or embedded field-test item appeared on more than one form. The purpose of administering field-test items is to obtain statistics for them so they can be reviewed before becoming operational. Based on this statistical review, many of the field-test items embedded in the 2013 PSSA were selected for use as common or equating block items (equating items) in the 2014 PSSA.

Note that for reading and mathematics assessments in Grades 3, 4, and 5, items included in the 2013 embedded field test were developed in preparation for the transition to the Pennsylvania Core Standards (PCS). As such, the reading items were not selected for use in the 2014 cores. However, the mathematics items aligned to the PCS were reviewed for alignment back to the Pennsylvania Academic Standards (PAS). Some of the items that were aligned to the PAS were then considered for use on the 2014 cores. For the Grade 5 writing assessment, all core items were selected from the existing pool as the 2013 assessment did not include embedded field-test items.

More information on the field test designs for all contents can be found in the content-specific portions of Chapter Three.

### STATISTICAL ANALYSIS OF ITEM DATA

All field-tested items were analyzed statistically following conventional item analysis methods. For MC items, traditional or classical item statistics included the corrected point-biserial correlation (Pt. Bis.) for the correct and incorrect responses (distractors), percent correct (*p*-value), and the percent responding to incorrect responses. For constructed-response (CR) items (including open-ended questions, short-answer questions, and writing prompts), the statistical indices included the item-test correlation, the point-biserial correlation for each score level, percent in each score category or level, and the percent of non-scoreable responses.

In general, more capable students are expected to respond correctly to easy items and less capable students are expected to respond incorrectly to difficult items. If either of these situations does not occur, the item will be reviewed by DRC test development staff and committees of Pennsylvania educators to determine the nature of the problem and the characteristics of the students affected. The primary way of detecting such conditions is through the point-biserial correlation coefficient for dichotomous (MC) items and the item-total correlation for polytomous (CR) items. In each case the statistic will be positive if the total test mean score is higher for the students who respond correctly to MC items (or attain a higher CR item score) and negative when the reverse is true.

Item statistics are used as a means of detecting items that deserve closer scrutiny, rather than being a mechanism for automatic retention or rejection. Toward this end, a set of criteria was used as a screening tool to identify items that needed a closer review by committees of Pennsylvania educators. For an MC item to be flagged, the criteria included any of the following:

- Point-biserial correlation for the correct response of less than 0.25
- Point-biserial correlation for any incorrect response greater than 0.0
- Percent correct less than 0.3 or greater than 0.9
- Percent responding to any incorrect responses greater than the percent correct
- Gender DIF code of either C-, or C+
- Any ethnic DIF code of C-

For a CR item to be flagged, the criteria included any of the following:

- Score Proportion < .05
- Gender DIF code of B-, B+, C-, or C+
- Any ethnic DIF code of B- or C-

Item analysis results for MC and CR field-test items are presented in Appendix F.

### REVIEW OF ITEMS WITH DATA

In the preceding section on Statistical Analysis of Item Data, it was stated that test development content-area specialists used certain statistics from item and DIF analyses of the 2013 field test to identify items for further review. Specific flagging criteria for this purpose were specified in the previous section. Items not identified for this review were those that had good statistical characteristics and, consequently, were regarded as statistically acceptable. Likewise, items of extremely poor statistical quality were regarded as unacceptable and needed no further review. However, there were some items—relatively few in number—that DRC content-area test development specialists and DRC psychometric specialists regarded as needing further review by a committee of Pennsylvania educators. The intent was to capture all items that needed a closer look; thus, the criteria employed tended to over-identify rather than under-identify items.

The review of the items with data was conducted by over 60 Pennsylvania educators (teachers and PDE staff) broken out into subject-area and/or grade-level or grade-span committees. Additional information, including gender, ethnicity (when available), and Instructional Unit (geographic location within Pennsylvania), about the participants is provided in Tables 5–1 through 5–6. The review for mathematics Grades 3–5, mathematics Grades 6–8, reading Grades 6–8, science, and writing Grade 8 took place on July 30, 2013. The review for ELA Grades 3–5 took place on July 30 through August 1, 2013. In these sessions, committee members were first trained by a representative from DRC's psychometrics staff with regard to the statistical indices used in item evaluation. This was followed by a discussion with examples concerning reasons that an item might be retained regardless of the statistics. The committee review process involved a brief exploration of possible reasons for the statistical profile of an item (e.g., possible bias, grade appropriateness, instructional issues) and a decision regarding acceptance. DRC content-area test development specialists facilitated the review of the items. Each committee reviewed the pool of field-tested items and made recommendations on each item and/or scenario/passage. Further discussion on how this information was used is covered in Chapter Six.

Table 5–1. Demographic Composition of the 2013 Mathematics Grades 3–5 Data Review Committee

| Member # | Gender              | Race/Ethnicity                 | Instructional Unit<br>Represented |
|----------|---------------------|--------------------------------|-----------------------------------|
| 1.       | Female              | White                          | 12                                |
| 2.       | Male                | White                          | 19                                |
| 3.       | Male                | White                          | 14                                |
| 4.       | Female              | White                          | 24                                |
| 5.       | Female              | White                          | 7                                 |
| 6.       | Female              | White                          | 11                                |
| 7.       | Female              | White                          | 21                                |
| 8.       | Female              | White                          | 28                                |
| 9.       | Female              | White                          | 6                                 |
| 10.      | Female              | White                          | 12                                |
| 11.      | Female              | White                          | 18                                |
| 12.      | Female              | African American               | 26                                |
| 13.      | Female              | White                          | 12                                |
| Totals   | 11 Female<br>2 Male | 1 African American<br>12 White |                                   |

Table 5–2. Demographic Composition of the 2013 Mathematics Grades 6–8 Data Review Committee

| Member # | Gender             | Race/Ethnicity                             | Instructional Unit<br>Represented |
|----------|--------------------|--|-----------------------------------|
| 1.       | Male               | White                                      | 25                                |
| 2.       | Female             | White                                      | 12                                |
| 3.       | Female             | Not Specified                              | 13                                |
| 4.       | Female             | African American                           | 26                                |
| 5.       | Female             | White                                      | 3                                 |
| 6.       | Female             | Not Specified                              | 23                                |
| 7.       | Female             | White                                      | 3                                 |
| 8.       | Male               | White                                      | 22                                |
| 9.       | Female             | White                                      | 29                                |
| Totals   | 7 Female<br>2 Male | 1 African American 6 White 2 Not Specified |                                   |

Table 5–3. Demographic Composition of the 2013 Reading Grades 6–8 Data Review Committee

| Member # | Gender             | Race/Ethnicity            | Instructional Unit<br>Represented |
|----------|--------------------|---------------------------|-----------------------------------|
| 1.       | Female             | White                     | 5                                 |
| 2.       | Female             | White                     | 18                                |
| 3.       | Female             | White                     | 3                                 |
| 4.       | Male               | Multi-racial              | 26                                |
| 5.       | Female             | White                     | 9                                 |
| 6.       | Female             | White                     | 18                                |
| 7.       | Female             | White                     | 25                                |
| 8.       | Female             | White                     | 13                                |
| 9.       | Male               | White                     | 10                                |
| Totals   | 7 Female<br>2 Male | 1 Multi-racial<br>8 White |                                   |

Table 5–4. Demographic Composition of the 2013 Science Data Review Committee

| Member # | Gender   | Race/Ethnicity  | Instructional Unit<br>Represented |
|----------|----------|-----------------|-----------------------------------|
| 1.       | Male     | White           | Not Specified                     |
| 2.       | Female   | White           | 12                                |
| 3.       | Male     | Not Specified   | 14                                |
| 4.       | Male     | White           | 29                                |
| 5.       | Male     | White           | 15                                |
| 6.       | Female   | White           | 12                                |
| 7.       | Male     | Not Specified   | 25                                |
| 8.       | Female   | White           | 23                                |
| 9.       | Male     | White           | 5                                 |
| Totals   | 3 Female | 7 White         |                                   |
| Totals   | 6 Male   | 2 Not Specified |                                   |

Table 5–5. Demographic Composition of the 2013 Writing Grade 8 Data Review Committee

| Member # | Gender             | Race/Ethnicity  | Instructional Unit<br>Represented |
|----------|--------------------|---|-----------------------------------|
| 1.       | Female             | Multi-racial  | 15                                |
| 2.       | Female             | White   | 20                                |
| 3.       | Female             | White   | 5                                 |
| 4.       | Male               | White   | 17                                |
| 5.       | Female             | White   | 18                                |
| 6.       | Female             | White   | 17                                |
| 7.       | Female             | White   | 3                                 |
| 8.       | Male               | Not Specified   | 1                                 |
| 9.       | Female             | Asian American  | 8                                 |
| Totals   | 7 Female<br>2 Male | <ul><li>1 Asian American</li><li>1 Multi-racial</li><li>6 White</li><li>1 Not Specified</li></ul> |                                   |

Table 5–6. Demographic Composition of the 2013 ELA Grades 3–5 Data Review Committee

| Member # | Gender             | Race/Ethnicity                                   | Instructional Unit<br>Represented |
|----------|--------------------|--|-----------------------------------|
| 1.       | Female             | White  | 24                                |
| 2.       | Female             | White  | 15                                |
| 3.       | Female             | White  | 6                                 |
| 4.       | Female             | Not Specified                                    | 12                                |
| 5.       | Female             | Not Specified                                    | 24                                |
| 6.       | Male               | White  | 26                                |
| 7.       | Female             | African American                                 | 5                                 |
| 8.       | Female             | White  | 12                                |
| 9.       | Female             | White  | 23                                |
| Totals   | 8 Female<br>1 Male | 1 African American<br>6 White<br>2 Not Specified |                                   |

Table 5-7. 2013 Data Review Committee Results

| Assessment  | Grade | No.<br>of<br>Items<br>in<br>2013<br>Field |     |     | Items in 20<br>Examine<br>ata Review   | d at  |                       | Ite<br>2013<br>Reje<br>2013 | agged<br>oms in<br>3 Field<br>Test<br>octed by<br>3 Data<br>eview<br>nmittee | Class "Re fr 201:  (all s Data Com PD: | tems sified as jected" rom 3 Field Test ources: Review amittee, E, and RC) |
|-------------|-------|---|-----|-----|--|-------|-----------------------|-----------------------------|--|--|--|
|             |       | Test                                      | MC  | CR  | Items<br>flagged<br>for<br>DIF<br>only | Total | Total<br>(% of<br>FT) | No. of                      | % of<br>FT   | No. of                                 | % of<br>FT   |
|             | 3     | 220                                       | 74  | 16  | 0                                      | 90    | 40.9%                 | 22                          | 10.0%  | 23                                     | 10.5%  |
|             | 4     | 220                                       | 79  | 14  | 4                                      | 93    | 42.3%                 | 21                          | 9.5%   | 21                                     | 9.5%   |
| Mathematics | 5     | 220                                       | 89  | 15  | 2                                      | 104   | 47.3%                 | 22                          | 10.0%  | 22                                     | 10.0%  |
| Wathematics | 6     | 99  | 11  | 6   | 1                                      | 17    | 17.2%                 | 7                           | 7.1%   | 7                                      | 7.1%   |
|             | 7     | 99  | 16  | 3   | 1                                      | 19    | 19.2%                 | 4                           | 4.0%   | 4                                      | 4.0%   |
|             | 8     | 99  | 22  | 4   | 3                                      | 26    | 26.3%                 | 11                          | 11.1%  | 13                                     | 13.1%  |
|             | 6     | 99  | 26  | 6   | 2                                      | 32    | 32.3%                 | 3                           | 3.0%   | 4                                      | 4.0%   |
| Reading     | 7     | 99  | 26  | 8   | 7                                      | 36    | 36.4%                 | 3                           | 3.0%   | 3                                      | 3.0%   |
|             | 8     | 99  | 33  | 8   | 3                                      | 41    | 41.4%                 | 4                           | 4.0%   | 4                                      | 4.0%   |
| Science     | 4     | 132                                       | 25  | 4   | 2                                      | 29    | 22.0%                 | 10                          | 7.6%   | 11                                     | 8.3%   |
| Science     | 8     | 156                                       | 47  | 6   | 1                                      | 53    | 34.0%                 | 7                           | 4.5%   | 7                                      | 4.5%   |
| Writing     | 8     | 54  | 18  | 3   | 4                                      | 21    | 38.9%                 | 7                           | 13.0%  | 7                                      | 13.0%  |
|             | 3     | 220                                       | 35  | 20  | 2                                      | 55    | 25.0%                 | 7                           | 3.2%   | 10                                     | 4.5%   |
| ELA         | 4     | 220                                       | 22  | 40  | 8                                      | 62    | 25.8%                 | 3                           | 1.3%   | 5                                      | 2.1%   |
| 5           |       | 220                                       | 45  | 39  | 17                                     | 84    | 35.0%                 | 4                           | 1.7%   | 12                                     | 5.0%   |
| Totals      | S     | 2,256                                     | 568 | 192 | 57                                     | 762   | 33.8%                 | 135                         | 6.0%   | 153                                    | 6.8%   |

### **DIFFERENTIAL ITEM FUNCTIONING**

Differential item functioning (DIF) occurs when examinees with the same ability level but different group memberships do not have the same probability of answering an item correctly. This pattern of results may suggest the presence of *item bias*. As a statistical concept, however, DIF can be differentiated from item bias, which is a content issue that can arise when an item presents negative group stereotypes, uses language that is more familiar to one subpopulation than to another, or is presented in a format that disadvantages certain learning styles. While the source of item bias is often plain to trained judges, DIF may have no clear cause. However, studying how DIF arises and how it presents itself can provide information about how to detect and correct for it.

### Limitations of Statistical Detection

No statistical procedure should be used as a substitute for rigorous, hands-on reviews by content and bias specialists. The statistical results can help organize the review so the effort is concentrated on the most problematic cases. Further, no items should be automatically rejected simply because a statistical method flagged them or accepted because they were not flagged.

Statistical detection of DIF is not an exact science. There have been a variety of methods proposed for detecting DIF, but no single statistic can be considered either necessary or sufficient. Different methods are more or less successful depending on the situation. No analysis can guarantee that a test is free of bias, but almost any thoughtful analysis will uncover the most flagrant problems.

A fundamental shortcoming of all statistical methods used in DIF evaluation is that all are intrinsic to the test being evaluated. If a test is unbiased overall but contains one or two DIF items, any method will locate the problems. If, however, all items on the test show consistent DIF to the disadvantage of a given subpopulation, a statistical analysis of the items will not be able to separate DIF effects from true differences in achievement.

### Mantel-Haenszel Procedure for Differential Item Functioning

For multiple-choice (MC) items, the *Mantel-Haenszel* procedure (Mantel & Haenszel, 1959) for detecting differential item functioning is a commonly used technique in educational testing. It does not depend on the application or the fit of any specific measurement model. However, it does have significant philosophical overlap with the Rasch model since it uses a test's total score to organize the analysis.

The procedure as implemented by DRC contrasts a focal group with a reference group. While it makes no practical difference in the analysis which group is defined as the focal group, the group most apt to be disadvantaged by a biased measurement is typically defined as the focal group. In these analyses, the focal group was female for gender-based DIF and black for ethnicity-based DIF; reference groups were male and white, respectively. The Mantel-Haenszel (MH) statistic for each item is computed from a contingency table. It has two groups (focal and reference) and two outcomes (right or wrong). The ability groups are defined by the test's score distribution for the total examinee populations.

The basic MH statistic is a single degree of freedom chi-square that compares the observed number in each cell to the expected number. The expected counts are computed to ensure that the analysis is not confounded with differences in the achievement level of the two groups.

For OE items, a comparable statistic is computed based on the standardized mean difference (SMD) (Dorans, Schmitt, & Bleistein, 1992), which is computed as the differences in mean scores for the focal and reference groups if both groups had the same score distribution.

To assist the review committees in interpreting the analyses, the items are assigned a severity code based on the magnitude of the MH statistic. Items classified as A+ or A- have little or no statistical indication of DIF. Items classified as B+ or B- have some indication of DIF but may be judged to be acceptable for future use. Items classified as C+ or C- have strong evidence of DIF and should be reviewed and possibly rejected from the eligible item pool. The plus sign indicates that the item favors the focal group and a minus sign indicates that the item favors the reference group.

#### Results and Observations

Counts of the number of items from each grade and subject area that were assigned to each severity code are shown in Table 5–8A (MC items), 5–8B (OE items), 5–8C (ESR items), and 5–8D (TDA items). DIF analyses were conducted on the 2014 PSSA field-test items and may be compared to the 2013 results with MC, OE, and ESR items.

The number of field-test items in each DIF category across the two years was quite similar. Overall, relatively few items had B or C DIF for the Male/Female or White/Black reference and focal groups. Generally speaking, there were more items showing White/Black DIF than Male/Female DIF. However, it was the Male/Female DIF for TDA items in Reading that exhibited the highest proportion of B or C classifications. The nature of TDA items are similar to writing prompt items. While this matches historical trends (writing tended to exhibit more Male/Female DIF than White/Black DIF historically), additional monitoring and study of DIF in these areas may be warranted.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> As suggested earlier, only a subset of items showing DIF will actually be biased. For example, any given B or C DIF code might be a false positive. It may also be the result of one of a number of systematic factors not actually attributable to bias. Of course, only items approved by teacher review committees will actually appear on operational PSSA tests.

Table 5-8A. DIF Summary—MC Items

|             | <u>le</u> |            |            |            |    |    |    | Male | /Femal     | le        |            |    |    |    |     |            |            |    |    |    |    | White | /Black     |     |    |    |    |    |     |
|-------------|-----------|------------|------------|------------|----|----|----|------|------------|-----------|------------|----|----|----|-----|------------|------------|----|----|----|----|-------|------------|-----|----|----|----|----|-----|
|             | Grade     |            |            | 20         | 13 |    |    |      |            |           | 201        | 4  |    |    |     |            |            | 20 | 13 |    |    |       |            |     | 20 | 14 |    |    |     |
|             | 9         | <b>A</b> + | <b>A</b> - | <b>B</b> + | B- | C+ | C- | Tot  | <b>A</b> + | <b>A-</b> | <b>B</b> + | B- | C+ | C- | Tot | <b>A</b> + | <b>A</b> - | B+ | B- | C+ | C- | Tot   | <b>A</b> + | A-  | B+ | B- | C+ | C- | Tot |
|             | 3         | 79         | 115        | 1          | 5  | 0  | 0  | 200  | 37         | 49        | 2          | 2  | 0  | 0  | 90  | 43         | 139        | 0  | 18 | 0  | 0  | 200   | 17         | 64  | 0  | 8  | 0  | 1  | 90  |
| tics        | 4         | 89         | 108        | 1          | 1  | 1  | 0  | 200  | 43         | 47        | 0          | 0  | 0  | 0  | 90  | 60         | 137        | 0  | 3  | 0  | 0  | 200   | 18         | 67  | 0  | 5  | 0  | 0  | 90  |
| ma          | 5         | 84         | 114        | 0          | 2  | 0  | 0  | 200  | 39         | 50        | 0          | 1  | 0  | 0  | 90  | 53         | 143        | 0  | 4  | 0  | 0  | 200   | 25         | 65  | 0  | 0  | 0  | 0  | 90  |
| Mathematics | 6         | 49         | 36         | 2          | 3  | 0  | 0  | 90   | 77         | 118       | 2          | 2  | 0  | 1  | 200 | 25         | 61         | 0  | 4  | 0  | 0  | 90    | 34         | 159 | 0  | 6  | 0  | 1  | 200 |
| Ma          | 7         | 43         | 43         | 1          | 2  | 0  | 1  | 90   | 69         | 123       | 0          | 7  | 1  | 0  | 200 | 15         | 71         | 0  | 4  | 0  | 0  | 90    | 49         | 142 | 0  | 9  | 0  | 0  | 200 |
|             | 8         | 48         | 37         | 2          | 3  | 0  | 0  | 90   | 68         | 125       | 1          | 5  | 0  | 1  | 200 | 19         | 64         | 0  | 4  | 0  | 3  | 90    | 69         | 123 | 0  | 7  | 0  | 1  | 200 |
|             | 3         | 81         | 77         | 0          | 1  | 0  | 1  | 160  | 24         | 47        | 0          | 1  | 0  | 0  | 72  | 33         | 123        | 0  | 4  | 0  | 0  | 160   | 13         | 58  | 0  | 1  | 0  | 0  | 72  |
| bn.         | 4         | 57         | 102        | 0          | 1  | 0  | 0  | 160  | 39         | 33        | 0          | 0  | 0  | 0  | 72  | 15         | 136        | 0  | 9  | 0  | 0  | 160   | 6          | 50  | 0  | 12 | 0  | 4  | 72  |
| din         | 5         | 71         | 80         | 0          | 6  | 0  | 3  | 160  | 40         | 32        | 0          | 0  | 0  | 0  | 72  | 33         | 113        | 0  | 10 | 1  | 3  | 160   | 14         | 57  | 0  | 1  | 0  | 0  | 72  |
| Reading     | 6         | 34         | 53         | 0          | 2  | 0  | 1  | 90   | 71         | 85        | 0          | 4  | 0  | 0  | 160 | 2          | 81         | 0  | 7  | 0  | 0  | 90    | 32         | 119 | 0  | 5  | 0  | 4  | 160 |
| _           | 7         | 43         | 43         | 1          | 3  | 0  | 0  | 90   | 74         | 81        | 1          | 4  | 0  | 0  | 160 | 22         | 62         | 0  | 4  | 0  | 2  | 90    | 24         | 125 | 0  | 11 | 0  | 0  | 160 |
|             | 8         | 48         | 40         | 0          | 2  | 0  | 0  | 90   | 58         | 89        | 0          | 11 | 0  | 2  | 160 | 25         | 57         | 0  | 8  | 0  | 0  | 90    | 31         | 114 | 0  | 14 | 0  | 1  | 160 |
| Science     | 4         | 44         | 52         | 0          | 0  | 0  | 0  | 96   | 44         | 51        | 0          | 1  | 0  | 0  | 96  | 18         | 73         | 0  | 3  | 0  | 2  | 96    | 9          | 82  | 0  | 5  | 0  | 0  | 96  |
|             | 8         | 60         | 54         | 5          | 1  | 0  | 0  | 120  | 63         | 48        | 2          | 7  | 0  | 0  | 120 | 35         | 83         | 0  | 2  | 0  | 0  | 120   | 33         | 85  | 0  | 2  | 0  | 0  | 120 |
| Writing     | 5         | 3          | 5          | 0          | 0  | 0  | 0  | 8    | -          | -         | -          | -  | -  | -  | -   | 0          | 8          | 0  | 0  | 0  | 0  | 8     | -          | -   | -  | -  | -  | -  | -   |
| Wri         | 8         | 24         | 23         | 0          | 1  | 0  | 0  | 48   | -          | -         | -          | -  | -  | -  | -   | 5          | 36         | 0  | 7  | 0  | 0  | 48    | -          | -   | -  | -  | -  | -  | -   |

Table 5–8B. DIF Summary—OE Items

|             | e     |    |    |    |    |    |    | Male | /Femal     | e         |     |    |    |    |     |            |           |    |     |    |    | Whit | te/Blac | k         |    |     |    |    |     |
|-------------|-------|----|----|----|----|----|----|------|------------|-----------|-----|----|----|----|-----|------------|-----------|----|-----|----|----|------|---------|-----------|----|-----|----|----|-----|
|             | Grade |    |    | 20 | 13 |    |    |      |            |           | 201 | 14 |    |    |     |            |           | 2  | 013 |    |    |      |         |           | 20 | )14 |    |    |     |
|             | 9     | A+ | A- | B+ | B- | C+ | C- | Tot  | <b>A</b> + | <b>A-</b> | B+  | B- | C+ | C- | Tot | <b>A</b> + | <b>A-</b> | B+ | B-  | C+ | C- | Tot  | A+      | <b>A-</b> | B+ | B-  | C+ | C- | Tot |
|             | 3     | 14 | 4  | 0  | 1  | 0  | 0  | 19   | 5          | 4         | 0   | 0  | 0  | 0  | 9   | 0          | 13        | 0  | 5   | 0  | 1  | 19   | 0       | 6         | 0  | 3   | 0  | 0  | 9   |
| Mathematics | 4     | 11 | 8  | 1  | 0  | 0  | 0  | 20   | 5          | 3         | 0   | 0  | 0  | 0  | 8   | 2          | 14        | 0  | 3   | 0  | 1  | 20   | 0       | 8         | 0  | 0   | 0  | 0  | 8   |
| ma          | 5     | 14 | 5  | 1  | 0  | 0  | 0  | 20   | 7          | 1         | 1   | 0  | 0  | 0  | 9   | 4          | 13        | 0  | 2   | 0  | 1  | 20   | 3       | 4         | 0  | 2   | 0  | 0  | 9   |
| the         | 6     | 3  | 6  | 0  | 0  | 0  | 0  | 9    | 13         | 4         | 1   | 1  | 0  | 0  | 19  | 0          | 7         | 0  | 1   | 0  | 1  | 9    | 2       | 12        | 0  | 4   | 0  | 1  | 19  |
| Ma          | 7     | 8  | 1  | 0  | 0  | 0  | 0  | 9    | 12         | 5         | 2   | 0  | 1  | 0  | 20  | 0          | 6         | 0  | 3   | 0  | 0  | 9    | 2       | 14        | 0  | 1   | 0  | 3  | 20  |
|             | 8     | 5  | 1  | 1  | 0  | 0  | 0  | 7    | 8          | 12        | 0   | 0  | 0  | 0  | 20  | 1          | 5         | 0  | 0   | 0  | 1  | 7    | 1       | 12        | 0  | 6   | 0  | 1  | 20  |
|             | 3     | 16 | 1  | 2  | 0  | 1  | 0  | 20   | 4          | 0         | 2   | 0  | 3  | 0  | 9   | 2          | 15        | 0  | 1   | 0  | 0  | 18   | 2       | 7         | 0  | 0   | 0  | 0  | 9   |
| 5.0         | 4     | 21 | 0  | 14 | 0  | 5  | 0  | 40   | 0          | 0         | 0   | 0  | 0  | 0  | 0   | 2          | 27        | 0  | 7   | 0  | 4  | 40   | 0       | 0         | 0  | 0   | 0  | 0  | 0   |
| Reading     | 5     | 18 | 1  | 10 | 0  | 10 | 0  | 39   | 0          | 0         | 0   | 0  | 0  | 0  | 0   | 8          | 23        | 0  | 5   | 0  | 3  | 39   | 0       | 0         | 0  | 0   | 0  | 0  | 0   |
| <b>≷</b> ea | 6     | 1  | 0  | 5  | 0  | 3  | 0  | 9    | 0          | 0         | 0   | 0  | 0  | 0  | 0   | 4          | 5         | 0  | 0   | 0  | 0  | 9    | 0       | 0         | 0  | 0   | 0  | 0  | 0   |
|             | 7     | 1  | 0  | 1  | 0  | 7  | 0  | 9    | 0          | 0         | 0   | 0  | 0  | 0  | 0   | 6          | 3         | 0  | 0   | 0  | 0  | 9    | 0       | 0         | 0  | 0   | 0  | 0  | 0   |
|             | 8     | 2  | 0  | 2  | 0  | 5  | 0  | 9    | 0          | 0         | 0   | 0  | 0  | 0  | 0   | 7          | 2         | 0  | 0   | 0  | 0  | 9    | 0       | 0         | 0  | 0   | 0  | 0  | 0   |
| Science     | 4     | 9  | 3  | 0  | 0  | 0  | 0  | 12   | 4          | 8         | 0   | 0  | 0  | 0  | 12  | 1          | 6         | 0  | 2   | 0  | 3  | 12   | 0       | 5         | 1  | 3   | 0  | 3  | 12  |
| Scie        | 8     | 3  | 5  | 2  | 1  | 1  | 0  | 12   | 7          | 4         | 0   | 1  | 0  | 0  | 12  | 1          | 6         | 0  | 1   | 0  | 4  | 12   | 0       | 6         | 0  | 2   | 0  | 4  | 12  |
| ing         | 5     | -  | -  | -  | -  | -  | -  | -    | -          | -         | -   | -  | -  | -  | -   | -          | -         | -  | -   | -  | -  | -    | -       | -         | -  | -   | -  | -  | -   |
| Writing     | 8     | 4  | 0  | 5  | 0  | 3  | 0  | 12   | -          | -         | -   | -  | -  | -  | -   | 0          | 10        | 0  | 1   | 0  | 1  | 12   | -       | -         | -  | -   | -  | -  | -   |

Table 5–8C. DIF Summary—ESR Items

|      | le  |            |    |    |    |    |    | Male | /Femal     | e         |     |    |    |    |     |    |    |    |     |    |    | Whi | te/Blac    | k  |    |    |    |    |     |
|------|-----|------------|----|----|----|----|----|------|------------|-----------|-----|----|----|----|-----|----|----|----|-----|----|----|-----|------------|----|----|----|----|----|-----|
|      | rad |            |    | 20 | 13 |    |    |      |            |           | 201 | 4  |    |    |     |    |    | 2  | 013 |    |    |     |            |    | 20 | 14 |    |    |     |
|      | G   | <b>A</b> + | A- | B+ | B- | C+ | C- | Tot  | <b>A</b> + | <b>A-</b> | B+  | B- | C+ | C- | Tot | A+ | A- | B+ | B-  | C+ | C- | Tot | <b>A</b> + | A- | B+ | B- | C+ | C- | Tot |
|      | 3   | 26         | 14 | 0  | 0  | 0  | 0  | 40   | 8          | 10        | 0   | 0  | 0  | 0  | 18  | 3  | 31 | 2  | 3   | 1  | 0  | 40  | 3          | 15 | 0  | 0  | 0  | 0  | 18  |
| 5.0  | 4   | 20         | 20 | 0  | 0  | 0  | 0  | 40   | 11         | 7         | 0   | 0  | 0  | 0  | 18  | 0  | 33 | 0  | 6   | 0  | 1  | 40  | 1          | 8  | 0  | 9  | 0  | 0  | 18  |
| ding | 5   | 20         | 19 | 0  | 1  | 0  | 0  | 40   | 7          | 11        | 0   | 0  | 0  | 0  | 18  | 3  | 32 | 0  | 4   | 0  | 1  | 40  | 1          | 16 | 0  | 0  | 0  | 1  | 18  |
| Rea  | 6   | -          | -  | -  | -  | -  | -  | -    | 20         | 20        | 0   | 0  | 0  | 0  | 40  | -  | -  | -  | -   | -  | -  | -   | 1          | 33 | 0  | 6  | 0  | 0  | 40  |
| -    | 7   | -          | -  | -  | -  | -  | -  | -    | 18         | 21        | 0   | 1  | 0  | 0  | 40  | -  | -  | -  | -   | -  | -  | -   | 3          | 29 | 0  | 8  | 0  | 0  | 40  |
|      | 8   | -          | -  | -  | -  | -  | -  | -    | 20         | 18        | 0   | 1  | 0  | 1  | 40  | -  | -  | -  | -   | -  | -  | -   | 8          | 25 | 0  | 7  | 0  | 0  | 40  |

Table 5–8D. DIF Summary—TDA Items

|         | le    |            |    | Ma | ale/Fer | nale |    |     |            |           | W  | hite/B | lack |    |     |
|---------|-------|------------|----|----|---------|------|----|-----|------------|-----------|----|--------|------|----|-----|
|         | Grade |            |    | 20 | 14      |      |    |     |            |           | 20 | 14     |      |    |     |
|         | 9     | <b>A</b> + | A- | B+ | B-      | C+   | C- | Tot | <b>A</b> + | <b>A-</b> | B+ | B-     | C+   | C- | Tot |
|         | 3     | 0          | 0  | 0  | 0       | 0    | 0  | 0   | 0          | 0         | 0  | 0      | 0    | 0  | 0   |
| ഫ       | 4     | 4          | 0  | 3  | 0       | 2    | 0  | 9   | 0          | 5         | 0  | 4      | 0    | 0  | 9   |
| ding    | 5     | 3          | 0  | 4  | 0       | 2    | 0  | 9   | 0          | 7         | 0  | 1      | 0    | 1  | 9   |
| Reading | 6     | 2          | 0  | 5  | 0       | 13   | 0  | 20  | 1          | 13        | 0  | 5      | 0    | 1  | 20  |
| _       | 7     | 4          | 0  | 4  | 0       | 12   | 0  | 20  | 0          | 16        | 0  | 3      | 0    | 1  | 20  |
|         | 8     | 6          | 0  | 9  | 0       | 5    | 0  | 20  | 2          | 13        | 0  | 5      | 0    | 0  | 20  |

# Chapter Six: Operational Forms Construction for 2014

### FINAL SELECTION OF ITEMS AND 2014 PSSA FORMS CONSTRUCTION

When the final selection of items for the operational 2014 test was ready to begin, the candidate items that emerged, including those from the spring 2013 field test, had undergone multiple reviews, including:

- reviews by DRC and WestEd content-area test development specialists and curriculum specialists to ensure that all items were properly aligned with content standards,
- formal bias, fairness, and sensitivity review by the Bias, Fairness, and Sensitivity Committee consisting of a multi-ethnic group of men and women having expertise with special-needs students and English Language Learners,
- formal review by the content committees consisting of Pennsylvania educators, including teachers as well as district personnel,
- PDE review, and
- item data review by members of the PDE subject-area teacher committees.

The item and bias reviews are detailed in Chapter Three. The results of the data review are summarized in Chapter Five.

The end product of the above process was an item status designation for each field-tested item. All items having an item status code of Acceptable/Active were candidates to be selected for the 2014 PSSA. To have an item status code of Acceptable/Active meant that the item met the following criteria:

- Appropriately aligned with its designated Assessment Anchor Content Standard (Assessment Anchor) and sub-classifications
- Acceptable in terms of bias/fairness/sensitivity issues, including differential item functioning (for gender and ethnicity)
- Acceptable in terms of psychometric standards, including a special review of flagged items

Next, all relevant information regarding the acceptable items, including associated graphics, was entered into the item banking system known as IDEAS (Item Development and Education Assessment System). From IDEAS and other database sources, Microsoft Excel files were created for each content area at each grade. These files contained all relevant content codes and statistical characteristics. IDEAS also created an item card displaying each acceptable item, any associated graphic, and all relevant content codes and item statistics for use by the content-area test development specialists and psychometric services staff.

DRC test development specialists reviewed the test design blueprint, including the number of items per strand for each content-area test. Special considerations, such as calculator use and manipulatives, were noted.

Psychometricians provided content-area test development specialists with an overview of the psychometric guidelines for forms construction, including guidelines for selecting linking items to link to previous test forms.

Senior DRC content-area test development specialists reviewed all items in the operational pool to make an initial selection for common (core) and equating block (equating items) positions according to test blueprint requirements and psychometric guidelines. Changes to items were not encouraged since alterations could affect how an item might perform on subsequent testing.

For the common items, this meant that the combination of MC and OE items would yield the appropriate range of points while tapping an appropriate variety of the Assessment Anchors and related Eligible Content within each Reporting Category. Items selected in the first round were examined with regard to how well they went together as a set. Of particular concern were the following:

- One item providing cues as to the correct answer to another item
- Context redundancy (e.g., mathematics items with a sports context)
- Presence of clang (distractors not unique from one another)
- Diversity of names and artwork for gender and ethnicity

The first round of items was then evaluated for statistical features such as an acceptable point-biserial correlation and whether correct answers were distributed equally—that is, whether approximately 25 percent of correct answers appeared in each of the four possible positions (A, B, C, or D). Selected items that were deemed psychometrically less advantageous in contrast to the overall psychometric characteristics of the core resulted in a search by the senior reviewer for suitable replacements. At this point, the second round of items was analyzed. If necessary, this iterative process between content-based selections and statistical properties continued in an effort to reach the best possible balance.

In the case of the core-to-core linking items (part of the overall core pull), content considerations remained relevant, together with statistical features, such as an acceptable point-biserial correlation and whether the items, as a collection, had an average logit value and a test characteristic curve approximating that of the previous year.

The process for selecting equating block items was slightly different. The chief consideration was that items in equating block positions of the various forms mirrored the psychometric considerations of the core. In some cases, the selection of equating block items also required multiple rounds of selection and evaluation until the best possible balance of content and statistical properties was obtained. The content-area test development specialist's task was to distribute these items in equating block positions across the forms so that the MC items assigned to a particular form would go well with one another and reflect the same content and statistical considerations as previously outlined. Additionally, the forms needed to display similar difficulty levels.

Once the recommendations were finalized for the core items, core-to-core linking items, and equating block items, they were submitted to PDE for review. Department staff provided feedback, which could be in the form of approval or recommendations for replacing certain items. Any item replacement was accomplished by the collective effort of the test development specialists, psychometricians, and PDE staff until final PDE approval was given. Once final PDE approval of the forms was given, PDE also participated in the construction and review of scrambled forms.

### SPECIAL FORMS USED IN THE 2014 PSSA

### Braille and Large Print

Students with visual impairments were able to respond to test materials that were available in either Braille or large print. At each grade level assessed, one form was selected for the creation of a Braille and a large-print edition. School district personnel ordered Braille or large-print assessment materials directly from DRC. They could also contact PaTTAN for technical assistance regarding students with visual impairments.

School personnel were directed to transcribe all student answers (MC and OE) into scannable answer documents exactly as the student responded. No alterations or corrections of student work were permitted, and the transcribed answer document had to have the same form designation as the Braille and large-print version.

### Spanish Translation of the Mathematics and Science Assessments

Starting with the 2005 assessment, school personnel had the option of allowing Spanish-speaking students who had been enrolled in schools in the United States for less than three years to respond to a Spanish version of the PSSA for mathematics. In 2009, a Spanish version was also added for the science component of the PSSA. The original translation of the items and the *Directions for Administration Manual* was completed by Second Language Testing, Incorporated. Second Language Testing, Incorporated, uses translators with varying cultural and regional backgrounds to create the Spanish versions of the mathematics and science assessments. The translations were then reviewed and verified by DRC's internal Spanish group. As part of the internal review, a Spanish style guide is maintained to document Spanish word choice from administration to administration and across grades within an administration. After discussions with PDE and Second Language Testing, Incorporated, the mathematics sections of the mathematics and reading test booklets for Grades 4–8 and the entire science assessment for Grades 4 and 8 were designed with a side-by-side format with the English text and Spanish translated text on facing pages. The Spanish translated text was on the left-hand side followed by the original English text on the right-hand (facing) side.

The mathematics sections of the answer booklets for Grades 4–8 and the science answer booklets for Grades 4 and 8 were also presented in Spanish and English. In the case of mathematics, each open-ended item covered a total of four pages in the answer booklet. In the case of science, each open-ended item covered either two or four pages in the answer booklet, depending on the length of the original English-language item. In the case of four-page open-ended items, the first set of facing pages of an item was presented in Spanish. The second set of facing pages of an item was presented in the original English. Those students using this accommodated version of the mathematics assessment could write their answers on either the English language pages or on the translated Spanish language pages. Their answers could be written in English, Spanish, or a combination of both Spanish and English, as all pages were evaluated and scored, and the highest possible scores from those combinations recorded for the students.

The mathematics sections of the scannable booklets for Grade 3 were presented in Spanish and English using a modified over/under format, with the Spanish presented directly above or to the left of the English. To assist the presentation of the two languages on the same page, the English portion was presented in italics and in a smaller font. Those students using this accommodated version of the mathematics assessment could write their answers in English, Spanish, or a

combination of both Spanish and English, with the highest possible scores from those combinations recorded for the students.

Spanish-translated versions of the mathematics assessment were used by a total of 2,511 students at Grades 3–8 in 2014. Spanish-translated versions of the science assessment were used by a total of 843 students at Grades 4 and 8 in 2014.

Instructions for the appropriate use of these special forms are detailed in accommodation manuals titled 2014 Accommodations Guidelines and Accommodations Guidelines for English Language Learners.

# Summary of the Translation Verification Study by SLTI of the 2009 PSSA Science Assessments

From November 2009 through January 2010, Second Language Testing, Incorporated, conducted a translation verification study of the 2009 PSSA science assessments titled "Translation Verification Study of the 2009 Pennsylvania System of School Assessment (PSSA) of Science for Grades 4, 8, and 11." In this study, the appropriateness of the transadaptation of the PSSA Science Assessments into Spanish was investigated. Three independent reviewers, specialists in bilingual science education and science translation, were used to determine the appropriateness of each translated or adapted item. The purpose of the report was to conduct qualitative research on the comparability of the Spanish and English versions of the PSSA Science assessments.

The report of this study by Second Language Testing, Incorporated, described the assessments, the purpose of the translation verification study, the reviewers, the translation verification process, and the translation verification results. A total of 185 items covering tests at Grades 4 (63 items), 8 (63 items), and 11 (59 items) were reviewed. The study shows that none of the 185 reviewed items were judged by the reviewers to be inappropriately translated or adapted into Spanish. The study did provide suggestions for nine items that were judged as appropriate but the translation could still be improved in the event the items were used again.

Overall, the report concluded that the transadaptation of the 2009 PSSA Science Assessments was clearly appropriate. Since both the English and Spanish versions are comparable in the sense that both versions assess the same content, use the same format, have equal numbers of items, follow the same test administration and scoring procedures, and are used and interpreted in the same way, the study concluded that the English and Spanish versions of the science assessments measured the same content in two different languages. Thus, the study indicated that both language versions showed the same degree of alignment and the same depth-of-knowledge described in the Assessment Anchors alignment study. As a result, the report concluded that there is no need to conduct a separate alignment study of the Spanish version of the PSSA Science Assessments.

Beyond the findings presented in the study, the report recommended that appropriate quantitative analyses be carried out on construct equivalence. Unless such analyses clearly demonstrate a lack of equivalence, it is appropriate to assume that there is no need to conduct a separate linking study or a separate standard setting study for the Spanish versions of the tests. Both versions can be scored on the same scale, and scores on each version have the same meaning in terms of student mastery of the Science Assessment Anchors as defined by the Eligible Content.

The full report can be obtained by request from the Pennsylvania Department of Education.

### Summary of Comparability Report from Sireci Psychometric Services

In addition to the study conducted by Second Language Testing, Incorporated, a second comparability study of the 2009 PSSA Spanish translations for science was completed in February 2010 by Sireci Psychometric Services. The report of the study is titled "Evaluating the Comparability of English and English-Spanish Science Tests from the Pennsylvania System of School Assessment."

In this study, the data from the English language and English-Spanish dual-language Pennsylvania science tests for Grades 4, 8, and 11 were analyzed. These analyses were designed to evaluate the consistency of the structure of the data and the consistency of item functioning across the English and Spanish versions of these assessments using various psychometrics methods.

The full report can be obtained by request from the Pennsylvania Department of Education.

# Chapter Seven: Test Administration Procedures

**Science** 

Writing

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### TEST SESSIONS, TEST SECTIONS, TEST TIMING, AND TEST LAYOUT

Some assessments utilized separate test booklets and answer booklets. An answer booklet was used to respond to the multiple-choice and constructed-response items (i.e., open-ended items, short-answer items, and writing prompts) and to collect demographic information. The multiple-choice items and all stimulus text were placed within the test booklet. Other assessments used a single consumable booklet. When a single scannable answer booklet was utilized, the contents of the answer booklet and the test booklet were combined into one integrated booklet.

Single **Test** Answer Consumable **Assessment** Grade Booklet **Booklet Booklet** 3 4 **Mathematics** 5 & ✓ 6 Reading ✓ ✓ 7 8 ✓ **√** 4

Table 7–1. Booklet Type by Administration

Generally, a separate test booklet and answer booklet were used to separate the multiple-choice items and constructed-response items. For the Grade 3 mathematics and reading assessment, a single booklet was used to accommodate the younger age of the students. The writing assessments also utilized one booklet, since sections 2 and 3 both required student writing only.

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The number of sections for the 2014 operational assessment varied based on the content area of the assessment. The reading and mathematics assessments consisted of six sections. The science assessments consisted of two sections. The writing assessments consisted of three sections. See also Appendix G.

**Table 7–2. PSSA Test Section Information** 

|    | Assessment  | No. of<br>Sections per<br>Content | No. of<br>Sections per<br>Form |
|----|-------------|-----------------------------------|--------------------------------|
| 1. | Mathematics | 3                                 | 6                              |
| 1. | Reading     | 3                                 | 0                              |
| 2. | Science     | 2                                 | 2                              |
| 3. | Writing     | 3                                 | 3                              |

Table 7–3. PSSA Testing Load and Duration by Subject by Grade

| Assessment  | Grade | Total No. of MC<br>Items per Form per<br>Administration | Total No. of OE<br>Items per Form per<br>Administration | Total Estimated Administration Time per Form (in Minutes) |
|-------------|-------|---|---|---|
|             | 3     | 72  | 4   | 200 to 245  |
|             | 4     | 72  | 4   | 200 to 245  |
| Mathematics | 5     | 72  | 4   | 200 to 245  |
| Maulematics | 6     | 72  | 4   | 200 to 245  |
|             | 7     | 72  | 4   | 200 to 245  |
|             | 8     | 72  | 4   | 200 to 245  |
|             | 3     | 58  | 3   | 215 to 260  |
|             | 4     | 58  | 5   | 255 to 300  |
| Dooding     | 5     | 58  | 5   | 255 to 300  |
| Reading     | 6     | 58  | 5   | 225 to 270  |
|             | 7     | 58  | 5   | 225 to 270  |
|             | 8     | 58  | 5   | 230 to 275  |
| Science     | 4     | 68  | 6   | 120 to 150  |
| Science     | 8     | 70  | 6   | 130 to 160  |
| Writing     | 5     | 20  | 2   | 200 to 245  |
| Writing     | 8     | 20  | 3   | 270 to 330  |

Table 7-4. PSSA Testing Load and Duration by Grade by Subject

| Grade | Content     | Total No. of<br>Items per<br>Form per<br>Administration | Total Estimated Administration Time per Form (in Minutes) | Total No. of<br>Items per<br>Student | Total Estimated Administration Time per Student (in Minutes) |
|-------|-------------|---|---|--------------------------------------|--|
| 3     | Mathematics | 76  | 200 to 245  | 137                                  | 395 to 485   |
| 3     | Reading     | 61  | 195 to 240  | 137                                  | 373 10 403   |
|       | Mathematics | 76  | 200 to 245  |                                      |  |
| 4     | Reading     | 63  | 230 to 275  | 213                                  | 550 to 670   |
|       | Science     | 74  | 120 to 150  |                                      |  |
|       | Mathematics | 76  | 200 to 245  |                                      |  |
| 5     | Reading     | 63  | 230 to 275  | 153                                  | 610 to 745   |
|       | Writing     | 14  | 180 to 225  |                                      |  |
| 6     | Mathematics | 76  | 200 to 245  | 139                                  | 435 to 525   |
| U     | Reading     | 63  | 235 to 280  | 139                                  | 455 10 325   |
| 7     | Mathematics | 76  | 200 to 245  | 139                                  | 440 to 530   |
| ,     | Reading     | 63  | 240 to 285  | 139                                  | 440 10 330   |
|       | Mathematics | 76  | 200 to 245  |                                      |  |
| Q     | Reading     | 63  | 235 to 280  | 229                                  | 745 to 910   |
| 8     | Science     | 76  | 130 to 160  | <i>LL7</i>                           | 743 10 910   |
|       | Writing     | 14  | 180 to 225  |                                      |  |

In general, the estimated testing times allowed 1–3 minutes per multiple-choice item, depending on the content area. The open-ended or short-answer items were estimated to take approximately 5–10 minutes per item, also depending on the content area. Writing prompts were estimated to take approximately 55–65 minutes per prompt.

Test administrators were instructed that each section in a form should be scheduled as one assessment session. However, they were allowed to combine multiple sections into a single session, as long as the sections were administered in the sequence in which they are printed in the test booklets (or shown on the screen). In all cases, individual assessment sections had to be completed within one school day.

Since not all students finished the assessment sections at the same time, test administrators were advised to use the flexibility of the time limits to the students' advantage. For example, test administrators managed the testing time so that students did not feel rushed while they were taking any assessment section, and no student was penalized because he or she worked slowly. It was equally stressed to test administrators that a student should not be given an opportunity to waste time. Students were told to close their booklets when they had finished the section of the assessment in which they had been working. Students who finished early were allowed to sit

quietly or read for pleasure until all students had finished. Students with special requirements and/or abilities (i.e., physical, visual, auditory, or learning disabilities as defined by their IEP or service contracts) and students who just worked slowly may have required extended time. Special assessment situations were arranged for these students. When all students in a testing session indicated that they had finished an assessment section, test administrators ended the section and began the next section or allowed the students to return to regular activities.

Scheduled extended time was provided by a test administrator, and students were allowed to request extended time if they indicated that they had not completed the task. Such requests were granted if the test administrator found the request to be educationally valid. Test administrators were advised that not permitting ample time for students to complete the assessment might impact the students' and school's performance.

As a general guideline, however, when all students indicated that they had finished a section, that section was closed. Students requiring time beyond the majority of the student population were allowed to continue immediately following the regularly scheduled session in another setting. When such accommodations were made, school personnel ensured that students were monitored at all times to prevent sharing of information. Students were not permitted to continue a section of the assessment after a significant lapse of time from the original session.

Additional information concerning testing time and test layouts can be found in Chapter Three.

### **TESTING WINDOW**

The testing windows for the 2014 operational assessments were as follows:

- Mathematics and Reading March 17 through March 28, 2014
- Make-up for Mathematics and Reading March 31 through April 4, 2014
- Writing March 31 through April 4, 2014
- Make-up for Writing April 7 through April 11, 2014
- Science April 28 through May 2, 2014
- Make-up for Science May 5 through May 9, 2014

Additional information concerning testing time and test layouts can be found in Chapter Three.

### SHIPPING, PACKAGING, AND DELIVERY OF MATERIALS

DRC sent two shipments for the 2014 PSSA operational assessment:

- Shipment one contained the *Handbook for Assessment Coordinators* and the *Directions for Administration Manuals* for each grade tested at a school participating in the mathematics, reading, science, and writing assessments. Shipment one was delivered by February 18, 2014.
- Shipment two contained the administrative materials (e.g., Return Shipping labels, District/School labels, Do Not Score labels, and Student Precode labels) and secure materials (e.g., consumable test/answer booklets) for each grade tested at a school participating in the mathematics, reading, science, and writing assessments. Shipment two was delivered by March 3, 2014.

DRC ensured that all assessment materials were assembled correctly prior to shipping. DRC operations staff used the automated Operations Materials Management System (Ops MMS) to assign secure materials to a school at the time of ship out. This system used barcode technology to provide an automated quality check between items requested for a site and items shipped to a site. A shipment box manifest was produced for and placed in each box shipped. DRC operations staff double-checked all box contents with the box manifest prior to sealing the box for shipping to ensure accurate delivery of materials. DRC operations staff performed lot acceptance sampling on both shipments. Districts and schools were selected at random and examined for correct and complete packaging and labeling. This sampling represented a minimum of 10 percent of all shipping sites.

DRC's materials management system, along with the systems of shippers, allowed DRC to track materials from DRC's warehouse facility to receipt at the district, school, or testing site. All DRC shipping facilities, materials processing facilities, and storage facilities are secure. Access is restricted by security code. Non-DRC personnel are escorted by a DRC employee at all times. Only DRC inventory control personnel have access to stored secure materials. DRC employees are trained in and made aware of the high level of security that is required.

DRC packed 2,832,412 assessment booklets and 137,277 *Directions for Administration Manuals* for 2,747 testing sites. DRC used United Parcel Service (UPS) and Advanced Shipping Technologies to deliver the secure materials to the testing sites.

### **MATERIALS RETURNED**

DRC used UPS for all returns. The return windows for the PSSA materials were as follows:

- Mathematics and Reading primary return window April 2 through April 8, 2014
- Mathematics and Reading make-up return window April 4 through April 11, 2014
- Writing primary return window April 8 through April 15, 2014
- Writing make-up return window April 11 through April 25, 2014
- Science return window (including make-ups) May 6 through May 9, 2014

### **TEST SECURITY MEASURES**

Test security is essential to obtaining reliable and valid scores for accountability purposes. Test Security Certifications were required to be signed by each building Principal, School Assessment Coordinator, District Assessment Coordinator, Test Administrator, and Proctor after the assessment has been administered. All signed Certifications were returned to the Chief School Administrator who must retain the Certifications for three years. The purpose of the Certifications was to serve as a tool to document that the individuals responsible for administering the assessments both understood and acknowledged the importance of test security and accountability. The Certifications attested that all security measures were followed concerning the handling of secure materials.

### SAMPLE MANUALS

Copies of the *Handbook for Assessment Coordinators* and the *Directions for Administration Manuals* can be found on the PDE website at www.education.state.pa.us.

### TESTING WINDOW ASSESSMENT ACCOMMODATIONS

The *Accommodations Guidelines* was developed by PDE for use with the 2014 PSSA. This manual can be found on the PDE website at www.education.state.pa.us. Additional information regarding assessment accommodations can be found in Chapter Four of this report.

# Chapter Eight: Processing and Scoring

### RECEIPT OF MATERIALS

Receipt of PSSA test materials began on March 26, 2014, and concluded with all make-up tests on May 14, 2014. DRC's Operations Materials Management System (Ops MMS) was utilized to receive assessment materials securely, accurately, and efficiently. This system features innovative automation and advanced barcode scanners. Captured data were organized into reports, which provided timely information with respect to suspected missing material.

The first step in the Ops MMS was the Box Receipt System. When a shipment arrived at DRC, the boxes were removed from the carrier's truck and passed under a barcode reader, which read the barcode printed on the return label and identified the district and school. The number of boxes was immediately compared to what was picked up at the district. The data collected in this process were stored in the Ops MMS database. After the barcode data were captured, the boxes were placed on a pallet and assigned a corresponding pallet number.

Once the box receipt process was completed, the materials separation phase began. Warehouse personnel opened the boxes and sorted materials by grade, subject, and status (used or unused booklets) into scanning boxes. Every booklet's security barcode and precode barcode were hand-scanned to link each document to the original box. As the booklets were sorted, the Ops MMS system guided the floor operator to which box to place the document. The Ops MMS system kept count and record of the materials placed in each box. This count remained correlated to the box as an essential quality-control step throughout the secure booklet processing and provided a target number for all steps of the check-in process. Once a box was closed, an MMS Processing Label was placed on that box.

Once labeled, the sorted and counted boxes proceeded to the Quality Assurance process, where a secure booklet check-in operator used a hand scanner to scan the MMS Processing Label. This procedure identified the material type and quantity parameters for what the Ops MMS should expect within a box. The box contents were then loaded into the streamfeeder.

The documents were fed past oscillating scanners that captured both the security code and precode from the booklets. A human operator monitored an Ops MMS screen that displayed scan errors, an ordered accounting of what was successfully scanned, and the document count for each box. The system ensured that each material within the box matched the information obtained from the original hand-scanning process.

When all materials were scanned and the correct document count was confirmed, the box was sealed and placed on a pallet. If the correct document count was not confirmed, or if the operator encountered difficulties with material scanning, the box and its contents were delivered to an exception handling station for resolution.

This check-in process occurred immediately upon receipt of materials; therefore, DRC provided feedback to districts and schools regarding any missing materials based on actual receipt versus expected receipt. Sites that had 100 percent of their materials missing after the date they were due to DRC were contacted, and any issues were resolved.

Throughout the process of secure booklet check-in, DRC project management ran a daily missing materials report. Every site that was missing any number of booklets was contacted by DRC. Results of these correspondences were recorded for inclusion in the final Missing Materials Report if the missing booklets were not returned by the testing site. DRC produced the Missing Materials Report for PDE upon completion of secure booklet check-in. The report listed all schools in each participating district along with security barcodes for any booklets not returned to DRC.

After scannable materials (used answer booklets) were processed through booklet check-in, the materials became available to the DRC Document Processing staff for document log-in. The booklets were logged-in using the following process:

- A DRC scannable barcode batch header was scanned, and a batch number was assigned to each box of booklets.
- The DRC box label barcode was scanned into the system to link the box and booklets to the newly created batch and to create a Batch Control Sheet.
- The DRC box label barcode number, along with the number of booklets in the box, was printed on the Batch Control Sheet for document tracking purposes. All booklets that were linked to the box barcode were assigned to the batch number and tracked through all processing steps. As booklets were processed, DRC staff dated and initialed the Batch Control Sheet to indicate that proper processing and controls were observed.

Before the booklets were scanned, all batches went through a quality inspection to ensure batch integrity and correct document placement.

After a quality check-in at the DRC Document Processing log-in area, the spines were cut off the scannable documents, and the pages were sent to DRC's Imaging and Scoring System.

### **SCANNING OF MATERIALS**

Customized scanning programs for all scannable documents were prepared to read the booklets and to format the scanned information electronically. Before materials arrived, all image scanning programs went through a quality review process that included scanning of mock data from production booklets to ensure proper data collection.

DRC's image scanners were calibrated using a standard deck of scannable pages with 16 known levels of gray. On a predefined page location, the average pixel darkness was compared to the standard calibration to determine the level of gray. Marks with an average darkness level of 4 or above on a scale of 16 (0 through F) were determined to be valid responses, per industry standards. If multiple marks were read for a single item and the difference of the grayscale reads was greater than four levels, the lighter mark was discarded. If the multiple marks had fewer than four levels of grayscale difference, the response was flagged systematically and forwarded to an editor for resolution.

DRC's image scanners read selected-response, demographic, and identification information. The image scanners also used barcode readers to read pre-printed barcodes from a label on the booklets.

The scannable documents were automatically fed into the image scanners where predefined processing criteria determined which fields were to be captured electronically. Open-ended response images were separated out for image-based scoring.

During scanning, a unique serial number was printed on each sheet of paper. This serial number was used for document integrity and to maintain sequencing within a batch of booklets.

A monitor randomly displayed images, and the human operator adjusted or cleaned the scanner when the scanned image did not meet DRC's strict quality standards for image clarity.

All images passed through a software clean-up program that despeckled, deskewed, and desmeared the images. A random sample of images was reviewed for image quality approval. If any document failed to meet image quality standards, the document was returned for rescanning.

Page-scan verification was performed to ensure that all predefined portions of the booklets were represented in their entirety in the image files. If a page was missing, the entire booklet was flagged for resolution.

After each batch was scanned, booklets were processed through a computer-based editing program to detect potential errors as a result of smudges, multiple marks, and omissions in predetermined fields. Marks that did not meet the predefined editing standards were routed to editors for resolution.

Experienced DRC Document Processing editing staff reviewed all potential errors detected during scanning and made necessary corrections to the data files. The imaging system displayed each suspected error. The editing staff then inspected the image and made any needed corrections using the unique serial number printed on the document during scanning.

Upon completion of editing, quality control reports were run to ensure that all detected potential errors were reviewed again and a final disposition was determined.

Before batches of booklets were extracted for scoring, a final edit was performed to ensure that all requirements for final processing were met. If a batch contained errors, it was flagged for further review before being extracted for scoring and reporting.

During this processing step, the actual number of documents scanned was compared to the number of booklets assigned to the box during book receipt. Count discrepancies between book receipt and booklets scanned were resolved at this time.

Once all requirements for final processing were met, the batch was released for scoring and student-level processing.

Table 8–1 shows the number of answer booklets received through booklet check-in, the number of booklets that contained student responses that were scanned and scored, the number of test booklets received, and the total number of booklets received for the writing assessment (W), the mathematics and reading assessment (MR), and the science assessment (S).

Table 8-1. Counts of 2014 PSSA Materials Received: Grades 3-8

|            | Answer<br>Booklets<br>Received | Used Answer<br>Booklets<br>Received | Test<br>Booklets<br>Received | Total<br>Booklets<br>Received | Total<br>Booklets<br>Shipped |
|------------|--------------------------------|-------------------------------------|------------------------------|-------------------------------|------------------------------|
| Grade 3 MR | 159,270                        | 128,120                             | n/a*                         | 159,270                       | 159,290                      |
| Grade 4 MR | 168,848                        | 129,765                             | 168,846                      | 337,694                       | 337,768                      |
| Grade 4 S  | 168,579                        | 129,176                             | 168,540                      | 337,119                       | 337,220                      |
| Grade 5 MR | 167,667                        | 129,379                             | 167,663                      | 335,330                       | 335,386                      |
| Grade 5 W  | 166,577                        | 129,226                             | n/a*                         | 166,577                       | 166,634                      |
| Grade 6 MR | 163,507                        | 127,920                             | 163,429                      | 326,936                       | 327,014                      |
| Grade 7 MR | 166,168                        | 131,751                             | 166,161                      | 332,329                       | 332,418                      |
| Grade 8 MR | 167,439                        | 132,350                             | 167,436                      | 334,875                       | 334,924                      |
| Grade 8 S  | 166,176                        | 130,880                             | 166,137                      | 332,313                       | 332,352                      |
| Grade 8 W  | 166,116                        | 131,968                             | n/a*                         | 166,116                       | 166,142                      |

<sup>\*</sup> Grades 5 and 8 writing and Grade 3 mathematics and reading were presented in a single, integrated test/answer booklet.

Figure 8–1 illustrates the production workflow for DRC's Ops MMS and Image Scanning and Scoring System from receipt of materials through all processing of materials and the presentation of scanned images for scoring.

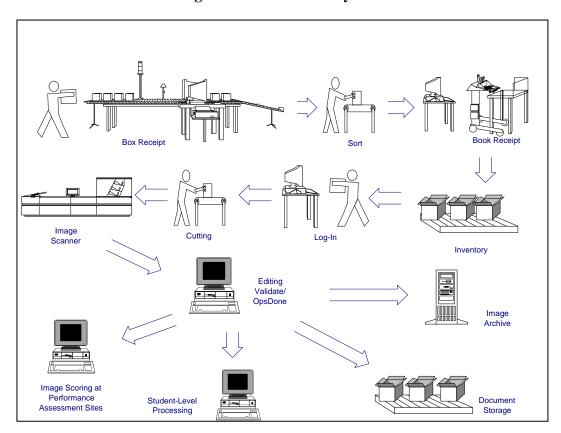


Figure 8–1. Workflow System

#### MATERIALS STORAGE

Upon completion of processing, student response documents were boxed for security purposes and final storage:

- Project-specific box labels were created containing unique customer and project information, material type, batch number, pallet/box number, and the number of boxes for a given batch.
- Boxes were stacked on pallets that were labeled with the project information and a list of the pallet's contents before delivery to the Materials Distribution Center for final secure storage.
- Materials will be destroyed one year after contract year ends, with PDE written approval.

#### SCORING MULTIPLE-CHOICE ITEMS

The scoring process included the scoring of multiple-choice items against the answer key and the aggregation of raw scores from the open-ended responses. A student's raw score is the actual number of points achieved by the student for tested elements of an assessment. From the raw scores, the scale scores were calculated.

The student file was scored against the final and approved multiple-choice answer key. Items were scored as right, wrong, omitted, or double-gridded (more than one answer was bubbled for an item). Sections of the test were evaluated as a whole and an attempt status was determined for each student for each subject. The score program defined all data elements at the student level for reporting.

#### RANGEFINDING

After student answer documents were received and processed, DRC's Performance Assessment Services (PAS) staff assembled groups of responses that exemplified the different score points for each subject. The score point ranges were represented by the following scoring guidelines:

- 0–3 item-specific scoring guidelines for ELA: reading (short answer)
- 1–4 holistic scoring guideline for ELA: text-dependent analysis
- 0–4 item-specific scoring guidelines for math
- 0–2 item-specific scoring guidelines for science

Note: For English language arts and mathematics at all grade levels (3–8), Pennsylvania Core Standards (PCS) items were rangefound and field tested this year. Grades 6–8 rangefound/field tested 20 forms per subject, per grade. Grades 3–5 rangefound/field tested 9 forms per subject, per grade. All items were embedded in the 2014 operational PSSA. The grades 6–8 PCS writing prompts were rangefound and field tested as part of a separate standalone field test not addressed in this technical report.

Responses were pulled from the embedded field-test portion of the PSSA for each subject. Once examples of all score points were selected for each item, sets were assembled for rangefinding. Copies were made for each rangefinding participant. Rangefinding committees consisted of Pennsylvania educators, PDE staff members, DRC Test Development staff, and DRC Performance Assessment Services staff. The rangefinding meetings were as follows:

- ELA: Text-Dependent Analysis (TDA) Field Test Rangefinding (grades 4 and 5), May 5–9, The Sheraton Harrisburg-Hershey, Harrisburg
- Reading Field Test Rangefinding (grade 3), May 5–7, The Sheraton Harrisburg-Hershey, Harrisburg
- Math Field Test Rangefinding (grades 6–8), May 5–8, The Sheraton Harrisburg-Hershey, Harrisburg
- ELA: TDA Field Test Rangefinding (grades 6–8), June 9–13, The Hilton, Harrisburg
- Math Field Test Rangefinding (grades 3–5), June 9–11, The Hilton, Harrisburg
- Science Field Test Rangefinding (grades 4 and 8), June 9–10, The Hilton, Harrisburg

Each rangefinding meeting began in a joint session with a review of the history of the assessment and a discussion of the transition towards a PCS assessment and then broke into subject/grade-specific groups. Sets of student responses were presented to the committees, one item at a time. Each committee initially reviewed and scored student responses as a group to ensure that everyone was interpreting the scoring guidelines consistently. Committee members then went on to score responses independently. For each student response, committee members' scores were discussed until a consensus was reached. Only those responses for which there was strong agreement among committee members were chosen for inclusion in training materials for DRC raters.

Discussions of student responses included the mandatory use of scoring guideline language. This ensured that committee members remained focused on the specific requirements of each score level. DRC PAS staff took notes addressing how and why the committees arrived at score point decisions, and this information was used by the scoring directors in rater training.

DRC and PDE discussed scoring guideline edits suggested by the rangefinding committees. Changes approved by PDE were then incorporated into the scoring guidelines by DRC Test Development staff. The edited scoring guidelines were used in the preparation of materials and the training of raters.

## RATER RECRUITMENT/QUALIFICATIONS

DRC retains a number of raters from year to year; the overall return rate in 2014 was 63 percent. This pool of experienced raters was drawn from to staff the scoring of the 2014 PSSA. To complete the rater staffing for this project, DRC placed advertisements in local newspapers and utilized a variety of web sites. Open houses were held and applications for rater positions were screened by DRC's recruiting staff. Candidates were personally interviewed by DRC staff. In addition, each candidate was required to provide an on-demand writing sample, an on-demand math sample, references, and proof of a four-year college degree. In this screening process, preference was given to candidates with previous experience scoring large-scale assessments and degrees emphasizing expertise in mathematics, English language arts, or science. Thus, the rater pool consisted of educators and other professionals with content-specific backgrounds. These individuals were valued for their content-specific knowledge, but they were required to set aside their own biases about student performance and accept the scoring standards outlined in the PSSA.

# LEADERSHIP RECRUITMENT/QUALIFICATIONS

Scoring directors and team leaders were selected by content specialists from a pool of employees who displayed expertise as raters and leaders on previous DRC projects. These individuals had strong backgrounds in mathematics, English language arts, or science and demonstrated organizational, leadership, and management skills. A majority of scoring directors and team leaders had at least five years of leadership experience working on large-scale assessments, including the PSSA. All scoring directors, team leaders, and raters were required to sign confidentiality agreements before handling secure materials.

Each room of raters was assigned a scoring director. This individual led all handscoring activities for the duration of the project. Scoring directors assisted in rangefinding, worked with supervisors to create training materials, conducted team leader training, and were responsible for training the raters. The scoring director made sure that reports were available and interpreted

those reports for the raters. The scoring director also supervised the team leaders. All scoring directors were monitored by the project director, the project manager, and the content specialists.

Team leaders assisted the scoring director with rater training by leading their teams in small-group discussions and answering individual questions that raters may not have felt comfortable asking in a large group. Once raters were qualified, team leaders were responsible for maintaining the accuracy and workload of each team member. Ongoing monitoring identified those individuals having difficulty scoring accurately. These raters received one-on-one retraining from the team leader. Any rater who could not be successfully retrained had his/her scores purged and was released from the project.

#### **TRAINING**

As part of preparation for the 2014 mathematics, reading, science, and writing assessments, DRC's PAS staff assembled the PDE-approved scoring guidelines and scored student responses approved by rangefinding committees into sets used for training raters. The item-specific scoring guidelines (and the revising and editing, and composing writing guidelines) served as the raters' constant reference. Responses that were relevant in terms of the scoring concepts they illustrated were annotated and included in an anchor set. The full range of each score point was clearly represented and annotated in the anchor set, which was used for reference by raters throughout the project.

Training sets and qualifying sets contained student responses consensus-scored by rangefinding committee members. Raters were instructed on how to apply the scoring guidelines and were required to demonstrate a clear comprehension of each anchor set by performing well on the associated training materials. Responses were selected for training to show raters the range of each score point (e.g., high, mid, and low 2s). Examples of 0s were also included for all mathematics, reading, and science items. This process helped raters recognize the various ways that a student could respond in order to earn each score point outlined and defined in the itemspecific scoring guidelines.

The scoring director conducted a team leader training session before training the raters. This session followed the same procedures as rater training, but qualifying standards were more stringent due to the extra responsibilities required of team leaders. During team leader training, all PSSA materials were reviewed and discussed. Team leaders were required to annotate all of their training materials with committee justifications from the rangefinding meetings. To facilitate scoring consistency, it was imperative that all team leaders imparted the same rationale for each response. Once the team leaders were qualified, leadership responsibilities were reviewed and team assignments were given. A ratio of one team leader per each 8–10 raters ensured sufficient monitoring rates for team members.

The 2014 assessment included the opportunity for students to respond in Spanish to mathematics and science items. The scoring director responsible for overseeing this is a Spanish language speaker who has a strong mathematics and science background and has worked closely with the PSSA in this capacity for five years. All Spanish raters were bilingual and hired specifically to score the Spanish portion of the assessment. They were required to meet the same training and scoring standards set for the raters of the English version of the assessment.

Rater training began with the scoring director providing an intensive review of the scoring guidelines and anchor papers. Next, raters practiced by independently scoring the responses in the training sets. After each training set, the scoring director or team leaders led a thorough discussion of the responses, either in a large-group or small-group setting.

Once the scoring guidelines, anchor sets, and training sets were thoroughly discussed, each rater was required to demonstrate understanding of the scoring criteria by qualifying (i.e., scoring with acceptable agreement to the true scores) on at least one of the qualifying sets. Raters who failed to achieve 70 percent exact agreement on the first qualifying set were given additional, individual training. Raters who did not perform at the required level of agreement by the end of the qualifying process were not allowed to score any student responses. These individuals were removed from the pool of potential raters in DRC's imaging system and released from the project.

#### HANDSCORING PROCESS

Student responses were scored independently. All responses were scored once, and 10 percent of the responses were scored a second time. The data collected from the 10 percent double-read portion was used to calculate the exact and adjacent agreement rates in the Scoring Summary Reports. The responses that were used for the 10 percent read behind were randomly chosen by the imaging system at the item level. Additional read behinds by the team leaders and scoring directors were done to further ensure reliability.

Raters scored the imaged student responses on PC monitors at DRC Scoring Centers in Sharonville and Columbus, Ohio; Plymouth and Woodbury, Minnesota; Pittsburgh, Pennsylvania; and Austin, Texas. Raters were seated at tables with two imaging stations at each table. Image distribution was controlled, ensuring that student images were sent only to designated groups of raters qualified to score those items. Imaged student responses were electronically separated for routing to individual raters by item. Raters were only provided with student responses that they were qualified to score. Scores were keyed into DRC's imaging system.

To handle possible alerts (i.e., student responses indicating potential issues related to students' safety and well-being that sometimes require attention at the state or local level), DRC's imaging system allows raters to forward responses needing attention to the scoring director. These alerts are reviewed by project management, who then notifies the students' schools and PDE of the occurrences. However, PDE does not receive students' responses or any other identifying information about the students. At no time in the alerts process do raters, or other DRC staff, acquire any knowledge concerning a student's personal identity.

## HANDSCORING VALIDITY PROCESS

One of the training tools PAS utilized to ensure rater accuracy was the validity process. The goal of the validity process is to ensure that scoring standards are maintained. Specifically, the objective is to make sure that raters score student responses in a manner consistent with statewide standards both within a single administration of the PSSA and across consecutive administrations. In scoring the 2014 PSSA, this scoring consistency was maintained, in part, through the validity process.

The validity process began with the selection of scored responses from the initial field test. The content specialist for each subject selected 40 validity papers for each core open-ended (OE) item. These 40 papers were drawn from a pool of exemplars (responses that are representative of

a particular score point and have been verified by the scoring director and the content specialist). The scores on validity papers are considered true scores.

The validity papers were then implemented to test rater accuracy. The responses were scanned into the imaging system and dispersed intermittently to the raters. By the end of the project, raters had scored all 40 validity papers for any items they were qualified to score. Raters were unaware that they were being dealt pre-scored validity responses and assumed that they were scoring live student responses. This helped bolster the internal validity of the process. It is important to note that all raters who received validity papers had already successfully completed the training/qualifying process.

Next, the scores that the raters assigned to the validity papers were compared to the true scores in order to determine the validity of the raters' scores. For each item, the percentage of exact agreement as well as the percentage of high and low scores was computed. This data was accessed through the Validity Item Detail Report. The same sort of data was also computed for each specific rater. This data was accessed through the Validity Reader Detail Report. Both of these may be run as daily or cumulative reports.

The Validity Reader Detail Report was used to identify particular raters for retraining. If a rater on a certain day generated a lower rate of agreement on a group of validity papers, it was immediately apparent in the Validity Reader Detail Report. A lower rate of agreement was defined as anything below 70 percent exact agreement with the true scores. Any time a rater's validity agreement rate fell below 70 percent, the scoring director was cued to examine that rater's scoring. First, the scoring director attempted to ascertain what kind of validity papers the rater was scoring incorrectly. This was done to determine whether there was any sort of a trend (e.g., trending low on the 1–2 line). Once the source of the low agreement rate was determined, the rater was retrained. If it was determined that the rater had been scoring live papers inaccurately, then his/her scores were purged for that day, and the responses were re-circulated and scored by other raters.

The cumulative Validity Item Detail Report was utilized to identify potential room-wide trends in need of correction. For instance, if a particular validity response with a true score of 3 was given a score of 2 by a significant number of raters within the room, that trend would be revealed in the Validity Item Detail Report. To correct a trend of this sort, the scoring director would look for student responses similar to the validity paper being scored incorrectly. Once located, these responses would be used in room-wide re-training, usually in the form of an annotated handout or a short set of papers without printed scores given to raters as a recalibration test.

Validity was employed on all core mathematics, reading, and science OE items and for all operational writing prompts. Each 40-paper validity set was formulated to mirror the score point distribution that the item generated during its previous administration. Each validity set included at least five examples of each score point. Examples of different types of responses were included to ensure that raters were tested on the full spectrum of response types.

The exact rater agreement rate generated during the validity process was often higher than the inter-rater agreement rate for the same item. The reason for this discrepancy has to do with how validity sets are formulated. The 40 validity papers for each item, chosen by the content specialist, are intended to cover the full breadth of each score point. For example, each validity set contains examples of high, mid, and low 2s. This scope ensures that the validity process is truly valid in terms of addressing the complete spectrum of response types. However, certain types of responses are generally not included in validity sets. These include line papers (i.e.,

examples of score points that are so close to the adjacent score point that raters are instructed to consult with a supervisor before assigning a score) and responses that, because of poor word choice/writing, are difficult to understand. The reason for these exclusions is that confusing/line/illegible papers often do not impart a teachable lesson. Since these types of papers are usually unique, any potential lesson the response might teach would apply only to that particular paper. Conversely, the papers in validity sets are chosen because they represent common response-types and teach lessons that can be applied to other similar papers. Due to this distinction, validity sets generate a slightly higher agreement rate than is typically generated during operational scoring.

### **QUALITY CONTROL**

Rater accuracy was monitored throughout the scoring session by means of daily and on-demand reports. These reports ensured that an acceptable level of scoring accuracy was maintained throughout the project. Inter-rater reliability was tracked and monitored with multiple quality control reports that were reviewed by quality assurance analysts. These reports and other quality control documents were generated at the scoring centers, where they were reviewed by the scoring directors, team leaders, content specialists, and project directors. The following reports and documents were used during the scoring of the open-ended items:

The Scoring Summary Report (includes two related reports)

- 1. The Reader Monitor Report monitored how often raters were in exact agreement with one another and ensured that an acceptable agreement rate was maintained. This report provided daily and cumulative exact and adjacent inter-rater agreement on the 10 percent that was double read.
- 2. The Score Point Distribution Report monitored the percentage of responses given each of the score points. For example, the mathematics daily and cumulative reports showed what percentage of 0s, 1s, 2s, 3s, and 4s a rater had given to all the responses scored at the time the report was produced. It also indicated the number of responses read by each rater so that production rates could be monitored.

The Item Status Report monitored the progress of handscoring. This report tracked each response and indicated the status (e.g., not read, complete, awaiting supervisor review, etc.). This report ensured that all responses were scored by the end of the project.

The Reader Score Report identified all responses scored by an individual rater. This report was useful if any responses needed rescoring because of possible rater drift.

The Validity Reports (addressed in detail on previous page) tracked how raters performed by comparing pre-scored responses to raters' scores for the same responses. If a rater's scoring fell below the 70 percent determined agreement rate, remediation occurred. Raters who did not retrain to the required level of agreement were released from the project.

The Read-Behind Log was used by the team leader/scoring director to monitor individual rater reliability. Team leaders read randomly selected, scored items from each team member. If the team leader disagreed with a rater's score, remediation occurred. This proved to be a very effective type of feedback because it was done with live items scored by a particular rater.

Recalibration Sets were used throughout the scoring sessions to ensure accuracy by comparing each rater's scores with the true scores on a pre-selected set of responses. Recalibration sets helped to refocus raters on Pennsylvania scoring standards. This check made sure there was no

change in the scoring pattern as the project progressed. Raters failing to achieve 70 percent agreement with the recalibration true scores were given additional training to achieve the highest degree of accuracy possible. Raters who were unable to recalibrate were released from the project. The process for creating and administering recalibration sets was similar to the one used for training sets.

Table 8–2 shows exact and adjacent agreement rates of raters on the core open-ended responses for the mathematics items in the 2014 PSSA. All student responses were read once, and 10 percent of the responses were read a second time. The data collected from this 10 percent double read was used to calculate the exact and adjacent agreement rates.

Table 8–2. Inter-rater Agreement for 2014 PSSA Mathematics Grades 3–8 Open-Ended Response Items and Validity

| Mathematics | Common<br>Item | % Exact<br>Agreement | % Adjacent<br>Agreement | % Exact + Adjacent Agreement | % Exact<br>Validity<br>Agreement |
|-------------|----------------|----------------------|-------------------------|------------------------------|----------------------------------|
|             | 1              | 94                   | 6                       | 100                          | 91                               |
| Grade 3     | 2              | 94                   | 6                       | 100                          | 97                               |
|             | 3              | 96                   | 4                       | 100                          | 97                               |
|             | 1              | 92                   | 8                       | 100                          | 90                               |
| Grade 4     | 2              | 94                   | 5                       | 99                           | 95                               |
|             | 3              | 87                   | 12                      | 99                           | 84                               |
|             | 1              | 84                   | 16                      | 100                          | 92                               |
| Grade 5     | 2              | 94                   | 6                       | 100                          | 98                               |
|             | 3              | 88                   | 13                      | 101                          | 92                               |
|             | 1              | 97                   | 3                       | 100                          | 94                               |
| Grade 6     | 2              | 89                   | 11                      | 100                          | 92                               |
|             | 3              | 93                   | 7                       | 100                          | 96                               |
|             | 1              | 91                   | 9                       | 100                          | 95                               |
| Grade 7     | 2              | 87                   | 13                      | 100                          | 92                               |
|             | 3              | 91                   | 9                       | 100                          | 95                               |
|             | 1              | 90                   | 10                      | 100                          | 88                               |
| Grade 8     | 2              | 87                   | 13                      | 100                          | 93                               |
|             | 3              | 89                   | 11                      | 100                          | 88                               |

*Note*. 0–4 possible score points

Table 8–3 shows the distribution of scores for the mathematics items. All mathematics items are scored with a 0–4 score point range.

Table 8–3. Percentages Awarded for Each Possible Score Point 2014 PSSA Mathematics Grades 3–8

| Mathematics | Common Item | %0 | %1 | %2 | %3 | %4 | %B/NS* |
|-------------|-------------|----|----|----|----|----|--------|
|             | 1           | 14 | 21 | 21 | 29 | 14 | 1      |
| Grade 3     | 2           | 15 | 28 | 26 | 17 | 14 | 2      |
|             | 3           | 2  | 7  | 23 | 23 | 44 | 1      |
|             | 1           | 16 | 14 | 20 | 40 | 9  | 2      |
| Grade 4     | 2           | 4  | 14 | 17 | 26 | 31 | 8      |
|             | 3           | 27 | 21 | 23 | 17 | 11 | 1      |
|             | 1           | 13 | 22 | 24 | 23 | 17 | 1      |
| Grade 5     | 2           | 5  | 13 | 54 | 19 | 5  | 5      |
|             | 3           | 27 | 30 | 17 | 18 | 7  | 1      |
|             | 1           | 13 | 63 | 5  | 12 | 7  | 1      |
| Grade 6     | 2           | 12 | 34 | 26 | 20 | 2  | 6      |
|             | 3           | 5  | 8  | 20 | 45 | 21 | 1      |
|             | 1           | 26 | 45 | 10 | 13 | 4  | 2      |
| Grade 7     | 2           | 21 | 26 | 21 | 10 | 17 | 5      |
|             | 3           | 18 | 8  | 27 | 36 | 10 | 1      |
|             | 1           | 43 | 6  | 27 | 9  | 13 | 2      |
| Grade 8     | 2           | 13 | 35 | 20 | 16 | 10 | 5      |
|             | 3           | 6  | 53 | 8  | 24 | 8  | 2      |

<sup>\*</sup>B=blank and NS=non-scoreable

Table 8–4 shows exact and adjacent agreement rates of raters on the core open-ended responses for the reading items in the 2014 PSSA. All student responses were read once, and 10 percent of responses were read a second time. The data collected from this 10 percent double read was used to calculate the exact and adjacent agreement rates.

Table 8–4. Inter-rater Agreement for 2014 PSSA Reading Grades 3–8 Open-Ended Response Items and Validity

| Reading | Common<br>Item | % Exact<br>Agreement | % Adjacent<br>Agreement | % Exact + Adjacent Agreement | % Exact<br>Validity<br>Agreement |
|---------|----------------|----------------------|-------------------------|------------------------------|----------------------------------|
| Grade 3 | 1              | 78                   | 22                      | 100                          | 76                               |
| Grade 5 | 2              | 77                   | 23                      | 100                          | 82                               |
|         | 1              | 81                   | 19                      | 100                          | 84                               |
| Grade 4 | 2              | 80                   | 20                      | 100                          | 81                               |
| Grade 4 | 3              | 80                   | 20                      | 100                          | 84                               |
|         | 4              | 83                   | 17                      | 100                          | 87                               |
|         | 1              | 78                   | 22                      | 100                          | 87                               |
| Grade 5 | 2              | 78                   | 21                      | 99                           | 81                               |
| Grade 5 | 3              | 80                   | 20                      | 100                          | 89                               |
|         | 4              | 75                   | 25                      | 100                          | 79                               |
|         | 1              | 77                   | 23                      | 100                          | 81                               |
| Grade 6 | 2              | 81                   | 18                      | 99                           | 75                               |
| Grade o | 3              | 82                   | 18                      | 100                          | 82                               |
|         | 4              | 83                   | 17                      | 100                          | 85                               |
|         | 1              | 86                   | 14                      | 100                          | 86                               |
| Grade 7 | 2              | 78                   | 22                      | 100                          | 80                               |
| Grade / | 3              | 81                   | 19                      | 100                          | 86                               |
|         | 4              | 82                   | 18                      | 100                          | 75                               |
|         | 1              | 74                   | 26                      | 100                          | 89                               |
| Grade 8 | 2              | 77                   | 23                      | 100                          | 89                               |
| Grade 8 | 3              | 74                   | 26                      | 100                          | 81                               |
|         | 4              | 78                   | 22                      | 100                          | 74                               |

*Note*. 0–3 possible score points

Table 8-5 shows the distribution of scores for the reading items. All reading items are scored with a 0-3 score point range.

Table 8–5. Percentages Awarded for Each Possible Score Point 2014 PSSA Reading Grades 3–8

| Reading | Common Item | %0 | %1 | %2 | %3 | %B/NS* |
|---------|-------------|----|----|----|----|--------|
| Grade 3 | 1           | 8  | 40 | 40 | 9  | 3      |
| Grade 3 | 2           | 6  | 41 | 41 | 10 | 2      |
|         | 1           | 5  | 24 | 41 | 27 | 3      |
| Grade 4 | 2           | 5  | 20 | 42 | 30 | 3      |
| Grade 4 | 3           | 6  | 26 | 44 | 22 | 2      |
|         | 4           | 12 | 33 | 33 | 19 | 3      |
|         | 1           | 2  | 23 | 57 | 16 | 2      |
| Grade 5 | 2           | 7  | 25 | 53 | 13 | 2      |
| Grade 5 | 3           | 8  | 19 | 57 | 15 | 1      |
|         | 4           | 14 | 40 | 34 | 10 | 2      |
|         | 1           | 2  | 30 | 45 | 21 | 2      |
| Grade 6 | 2           | 5  | 34 | 47 | 13 | 1      |
| Grade 0 | 3           | 5  | 32 | 53 | 10 | 0      |
|         | 4           | 16 | 26 | 43 | 9  | 6      |
|         | 1           | 2  | 49 | 27 | 21 | 1      |
| Grade 7 | 2           | 6  | 31 | 43 | 17 | 3      |
| Grade / | 3           | 7  | 30 | 35 | 26 | 2      |
|         | 4           | 11 | 36 | 31 | 21 | 1      |
|         | 1           | 7  | 35 | 42 | 14 | 2      |
| Grade 8 | 2           | 3  | 15 | 53 | 26 | 3      |
| Grade 8 | 3           | 7  | 29 | 46 | 16 | 2      |
|         | 4           | 9  | 37 | 32 | 19 | 3      |

<sup>\*</sup>B=blank and NS=non-scoreable

Table 8–6 shows exact and adjacent agreement rates of raters on the core open-ended responses for the science items in the 2014 PSSA. All student responses were read once, and 10 percent of responses were read a second time. The data collected from this 10 percent double read was used to calculate the exact and adjacent agreement rates.

Table 8–6. Inter-rater Agreement for 2014 PSSA Science Grades 4 and 8 Open-Ended Response Items and Validity

| Science | Common<br>Item | % Exact<br>Agreement | % Adjacent<br>Agreement | % Exact + Adjacent Agreement | % Exact<br>Validity<br>Agreement |
|---------|----------------|----------------------|-------------------------|------------------------------|----------------------------------|
|         | 1              | 95                   | 5                       | 100                          | 98                               |
|         | 2              | 93                   | 7                       | 100                          | 96                               |
| Grade 4 | 3              | 96                   | 4                       | 100                          | 99                               |
|         | 4              | 97                   | 3                       | 100                          | 99                               |
|         | 5              | 83                   | 17                      | 100                          | 92                               |
|         | 1              | 86                   | 14                      | 100                          | 94                               |
|         | 2              | 78                   | 21                      | 100                          | 90                               |
| Grade 8 | 3              | 84                   | 15                      | 99                           | 95                               |
|         | 4              | 86                   | 14                      | 100                          | 94                               |
|         | 5              | 93                   | 7                       | 100                          | 98                               |

Note. 0-2 possible score points

Table 8–7 shows the distribution of scores for the science items. All science items are scored with a 0–2 score point range for reporting purposes.

Table 8–7. Percentages Awarded for Each Possible Score Point 2014 PSSA Science Grades 4 and 8

| Science | Common Item | %0 | %1 | %2 | %B/NS* |
|---------|-------------|----|----|----|--------|
|         | 1           | 21 | 42 | 36 | 1      |
|         | 2           | 13 | 38 | 47 | 1      |
| Grade 4 | 3           | 5  | 46 | 48 | 2      |
|         | 4           | 23 | 35 | 40 | 1      |
|         | 5           | 16 | 38 | 45 | 2      |
|         | 1           | 11 | 27 | 60 | 2      |
|         | 2           | 13 | 36 | 49 | 3      |
| Grade 8 | 3           | 33 | 34 | 29 | 4      |
|         | 4           | 24 | 29 | 44 | 3      |
|         | 5           | 26 | 36 | 35 | 3      |

<sup>\*</sup>B=blank and NS=non-scoreable

Table 8–8 shows exact and adjacent agreement rates of raters on the core open-ended responses for the writing items in the 2014 PSSA. All student responses were read once, and 10 percent of responses were read a second time. The data collected from this 10 percent double read was used to calculate the exact and adjacent agreement rates.

Table 8–8. Inter-rater Agreement for 2014 PSSA Writing Grades 5 and 8 Open-Ended Response Items and Validity

| Wr    | iting      | Comp  | osition % A               | greement | Revising and Editing % Agreement |          |                     |
|-------|------------|-------|---------------------------|----------|----------------------------------|----------|---------------------|
| Grade | Prompt     | Exact | Adjacent Exact + Adjacent |          | Exact                            | Adjacent | Exact +<br>Adjacent |
|       | 1          | 84    | 16                        | 100      | 82                               | 18       | 100                 |
| 5     | 2          | 84    | 16                        | 100      | 83                               | 17       | 100                 |
| 3     | 1 Validity | 73    | 27                        | 100      | 75                               | 25       | 100                 |
|       | 2 Validity | 71    | 29                        | 100      | 72                               | 29       | 100                 |
|       | 1          | 83    | 17                        | 100      | 79                               | 21       | 100                 |
| 8     | 2          | 80    | 20                        | 100      | 76                               | 24       | 100                 |
| 8     | 1 Validity | 71    | 29                        | 100      | 70                               | 30       | 100                 |
|       | 2 Validity | 81    | 19                        | 100      | 80                               | 20       | 100                 |

Note. 1-4 possible score points

Table 8–9 shows the distribution of scores for the writing items. All prompts are scored with a 1–4 score point range for both Composition and for Revising and Editing.

Table 8–9. Percentages Awarded for Each Possible Score Point 2014 PSSA Writing Grades 5 and 8

| Writing |        |    | C  | omposi | ition |             | Revising and Editing |    |    |    | 5           |
|---------|--------|----|----|--------|-------|-------------|----------------------|----|----|----|-------------|
| Grade   | Prompt | %1 | %2 | %3     | %4    | %NS/<br>NT* | %1                   | %2 | %3 | %4 | %NS/<br>NT* |
| _       | 1      | 6  | 41 | 46     | 4     | 2           | 7                    | 43 | 44 | 4  | 2           |
| 5       | 2      | 7  | 45 | 41     | 4     | 2           | 8                    | 45 | 41 | 4  | 2           |
| 0       | 1      | 3  | 26 | 63     | 6     | 2           | 3                    | 28 | 61 | 7  | 2           |
| 8       | 2      | 4  | 34 | 55     | 6     | 2           | 5                    | 33 | 55 | 6  | 2           |

\* NS=non-scoreable and NT=not taken

# Chapter Nine: Description of Data Sources and Sampling Adequacy

This chapter describes the data sources (e.g., *n*-counts, characteristics of students) used for the various analysis procedures discussed in the remaining chapters of this technical report. Psychometric analyses are conducted at several points for the PSSA: 1) early analyses for quality control purposes; 2) analyses associated with the calibration, scaling, and linking processes; 3) analyses used for item banking; and 4) analyses for the technical report. Detailed information regarding the attributes of students used for Adequate Yearly Progress (AYP) reporting is provided in Chapter Ten.

#### PRIMARY STUDENT FILTERING CRITERIA

For many data files, the primary means of filtering students for inclusion/exclusion from any data analysis are based on the state reporting criteria which are outlined below. Within the state reporting rules are separate attempt criteria for individual subject areas. The attempt criteria are discussed more fully below.

## State Reporting Criteria

The state reporting criteria are as follows:

- The student must be enrolled for the full academic year.
- The student must be attributed to a public district/school (state).
- The student must receive a score (i.e., met the subject attempt logic—see additional information below).
- The student is not a homeschool student.
- The student is not a foreign exchange student.
- The student is not a first-year ELL student (mathematics/reading only).

## PSSA Attempt Criteria

For all data sources, only students who meet the attempt criteria are included. For mathematics, reading, and science, the attempt criteria required students to complete a minimum of five items (multiple-choice (MC) or open-ended (OE)) in each respective subject-area section of the test booklets. Science counts were based on operational items only, while mathematics and reading counts were based on operational and nonoperational items. For writing, a student must complete at least five MC items and respond to both operational writing prompts.

#### **KEY VALIDATION DATA**

These data are only mentioned for the sake of completeness, as no formal results from these data are provided in this technical document. An analysis on all operational MC items is conducted early in the scoring process to ensure that the items are performing as expected. This is an important quality check that is always done for the PSSA. This analysis is usually (but not always) done using all students from early-return schools. The sample does not need to be representative of the entire state for these quality checks. Available student data typically suffices as long as there is reasonable variability in the total test scores of students.

For 2014 this data included all public school students who 1) had their MC items scanned and scored by May 12 (mathematics/reading/writing) or May 16 (science) and 2) met preliminary attempt criteria (i.e., attempt was determined based on MC items only). Note that the full state reporting criteria were not in effect for this file (only attribution to a public school based on tested site and preliminary attempt criteria were used to filter students).

#### **CALIBRATION DATA**

Calibration data included students who met the preliminary state reporting criteria (including attempt criteria) by May 16. The state reporting criteria were preliminary, meaning that attributions and final PIMS<sup>6</sup> information were not complete by this time. No sampling was undertaken in this data (i.e., it included all students who met the above criteria with operational test scores up to this point<sup>7</sup>). This data file was used to provide impact results to the Technical Advisory Committee (TAC) during the linking review process.

#### ITEM BANK DATA

The item bank data included students who met the state reporting criteria by July 8. No sampling was undertaken in this data (i.e., it included all students who met the above criteria with scored field-test data up to this point). The data banked for field-test items were based on this data file.

#### FINAL DATA

This file included all students who met state reporting criteria by August 5 for all subject areas. The final data reflects update by schools for correction of certain fields (e.g., student ethnicity). All other files contained preliminary data (item bank data). The majority of the results included in this technical report were derived using the final data file.

<sup>&</sup>lt;sup>6</sup> Pennsylvania Information Management System

<sup>&</sup>lt;sup>7</sup> Historically, PSSA has retained all students who met the stated criteria in the calibration data set, even those who had testing accommodations.

#### FINAL N-COUNTS FOR ALL DATA SOURCES

The *n*-counts for all data sources are provided in Table 9–1. The calibration count includes students who met the preliminary state reporting criteria, while the final count includes students who met the final state reporting criteria. A computer-based test (CBT) was offered for all subjects for the first time in 2014. Calibration data shows the number of students in both modes. Calibration of item parameters was conducted with paper students only; however, other analyses conducted during the calibration period (see Chapter Twelve) used both paper and CBT students. The *n*-counts of item bank data show only the number of students who took a paper test, because values for item banking (e.g., CTT statistics) were obtained with paper students. However, the *n*-counts of paper students and total are not very different because the proportions of CBT students were small (see Table 9–2).

Table 9–1. Data Source N-Counts

| Subject        | Grade | Key<br>Validation<br>(Paper/CBT) | Calibration<br>(Paper/CBT) | Item<br>Bank<br>(Paper) | Final<br>(Paper/CBT) |
|----------------|-------|----------------------------------|----------------------------|-------------------------|----------------------|
|                | 3     | 47790                            | 124259                     | 124520                  | 124702               |
|                | 4     | 38846                            | 126486                     | 126588                  | 126911               |
| Mathematics    | 5     | 41133                            | 126188                     | 126242                  | 126693               |
| Mathematics    | 6     | 42668                            | 125564                     | 124839                  | 126128               |
|                | 7     | 46718                            | 129348                     | 128268                  | 130189               |
|                | 8     | 43368                            | 130101                     | 128649                  | 131363               |
|                | 3     | 47719                            | 124336                     | 124477                  | 124659               |
|                | 4     | 38784                            | 126469                     | 126565                  | 126887               |
| D II           | 5     | 41069                            | 126134                     | 126187                  | 126639               |
| Reading        | 6     | 42612                            | 125489                     | 124757                  | 126044               |
|                | 7     | 46669                            | 129220                     | 128135                  | 130053               |
|                | 8     | 43301                            | 129968                     | 128507                  | 131218               |
| Caiamaa        | 4     | 121006                           | 126268                     | 125860                  | 127105               |
| Science        | 8     | 121165                           | 129067                     | 126375                  | 130918               |
| <b>XX</b> 7*4* | 5     | 71718                            | 124168                     | 124429                  | 124666               |
| Writing        | 8     | 76702                            | 128991                     | 127637                  | 130302               |

<sup>&</sup>lt;sup>8</sup> For this reason, the final count may be smaller than the calibration count in any given year.

## COMPUTER-BASED TEST (CBT)

Table 9–2 displays the count of students who took the 2014 PSSAs broken out by content, grade, and mode with the final data. In all grades, only three percent or less of students were enrolled to take the PSSAs online in the spring. Lower grades had fewer students who took CBT and grade 8 had highest CBT proportion of students in all subjects. Slightly over two percent of grade 8 students took CBT with mathematics, reading, and writing, and slightly over three percent of grade 8 students took science CBT.

| Cubicat     | Cwada | N-Co   | unts | Proport | ion (%) |
|-------------|-------|--------|------|---------|---------|
| Subject     | Grade | Paper  | CBT  | Paper   | CBT     |
|             | 3     | 124456 | 246  | 99.80   | 0.20    |
|             | 4     | 126514 | 397  | 99.69   | 0.31    |
| Mathematics | 5     | 126143 | 550  | 99.57   | 0.43    |
| wiamemanes  | 6     | 124724 | 1404 | 98.89   | 1.11    |
|             | 7     | 128137 | 2052 | 98.42   | 1.58    |
|             | 8     | 128491 | 2872 | 97.81   | 2.19    |
|             | 3     | 124413 | 246  | 99.80   | 0.20    |
|             | 4     | 126491 | 396  | 99.69   | 0.31    |
| Dooding     | 5     | 126088 | 551  | 99.56   | 0.44    |
| Reading     | 6     | 124642 | 1402 | 98.89   | 1.11    |
|             | 7     | 128004 | 2049 | 98.42   | 1.58    |
|             | 8     | 128348 | 2870 | 97.81   | 2.19    |
| Caiamaa     | 4     | 126246 | 859  | 99.32   | 0.68    |
| Science     | 8     | 126840 | 4078 | 96.89   | 3.11    |
| VV:4: ~     | 5     | 124304 | 362  | 99.71   | 0.29    |
| Writing     | 8     | 127449 | 2853 | 97.81   | 2.19    |

Table 9–2. Final N-Counts and Proportion by Mode

#### **SPIRALING OF FORMS**

PSSA forms were scrambled and spiraled for all grades and subjects except writing. For writing, no scrambling was done. With 2014 PSSA, there was only one form for both grades 5 and 8 and thus no spiraling was done (see Appendix H for summary statistics).

Appendix H provides summary statistics for all test forms (there are multiple forms for mathematics, reading, and science) for each grade and subject-area test. The tables provide the form number (Form), the number of students (N), test length in items (L), total points (Pts.), the minimum score (Min), the maximum score (Max), the mean score (Mean), the median score (Med), and the standard deviation (SD). The mean raw scores across forms are similar, indicating the student populations taking each form are of approximately equal ability and item scrambling are appropriate. This equivalence of ability distributions across forms is the desired outcome of spiraling and allows for optimum analysis of the embedded field-test items.

### **SCRAMBLING OF FORMS**

In response to test security issues raised in prior PSSA administrations, multiple scrambled patterns of operational forms were constructed for each mathematics, reading, and science assessment since 2013. The core form was constructed following the past test construction and equating guidelines and will be referred to as the Master Core throughout the remainder of this document. Based on previous TAC recommendation, the Master Core is the pattern of the test that would have been administered to all students in the absence of scrambling. More importantly, the data obtained from administration of the Master Core were used for operational MC item calibration for the 2014 PSSA.

Once the Master Core was constructed and approved, DRC and PDE content specialists built seven scrambled patterns of the Master Core for each content and grade. OE items were not scrambled so each OE item appeared in the same position on every form. Some MC items also appear in the same position on multiple forms due to content constraints. In some content areas and grades the number of field-test forms was greater than the number of scrambled patterns. In these instances the Master Core and scrambled patterns were repeated with no specific pattern appearing more than three times. Due to the limited enrollment for the PSSA CBT, only three forms were offered. These forms included the accommodation form, a Master Core form, and one additional scrambled form; therefore, these forms have slightly higher participation than other forms.

When the Master Core was built, the linking position rules were observed for all core-linking and equating block items. The Master Core was used at least as often, or more often, than any scrambled version of the core form. Since form 1 was used for all accommodated forms (e.g., Braille, Large Print, Audio, and Spanish) it was never designated as a Master Core. The specific forms presenting the Master Core vary across grades within each content area. For example, the Master Core for mathematics Grade 8 is repeated on Forms 2, 9, and 13 while the Master Core for Grade 7 is repeated on Forms 2, 10, and 11. Given that all forms were spiraled at the student level, the distribution of forms is reasonably uniform. The exception is Form 1, which had higher participation due to the fact that it is the only form used for accommodations.

Based on TAC recommendations to minimize possible item position effects, each section of the Master Core was divided into blocks of non-overlapping MC items. Recall that the OE items were not part of the scrambling. The blocks generally contained six to seven MC items (or one passage), but the block sizes varied depending on the content and test session. Within each block, MC items were scrambled following general psychometric and content guidelines to create up to five versions of the block in addition to the Master Core sequencing. The blocks were assembled to create seven scrambled versions of the Master Core. Table 9–3 shows the mathematics Grade 8 scrambled form structure. The core was divided into nine blocks (labeled "1"–"9") and each block was scrambled in five different permutations (labeled I, II, III, IV, and M). So, for example, Form 1 was constructed with scrambled block version "I" for all nine blocks. Seven scrambled variations (labeled A, B, C, D, E, F, and G in the "Pattern" column) of the Master Core were used in addition to the Master Core across the twenty field-test forms. The Master Core was used on Forms 2, 9, and 13.

Block 3 5 Pattern **Form** 4 Ι Ι Ι Ι Ι Ι Ι Ι 1 Ι В 2 M M M M M M M M M Master 3 II II II II II II II II II C 4 Ш Ш Ш Ш Ш Ш Ш Ш Ш F 5 IV IV IV IV IV IV IV IV IV D 6 II IV I Ш II III M IV I Е 7 Ш Ι IV M Ι II IV II Ш G IV Ш IV II 8 Ш M I II I A 9 M M M M M M M M M Master 10 Ш IV IV Ш I M I II Π G I 11 I I I I I Ι I I В 12 II IV I Ш II Ш M IV I Е 13 M M M M M M M M M Master 14 II II II П Π C II П II II IV IV IV IV IV IV IV IV IV 15 D Ш Ш Ш Ш Ш Ш Ш F 16 Ш Ш 17 IV Ш M I Ш IV II I II A I Ι 18 I I I I Ι I I В 19 IV Ш M Ι Ш IV Π Π I Α 20 Π П П II П Π П П II C

Table 9–3. Mathematics Grade 8 Scrambling

Prior to scrambling the Master Core, DRC and PDE content specialists developed the following general psychometric and content guidelines:

- Items cannot move between blocks.
- DRC and PDE content specialists will work to ensure that the scrambling does not result in making content more difficult than the Master Core item sequence. For example, items of similar cognitive complexity will be swapped rather than random scrambling.
- A block scramble pattern is only valid if it does not contain an invalid key distribution within the block. Additional checks for an invalid key distribution across blocks must be made when combining block scramble patterns to create forms. For example, scrambling must not create more than three (3) of the same key positions in a row.
- A block scramble pattern is only valid if it does not contain an invalid standard (AA/EC) distribution within a block. Additional checks for standard distribution across blocks must be made when combining block scramble patterns to create forms. An exception was made for one mathematics scramble for each grade which ordered items within block by eligible content per PDE request.

- Scrambling should not place a difficult item as the first item in a section. The first item in a block that does NOT begin a section may be a difficult item since blocks are invisible to the student.
- For passage-based items, a block scramble pattern is only valid if it does not create dissonance between the items and passage(s).
- Scrambling should not place a difficult item as the first item in a passage set.
- Within a set of items connected to a paired set of passages, an item associated with both passages can be swapped only with another item associated with both passages. (These items must remain at the end of the set of items associated with the passage set.)

Table 9–4 shows a summary of the scrambling strategy employed for the 2014 PSSAs. Each content and grade used a total of eight different patterns of the core including the Master Core. Recall that mathematics and reading have started transitioning to the PA Common Core (PACC). In 2013, grades 3–5 had more forms to field test PACC-aligned items, and in 2014, grades 6–8 were required to field test more forms. Also note that no scrambling was implemented for the writing assessment.

Total Master **Patterns** Content Grade **Forms** Cores **Mathematics** 

Reading

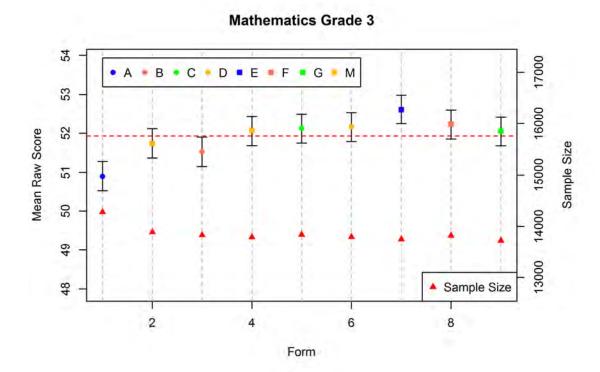
Science

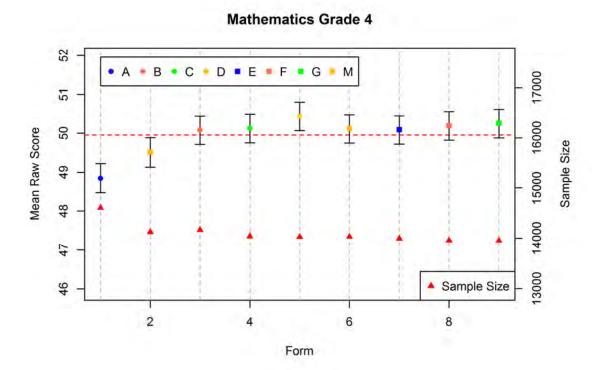
**Table 9–4. Form Scrambling** 

An important assumption for effectively collapsing forms into pattern groups is that the form spiraling yielded randomly equivalent groups. Figure 9–1 displays the raw score mean, a 3 standard error band, and the scramble pattern for each form. The standard error bands we have plotted here are equivalent to approximately 99 percent confidence interval for the form means. When the error bands for a form overlapped the overall mean (the red line), the form means were not statistically different from the overall mean regardless of the type of scrambling. As can be seen, the spiraling essentially produced randomly equivalent groups. Please note that Form 1 is

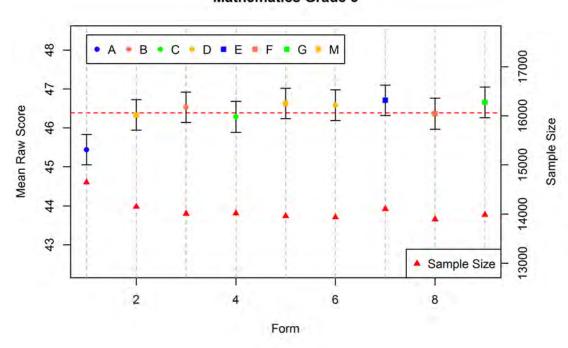
used for all accommodated administrations and as such appears very different from the remaining forms in these plots.

Figure 9–1. Form Mean Scores with +/- Three Standard Error (SE) Bands

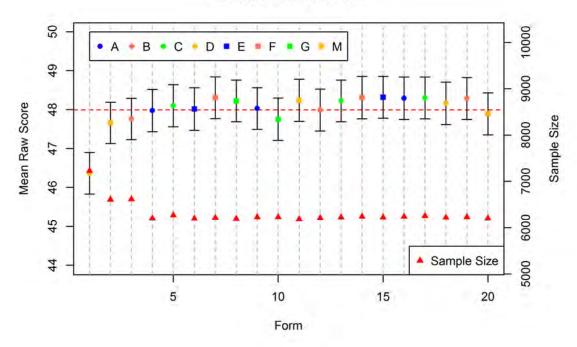




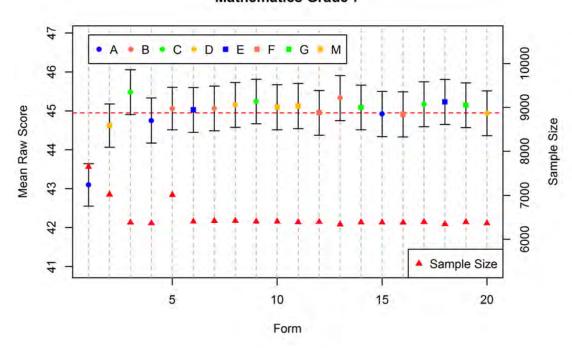
## **Mathematics Grade 5**



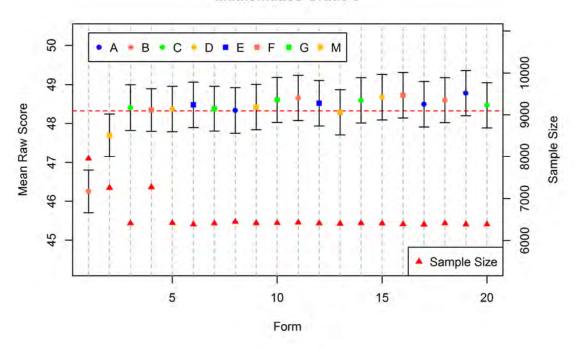
# **Mathematics Grade 6**

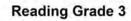


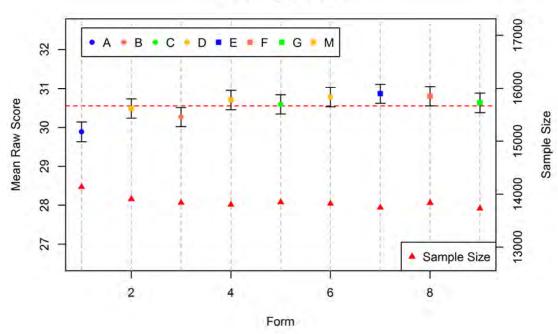
## **Mathematics Grade 7**



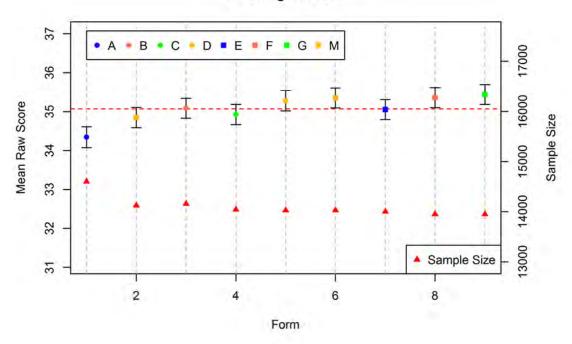
# **Mathematics Grade 8**



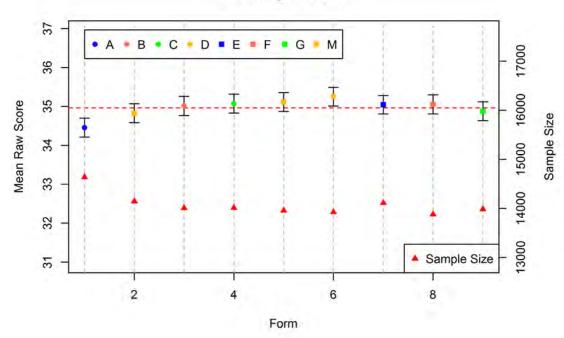




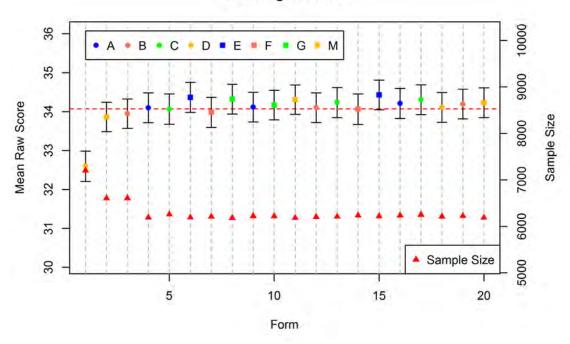
# Reading Grade 4



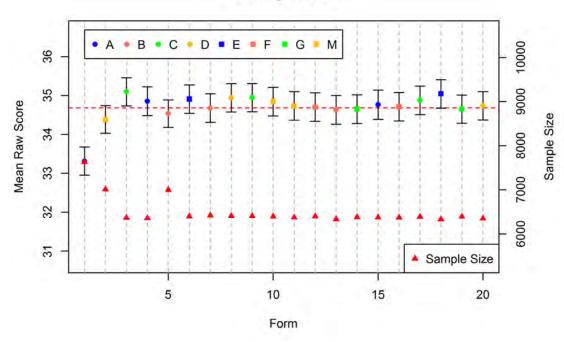




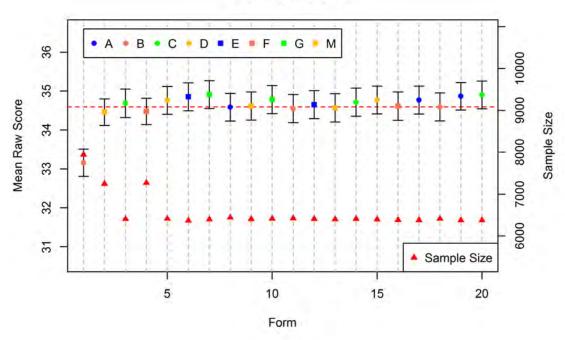
# Reading Grade 6



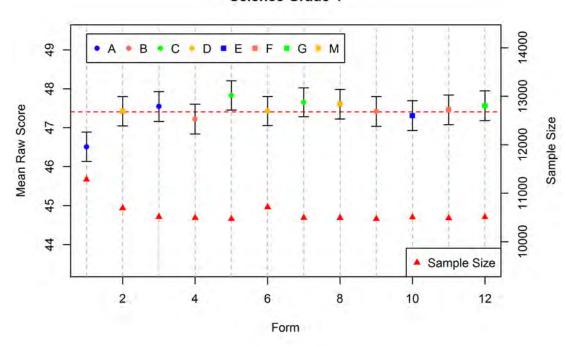




# Reading Grade 8



## Science Grade 4



# Science Grade 8

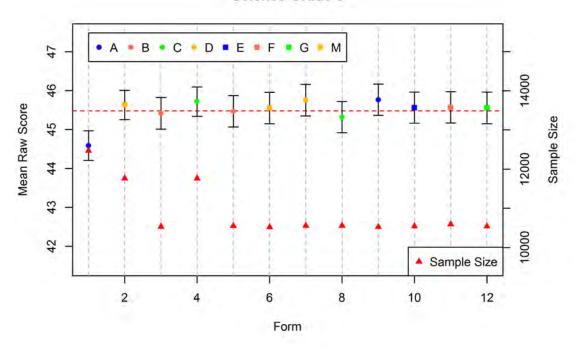


Table 9–5 shows the number of students who took each form pattern (recall that pattern A is the Master Core version), and Table 9–6 gives the form to scramble pattern conversion.

Table 9-5. Form Pattern Counts

| G 4 4       | <i>C</i> 1 |       |       |       | Patt  | ern   |       |       |       |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Content     | Grade      | A     | В     | C     | D     | E     | F     | G     | M     |
|             | 3          | 14275 | 13829 | 13839 | 13794 | 13748 | 13817 | 13723 | 27677 |
|             | 4          | 14605 | 14167 | 14042 | 14029 | 13995 | 13960 | 13956 | 28157 |
| Mathematics | 5          | 14647 | 14007 | 14014 | 13936 | 14104 | 13893 | 13985 | 28107 |
|             | 6          | 18653 | 19040 | 18734 | 13439 | 12414 | 12446 | 12416 | 18986 |
|             | 7          | 20394 | 19756 | 19169 | 12779 | 12742 | 12771 | 12775 | 19803 |
|             | 8          | 19207 | 20791 | 19203 | 12825 | 12791 | 13658 | 12821 | 20067 |
|             | 3          | 14137 | 13837 | 13847 | 13818 | 13747 | 13835 | 13730 | 27708 |
|             | 4          | 14602 | 14158 | 14042 | 14027 | 14000 | 13953 | 13950 | 28155 |
| Reading     | 5          | 14636 | 14005 | 14009 | 13924 | 14107 | 13877 | 13984 | 28097 |
| 210000000   | 6          | 18647 | 19032 | 18719 | 13416 | 12410 | 12444 | 12400 | 18976 |
|             | 7          | 20358 | 19743 | 19153 | 12757 | 12728 | 12765 | 12773 | 19776 |
|             | 8          | 19188 | 20773 | 19187 | 12805 | 12772 | 13647 | 12805 | 20041 |
| Science     | 4          | 21796 | 20960 | 20961 | 10712 | 10502 | 10485 | 10508 | 21181 |
|             | 8          | 22999 | 21082 | 22323 | 10556 | 10543 | 10592 | 10539 | 22284 |

Note. Final data was used

Table 9-6. Form to Pattern Conversion Table

|             |       |       | Form  |    |    |    |    |    |   |   |    |    |    |    |    |    |    |    |    |    |    |
|-------------|-------|-------|-------|----|----|----|----|----|---|---|----|----|----|----|----|----|----|----|----|----|----|
| Content     | Grade | 1     | 2     | 3  | 4  | 5  | 6  | 7  | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| ics         | 3     | A*    | M*    | В  | M  | C* | D  | Е  | F | G |    |    |    |    |    |    |    |    |    |    |    |
|             | 4     | A*    | M*    | B* | C  | D  | M  | E  | F | G |    |    |    |    |    |    |    |    |    |    |    |
| mat         | 5     | A*    | M*    | В  | C  | M  | D  | E* | F | G |    |    |    |    |    |    |    |    |    |    |    |
| Mathematics | 6     | $D^*$ | $M^*$ | В* | A  | C  | E  | F  | G | A | G  | M  | В  | C  | F  | E  | A  | C  | D  | В  | M  |
| Mã          | 7     | A*    | M*    | C  | A  | B* | E  | В  | D | C | M  | M  | F  | В  | G  | Α  | F  | C  | E  | G  | D  |
|             | 8     | В*    | M*    | C  | F* | D  | E  | G  | A | M | G  | В  | E  | M  | C  | D  | F  | A  | В  | A  | C  |
|             | 3     | A*    | M*    | В  | M  | C* | D  | E  | F | G |    |    |    |    |    |    |    |    |    |    |    |
| 50          | 4     | A*    | M*    | B* | C  | D  | M  | E  | F | G |    |    |    |    |    |    |    |    |    |    |    |
| ding        | 5     | A*    | M*    | В  | C  | M  | D  | E* | F | G |    |    |    |    |    |    |    |    |    |    |    |
| Reading     | 6     | $D^*$ | M*    | B* | A  | C  | E  | F  | G | Α | G  | M  | В  | C  | F  | E  | A  | C  | D  | В  | M  |
|             | 7     | A*    | M*    | C  | A  | B* | E  | В  | D | C | M  | M  | F  | В  | G  | Α  | F  | C  | E  | G  | D  |
|             | 8     | B*    | M*    | C  | F* | D  | E  | G  | A | M | G  | В  | E  | M  | C  | D  | F  | A  | В  | A  | C  |
| Science     | 4     | A*    | M*    | A  | В  | С  | D* | С  | M | В | Е  | F  | G  |    | •  |    | •  | •  |    | •  |    |
|             | 8     | A*    | M*    | В  | C* | В  | M  | D  | C | A | E  | F  | G  |    |    |    |    |    |    |    |    |

Note. \* indicates the form was offered online

#### **SCRAMBLING ANALYSIS**

#### Form Level

The test-level and item-level effects of scrambling are presented in the following section. Table 9–7 shows the mean raw score difference from the Master Core for each scramble pattern (scramble pattern mean minus Master Core mean). The Master Core is labeled as scramble pattern A. The highlighted mean differences are statistically significant at family-wise Type I error rate (alpha) 0.01 with two-sample *t*-test. For example, with grade 3 math, seven two sample *t*-tests are conducted (Master Core vs. A, B, C, D, E, F, and G) and each test had Type I error rate (alpha) of 0.001428571 to keep the family-wise Type I error rate 0.01. Form 1 was excluded from these analyses since the accommodations tend to lower average performance. This means that there are no pattern A results for mathematics and reading grades 3–5 because pattern A was only used once in these contents and grades and form 1 followed pattern A. Table 9–7 shows that 2 of 39, 3 of 39, and 0 of 12 scramble pattern raw score means showed a significant difference from the Master Core in mathematics, reading, and science, respectively. Although there are some content grades showing a constant direction of performance differences of the scramble patterns from the Master Core, there does not appear to be a general pattern by either content or grade.

Table 9-7. Mean Raw Score Differences From the Master Core

|             |       | Scramble Pattern |       |       |       |              |       |       |  |
|-------------|-------|------------------|-------|-------|-------|--------------|-------|-------|--|
| Content     | Grade | A                | В     | C     | D     | $\mathbf{E}$ | F     | G     |  |
|             | 3     |                  | -0.37 | 0.22  | 0.26  | 0.71         | 0.33  | 0.15  |  |
|             | 4     |                  | 0.27  | 0.31  | 0.62  | 0.27         | 0.38  | 0.44  |  |
| Mathematics | 5     |                  | 0.05  | -0.20 | 0.10  | 0.23         | -0.11 | 0.17  |  |
| Mathematics | 6     | 0.18             | 0.08  | 0.28  | 0.24  | 0.24         | 0.38  | 0.06  |  |
|             | 7     | -0.10            | 0.21  | 0.36  | 0.11  | 0.19         | -0.01 | 0.18  |  |
|             | 8     | 0.42             | 0.51  | 0.37  | 0.41  | 0.38         | 0.41  | 0.38  |  |
|             | 3     |                  | -0.33 | 0.00  | 0.18  | 0.27         | 0.21  | 0.03  |  |
|             | 4     |                  | -0.01 | -0.17 | 0.18  | -0.04        | 0.26  | 0.34  |  |
| Reading     | 5     |                  | 0.05  | 0.10  | 0.28  | 0.08         | 0.08  | -0.09 |  |
| Reading     | 6     | 0.02             | -0.05 | 0.08  | -0.02 | 0.27         | -0.10 | 0.12  |  |
|             | 7     | 0.16             | -0.03 | 0.33  | 0.19  | 0.33         | 0.06  | 0.00  |  |
|             | 8     | 0.20             | 0.03  | 0.22  | 0.22  | 0.21         | 0.00  | 0.30  |  |
| Science     | 4     | 0.03             | -0.19 | 0.23  | -0.08 | -0.20        | -0.05 | 0.05  |  |
|             | 8     | 0.17             | -0.15 | -0.07 | 0.16  | -0.03        | -0.03 | -0.04 |  |

*Note*. Final data is used and highlighted cells indicate the scramble patter is statistically significant different from master core form at family-wise  $\alpha = 0.01$  for each subject and grade combination.

#### Item Level

The item *p*-values are tested for the independence using the chi-square test. For example, a chi-square test for the 2-by-2 table is conducted for comparison of Master Core form and Scramble pattern B for the first item in grade 3 mathematics (Table 9–8). The chi-square test is thought to be a good method here because the item scores are discrete and we are interested in comparing proportions. The null hypothesis here is that students are equally likely to answer the item correct regardless of Master Core or scramble pattern B, and the alternative hypothesis is that students are not equally likely to answer the item correct in Master Core and form B.

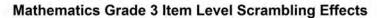
Table 9–8. Example of a Contingency Table for Grade 3 Mathematics for Item 1

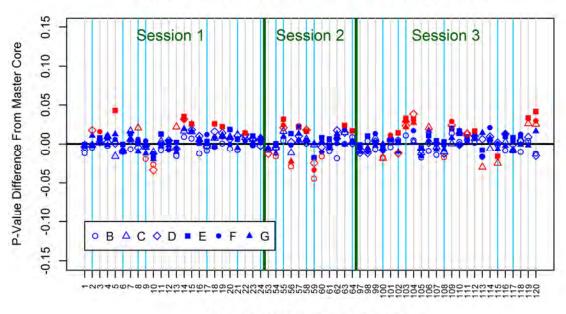
|            |   | Scramble Pattern   |       |  |  |  |  |
|------------|---|--------------------|-------|--|--|--|--|
|            |   | <b>Master Core</b> | В     |  |  |  |  |
| Itam Casus | 1 | 1057               | 1534  |  |  |  |  |
| Item Score | 0 | 17991              | 11114 |  |  |  |  |

Figure 9–2 shows the item *p*-value difference from Master Core (Master Core mean minus scramble pattern mean). Blue symbols means there were no statistically significant difference. Red symbols mean the difference was statistically significant.

As in *t*-test for the form-level analyses, the Type I error rate is controlled by Bonferroni correction to keep family-wise alpha equal to 0.01. For example, for grade 6 mathematics, each comparison has alpha equals to 0.01 divided by 60 items and divided by 7 scrambling patterns. Please note that even though the analysis includes controlling the family-wise alpha to 0.01, statistical differences are still likely to be found given the large sample size. For this reason, flagged items are further scrutinized to evaluate whether the statistically significant differences have practical implications for the testing program. Content specialists scrutinized these outliers for any possible clanging, clueing, or other item sequence interactions but were unable to furnish any content-based explanations that would account for the differences.

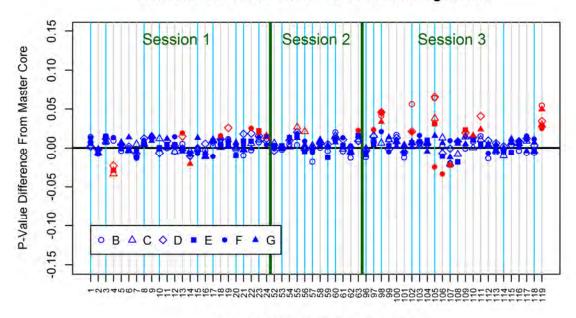
Figure 9-2. Mathematics, Reading, and Science Item Level Scrambling Effects





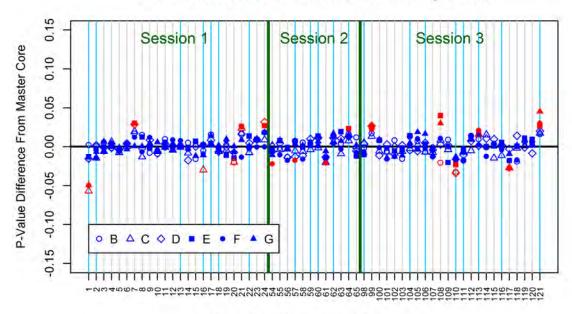
Operational MC Items Item Sequence

## Mathematics Grade 4 Item Level Scrambling Effects



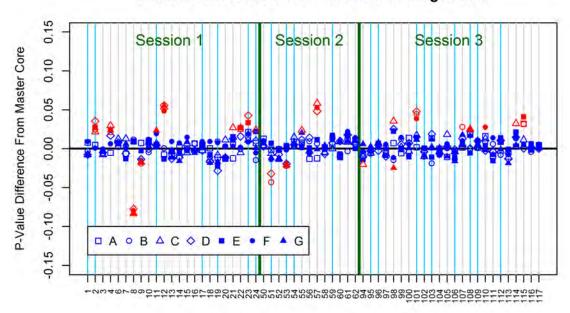
Operational MC Items Item Sequence

## Mathematics Grade 5 Item Level Scrambling Effects



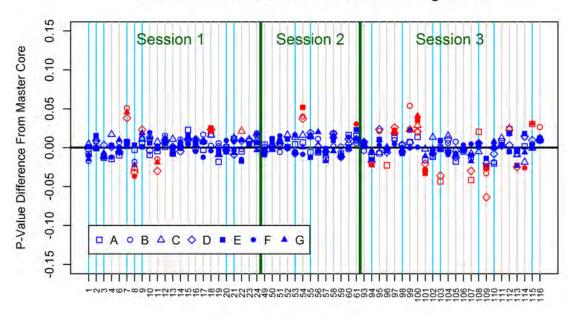
Operational MC Items Item Sequence

# Mathematics Grade 6 Item Level Scrambling Effects



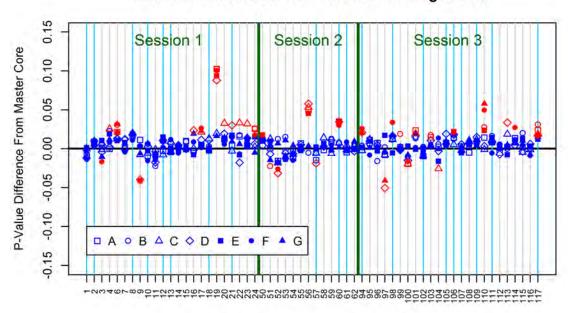
Operational MC Items Item Sequence

## Mathematics Grade 7 Item Level Scrambling Effects



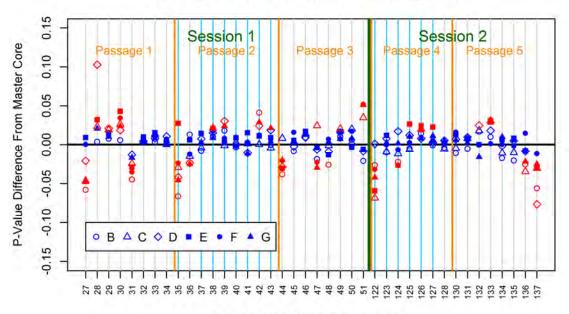
Operational MC Items Item Sequence

# Mathematics Grade 8 Item Level Scrambling Effects



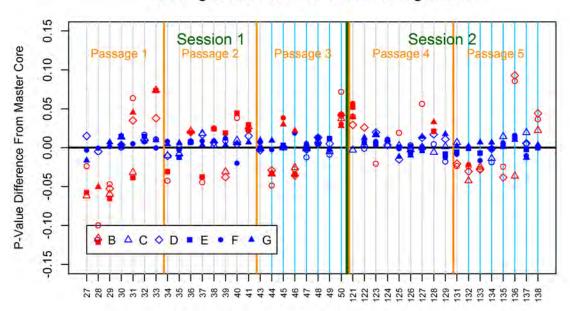
Operational MC Items Item Sequence

# Reading Grade 3 Item Level Scrambling Effects



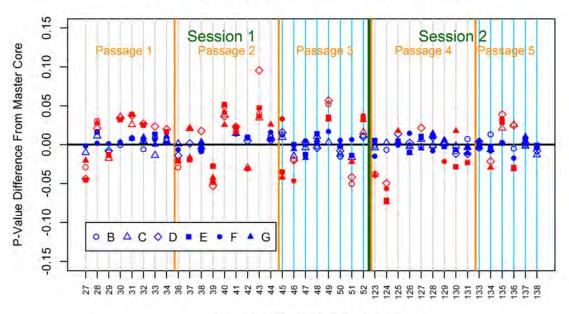
Operational MC Items Item Sequence

## Reading Grade 4 Item Level Scrambling Effects



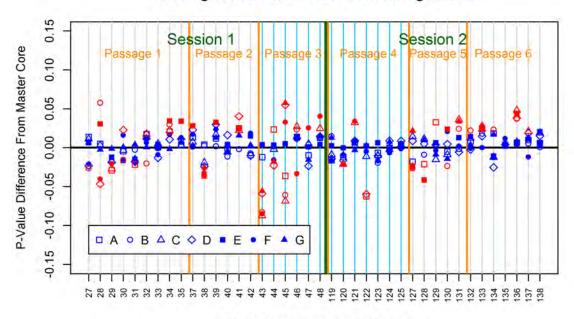
Operational MC Items Item Sequence

# Reading Grade 5 Item Level Scrambling Effects



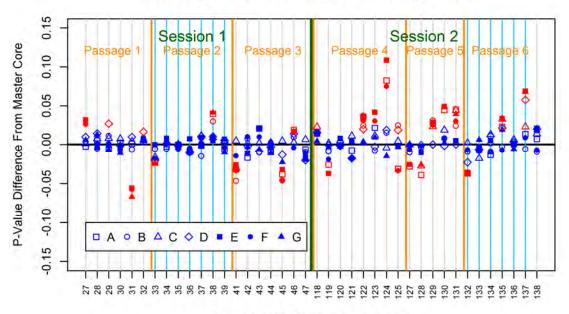
Operational MC Items Item Sequence

## Reading Grade 6 Item Level Scrambling Effects



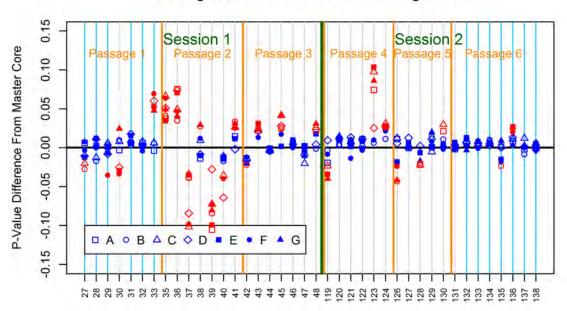
Operational MC Items Item Sequence

# Reading Grade 7 Item Level Scrambling Effects



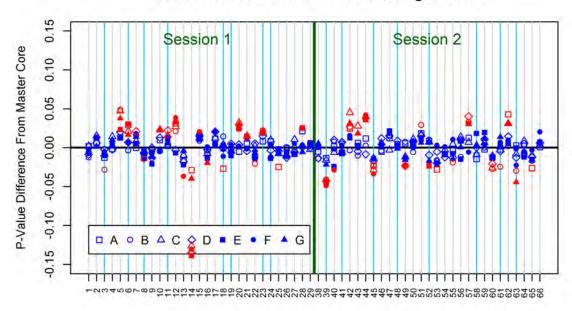
Operational MC Items Item Sequence

## Reading Grade 8 Item Level Scrambling Effects



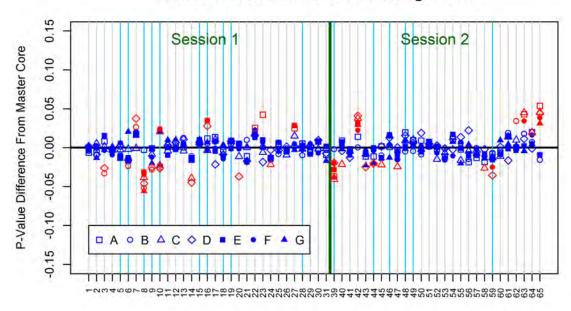
Operational MC Items Item Sequence

# Science Grade 4 Item Level Scrambling Effects



Operational MC Items Item Sequence

# Science Grade 8 Item Level Scrambling Effects



Operational MC Items Item Sequence

# Chapter Ten: Summary Demographic, Program, and Accommodation Data for the 2014 PSSA

#### ASSESSED STUDENTS

The PSSA assessed students include those from public schools who are required to participate as well as those from a small number of non-public schools (fewer than 500 students per grade level) that elected to participate. Also included are home-schooled students (fewer than 100 per grade) and a small number of foreign exchange students (generally fewer than 30 per grade through Grade 8). An exception was granted for those IEP students with quite significant cognitive impairments who met each of the following criteria, making them eligible to participate in the Pennsylvania Alternate System of Assessment (PASA) for mathematics, reading, and science and a school-administered alternate assessment for writing: 1) was enrolled in the assessed grade level for the subject area, 2) had a very severe cognitive disability, 3) required very intensive instruction, 4) required very extensive adaptation and support to perform or participate meaningfully, 5) required very substantial modification of the general education curriculum, and 6) participated in the general education curriculum that differed markedly in form and substance from that of other students. (See the 2013–2014 Pennsylvania System of School Assessment: Handbook for Assessment Coordinators, p. 8.)

Results for this chapter are presented in sets of tables for the four PSSA subject areas (mathematics, reading, science, and writing). Accompanying each numbered table is a letter (M, R, S, or W) to designate the subject area. Table set 10–1M through 10–1W provides a summary of the assessed students for each subject. Presented on the first line is the total number of non-blank answer documents processed by grade level for the 2014 PSSA. This number pertains to the total number of records on the student file and is typically less than the "Used Answer Booklets Scanned" column shown in the Appendix L tables. The reason for the difference is that completely blank answer booklets (no student name and no items responded to) get removed from the initial batch of materials scanned. See Chapter Eight for more details on processing. The second line shows the number and percentage of students with a PSSA score in the subject area, followed by the number and percentage not receiving a score. The final line shows the number of students contributing to state summary statistics, which is especially relevant for all tables in Appendices I, J, K, and L. (See the section of this chapter entitled "Composition of Sample Used in Subsequent Tables" for additional explanation.)

Table 10–1M. Students Assessed on the 2014 PSSA: Mathematics

|   | Gr. 3   | Gr. 4   | Gr. 5   | Gr. 6   | Gr. 7   | Gr. 8   |
|---|---------|---------|---------|---------|---------|---------|
|   | N/Pct   | N/Pct   | N/Pct   | N/Pct   | N/Pct   | N/Pct   |
| Total number of PPT processed                             | 127,870 | 129,763 | 129,379 | 127,917 | 131,748 | 132,319 |
| Total number of CBT processed                             | 286     | 440     | 596     | 1,492   | 2,170   | 2,986   |
| Total number of tests processed                           | 128,156 | 130,203 | 129,975 | 129,409 | 133,918 | 135,305 |
| Total number of tests                                     | 127,454 | 129,451 | 129,192 | 128,615 | 132,772 | 133,853 |
| processed with a score                                    | 99.5    | 99.4    | 99.4    | 99.4    | 99.1    | 98.9    |
| Total number of tests                                     | 702     | 752     | 783     | 794     | 1,146   | 1,452   |
| processed without a score                                 | 0.5     | 0.6     | 0.6     | 0.6     | 0.9     | 1.1     |
| Students with a mathematics score used in state summaries | 124,702 | 126,911 | 126,693 | 126,128 | 130,189 | 131,363 |

Table 10-1R. Students Assessed on the 2014 PSSA: Reading

|   | Gr. 3   | Gr. 4   | Gr. 5   | Gr. 6   | Gr. 7   | Gr. 8   |
|---|---------|---------|---------|---------|---------|---------|
|   | N/Pct   | N/Pct   | N/Pct   | N/Pct   | N/Pct   | N/Pct   |
| Total number of PPT processed                         | 127,754 | 129,763 | 129,379 | 127,917 | 131,748 | 132,319 |
| Total number of CBT processed                         | 285     | 440     | 593     | 1,489   | 2,168   | 2,980   |
| Total number of tests processed                       | 128,039 | 130,203 | 129,972 | 129,406 | 133,916 | 135,299 |
| Total number of tests                                 | 127,047 | 129,094 | 128,834 | 128,288 | 132,368 | 133,427 |
| processed with a score                                | 99.2    | 99.1    | 99.1    | 99.1    | 98.8    | 98.6    |
| Total number of tests                                 | 992     | 1,109   | 1,138   | 1,118   | 1,548   | 1,872   |
| processed without a score                             | 0.8     | 0.9     | 0.9     | 0.9     | 1.2     | 1.4     |
| Students with a reading score used in state summaries | 124,659 | 126,887 | 126,639 | 126,044 | 130,053 | 131,218 |

Table 10-1S. Students Assessed on the 2014 PSSA: Science

|   | Gr. 4   | Gr. 8   |
|---|---------|---------|
|   | N/Pct   | N/Pct   |
| Total number of PPT processed                         | 129,175 | 130,854 |
| Total number of CBT processed                         | 903     | 4,192   |
| Total number of tests processed                       | 130,078 | 135,046 |
| Total number of tests                                 | 129,338 | 133,158 |
| processed with a score                                | 99.4    | 98.6    |
| Total number of tests                                 | 740     | 1,888   |
| processed without a score                             | 0.6     | 1.4     |
| Students with a science score used in state summaries | 127,105 | 130,918 |

Table 10-1W. Students Assessed on the 2014 PSSA: Writing

|   | Gr. 5   | Gr. 8   |
|---|---------|---------|
|   | N/Pct   | N/Pct   |
| Total number of PPT processed                         | 129,226 | 131,963 |
| Total number of CBT processed                         | 414     | 2,976   |
| Total number of tests processed                       | 129,640 | 134,939 |
| Total number of tests                                 | 126,723 | 132,459 |
| processed with a score                                | 97.7    | 98.2    |
| Total number of tests                                 | 2,917   | 2,480   |
| processed without a score                             | 2.3     | 1.8     |
| Students with a writing score used in state summaries | 124,666 | 130,302 |

#### NON-ASSESSED STUDENTS

As may be observed from Tables 10–1M through 10–1W, not all students were assessed. Although there are a variety of reasons for this, the major ones pertain to the following:

- Extended absence from school that continued beyond the assessment window
- Absence without make-up for at least one section of a subject-area test
- Failure to meet the attempt criteria on one or more subject-area test sections and no exclusion code was marked by school personnel; for mathematics, reading, and science, the attempt criteria required a minimum of five items to be completed in each subject-area section; for writing, the attempt criteria required is at least five multiple-choice items and a response to both operational writing prompts
- ELL students in the first year in U.S. schools (reading and writing only)
- Medical emergency
- Other reasons (includes parental request due to religious reasons, students who are court-agency placed, students with multiple reasons coded, and the category of other)

The numbers of students without test scores for these reasons are presented in Tables 10–2M through 10–2W.

Table 10–2M. Counts of Students without Scores on the 2014 PSSA: Mathematics

| Reason for Non-       | Gr. 3 | Gr. 4 | Gr. 5 | Gr. 6 | Gr. 7 | Gr. 8 |
|-----------------------|-------|-------|-------|-------|-------|-------|
| Assessment            | N/Pct | N/Pct | N/Pct | N/Pct | N/Pct | N/Pct |
| Extended absence from | 39    | 37    | 62    | 80    | 166   | 229   |
| school                | 5.6   | 4.9   | 7.9   | 10.1  | 14.5  | 15.8  |
| Absent without make-  | 49    | 71    | 83    | 81    | 125   | 173   |
| ир                    | 7.0   | 9.4   | 10.6  | 10.2  | 10.9  | 11.9  |
| Nina                  | 292   | 297   | 238   | 249   | 316   | 358   |
| Non-attempt           | 41.6  | 39.5  | 30.4  | 31.4  | 27.6  | 24.7  |
| Madical amarganau     | 100   | 110   | 162   | 189   | 302   | 386   |
| Medical emergency     | 14.2  | 14.6  | 20.7  | 23.8  | 26.4  | 26.6  |
| Other reasons         | 222   | 237   | 238   | 195   | 237   | 306   |
| Other reasons         | 31.6  | 31.5  | 30.4  | 24.6  | 20.7  | 21.1  |
| Total not assessed    | 702   | 752   | 783   | 794   | 1,146 | 1,452 |

Table 10-2R. Counts of Students without Scores on the 2014 PSSA: Reading

| Reason for Non-           | Gr. 3 | Gr. 4 | Gr. 5 | Gr. 6 | Gr. 7 | Gr. 8 |
|---------------------------|-------|-------|-------|-------|-------|-------|
| Assessment                | N/Pct | N/Pct | N/Pct | N/Pct | N/Pct | N/Pct |
| Extended absence from     | 40    | 38    | 65    | 82    | 169   | 231   |
| school                    | 4.0   | 3.4   | 5.7   | 7.3   | 10.9  | 12.3  |
| Absent without make-      | 62    | 82    | 98    | 87    | 152   | 193   |
| up                        | 6.3   | 7.4   | 8.6   | 7.8   | 9.8   | 10.3  |
| Non attampt               | 326   | 329   | 284   | 338   | 435   | 483   |
| Non-attempt               | 32.9  | 29.7  | 25.0  | 30.2  | 28.1  | 25.8  |
| ELL in first year in U.S. | 242   | 306   | 287   | 214   | 237   | 254   |
| schools                   | 24.4  | 27.6  | 25.2  | 19.1  | 15.3  | 13.6  |
| Madical amarganau         | 103   | 113   | 168   | 194   | 314   | 391   |
| Medical emergency         | 10.4  | 10.2  | 14.8  | 17.4  | 20.3  | 20.9  |
| Other reasons             | 219   | 241   | 236   | 203   | 241   | 320   |
| Other reasons             | 22.1  | 21.7  | 20.7  | 18.2  | 15.6  | 17.1  |
| Total not assessed        | 992   | 1,109 | 1,138 | 1,118 | 1,548 | 1,872 |

Table 10-2S. Counts of Students without Scores on the 2014 PSSA: Science

| Reason for Non-       | Gr. 4 | Gr. 8 |
|-----------------------|-------|-------|
| Assessment            | N/Pct | N/Pct |
| Extended absence from | 86    | 464   |
| school                | 11.6  | 24.6  |
| Absent without make-  | 78    | 260   |
| up                    | 10.5  | 13.8  |
| Non attament          | 234   | 433   |
| Non-attempt           | 31.6  | 22.9  |
| Madical amagaza       | 108   | 434   |
| Medical emergency     | 14.6  | 23.0  |
| Oth or recens         | 234   | 297   |
| Other reasons         | 31.6  | 15.7  |
| Total not assessed    | 740   | 1,888 |

Table 10–2W. Counts of Students without Scores on the 2014 PSSA: Writing

| Reason for Non-           | Gr. 5 | Gr. 8 |
|---------------------------|-------|-------|
| Assessment                | N/Pct | N/Pct |
| Extended absence from     | 109   | 400   |
| school                    | 3.7   | 16.1  |
| Absent without make-      | 82    | 213   |
| up                        | 2.8   | 8.6   |
| Non attampt               | 2,159 | 1,075 |
| Non-attempt               | 74.0  | 43.3  |
| ELL in first year in U.S. | 101   | 50    |
| schools                   | 3.5   | 2.0   |
| Modical amargansy         | 202   | 428   |
| Medical emergency         | 6.9   | 17.3  |
| Oth or recens             | 264   | 314   |
| Other reasons             | 9.1   | 12.7  |
| Total not assessed        | 2,917 | 2,480 |

## COMPOSITION OF SAMPLE USED IN SUBSEQUENT TABLES

Students included in the following demographic analyses were those who contributed to state summary statistics, using the final individual student data file provided to the Pennsylvania Department of Education in August 2014. Students not included in the present state summary data were those who were 1) enrolled in a Pennsylvania school after October 1, 2013, 2) coded as ELL and enrolled after May 3, 2013, 3) foreign exchange students, 4) home schooled, 5) enrolled in a non-public school, or 6) without a subject-area test score.

Demographic data for students taking the PSSA is presented separately for each subject area in Appendix I. Results for accommodations received were collected separately by subject area and are presented in separate tables as well.

#### COLLECTION OF STUDENT DEMOGRAPHIC INFORMATION

Data for analyses involving demographic characteristics were obtained primarily from information supplied by school district personnel through the Pennsylvania Information Management System (PIMS) and subsequently transmitted to DRC. Updates of attribution data were carried out through the DRC Attribution System. Some data such as accommodation information is marked directly on the student answer document at the time the PSSA is administered.

#### PARTICIPATION BY ADMINISTRATION MODE

This was the second year in which online testing was available for the PSSA. As anticipated, the vast majority of students were assessed utilizing paper/pencil tests (PPT). The bottom row of the tables presented in Appendix I present the number of students involved in the PPT and CBT administrations as well as Table 9–2 in Chapter Nine. Overall, the percent of students responding by CBT was approximately 1.0 percent for mathematics and reading, 1.9 percent for science, and 1.3 percent for writing. There was a slight rise in the percent of students taking a CBT across grade levels. For mathematics and reading the percent of CBT usage went from 0.2, 0.3, 0.4, 1.1, 1.6, and 2.2 percent from Grades 3 through 8. For science, CBT participation rate was 0.7 percent and 3.1 percent for grades 4 and 8, respectively. Writing participation was 0.3 percent and 2.2 percent at Grades 5 and 8.

## Demographic Characteristics

Frequency data for each demographic category is presented in Appendix I. Percentages are based on students with scores in a subject area, which are shown at the bottom of the appropriate table. Included are students receiving education in a non-traditional setting, such as a court-agency placement.

Demographic Characteristics of Students Taking the 2014 PSSA can be found in Appendix I.

### TEST ACCOMMODATIONS PROVIDED

School personnel supplied information regarding accommodations that a student may have received while taking the PSSA. Accommodations are classified in terms of presentation, response, setting, and timing to enable students to better manage disabilities that hinder their ability to learn and respond to assessments. An accommodations manual entitled *Accommodations Guidelines: Keystone Exams and PSSA* (PDE, revised 11/12/2013) was updated for use with the 2014 PSSA and Keystone Exams. This manual may be found on the PDE website at www.education.state.pa.us. Click on State Assessment System on the home page next to the large green check mark, then PSSA. A glossary of accommodation terms as applied to the PSSAs is provided in Table 10–3 at the end of this chapter.

It should be noted that a few of the accommodations available to students in the current year differ from those of the previous year. These include several new or revised accommodations along with several that were dropped.

The frequency with which accommodations were utilized for PPT and CBT formats is summarized separately for each subject area in Appendix J. Tabled values are based on all students whose score contributed to state summary statistics in a given subject area. Because of the very small number of students utilizing CBT, combined with the fact that a number of accommodations are primarily accessed by only one of the two administration modes, meaningful comparisons with PPT are rather limited. In the tables, an NA denotes those instances in which a particular accommodation does not apply to one of the testing modes.

#### PRESENTATION ACCOMMODATIONS RECEIVED

Presentation accommodations are those that provide alternate ways for students to access and process printed instructional material and assessments. These include auditory, tactile, visual, and combined auditory/visual modes of presentation. The number of presentation accommodations provided in the 2014 PSSA varied by subject and testing mode as follows:

- PPT: mathematics and science, 11; reading, 7; and writing, 11.
- CBT: mathematics and science, 11; reading, 5; and writing, 9.

As depicted in Appendix J, the actual frequencies were quite low, generally representing less than two-tenths of one percent of assessed students statewide. Frequencies of less than one-tenth of one percent were observed in at least half of the instances. The most notable exceptions were "All items/questions read aloud" and "Some items/questions read aloud" (mathematics and items/questions/prompt science), and "some read aloud" (writing) items/questions/prompt read aloud" (writing). Among accommodations specific to CBT, the use of audio was the most frequent. Although included in the tabled data, Spanish version (mathematics and science) is not included in the counts listed above. For CBT administration there were also four unique accommodations for mathematics and science and two for reading and writing.

Incidence of Presentation Accommodations Received on the 2014 PSSA can be found in Appendix J.

#### RESPONSE ACCOMMODATIONS RECEIVED

Response accommodations permit students to complete assignments, tests, and activities in different ways to solve or organize problems using some type of assistive device or organizer. The number of response accommodations provided on the 2014 PSSA varied by subject as follows:

- PPT: mathematics and science, 12; reading, 9; and writing, 8.
- CBT: mathematics and science, 9; reading, 6; and writing, 5.

Summarized in Appendix J is the frequency with which these accommodations were utilized, most of which are quite low. Very few response accommodations were coded as being utilized by students responding by CBT.

Incidence of Response Accommodations Received on the 2014 PSSA can be found in Appendix J.

#### SETTING ACCOMMODATIONS RECEIVED

Setting accommodations permit a change in location in which a student receives instruction or participates in an assessment. There were four categories of setting accommodations for mathematics, reading, science, and writing on the 2014 PSSA. As depicted in Appendix J, the most common accommodation across subject areas was small group setting. This was true for PPT and CBT modes of administration. In mathematics and reading the percentage of use for this accommodation by students using a PPT was greatest at Grade 4, followed by gradual decreases through Grade 8. Similarly, usage of a small group setting was greatest at the elementary level for science (Grade 4) and writing (Grade 5), with a slightly lower percentage at Grade 8.

Incidence of Setting Accommodations Received on the 2014 PSSA can be found in Appendix J.

#### TIMING ACCOMMODATIONS RECEIVED

Timing accommodations involve a change in the allowable length of time to complete assignments or assessments, including the way in which time is organized. There were four categories of timing accommodations for mathematics, reading, science, and writing on the 2014 PSSA. As depicted in Appendix J, the most commonly used accommodation was extended time, followed by frequent breaks. One consistent finding for mathematics and reading was that students responding by CBT had a slightly higher usage of frequent breaks across all six grade levels than observed for students taking a PPT. This was also true for the two grade levels assessed for science and writing.

Incidence of Timing Accommodations Received on the 2014 PSSA can be found in Appendix J.

### ACCOMMODATION RATE FOR NON-IEP AND IEP STUDENTS

A comparison between students without an IEP (non-IEP students) and those with an IEP (IEP students) with regard to having received an accommodation is provided in Appendix K. In this data, accommodated means that a student received one or more of the total number of accommodations available for a given subject area; however, this also varies with administration mode. The total number of available accommodations for students taking a PPT was as follows: mathematics and science, 31; reading, 24; and writing, 27. The number of available accommodations for students taking a CBT was as follows: mathematics and science, 28; reading, 19; and writing, 22. The category of "non-accommodated" indicates that a student did not receive any accommodation during testing.

The general pattern of findings reveals a consistent and substantially higher percentage of IEP students receiving an accommodation in contrast to non-IEP students. This same pattern holds true regardless of test administration mode and PSSA test.

Comparisons between administration modes are less clear. IEP students taking a CBT exceeded those taking a PPT in receiving an accommodation by at least five percentage points in all grade levels for math. In reading, accommodated IEP students taking a PPT exceeded those taking a CBT by a margin of at least five percent in four grade levels. No clear pattern emerged for science or writing. These results are tentative at best due to the very small sample size for students taking a CBT.

Accommodation Rates for Non-IEP and IEP Students can be found in Appendix K.

## THE INCIDENCE OF ACCOMMODATIONS AND IEP AND ELL STATUS

As noted in Appendix L, students with an IEP received an accommodation of some type far more often than non-IEP students. Certain accommodations with very low frequencies are specific to particular disabilities while others are far more common and may also apply to students classified as English Language Learners (ELL). Accommodations having the largest frequencies can potentially supply the most stable data when separated out for subgroup analysis. Listed below are the most commonly used accommodations, which were chosen for display.

- Some test items/questions read aloud (mathematics, science)
- All test items/questions read aloud (mathematics, science)
- Small group setting (mathematics, reading, science, writing)
- Extended time (mathematics, reading, science, writing)
- Frequent breaks (mathematics, reading, science, writing)
- Test directions read aloud (writing)
- Some test items/questions/prompt read aloud (writing)
- All test items/questions/prompt read aloud (writing)

Coding for IEP is dichotomous, as students are classified IEP and non-IEP. For purposes of this analysis, an English Language Learner (ELL) is a student classified ELL and enrolled in a U.S. school on or before March 3, 2013. All other assessed students, including those who have exited an ESL/bilingual program and are in the first or second year of monitoring, are regarded as non-ELL. Students coded as ELL and enrolled in a U.S. school after March 3, 2013, are excluded from state summary statistics, with the exception of science, as stated earlier in this chapter.

Customarily, a considerably larger percentage of IEP students receive a given accommodation than non-IEP students. Although less frequent, certain accommodations also have a high frequency rate for ELL students. To separate out the effect of being classified IEP or ELL, four possible combinations are presented in the tables. These include general education students who are neither IEP nor ELL, students who are IEP but non-ELL, students who are ELL but non-IEP, and students who are both IEP and ELL. The bottom row for each grade provides the total number of assessed students in each of the four classifications.

Because the combination of tabled accommodations and grades assessed differs somewhat by subject area, it is useful to reference the number of instances of accommodations for which the tabled results apply. For example, mathematics has 30 possible instances resulting from five accommodations displayed and six assessed grade levels. There are 18 instances for reading, 10 for science, and 12 for writing. The total number of instances across subjects is 70.

For purposes of comparing the four groups in terms of whether a group displayed a larger frequency rate than another group, a choice was made to use a difference of five or more percentage points. In many instances, the percentage difference between groups was of little practical significance (from zero to only several percentage points).

Although the separate presentation of data for PPT and CBT modes provides an impression of overall findings, the much smaller *n*-counts and accommodation rate by students taking a CBT renders an administration mode comparison meaningless for two groups, namely, ELL and Non-IEP and Both IEP and ELL. Nevertheless, it is possible to make some cautious descriptive observations when sufficient *n*-counts and consistency are present. In the summary comments regarding the tables in Appendix L the term "instances" refers to the set of **accommodations for which data is displayed**. The general findings for each of the four classifications of students may be summarized as follows.

## Group Comparisons for Students Taking a PPT

The general findings for students receiving a PPT, where the volume of data is quite substantial, showed a great deal of consistency. Among the accommodations presented in Appendix L, frequent breaks displayed the least differentiation among the four comparison groups. Small group testing had the largest frequency for each subject area at all assessed grades. A dominant pattern was in the especially high number of times that the IEP/ELL group had the largest percent of accommodations at the elementary level (grades 3–5), which then shifted as the IEP/Non-ELL group tended to receive larger percentages of particular accommodations at the middle school level (grades 6–8). Major findings for each of the four classifications of students are summarized below:

- General education students (neither IEP nor ELL) had a very low incidence of accommodations in general and less than the other three groups in nearly all instances. The frequency of accommodations was less than one percent in 31 of the 70 total instances and less than five percent in all but five instances.
- The IEP/non-ELL students had the largest percentage of these accommodations in 37 of the 70 instances, all occurring within Grades 6–8 (small group setting), and was within five percentage points of the IEP/ELL group in 48 of 70 instances.
- The ELL/non-IEP students received a larger percentage of these accommodations than the general education students in all 70 instances, 41 of which exceeded the five percent margin. Furthermore, they exhibited lower percentages than IEP/non-ELL students (69 of 70 instances) and IEP/ELL students (70 of 70 instances).
- The IEP/ELL students had the largest percentage of these accommodations in 31 instances. In 48 instances it was within five percentage points of the IEP/non-ELL student group.

# CBT Comparisons with PPT

The only groups for which comparisons between PPT and CBT administration modes were deemed reasonable based on sample sizes were within the general education group and the IEP/non-ELL group. The findings are summarized below.

• General education students at grade levels in which at least 300 students responded by CBT included mathematics and reading (Grades 5–8), science (Grades 4 and 8), and writing (Grade 8). As noted for PPT, CBT also displayed a very low incidence of accommodations. Of 49 possible instances, the difference between PPT and CBT in percent of students receiving an accommodation was within five percentage points and most often within a percentage point or two.

• IEP/non-ELL students at grade levels in which at least 300 students responded by CBT included mathematics and reading (Grades 6, 7, and 8) and science and writing (Grade 8). Results indicated that in 23 of 35 possible instances students tested by CBT had a greater frequency of accommodations than those responding by PPT, 14 of which were by a margin of 10 or more percentage points. In five instances, PPT exceeded CBT by a wide margin (small group setting). Consistent with the PPT findings, the percentage of CBT students receiving an accommodation was far greater for the IEP/non-ELL group than for the general education group.

Incidence of IEP and ELL Students Receiving Selected Accommodations can be found in Appendix L.

### GLOSSARY OF ACCOMMODATION TERMS

Table 10–3 provides a brief description of accommodation terms as used in the PSSA and Keystone Exams. Accommodation data was supplied by school personnel as noted in the left column of the table. The right column contains an explanation derived from the PDE publication, 2014 *Accommodations Guidelines: Keystone Exams and PSSA* (PDE, revised 11/12/2013, pages 23–47). This manual may be found on the PDE website at www.education.state.pa.us. Click on State Assessment System on the home page next to the large green check mark, then PSSA.

Table 10–3. Glossary of Accommodation Terms as Applied in the 2014 PSSA and 2013–2014 Keystone Exams

| Type of Testing Accommodation  | Explanation   |
|--|---|
| Student used the following<br>Presentation Accommodations                              |   |
| Braille format   | Students may use a Braille format of the test. Answers must then be transcribed into the answer booklet without alteration.   |
| Large-print format   | Students with visual impairments may use a large-print format. Answers must then be transcribed into the answer booklet without alteration.   |
| Magnification device   | Devices to magnify print may be used for students with visual impairments and/or print disabilities.  |
| Color overlay  | Students with visual impairments may place a color overlay on a printed page of the test document to make text more readable.   |
| Computer assistive technology (e.g., electronic screen reader) (PDE approval required) | Students with severe visual disabilities that prevent them from accessing instructional material or performing the skill may use computer assistive technology; however, PDE must approve the program and functions prior to the test window.   |
| Test items/questions/prompt signed (PSSA writing)                                      | Deaf/hearing-impaired students may receive test directions from a qualified interpreter. Signing is also permitted for essay prompts in PSSA writing and all items in PSSA mathematics and science and for Keystone Algebra and Biology.  |
| Test items/questions/prompt interpreted for ELL  | A qualified interpreter may translate directions or clarify instructions for the assessments. The interpreter may translate but not define specific words or test questions on the PSSA mathematics, science, and writing (including a writing prompt) tests and Keystone Algebra and Biology exams. On the PSSA reading test, the interpreter may only translate directions and may not translate or define words in the passages or test questions. |
| Some or all test items/questions/prompt read aloud (writing only)                      | Students unable to decode text visually may have items/questions read aloud for PSSA mathematics and science and Keystone Algebra I and Biology; however, words may not be defined.   |
| Amplification device   | In addition to using hearing aids, an amplification device to enhance clarity may be required.  |

Table 10–3 (continued). Glossary of Accommodation Terms as Applied in the 2014 PSSA and 2013–2014 Keystone Exams

| Type of Testing Accommodation  | Explanation  |
|--|--|
| Other (PDE approval required)  | Other presentation accommodations indicated in the <i>Accommodation Guidelines</i> may be provided; however, PDE approval is required prior to the test window.  |
| Spanish version for PSSA (Math and Science) and Keystone (Algebra and Biology)                 | Students whose first language is Spanish and who have been enrolled in U.S. schools for fewer than three years may take this version.  |
| Student used the following Online Presentation Accommodations                                  |  |
| Audio  | An audio CD version of PSSA mathematics and science or Keystone Algebra and Biology test items/questions may be taken by students with severe hearing disabilities as documented by their IEPs.  |
| Video sign language (per accommodations guidelines)  | Eligible students who use a sign language accommodation during instructional periods may use a VSL on the PSSA mathematics and science assessments.  |
| Color chooser or contrasting text chooser  | The use of this accommodation enables a visually impaired student to change the background color or text color to make text more readable.   |
| Student used the following Response<br>Accommodations  |  |
| Brailler/Note taker (per Accommodations Guidelines)  | Students using this device as part of their regular instructional program may use it on the assessments; however, they may not use the thesaurus, spelling, or grammar checker.  |
| Test administrator scribed <b>open-ended</b> responses at student's direction                  | A test administrator may record word-for-word exactly what a student dictated directly into the test booklet. This includes MC and OE responses Keystone Algebra, Biology, and Literature tests and PSSA mathematics and science.  |
| Test administrator marked <b>multiple-</b><br><b>choice</b> responses at student's direction   | A test administrator may mark an answer booklet at the direction of a student (e.g., a student may point to an MC answer with the test administrator marking the response in the answer booklet).  |
| Test administrator transcribed student responses (per <i>Accommodations Guidelines</i> )       | A test administrator may transcribe (copy) a student's written, typed, or keyed response into a standard answer booklet.   |
| Qualified Interpreter translated,<br>transcribed, and/or scribed student's<br>signed responses | A qualified interpreter may interpret a student's <b>signed</b> responses into written English for Keystone Algebra and Biology exams and PSSA mathematics and science assessments. Interpreters are not permitted to make corrections or change the meaning of the response.    |
| Qualified Interpreter translated,<br>transcribed, and/or scribed ELL student<br>responses      | A qualified interpreter may interpret a student's non-English oral responses into written English for Keystone Algebra and Biology exams and PSSA mathematics and science assessments. Interpreters are not permitted to make corrections or change the meaning of the response. |

Table 10–3 (continued). Glossary of Accommodation Terms as Applied in the 2014 PSSA and 2013–2014 Keystone Exams

| Type of Testing Accommodation  | Explanation   |
|--|---|
| Augmentative communication device  | Students with severe communication difficulties may use a special device to convey responses, which must be transcribed into the answer booklet by the test administrator.  |
| Keyboard, word processor, or computer (per <i>Accommodations Guidelines</i> )                | This is an allowable accommodation as a typing function only for students with the identified need. Supports such as dictionaries, thesauri, spell checkers, and grammar checkers must be turned off. Answers must then be transcribed into the answer booklet without alteration.  |
| Audio recording of student responses (per Accommodations Guidelines)                         | An electronic recording device may be used to record responses, which must be transcribed into the answer booklet by the test administrator. (Students who are unable to use a pencil or have illegible handwriting may answer MC questions orally. Answers must be recorded in the answer booklet without alteration during the testing period.) |
| Translation dictionary for ELL student   | A word-to-word dictionary that translates native language to English (or vice versa) without word definitions or pictures is allowed on any portion of the Keystone Algebra and Biology exams, and PSSA mathematics and science tests.  |
| Computer assistive technology<br>(e.g., electronic screen reader)<br>(PDE approval required) | Students with blindness or extremely low vision may dictate text into a computer. Responses must be transcribed verbatim into student's regular answer booklet.   |
| Other (per Accommodations Guidelines or PDE approval)  | Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Documentation must be provided to PDE.   |
| Student used the following<br>Setting Accommodations   |   |
| Hospital/home testing  | A student who is confined to a hospital or to home during the testing window may be tested in that environment.   |
| One-on-one setting (Keystone Exams and PSSA Math, Reading, Science, Writing)                 | One-on-one settings are necessitated in certain instances, such as to reduce distraction or in the use of certain devices. A separate room may be used to reduce distraction.   |
| Small group setting  | Some students may require a test setting with fewer students or a setting apart from all other students to minimize distraction.  |
| Other (per Accommodations Guidelines or PDE approval)  | Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Documentation must be provided to PDE.   |

Table 10–3 (continued). Glossary of Accommodation Terms as Applied in the 2014 PSSA and 2013–2014 Keystone Exams

| Type of Testing Accommodation                         | Explanation   |
|---|---|
| Student used the following<br>Timing Accommodations   |   |
| Extended time   | Extended time may be allotted for each section of the test as a planned accommodation to enable students to finish.   |
| Frequent breaks                                       | Frequent breaks (breaks within a test section) may be scheduled for<br>the completion of each test section; however, a test section must be<br>completed within one school day. |
| Changed test schedule                                 | Students whose disabilities prevent them from following a regular, planned test schedule may follow an individual schedule that enables test completion.                        |
| Other (per Accommodations Guidelines or PDE approval) | Other accommodations may be appropriate and available if they do not compromise the integrity of the assessment. Documentation must be provided to PDE.                         |

# Chapter Eleven: Classical Item Statistics

This chapter provides an overview of the two most familiar item-level statistics obtained from any classical (traditional) item analysis: item difficulty and item discrimination. The following results pertain only to operational PSSA items (i.e., those items that contributed to a student's total test score). Rasch item statistics are discussed in Chapter Twelve, and test-level statistics are found in Chapter Seventeen.

#### ITEM-LEVEL STATISTICS

Appendix F provides classical item statistics for all PSSA items. Results are organized by subject and grade. These statistics represent the item characteristics most often used to determine whether an item functioned properly and/or how a group of students performed on a particular item. The item statistics in the appendices include *p*-values for multiple-choice (MC) items and item means for open-ended (OE) items (indicators of item difficulty); point-biserial correlations for MC items and item-test correlations for OE items (indicators of item discrimination); and the proportion of students selecting each MC item option or earning each OE item score point.

#### ITEM DIFFICULTY

At the most general level, an item's difficulty is indicated by its mean score in some specified group (e.g., grade level).

$$\overline{x} = \frac{1}{n} \cdot \sum_{i=1}^{n} x_i$$

In the mean score formula above, the individual item scores ( $x_i$ ) are summed and then divided by the total number of students (n). For multiple-choice items, student scores are represented by 0s and 1s (0 = wrong, 1 = right). With 0–1 scoring, the equation above also represents the number of students correctly answering the item divided by the total number of students. Therefore, this is also the proportion correct for the item, or the p-value. In theory, p-values can range from  $0.00^9$  to 1.00 on the proportion-correct scale. For example, if an item has a p-value of 0.89, it means 89 percent of the students answered the item correctly. Additionally, this value might also suggest that the item was relatively easy and/or the students who attempted the item were relatively high achievers. In other words, item difficulty and student ability are somewhat confounded.

For OE items, mean scores can range from the minimum possible score (usually zero) to the maximum possible score (e.g., four points in the case of some mathematics, science, and writing items). Sometimes a pseudo *p*-value is provided for an OE item. This is done by dividing the mean item score by the maximum possible item score.

The minimum and maximum extremes of the difficulty scale are typically not seen in applied practice. However, understanding the extremes helps illustrate that relatively lower values correspond to more difficult items, and that relatively higher values correspond to easier items. (As a result of this, some assert that this index would be more accurately referred to as the item's easiness.)

Item difficulty is an important consideration for the PSSA tests because of the ranging achievement levels of students in Pennsylvania (Below Basic, Basic, Proficient, and Advanced).

<sup>&</sup>lt;sup>9</sup> For MC items with four response options, pure random guessing would lead to an expected *p*-value of 0.25.

Items that are either very hard or very easy provide little information about student differences in achievement. However, an item answered correctly by a high percentage of students would suggest that the knowledge or skill the item taps has been mastered by most students. Conversely, an item answered incorrectly by a low percentage of students would suggest few students have mastered the knowledge or skill the item taps. On standards-referenced tests like the PSSAs, a test development goal is to include a wide range of item difficulties.

## **ITEM DISCRIMINATION**

At the most general level, item discrimination<sup>10</sup> indicates an item's ability to differentiate between high and low achievers. It is expected that students with high ability (i.e., those who perform well on the PSSA overall) would be more likely to answer any given PSSA item correctly, while students with low ability (i.e., those who perform poorly on the PSSA overall) would be more likely to answer the same item incorrectly. For the PSSA tests, Pearson's product-moment correlation coefficient between item scores and test scores is used to indicate discrimination. (As commonly practiced, DRC removes the item score from the total score such that the resulting correlations will not be spuriously high.) The correlation coefficient can range from -1.0 to +1.0. If the aforementioned expectation is met (high-scoring students tend to get the item right while low-scoring students do not), the correlation between the item score and the total test score will be both positive and noticeably large in its magnitude (i.e., well above zero), meaning the item is a good discriminator between high- and low-ability students. This should be the case for all PSSA operational test items.

In summary, the correlation will be positive in value when the mean test score of the students answering the item correctly is higher than the mean test score of the students answering the item incorrectly. In other words, this indicates that students who did well on the total test tended to do well on the item as well. However, an interaction can exist between item discrimination and item difficulty. Items answered correctly (or incorrectly) by a large proportion of examinees (i.e., the items have extreme p-values) can have reduced power to discriminate, and thus, can have lower correlations.

Discrimination is an important consideration for the PSSA because the use of more discriminating items on a test is associated with more reliable test scores. This in turn means that score estimates will be more precise (i.e., there will be smaller confidence intervals around the scores) and, perhaps more importantly, that more accurate performance level placements will be made. The issues of reliability, confidence intervals, and performance level classifications are further discussed in Chapter Eighteen.

<sup>&</sup>lt;sup>10</sup> As noted earlier, the discrimination index for PSSA dichotomous MC items is typically referred to as the point-biserial correlation coefficient. For OE items, the term item-test correlation is sometimes used.

<sup>&</sup>lt;sup>11</sup> It is legitimate to view the point-biserial correlation as a standardized mean difference. A positive value indicates students who chose that response had a higher mean score than the average student; a negative value indicates students who chose that response had a lower-than-average mean score.

### DISCRIMINATION ON DIFFICULTY SCATTERPLOTS

Figure 11–1 contains a series of scatterplots showing item discrimination values (y-axis) on the item difficulty (x-axis) for each grade and subject-area test. Note that pseudo p-values (described above) are used for OE items in these plots. These plots provide maximum information about item discrimination and difficulty in a single visual image for each PSSA test. This is because the x- and y-axes also show histogram with following descriptive statistics:

- Minimum and maximum values
- Mean scores
- Median scores
- First and third quantile (Q1 and Q3)

The bivariate relationship between item discrimination (item-test *correlations*) and difficulty (item *mean* scores) is also presented through scatterplots in these figures. One does not usually expect any type of trend here. However, as noted earlier, it is often the case that items with extreme difficulties can have lower discrimination values, as this can be revealed in such plots.

#### **OBSERVATIONS AND INTERPRETATIONS**

To support the visuals, Table 11–1 provides break-out results for the MC and OE items. The mean *p*-values for the MC items ranged from about 0.66 to 0.75, while the mean proportion-correct values for the OE items ranged from about 0.41 to 0.67. Most means were generally close to their historic values<sup>12</sup> and suggest that the PSSA items, overall, were reasonably challenging to most students based on these past trends. From the difficulty distributions illustrated in the plots, a wide range of item difficulties appeared on each exam, which was one test development goal.

The mean item-test correlations ranged from roughly 0.37 to 0.48 and 0.47 to 0.68 for the MC and OE items, respectively. Again, these were similar to historic trends. The writing MC item-test correlations were generally the lowest, but even here were in the upper 0.30s. The writing MC items were correlated against the unweighted writing total scores, which included the prompt scores. The correlations in writing might be suppressed some because the prompt tasks are so different from the MC tasks. The OE correlations tended to be higher than the MC correlations, which is not surprising because the OE items include more score points. Based on the distribution of the discrimination statistics, the overall item quality was quite good.

It is difficult to make global conclusions about overall test quality from these item statistics alone. With that caveat in mind, the results presented in this chapter indicate that the PSSA item difficulty and discrimination were in expected and acceptable ranges when using historic trends as a guide.<sup>13</sup>

 $<sup>^{12}</sup>$  Historically, average item difficulties have ranged from mid 0.60s to low 0.70s for most PSSA tests.

<sup>&</sup>lt;sup>13</sup> Every year each PSSA test is built to the same content and statistical specifications. Since the average item difficulty and discrimination indices are similar, the historic trend is expected.

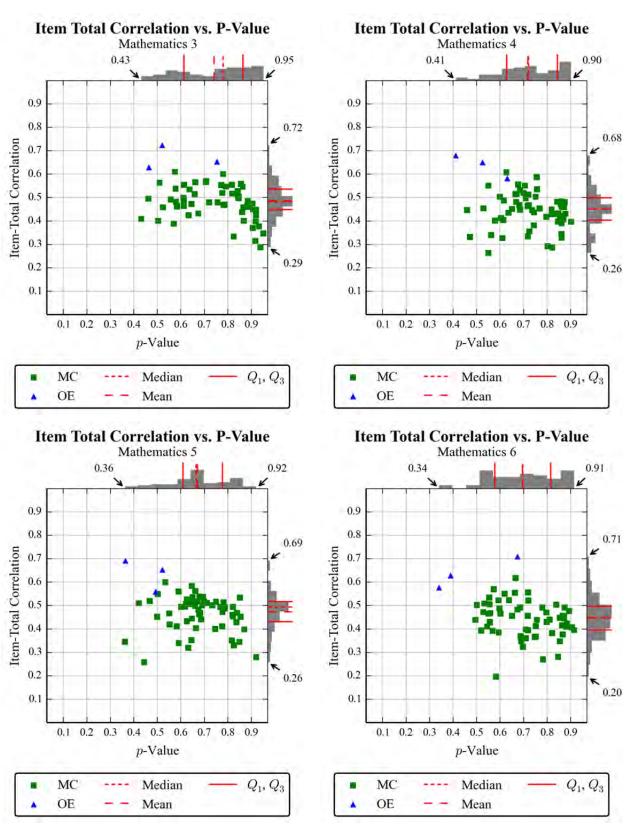
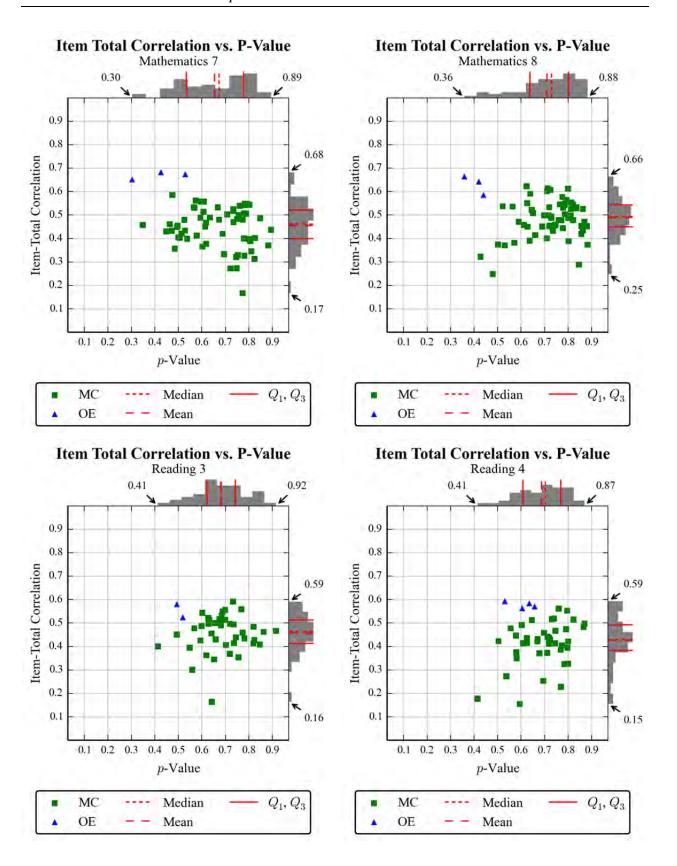
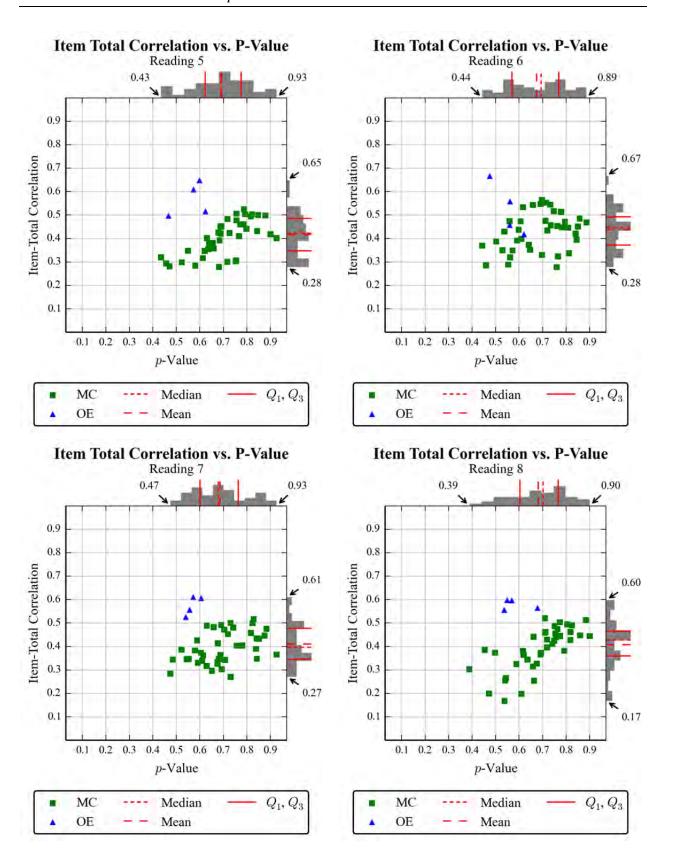


Figure 11–1. Discrimination on Difficulty Scatterplots





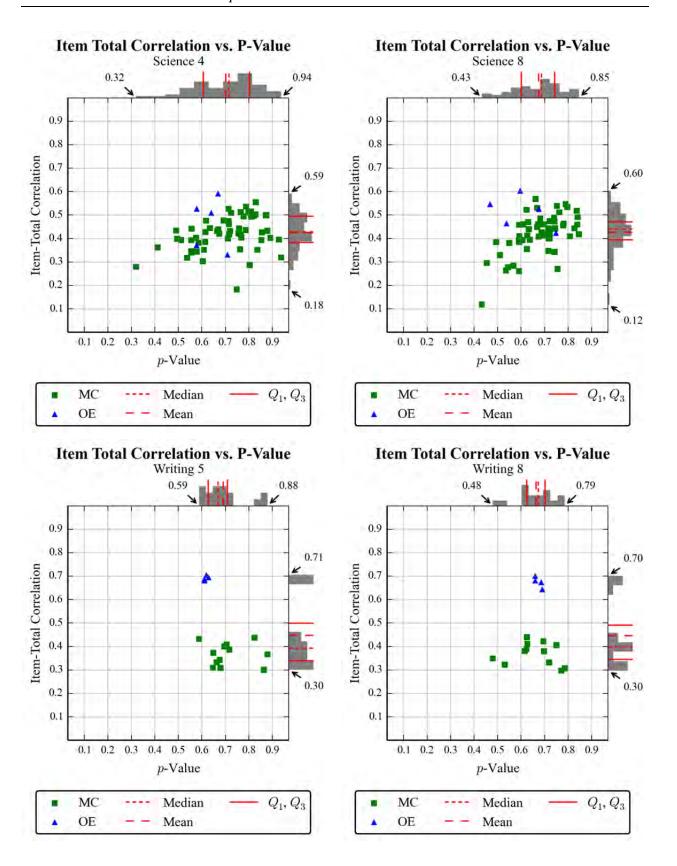


Table 11-1. Sum and Mean Statistics for MC and OE Items

|             |       | <b>Multiple-Choice Items</b> |       |                |                      | Open-Ended Items |       |                |                      |
|-------------|-------|------------------------------|-------|----------------|----------------------|------------------|-------|----------------|----------------------|
| Subject     | Grade | Points                       | Sum   | Mean<br>P-val. | Mean<br>I-T<br>Corr. | Points           | Sum   | Mean<br>P-Val. | Mean<br>I-T<br>Corr. |
| Mathematics | 3     | 60                           | 44.99 | 0.75           | 0.48                 | 12               | 6.96  | 0.58           | 0.67                 |
|             | 4     | 60                           | 43.70 | 0.73           | 0.44                 | 12               | 6.27  | 0.52           | 0.64                 |
|             | 5     | 60                           | 40.89 | 0.68           | 0.46                 | 12               | 5.52  | 0.46           | 0.63                 |
|             | 6     | 60                           | 42.41 | 0.71           | 0.44                 | 12               | 5.62  | 0.47           | 0.64                 |
|             | 7     | 60                           | 39.98 | 0.67           | 0.44                 | 12               | 5.03  | 0.42           | 0.67                 |
|             | 8     | 60                           | 43.56 | 0.73           | 0.48                 | 12               | 4.87  | 0.41           | 0.63                 |
| Reading     | 3     | 40                           | 27.52 | 0.69           | 0.45                 | 6                | 3.04  | 0.51           | 0.55                 |
|             | 4     | 40                           | 27.80 | 0.70           | 0.41                 | 12               | 7.28  | 0.61           | 0.58                 |
|             | 5     | 40                           | 28.19 | 0.70           | 0.40                 | 12               | 6.79  | 0.57           | 0.57                 |
|             | 6     | 40                           | 27.46 | 0.69           | 0.43                 | 12               | 6.65  | 0.55           | 0.52                 |
|             | 7     | 40                           | 27.92 | 0.70           | 0.39                 | 12               | 6.82  | 0.57           | 0.57                 |
|             | 8     | 40                           | 27.66 | 0.69           | 0.39                 | 12               | 7.00  | 0.58           | 0.58                 |
| Science     | 4     | 58                           | 41.06 | 0.71           | 0.42                 | 10               | 6.35  | 0.63           | 0.47                 |
|             | 8     | 58                           | 39.43 | 0.68           | 0.42                 | 10               | 6.05  | 0.61           | 0.51                 |
| Writing     | 5     | 12                           | 8.59  | 0.72           | 0.37                 | 16               | 9.88  | 0.62           | 0.69                 |
|             | 8     | 12                           | 7.92  | 0.66           | 0.37                 | 16               | 10.78 | 0.67           | 0.68                 |

*Note.* I-T Corr. is the item-test score correlation.

# Chapter Twelve: Rasch Item Calibration

The particular item response theory (IRT) model used for the PSSA is based on the work of Georg Rasch. Rasch models have had a long-standing presence in applied testing programs and it has been the methodology continually used to calibrate PSSA items in recent history. IRT has several advantages over classical test theory, so it has become the standard procedure for analyzing item response data in large-scale assessments. However, IRT models make a number of strong assumptions related to dimensionality, local independence, model-data fit, and item parameter invariance. Resulting inferences derived from any application of IRT rests strongly on the degree to which the underlying assumptions are met.

This chapter outlines the procedures used for calibrating the operational PSSA items. Generally, item calibration is the process of assigning a difficulty-parameter estimate to each item on an assessment so that all items are placed onto a common scale. This chapter briefly introduces the Rasch model, reports the results from evaluations of the adequacy of the Rasch assumptions, and summarizes the Rasch item statistics for the PSSA mathematics, reading, and science tests. Additional Rasch procedures are discussed with respect to scale linking in Chapter Fifteen.

### DESCRIPTION OF THE RASCH MODEL

The Rasch partial credit model (RPCM; Wright and Masters, 1982) was used to calibrate PSSA items because both multiple-choice (MC) and open-ended (OE) items were part of the assessment. The RPCM extends the Rasch model (Rasch, 1960) for dichotomous (0, 1) items so that it accommodates the polytomous OE item data. Under the RPCM, for a given item i with  $m_i$  score categories, the probability of person n scoring x ( $x = 0, 1, 2, ..., m_i$ ) is given by:

$$P_{ni}(X = x) = \frac{\exp \sum_{j=0}^{x} (\theta_{n} - D_{ij})}{\sum_{k=0}^{m_{i}} \exp \sum_{j=0}^{k} (\theta_{n} - D_{ij})},$$

where  $\theta_n$  represents a student's proficiency (ability) level, and  $D_{ij}$  is the step difficulty of the  $j^{th}$  step on item i. For dichotomous MC items, the RPCM reduces to the standard Rasch model and the single step difficulty is referred to as the item's difficulty. The Rasch model predicts the probability of person n getting item i correct as follows:

$$P_{ni}(X=1) = \frac{\exp(\theta_n - D_{ij})}{1 + \exp(\theta_n - D_{ij})}.$$

The Rasch model places both student ability and item difficulty (estimated in terms of log-odds or logits) on the same continuum. When the model assumptions are met, the Rasch model provides estimates of a person's ability which are independent of the items employed in the assessment, and conversely, estimates item difficulty independently of the sample of examinees. (As noted in Chapter Eleven, interpretation of item *p*-values confounds item difficulty and student ability.)

## Software and Estimation Algorithm

Item calibration was implemented via WINSTEPS 3.54 computer program (Wright and Linacre, 2003), which employs unconditional (UCON), joint-maximum-likelihood estimation (JMLE).

## Sample Characteristics

The characteristics of calibration samples are reported in Chapter Nine. These samples only include the students who attempted the tests. All omits (no response) and multiple responses (more than one response selected) were scored as incorrect answers (coded as 0s) for calibration.

### CHECKING RASCH ASSUMPTIONS

Since the Rasch model was the basis of all calibration, scoring, and scaling analyses associated with the PSSA, the validity of the inferences from these results depends on the degree to which the assumptions of the model were met and how well the model fits the test data. Therefore, it is important to check these assumptions. This section evaluates the dimensionality of the data, local item independence, item fit, and item parameter invariance. It should be noted that only operational items were analyzed since they are the basis of student scores.

## **Unidimensionality**

Rasch models assume that one dominant dimension determines the difference among students' performances. Principal Components Analysis (PCA) can be used to assess the unidimensionality assumption. The purpose of the analysis is to verify whether any other dominant component(s) exist among the items. If any other dimensions are found, the unidimensionality assumption would be violated.

Figure 12–1 shows the PCA results for the mathematics, reading, science, and writing tests. The results include the eigenvalues and the percentage of variance explained for the first five components as well as the scree plots. The scree plots show the eigenvalues plotted by component number and the results from a parallel analysis. The total number of components in PCA is same as the total number of items in a test; however, Figure 12–1 shows only the first 10 components given that beyond 10<sup>th</sup> component the additional information would be negligible.

Parallel analysis (Horn, 1965) is a technique to decide how many factors exists in principal components. A parallel analysis (Horn, 1965) was also conducted to help distinguish components that are real from components that are random. For the parallel analysis, 100 random data sets were created of size equal to the original data. For each random data set, a PCA was performed and the resulting eigenvalues stored. Then for each component, the upper 95th percentile value of the distribution of the 100 eigenvalues from the random data sets was plotted. Given the size of the data generated for the parallel analysis, the reference line is essentially equivalent to plotting a reference line for an eigenvalue of 1.

As can been seen in Figure 12–1, for PSSA mathematics the primary dimension explained about 23 percent to 27 percent of the total variance across Grades 3 through 8. The eigenvalues of the second dimensions ranged from 2.7 to 4.5. This indicates that the second dimension accounted for only 1.7 to 2.9 units out of 63 units of total variance, where 63 is the total number of items in

a test. Overall, the PCA suggests that there is one clearly dominant dimension for all mathematics tests<sup>14</sup>.

For the PSSA reading tests, the primary dimension explained about 21 percent to 25 percent of the total variance. The second dimension accounted for only 1.3 to 1.4 units out of 42 or 44 units total variance. The parallel analysis in the scree plots also suggests that only the first component should be retained in each grade. These results also suggest that each reading test essentially measures a single dominant dimension.

For the PSSA science tests, the primary dimension explained about 21 percent of the total variance for both grades 4 and 8. The second dimension accounted for only 1.8 and 1.3 units out of 63 unit of total variance. The parallel analysis in the scree plots also suggests that only the first factor should be retained in each grade. This, too, suggests that one dominant dimension was measured by each science test.

For the PSSA writing tests, first dimension accounted for 30 percent of the total variance for both grades 5 and 8. Second dimension accounted for 5 and 8 percent of total variance for grades 5 and 8, respectively, which were about 2.8 and 1.2 units out of 12 unit of total variance. The figures suggest that one dominant dimension was measured by each writing test.

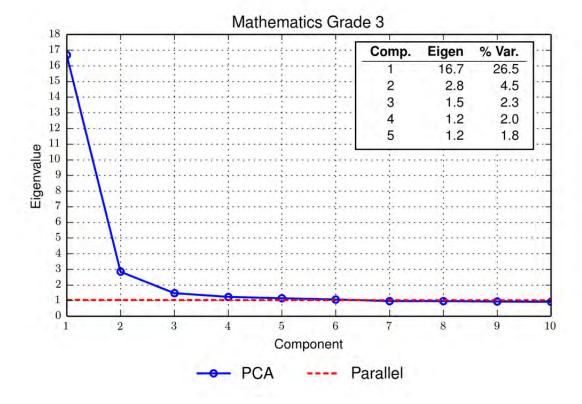
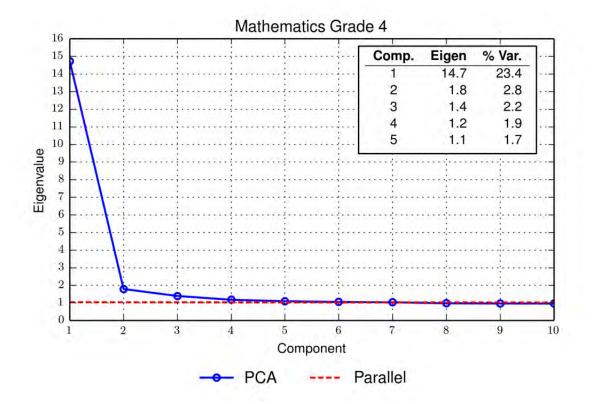
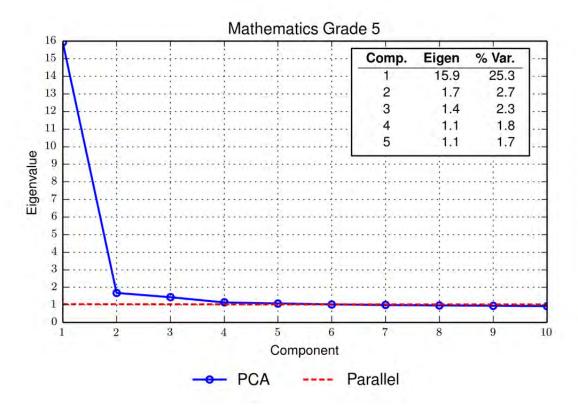
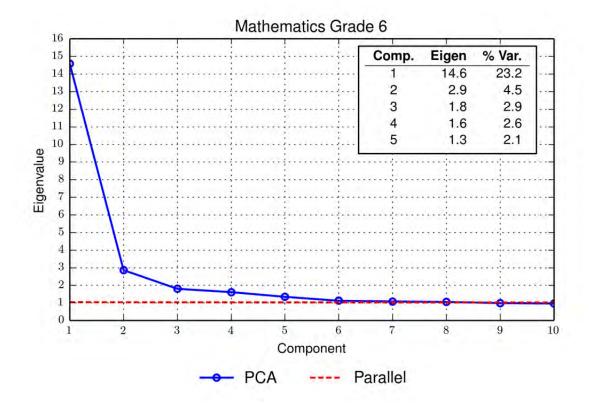


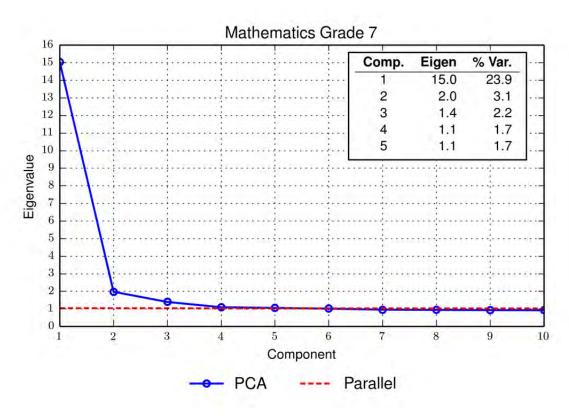
Figure 12-1. Scree Plots

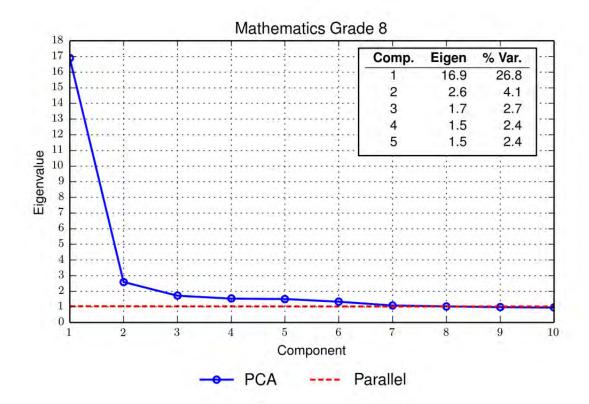
<sup>&</sup>lt;sup>14</sup> According to Reckase (1979), the variance explained by the primary dimension should be greater than 20% to indicate unidimensionality.

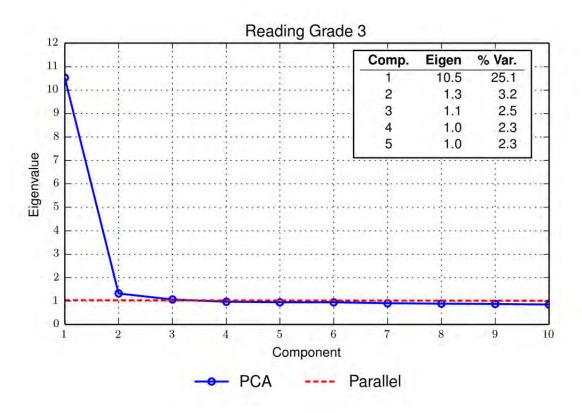


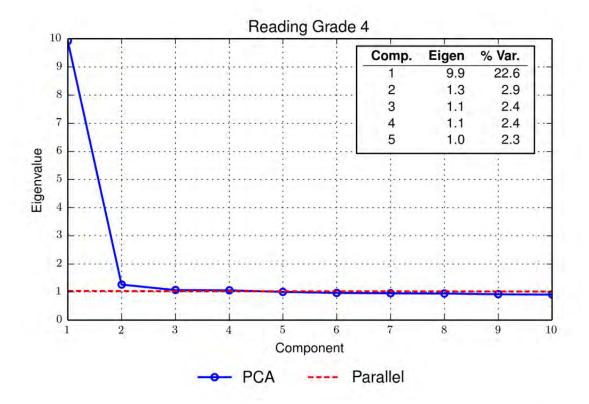


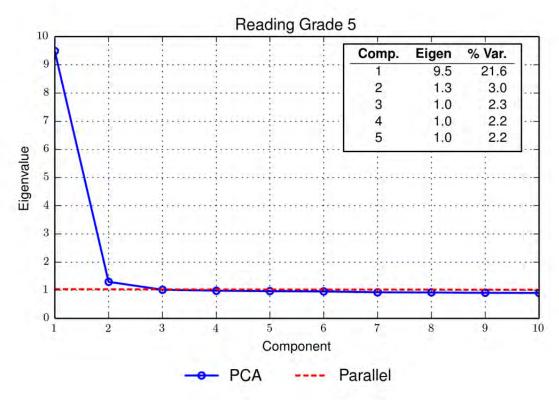


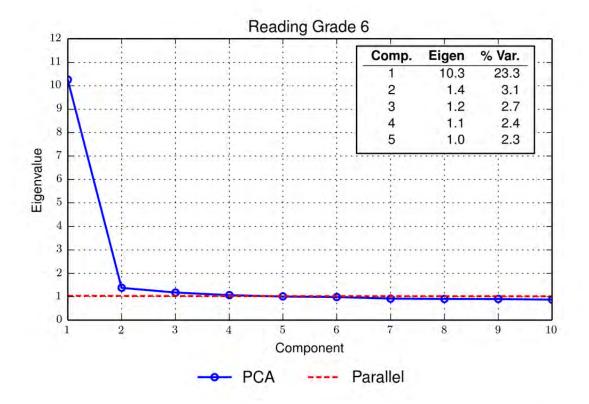


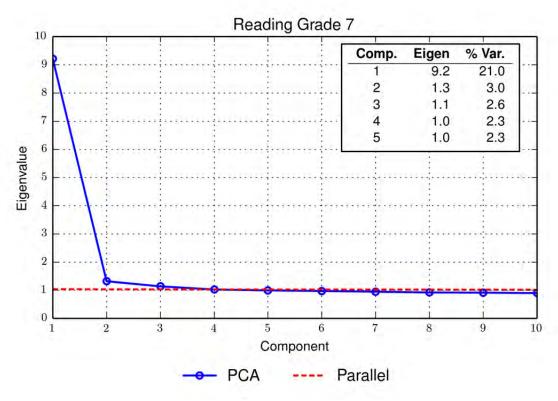


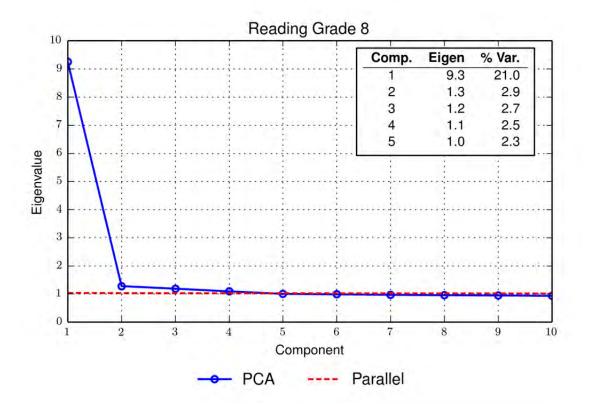


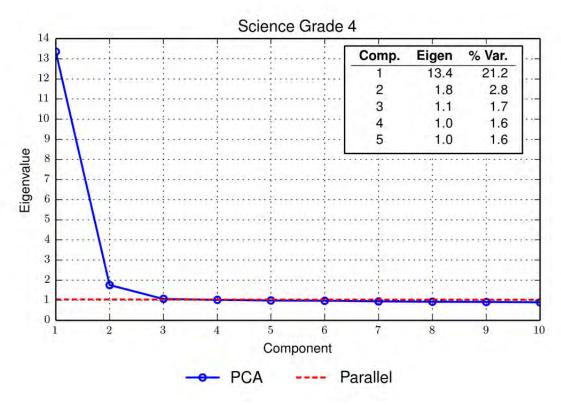


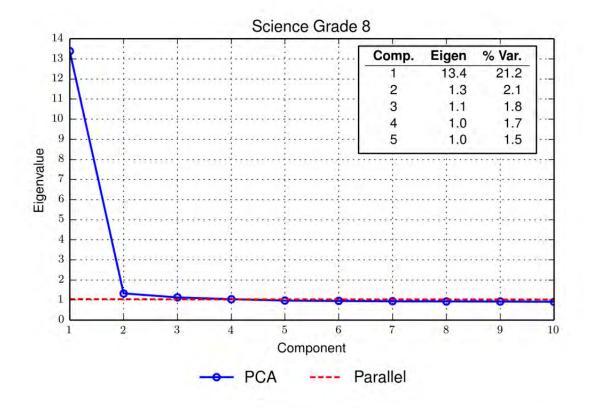


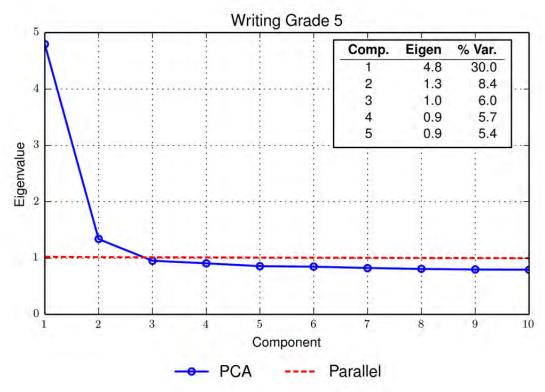


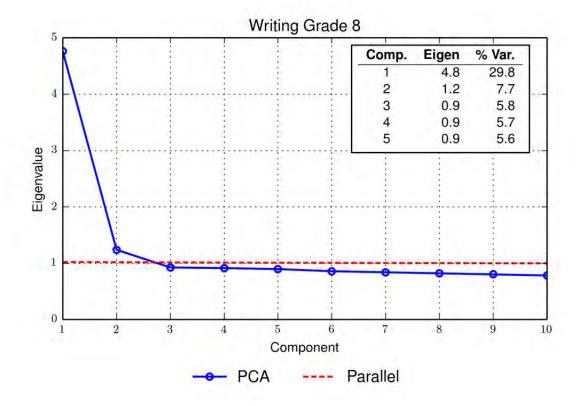












# Local Independence

Local independence (LI) is a fundamental assumption of IRT. No relationship should exist between examinees' responses to different items after accounting for the abilities measured by a test. In formal statistical terms, a test X that is comprised of items  $X_1, X_2,...X_n$  is locally independent with respect to the latent variable  $\theta$  if, for all  $x = (x_1, x_2,...x_n)$  and  $\theta$ ,

$$P(\mathbf{X} = \mathbf{x} \mid \boldsymbol{\theta}) = \prod_{i=1}^{I} P(X_i = x_i \mid \boldsymbol{\theta}).$$

This formula essentially states that the probability of any pattern of responses across all items ( $\mathbf{x}$ ), after conditioning on the abilities ( $\theta$ ) measured by the test, should be equal to the product of the conditional probabilities across each item (cf. the multiplication rule for independent events where the joint probabilities are equal to the product of the associated marginal probabilities).

The equation above shows the condition after satisfying the strong form of local independence. A weak form of local independence (WLI) was proposed by McDonald (1979). The distinction is important as many indicators of local dependency are actually framed by WLI. The requirement would be for the conditional covariances of all pairs of item responses, conditioned on the abilities, to be equal to zero. When this assumption is met, the joint probability of responses to an item pair, conditioned on abilities, is the product of the probabilities of responses to these two items, as shown below. (This is a weaker form because higher-order dependencies among items are allowed.) Based on the WLI, the following expression can be derived:

$$P(X_i = x_i, X_j = x_j \mid \theta) = P(X_i = x_i \mid \theta)P(X_j = x_j \mid \theta).$$

Marais and Andrich (2008) pointed out that local item dependence in the Rasch model can occur in two ways that some may not distinguish. The first way occurs when the assumption of unidimensionality is violated. Here, other nuisance dimensions besides a dominant dimension determine student performance (this can be called "trait dependence"). The second violation occurs when responses to an item depend on responses to another. This is a violation of statistical independence and can be called response dependence. Many people treat the assumptions of unidimensionality and local independence as one phenomenon and believe that once unidimensionality holds, that local independence also holds. By distinguishing the two sources of local dependence, one can see that while local independence can be related to unidimensionality, the two are different assumptions and therefore, require different tests.

Residual item correlations provided in WINSTEPS for each item pair were used to assess the local dependence among the PSSA items. In general, these residuals are computed as follows. First, expected item performance based on the Rasch model is determined using ability and item parameter estimates. Next, deviations (residuals) between the examinees' expected and observed performance is determined for each item. Finally, for each item pair, a correlation between the respective deviations is computed.

Three types of residual correlations are available in WINSTEPS: raw, standardized, and logit. It should be noted that the raw score residual correlation essentially corresponds to Yen's  $Q_3$  index, a popular LI statistic. The expected value for the  $Q_3$  statistic is approximately -1/(k-1) when no local dependence exists, where k is test length (Yen, 1993). Thus, the expected  $Q_3$  values should be approximately -0.02 for the PSSA tests (since most of the PSSA tests had more than 50 core items). Index values that are greater than 0.20 indicate a degree of local dependence that probably should be examined by test developers (Chen & Thissen, 1997).

Since the three residual correlations are very similar, the default "standardized residual correlation" in WINSTEPS was used for these analyses. Table 12–1 shows the summary statistics—mean, SD, minimum, maximum, and several percentiles  $(P_{10}, P_{25}, P_{50}, P_{75}, P_{90})$  — for all the residual correlations for each test. The total number of item pairs (N) and the number of pairs with the residual correlations greater than 0.20 are also reported in this table. The mean residual correlations were slightly negative and the values were close to -0.02. The vast majority of the correlations were very small, suggesting local item independence generally holds for the PSSA reading, mathematics, science, and writing tests.

Table 12–1. Summary of Item Residual Correlations for PSSA Mathematics, Reading, Science, and Writing

|           | Mathematics |       |       |       |       |       |  |  |  |
|-----------|-------------|-------|-------|-------|-------|-------|--|--|--|
| Statistic | 3           | 4     | 5     | 6     | 7     | 8     |  |  |  |
| N         | 1953        | 1953  | 1953  | 1953  | 1953  | 1953  |  |  |  |
| Mean      | -0.01       | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |  |  |  |
| SD        | 0.03        | 0.03  | 0.03  | 0.05  | 0.03  | 0.05  |  |  |  |
| Minimum   | -0.12       | -0.1  | -0.08 | -0.11 | -0.08 | -0.14 |  |  |  |
| $P_{10}$  | -0.04       | -0.04 | -0.04 | -0.05 | -0.04 | -0.06 |  |  |  |
| $P_{25}$  | -0.03       | -0.03 | -0.03 | -0.04 | -0.03 | -0.04 |  |  |  |
| $P_{50}$  | -0.02       | -0.01 | -0.02 | -0.02 | -0.02 | -0.02 |  |  |  |
| $P_{75}$  | 0           | 0     | 0     | -0.01 | 0     | 0     |  |  |  |
| $P_{90}$  | 0.01        | 0.01  | 0.01  | 0.02  | 0.01  | 0.03  |  |  |  |
| Maximum   | 0.41        | 0.36  | 0.31  | 0.53  | 0.29  | 0.43  |  |  |  |
| > 0.20    | 7           | 4     | 3     | 19    | 2     | 20    |  |  |  |

| _               | Reading |       |       |        |       |       |  |  |
|-----------------|---------|-------|-------|--------|-------|-------|--|--|
| Statistic       | 3       | 4     | 5     | 6      | 7     | 8     |  |  |
| N               | 861     | 946   | 946   | 946    | 946   | 946   |  |  |
| Mean            | -0.02   | -0.02 | -0.02 | -0.02  | -0.02 | -0.02 |  |  |
| SD              | 0.02    | 0.03  | 0.02  | 0.03   | 0.02  | 0.03  |  |  |
| Minimum         | -0.1    | -0.09 | -0.08 | -0.12  | -0.11 | -0.11 |  |  |
| $P_{10}$        | -0.05   | -0.05 | -0.05 | -0.055 | -0.05 | -0.06 |  |  |
| $P_{25}$        | -0.03   | -0.04 | -0.03 | -0.04  | -0.03 | -0.03 |  |  |
| $P_{50}$        | -0.02   | -0.02 | -0.02 | -0.02  | -0.02 | -0.02 |  |  |
| P <sub>75</sub> | -0.01   | -0.01 | -0.01 | -0.01  | -0.01 | -0.01 |  |  |
| $P_{90}$        | 0       | 0.01  | 0.005 | 0.01   | 0.01  | 0.01  |  |  |
| Maximum         | 0.13    | 0.12  | 0.08  | 0.2    | 0.13  | 0.15  |  |  |
| > 0.20          | 0       | 0     | 0     | 0      | 0     | 0     |  |  |

|                 | Scie  | nce   |
|-----------------|-------|-------|
| Statistic       | 4     | 8     |
| N               | 1953  | 1953  |
| Mean            | -0.01 | -0.01 |
| SD              | 0.02  | 0.02  |
| Minimum         | -0.07 | -0.09 |
| $P_{10}$        | -0.04 | -0.04 |
| $P_{25}$        | -0.03 | -0.03 |
| $P_{50}$        | -0.02 | -0.02 |
| P <sub>75</sub> | 0     | -0.01 |
| $P_{90}$        | 0.01  | 0.01  |
| Maximum         | 0.13  | 0.09  |
| > 0.20          | 0     | 0     |

Table 12–1 (continued). Summary of Item Residual Correlations for PSSA Mathematics, Reading, Science, and Writing

|                 | Wri   | ting  |
|-----------------|-------|-------|
| Statistic       | 5     | 8     |
| N               | 120   | 120   |
| Mean            | 0.02  | 0.04  |
| SD              | 0.20  | 0.17  |
| Minimum         | -0.72 | -0.62 |
| $P_{10}$        | -0.15 | -0.16 |
| $P_{25}$        | -0.12 | -0.07 |
| $P_{50}$        | 0.08  | 0.14  |
| P <sub>75</sub> | 0.16  | 0.17  |
| $P_{90}$        | 0.19  | 0.2   |
| Maximum         | 0.9   | 0.5   |
| > 0.20          | 10    | 10    |

Table 12–2 lists all item pairs with residual correlations greater than 0.20 with the added information of session, sequence, and Eligible Content. In terms of position, there is not an obvious pattern as some pairs of items were very close together in the test booklet while others appeared at opposites ends of the test booklet in separate sections. The pattern that is evident, however, is that these correlated items share identical or very similar Eligible Content and are testing the same or similar skills. Test blueprints determine what Assessment Anchors, as defined by the Eligible Content, will be assessed. PDE and DRC make every effort to avoid one item cueing another through careful item selection and sequencing.

**Table 12–2. Item Pairs With Large Residual Correlations** 

|             |          |         | It       | tem 1    |                    |         | It       | em 2     |                    |              |
|-------------|----------|---------|----------|----------|--------------------|---------|----------|----------|--------------------|--------------|
|             | G 1      | g .     |          |          | Eligible           | g .     |          |          | Eligible           | Resid.       |
|             | Grade    | Session | Seq.     | Type     | Content            | Session | Seq.     | Type     | Content            | Corr.        |
|             | 3        | 1       | 14       | MC       | B.1.1.2            | 3       | 55       | MC       | B.1.1.2            | 0.29         |
|             | 3        | 1       | 14       | MC       | B.1.1.2            | 5       | 109      | MC       | B.1.1.2            | 0.25         |
|             | 3        | 1       | 14       | MC       | B.1.1.2            | 5       | 114      | MC       | B.1.1.2            | 0.23         |
|             | 3        | 3       | 55       | MC       | B.1.1.2            | 5       | 109      | MC       | B.1.1.2            | 0.33         |
|             | 3        | 3       | 55       | MC       | B.1.1.2            | 5       | 114      | MC       | B.1.1.2            | 0.30         |
|             | 3        | 5       | 98       | MC       | A.2.1.3            | 5       | 118      | MC       | A.2.1.3            | 0.25         |
|             | 3        | 5       | 109      | MC       | B.1.1.2            | 5       | 114      | MC       | B.1.1.2            | 0.41         |
|             | 4        | 1       | 5        | MC       | E.1.2.2            | 3       | 62       | MC       | E.1.2.2            | 0.24         |
|             | 4        | 1       | 6        | MC       | C.1.2.2            | 5       | 106      | MC       | C.1.2.2            | 0.21         |
|             | 4        | 1       | 15<br>17 | MC       | B.1.1.3            | 3       | 53<br>58 | MC<br>MC | B.1.1.3<br>C.2.1.1 | 0.22         |
|             | 4<br>5   | 1       | 2        | MC<br>MC | C.2.1.1<br>A.2.1.2 | 3       | 38<br>4  | MC<br>MC | A.2.1.2            | 0.36<br>0.22 |
|             | <i>5</i> | 1 1     | 12       | MC<br>MC | A.2.1.2<br>A.1.3.2 | 1<br>1  | 4<br>19  | MC<br>MC | A.2.1.2<br>A.1.3.2 | 0.22         |
|             | 5        | 3       | 58       | MC       | A.1.3.2<br>A.3.1.1 | 5       | 102      | MC<br>MC | A.1.3.2<br>A.3.1.1 | 0.31         |
|             | 6        | 1       | 8        | MC       | A.1.3.2            | 5       | 115      | MC<br>MC | A.1.3.2            | 0.26         |
|             | 6        | 3       | 50       | MC       | C.3.1.1            | 3       | 58       | MC<br>MC | C.3.1.1            | 0.20         |
|             | 6        | 3       | 50       | MC       | C.3.1.1            | 5       | 96       | MC<br>MC | C.3.1.1            | 0.30         |
|             | 6        | 3       | 50       | MC       | C.3.1.1            | 5       | 104      | MC<br>MC | C.3.1.1            | 0.40         |
|             | 6        | 3       | 50       | MC       | C.3.1.1            | 5       | 117      | MC<br>MC | C.3.1.1            | 0.43         |
|             | 6        | 3       | 50       | MC       | C.3.1.1            | 1       | 25       | OE       | C.3.1.1            | 0.22         |
|             | 6        | 3       | 58       | MC       | C.3.1.1            | 5       | 96       | MC       | C.3.1.1            | 0.22         |
|             | 6        | 3       | 58       | MC       | C.3.1.1            | 5       | 104      | MC       | C.3.1.1            | 0.51         |
| Mathematics | 6        | 3       | 58       | MC       | C.3.1.1            | 5       | 117      | MC       | C.3.1.1            | 0.40         |
|             | 6        | 3       | 58       | MC       | C.3.1.1            | 1       | 25       | OE       | C.3                | 0.27         |
|             | 6        | 5       | 94       | MC       | E.2.1.1            | 5       | 116      | MC       | E.2.1.1            | 0.43         |
|             | 6        | 5       | 95       | MC       | A.1.1.3            | 5       | 102      | MC       | A.1.1.3            | 0.41         |
|             | 6        | 5       | 96       | MC       | C.3.1.1            | 5       | 104      | MC       | C.3.1.1            | 0.53         |
|             | 6        | 5       | 96       | MC       | C.3.1.1            | 5       | 117      | MC       | C.3.1.1            | 0.42         |
|             | 6        | 5       | 96       | MC       | C.3.1.1            | 1       | 25       | OE       | C.3                | 0.24         |
|             | 6        | 5       | 99       | MC       | D.2.1.2            | 5       | 109      | MC       | D.2.1.2            | 0.28         |
|             | 6        | 5       | 101      | MC       | A.1.3.1            | 5       | 107      | MC       | A.1.3.1            | 0.21         |
|             | 6        | 5       | 104      | MC       | C.3.1.1            | 5       | 117      | MC       | C.3.1.1            | 0.47         |
|             | 6        | 5       | 104      | MC       | C.3.1.1            | 1       | 25       | OE       | C.3                | 0.24         |
|             | 7        | 1       | 20       | MC       | B.2.1.1            | 5       | 106      | MC       | B.2.1.1            | 0.29         |
|             | 7        | 3       | 60       | MC       | A.1.1.1            | 5       | 93       | MC       | A.1.1.1            | 0.23         |
|             | 8        | 1       | 7        | MC       | A.1.1.1            | 1       | 18       | MC       | A.1.1.1            | 0.24         |
|             | 8        | 1       | 8        | MC       | D.4.1.1            | 1       | 20       | MC       | D.4.1.1            | 0.28         |
|             | 8        | 1       | 10       | MC       | C.1.2.1            | 3       | 56       | MC       | C.1.2.1            | 0.22         |
|             | 8        | 1       | 10       | MC       | C.1.2.1            | 5       | 96       | MC       | C.1.2.1            | 0.23         |
|             | 8        | 1       | 12       | MC       | D.4.1.3            | 1       | 17       | MC       | D.4.1.3            | 0.22         |
|             | 8        | 1       | 12       | MC       | D.4.1.3            | 5       | 106      | MC       | D.1.1.3            | 0.21         |
|             | 8        | 1       | 13       | MC       | C.1.2.1            | 1       | 25       | OE       | C.1                | 0.29         |
|             | 8        | 1       | 17       | MC       | D.4.1.3            | 1       | 22       | MC       | D.1.1.3            | 0.25         |
|             | 8        | 1       | 18       | MC       | A.1.1.1            | 3       | 55       | MC       | A.1.1.1            | 0.34         |
|             | 8        | 1       | 18       | MC       | A.1.1.1            | 5       | 107      | MC       | A.1.1.1            | 0.40         |

Table 12–2 (continued). Item Pairs With Large Residual Correlations

|             |       |         | It   | em 1 |                     |         | It   | em 2 |                     |                 |
|-------------|-------|---------|------|------|---------------------|---------|------|------|---------------------|-----------------|
|             | Grade | Session | Seq. | Туре | Eligible<br>Content | Session | Seq. | Туре | Eligible<br>Content | Resid.<br>Corr. |
|             | 8     | 3       | 54   | MC   | E.4.1.1             | 5       | 111  | MC   | E.4.1.1             | 0.25            |
|             | 8     | 3       | 55   | MC   | A.1.1.1             | 5       | 107  | MC   | A.1.1.1             | 0.37            |
|             | 8     | 3       | 56   | MC   | C.1.2.1             | 5       | 96   | MC   | C.1.2.1             | 0.31            |
|             | 8     | 3       | 56   | MC   | C.1.2.1             | 1       | 25   | OE   | C.1                 | 0.21            |
| Mathematics | 8     | 3       | 61   | MC   | C.1.2.1             | 5       | 105  | MC   | C.1.2.1             | 0.39            |
| Mathematics | 8     | 3       | 61   | MC   | C.1.2.1             | 5       | 116  | MC   | C.1.2.1             | 0.24            |
|             | 8     | 5       | 105  | MC   | C.1.2.1             | 5       | 112  | MC   | C.1.2.1             | 0.35            |
|             | 8     | 5       | 105  | MC   | C.1.2.1             | 5       | 116  | MC   | C.1.2.1             | 0.34            |
|             | 8     | 5       | 107  | MC   | A.1.1.1             | 5       | 114  | MC   | A.1.1.1             | 0.22            |
| -           | 8     | 5       | 112  | MC   | C.1.2.1             | 5       | 116  | MC   | C.1.2.1             | 0.43            |
|             | 5     | 1       | 4    | MC   | B.6                 | 1       | 5    | MC   | B.6                 | 0.22            |
|             | 5     | 1       | 4    | MC   | B.6                 | 1       | 6    | MC   | B.5                 | 0.21            |
|             | 5     | 1       | 5    | MC   | B.6                 | 1       | 6    | MC   | B.5                 | 0.21            |
|             | 5     | 1       | 8    | MC   | B.5                 | 1       | 11   | MC   | B.5                 | 0.22            |
|             | 5     | 2       | 13.1 | WP   | A.2                 | 2       | 13.2 | WP   | A.2                 | 0.68            |
|             | 5     | 2       | 13.1 | WP   | A.2                 | 3       | 14.1 | WP   | A.3                 | -0.72           |
|             | 5     | 2       | 13.1 | WP   | A.2                 | 3       | 14.2 | WP   | A.3                 | -0.67           |
|             | 5     | 2       | 13.2 | WP   | A.2                 | 3       | 14.1 | WP   | A.3                 | -0.56           |
|             | 5     | 2       | 13.2 | WP   | A.2                 | 3       | 14.2 | WP   | A.3                 | -0.52           |
| W-:4: ~     | 5     | 3       | 14.1 | WP   | A.3                 | 3       | 14.2 | WP   | A.3                 | 0.90            |
| Writing     | 8     | 1       | 2    | MC   | B.6                 | 1       | 10   | MC   | B.6                 | 0.24            |
|             | 8     | 1       | 5    | MC   | B.5                 | 1       | 7    | MC   | B.6                 | 0.25            |
|             | 8     | 1       | 7    | MC   | B.6                 | 1       | 9    | MC   | B.6                 | 0.23            |
|             | 8     | 1       | 7    | MC   | B.6                 | 1       | 12   | MC   | B.5                 | 0.21            |
|             | 8     | 2       | 13.1 | WP   | A.2                 | 2       | 13.2 | WP   | A.2                 | 0.50            |
|             | 8     | 2       | 13.1 | WP   | A.2                 | 3       | 14.1 | WP   | A.3                 | -0.62           |
|             | 8     | 2       | 13.1 | WP   | A.2                 | 3       | 14.2 | WP   | A.3                 | -0.42           |
|             | 8     | 2       | 13.2 | WP   | A.2                 | 3       | 14.1 | WP   | A.3                 | -0.43           |
|             | 8     | 2       | 13.2 | WP   | A.2                 | 3       | 14.2 | WP   | A.3                 | -0.22           |
|             | 8     | 3       | 14.1 | WP   | A.3                 | 3       | 14.2 | WP   | A.3                 | 0.49            |

#### Item Fit

WINSTEPS provides two item fit statistics (infit and outfit) for evaluating the degree to which the Rasch model predicts the observed item responses. Each fit statistic can be expressed as a mean square (MnSq) statistic or on a standardized metric (Zstd with mean = 0 and variance = 1). MnSq values are more oriented toward practical significance, while Zstd values are more oriented toward statistical significance. Though both are informative, the Zstd values are very likely too sensitive to the large sample sizes observed on the PSSA. In this situation it is recommended that the Zstd values be ignored if the MnSq values are acceptable (Linacre, 2009).

Both infit and outfit MnSq are the average of standardized residual variance (the difference between the observed score and the Rasch estimated score divided by the square root of the Rasch model variance). The difference is that the outfit statistic gives all examinees equal weight in computing the fit and tends to be affected more by unexpected responses far from the person, item, or rating scale category measure (i.e., it is more sensitive to outlying, off-target, low-information responses). The infit statistic is weighted by the examinee locations relative to item difficulty and tends to be affected more by unexpected responses close to the person, item, or rating scale category measure (i.e., informative, on-target responses). Some feel that extreme infit values are a greater threat to the measurement process than extreme outfit since most tests intend to measure the on-target population rather than extreme outliers.

The expected MnSq value is 1.0 and can range from 0 to infinity. Deviation in excess of the expected value can be interpreted as noise or lack of fit between the items and the model. Values lower than the expected value can be interpreted as item redundancy or overfitting items (too predictable, too much redundancy), and values greater than the expected value indicate underfitting items (too unpredictable, too much noise). Rules of thumb regarding "practically significant" MnSq values vary. More conservative users might prefer items with MnSq values that range from 0.8 to 1.2. Others believe reasonable test results can be achieved with values from 0.5 to 1.5. In the results below, values outside of 0.7 to 1.3 are given practical importance.

Table 12–3 presents the summary statistics of infit and outfit mean square statistics for the PSSA reading, mathematics, science, and writing tests, including the mean, SD, and minimum and maximum values. The number of items within the range of [0.7, 1.3] is also reported in Table 12–3. As can be seen, the mean values for both fit statistics were close to 1.00 for mathematics, reading, and science tests. Almost all the items had infit values falling in the range of [0.7, 1.3] for mathematics, reading, and science tests. Though more outfit values fell outside this range than infit values with mathematics, reading, and science tests, most of the extreme values were just barely above 1.3 or below 0.7, except grades 3 and 7 mathematics. Overall, these results indicate that the Rasch model fits the PSSA item data well in mathematics, reading, and science. As in previous years, the fit of the model to the writing data is relatively poor compared to the other content areas given its length, structure, and item weighting.

Table 12–3. Summary of Infit and Outfit Mean Square Statistics for PSSA Mathematics, Reading, Science, and Writing

|             |   |      | Infit Mean Square |      |      |           |      | Outfi | t Mean | Squar | e         |
|-------------|---|------|-------------------|------|------|-----------|------|-------|--------|-------|-----------|
|             |   | Mean | SD                | Min  | Max  | [0.7,1.3] | Mean | SD    | Min    | Max   | [0.7,1.3] |
|             | 3 | 1.00 | 0.10              | 0.82 | 1.34 | 80/81     | 1.03 | 0.25  | 0.65   | 2.27  | 69/81     |
|             | 4 | 0.99 | 0.10              | 0.82 | 1.48 | 80/81     | 0.98 | 0.19  | 0.62   | 1.63  | 74/81     |
| Mathamatica | 5 | 1.02 | 0.12              | 0.83 | 1.3  | 81/81     | 1.03 | 0.21  | 0.59   | 1.53  | 67/81     |
| Mathematics | 6 | 0.99 | 0.11              | 0.8  | 1.37 | 80/81     | 0.97 | 0.21  | 0.56   | 1.56  | 68/81     |
|             | 7 | 1.00 | 0.12              | 0.79 | 1.41 | 79/81     | 1.03 | 0.33  | 0.56   | 2.97  | 64/81     |
|             | 8 | 0.99 | 0.13              | 0.76 | 1.38 | 79/81     | 0.97 | 0.25  | 0.59   | 1.81  | 66/81     |
|             | 3 | 1.00 | 0.12              | 0.81 | 1.42 | 57/58     | 0.97 | 0.22  | 0.46   | 1.82  | 49/58     |
|             | 4 | 0.99 | 0.10              | 0.81 | 1.32 | 59/60     | 0.98 | 0.19  | 0.64   | 1.48  | 51/60     |
| D 1!        | 5 | 0.99 | 0.10              | 0.74 | 1.14 | 60/60     | 0.97 | 0.17  | 0.57   | 1.27  | 57/60     |
| Reading     | 6 | 1.00 | 0.11              | 0.82 | 1.25 | 60/60     | 1.00 | 0.20  | 0.63   | 1.42  | 55/60     |
|             | 7 | 1.00 | 0.09              | 0.83 | 1.18 | 60/60     | 1.00 | 0.17  | 0.62   | 1.35  | 56/60     |
|             | 8 | 1.00 | 0.11              | 0.84 | 1.31 | 59/60     | 0.98 | 0.19  | 0.53   | 1.51  | 53/60     |
| G.:         | 4 | 0.99 | 0.10              | 0.79 | 1.31 | 86/87     | 0.97 | 0.18  | 0.61   | 1.39  | 77/87     |
| Science     | 8 | 1.01 | 0.10              | 0.82 | 1.36 | 86/87     | 1.01 | 0.16  | 0.66   | 1.49  | 84/87     |
| XX7         | 5 | 1.46 | 0.50              | 0.62 | 1.97 | 1/16      | 7.57 | 4.18  | 0.51   | 9.9   | 0/16      |
| Writing     | 8 | 1.50 | 0.50              | 0.56 | 1.89 | 2/16      | 7.57 | 4.17  | 0.44   | 9.9   | 1/16      |

## Population Invariance

The property of invariance is regarded as the cornerstone of IRT and is its major distinguishing attribute from classical test theory (Hambleton, Swaminathan, & Rogers, 1991). It is this property that makes many IRT applications possible (e.g., equating, item banking, investigation of item bias, and adaptive testing) (Hambleton et al., 1991, p.25). Inferences from these IRT applications are valid to the extent that the property of invariance holds. Therefore, it is important to evaluate invariance whenever applying IRT.

Invariance should hold for both item and ability parameters. Item invariance implies that item parameter estimates do not depend on the particular sample of examinees used to derive them. Person (ability parameter) invariance means that examinees' ability estimates do not depend on which items are administered. For the Rasch item calibrations, it is more important to determine how well the item invariance assumption holds. Therefore, only item invariance is evaluated here. We call item invariance "population invariance" with the intention that item parameters do not depend on particular population.

Population invariance was examined using the root mean squared difference (RMSD) and the root expected mean standardized difference (REMSD) statistics (Dorans and Holland, 2000; von Davier & Wilson, 2008). The RMSD statistic quantifies the difference in the equating relationship at a given observed 2014 raw score point in terms of the subgroup relationship and the full group (population) equating relationship. The RMSD statistic is given as follows:

$$RMSD_{x} = \frac{\sqrt{\sum_{j=1}^{J} w_{j} [\hat{y}_{jx} - \hat{y}_{Px}]^{2}}}{\sigma_{Y}},$$

where x is an observed 2014 (scale of X) raw score,  $\hat{y}_{jx}$  is the expected 2013 raw score for subgroup j (based on the subgroup calibration/equating) given 2014 raw score x,  $\hat{y}_{Px}$  is the expected 2013 raw score for population (P, based on calibration/equating with all students) given 2014 raw score x, the weight,  $w_j$ , is the proportion for the subgroup, and  $\sigma_Y$  is the standard deviation of the 2013 raw scores with all students. A related index, REMSD, summarizes the average difference between the equating across all observed score points. Dorans, Holland, Thayer, and Tatenkeni (2003) used the notion of a "difference that matters" (DTM) to provide further context for interpreting the population invariance results. The DTM for a particular assessment depends on the reporting scale. For the PSSAs, one raw score point translates to different scaled scores and potentially different performance level classifications. Differences in equating functions greater than half a raw score point could result in different scores reported. For this reason, a DTM of a half a point is used for our evaluation of population invariance. RMSD and REMSD are compared relative to the standardized DTM which is obtained by dividing 0.5 by the standard deviation in the denominator of the RMSD and REMSD.

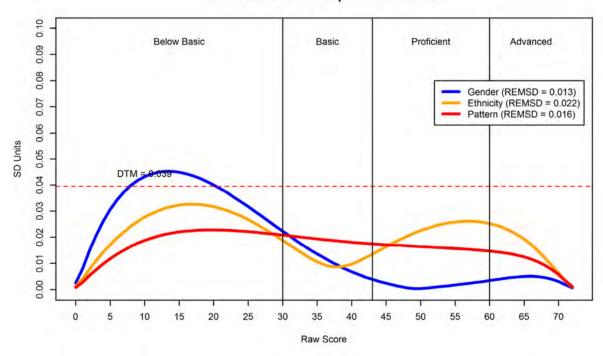
As in 2013, the subgroups considered within the population invariance analyses are gender (male, female), ethnicity (White, Black, and Hispanic), and scrambling pattern (A, B, C, D, E, F, G, M). The REMSD statistics, which provide a summary of the differences across all observed score points, were all lower than the DTM indicating that the equating results were invariant with respect to gender, ethnicity, and scramble pattern group, except for grade 5 mathematics. In grade 5 mathematics, the REMSD for both the gender and ethnic groups were above the DTM threshold.

Figure 12–2 presents the RMSDs (*y*-axis) for gender, ethnicity, and scramble pattern group and includes REMSD estimates for each equating set. The population invariance curves (or deviance curves) of the RMSDs generally fell below the DTM for all score points across each test, except mathematics grades 3, 5, and 6, and writing grade 8. In grade 3 mathematics, the difference between the equating based on gender groups was above the DTM at the lowest end of the distribution. Similarly, at grade 6 mathematics and grade 8 writing, the difference in equating based on gender was above the DTM in a small section of the score range. In Grade 5 mathematics, the RMSD for both the gender and ethnic groups was above the DTM for a wider range of score points, which was consistent with the magnitude of the REMSD statistics. These results suggest that there may be some variance in equating results by gender and ethnic groups that should be monitored in future administrations.

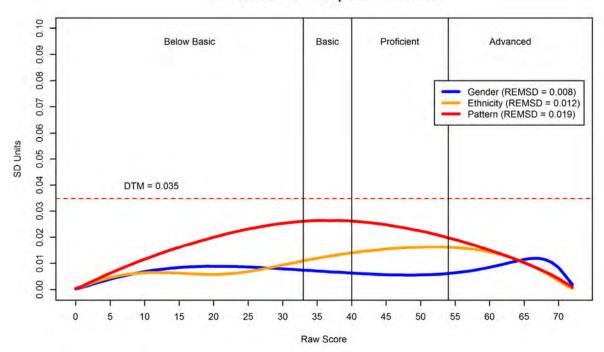
The 2014 population invariance results are consistent with 2013 in that the majority of grade-subject combinations showed population invariance of the equating relationship across gender, ethnic, and scramble groups. The fact that equating differences are seen in different grade/subject/subgroup analyses over the two years suggests that population invariance of equating may not be a stable trait of an examination. We will continue to monitor population invariance of the equating in subsequent PSSA administrations.

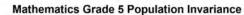
Figure 12–2. Population Invariance Plots

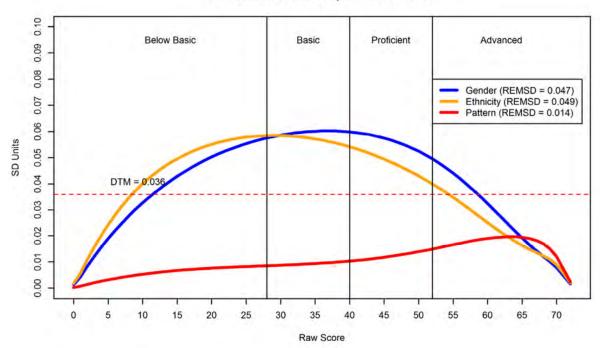
## Mathematics Grade 3 Population Invariance



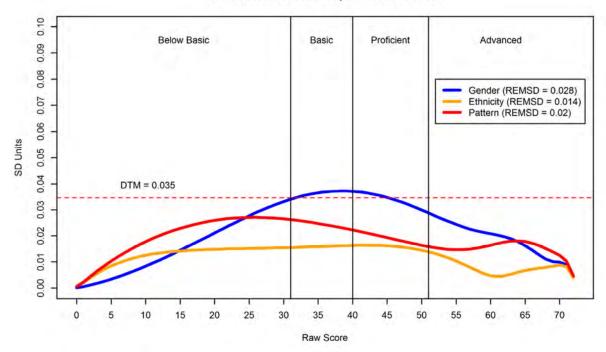
### **Mathematics Grade 4 Population Invariance**



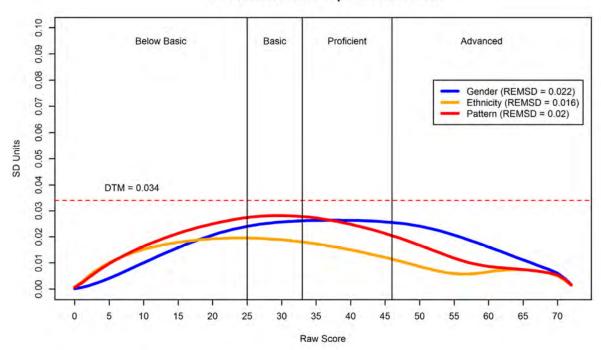




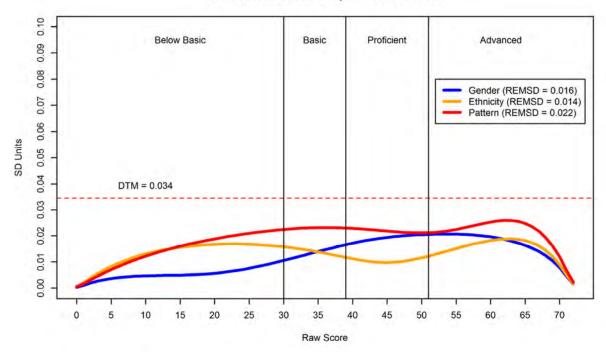
## **Mathematics Grade 6 Population Invariance**



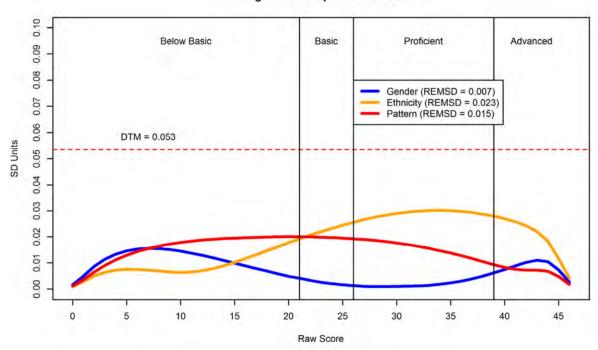
### **Mathematics Grade 7 Population Invariance**



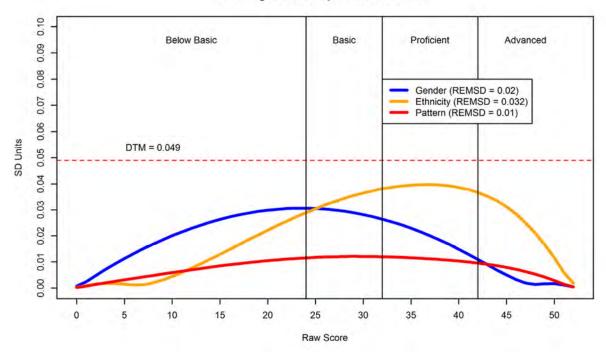
## **Mathematics Grade 8 Population Invariance**



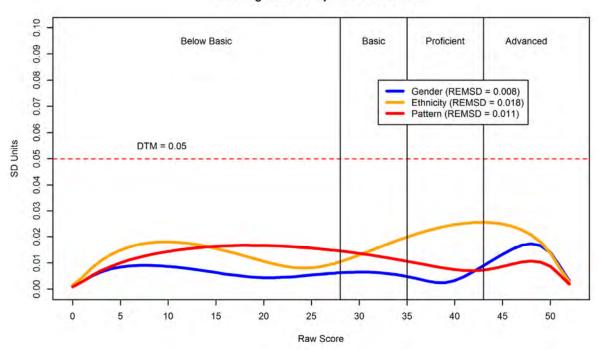
## Reading Grade 3 Population Invariance



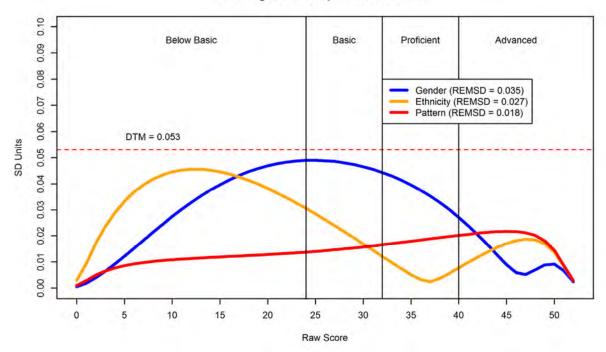
## Reading Grade 4 Population Invariance



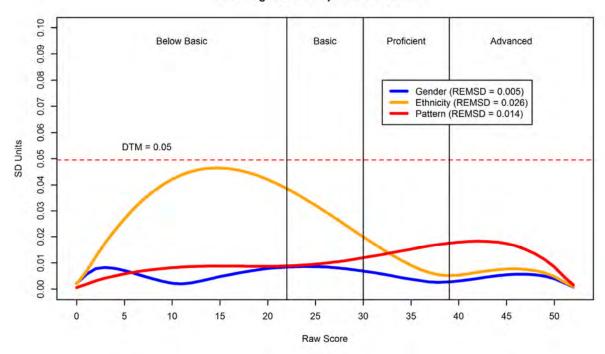
### Reading Grade 5 Population Invariance



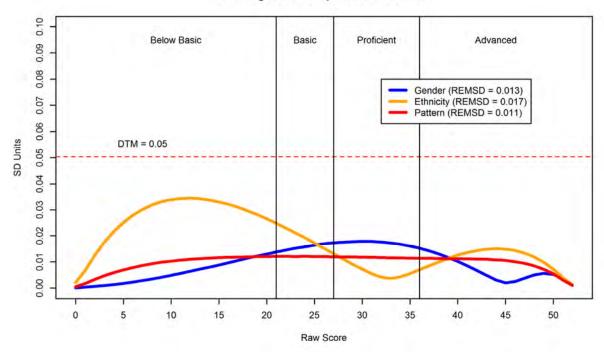
## Reading Grade 6 Population Invariance



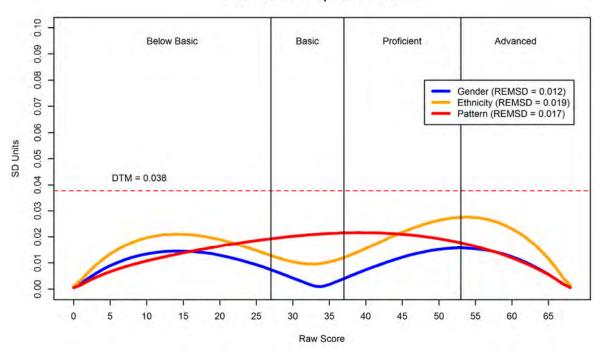
## Reading Grade 7 Population Invariance



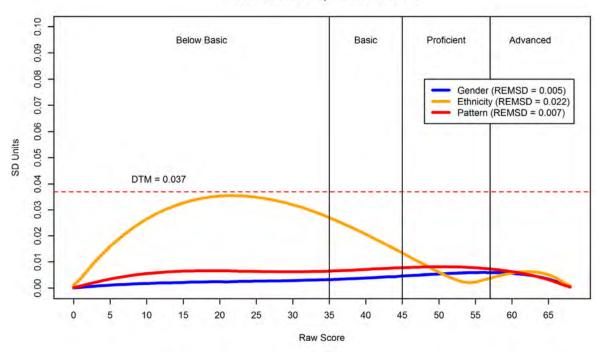
## Reading Grade 8 Population Invariance



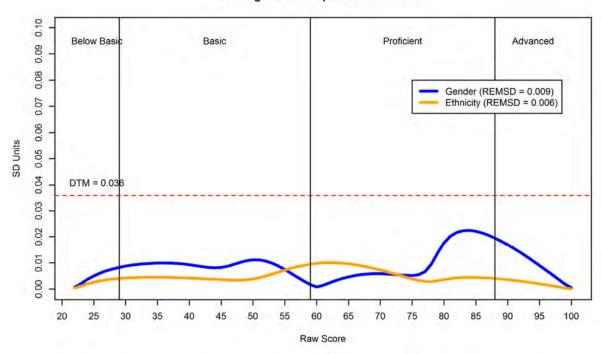
### Science Grade 4 Population Invariance



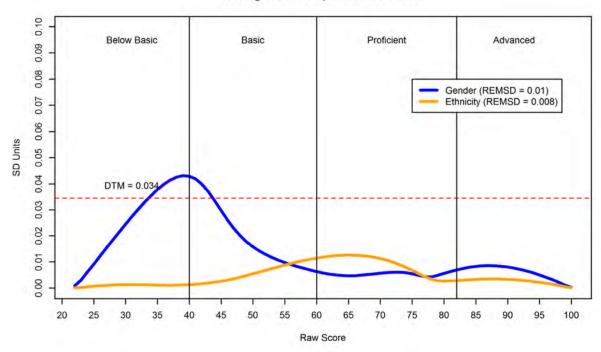
# Science Grade 8 Population Invariance



## Writing Grade 5 Population Invariance



## Writing Grade 8 Population Invariance



## **RASCH ITEM STATISTICS**

As noted earlier, the Rasch model expresses item difficulty (and student ability) in units referred to as *logits*, rather than on the percent-correct metric. In the simplest case, a logit is a transformed *p*-value with the average *p*-value becoming a logit of zero. In this form, logits resemble *z*-scores or standard normal deviates; a very difficult item might have a logit of +4.0 and a very easy item might have a logit of -4.0. However, they have no formal relationship to the normal distribution.

The logit metric has several mathematical advantages over p-values. Logits have an interval scale, meaning that two items with logits of 0.0 and +1.0 (respectively) are the same distance apart as two items with logits of +3.0 and +4.0. Logits are not dependent on the ability level of the students. For example, a test form can have a mean logit of zero, whether the average item p-value for the student sample is 0.8 or 0.3.

The standard Rasch calibration procedure arbitrarily sets the mean difficulty of the items on any form at zero. Under normal circumstances where all students are administered the same set of items, any item with a *p*-value lower than the average item on the form receives a positive logit difficulty and any item with a *p*-value higher than the average receives a negative logit. Consequently, the logits for any calibration, whether it is a third-grade reading test or a high-school science test, relate to an arbitrary origin defined by the center of items on that form. The average third-grade reading item will have a logit of zero; the average high-school science item will have a logit of zero. Logits for both item difficulties and student abilities are placed on the same scale and relate to the same mean item difficulty.

There are a number of other arbitrary choices that could be made for centering the item difficulties. Rather than using all the items, the origin could be defined by a subset. For the PSSA, all test forms in a particular grade and content area share the same operational item set. All items on each form can then be easily adjusted to a single (but still arbitrary) origin by defining the origin as the mean of the operational items. With this done, the origins for all the forms will be statistically equal. For example, items on any two forms that are equally difficult will now have statistically equal logit difficulties. This is partly how PSSA items can be placed on the same logit difficulty scale across years. Chapter Fifteen has more detailed information about the PSSA scale linking procedures.

Appendix F reports the item statistics including classical and Rasch logit difficulties for all the operational items. Table 12–4 summarizes the Rasch logit difficulties of the operational items on each test. The minimum and maximum values and standard deviations suggest that the PSSA items covered a relatively wide range of difficulties. It is important to note that the logit difficulty values presented have not been linked to a common scale of measurement across grades and subjects. Therefore, the relative magnitude of the statistics across content areas and grades cannot be compared.

Table 12–4. Summary of Rasch Item Difficulties for PSSA Mathematics, Reading, Science, and Writing

|             |   | N  | Mean  | SD   | Min   | Max  |
|-------------|---|----|-------|------|-------|------|
|             | 3 | 63 | 1.01  | 1.16 | -1.13 | 3.14 |
|             | 4 | 63 | -0.07 | 0.81 | -1.58 | 1.70 |
| Mathematics | 5 | 63 | 0.60  | 0.82 | -1.53 | 2.43 |
| Mathematics | 6 | 63 | 0.15  | 0.94 | -1.68 | 2.37 |
|             | 7 | 63 | 0.42  | 0.84 | -1.31 | 2.47 |
|             | 8 | 63 | 0.21  | 0.83 | -1.25 | 2.31 |
|             | 3 | 42 | -0.07 | 0.70 | -2.00 | 1.44 |
|             | 4 | 44 | -0.07 | 0.60 | -1.42 | 1.25 |
| Reading     | 5 | 44 | 0.06  | 0.74 | -2.05 | 1.51 |
| Keaunig     | 6 | 44 | -0.02 | 0.75 | -1.58 | 1.36 |
|             | 7 | 44 | 0.00  | 0.74 | -1.88 | 1.30 |
|             | 8 | 44 | 0.61  | 0.72 | -1.00 | 2.18 |
| Science     | 4 | 63 | 0.06  | 0.83 | -1.89 | 2.19 |
| Science     | 8 | 63 | -0.28 | 0.60 | -1.45 | 1.02 |
| Writing 5   | 5 | 16 | 1.21  | 1.29 | -1.06 | 3.07 |
|             | 8 | 16 | 1.53  | 0.72 | 0.30  | 2.78 |

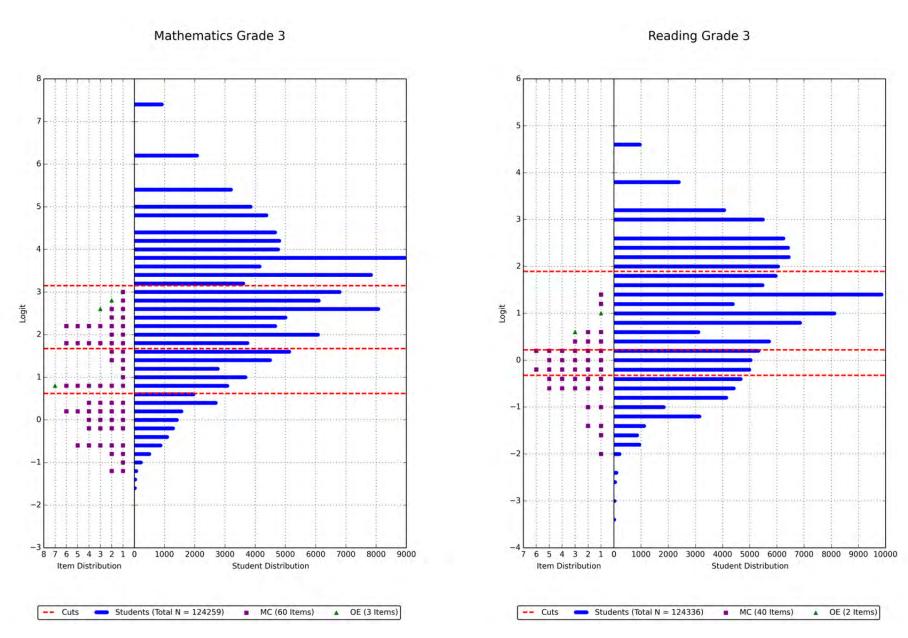
*Note*. The mean logit values are not necessarily 0.0 because the items have been placed on a scale that was developed in prior years.

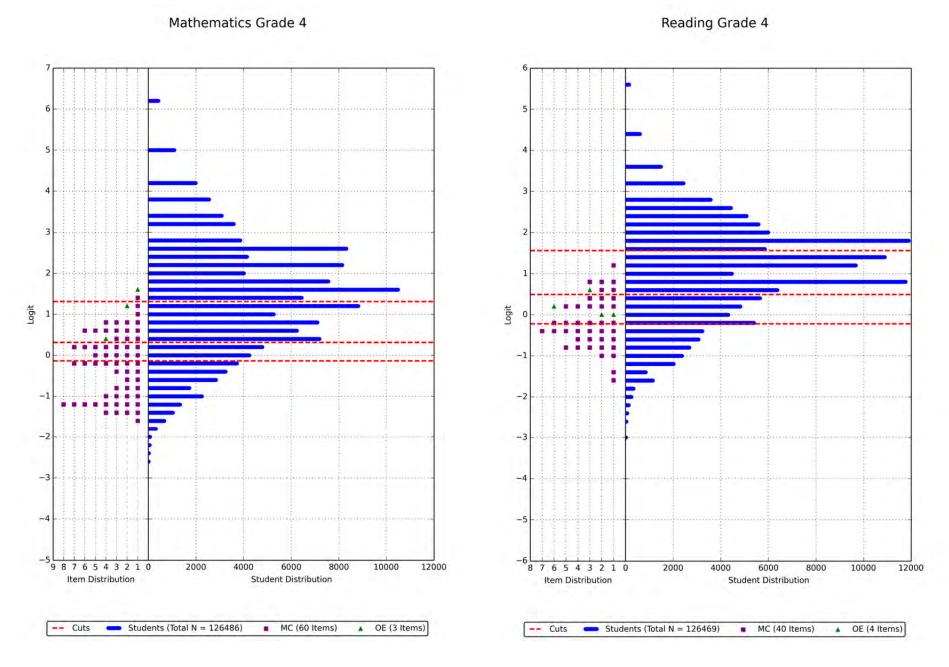
# Item Difficulty-Student Ability Wright Maps

The distributions of the Rasch item logits (item difficulty estimates) are shown on the item difficulty-student ability maps presented in Figure 12–3. In each item-student map, markers on the left-hand side represent item difficult parameter estimates, whereas markers on the right-hand side represent person ability parameter estimates. As noted earlier, the Rasch model enables placement of both items and students on the same scale. Consequently, one can easily visualize information about how the difficulty of the test items related to the ability distribution of students who took the test. The students located in the upper-right quadrant of any given plot have relatively more ability. Items in the lower-left quadrant are relatively easier. High-ability students have higher probabilities of correctly answering easier items. Similarly, low-ability students (in lower-right quadrant of any given plot) have lower probabilities of answering harder items (in upper-left quadrant).

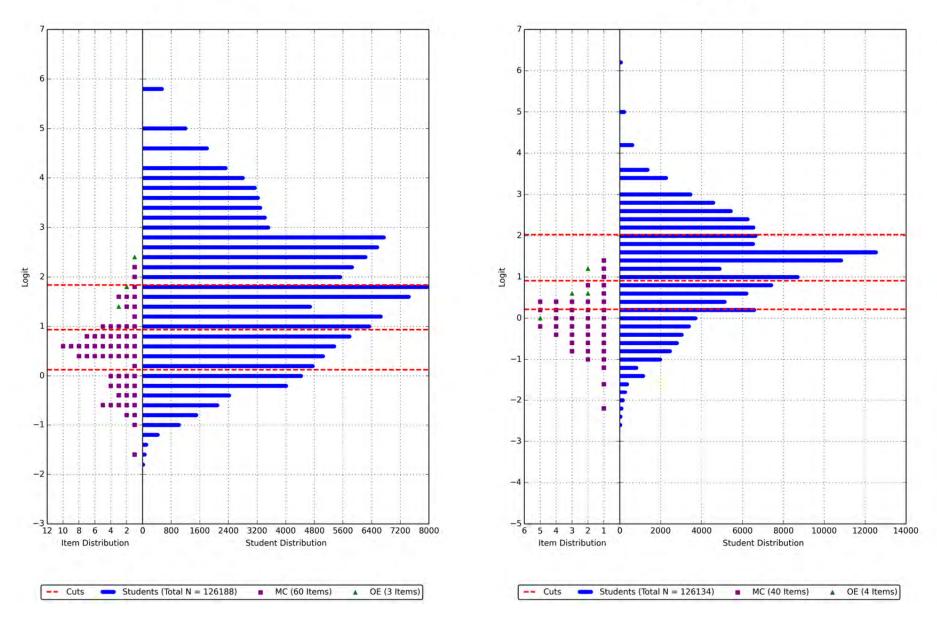
Overall, the most predominant pattern seen across all maps was for students to have relatively higher ability and for items to be relatively easier. It is also important to understand where the items are providing more accurate measurement (e.g., near the cutscores or away from the cutscores). This issue is addressed more fully in Chapter Eighteen (see Figure 18–2).

Figure 12–3. Item-Student Maps

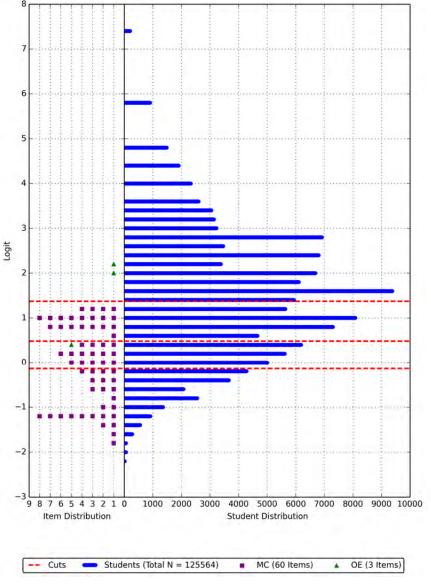


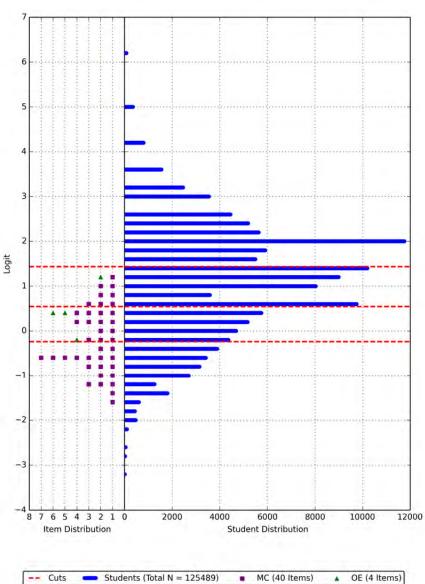




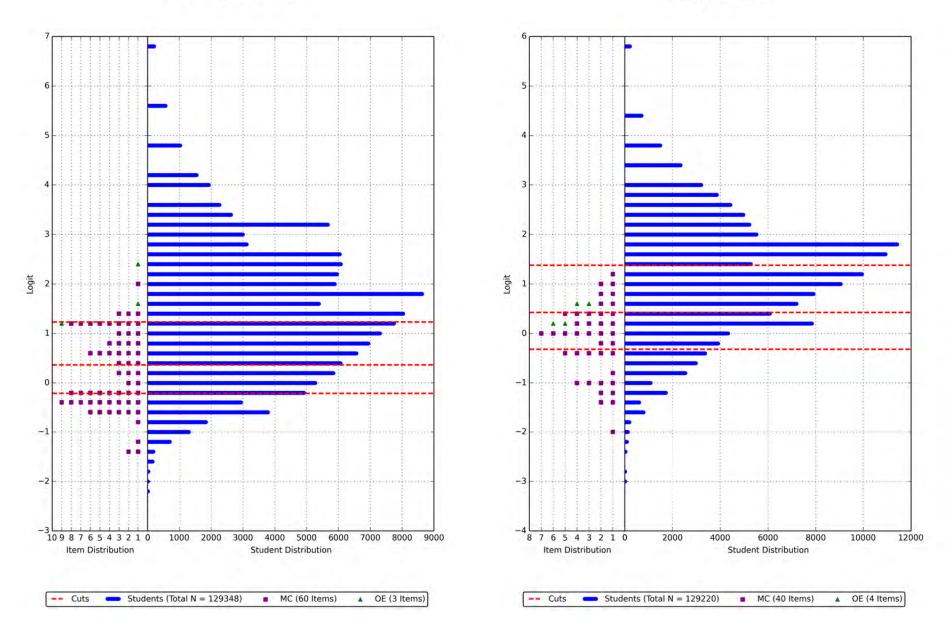


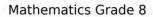


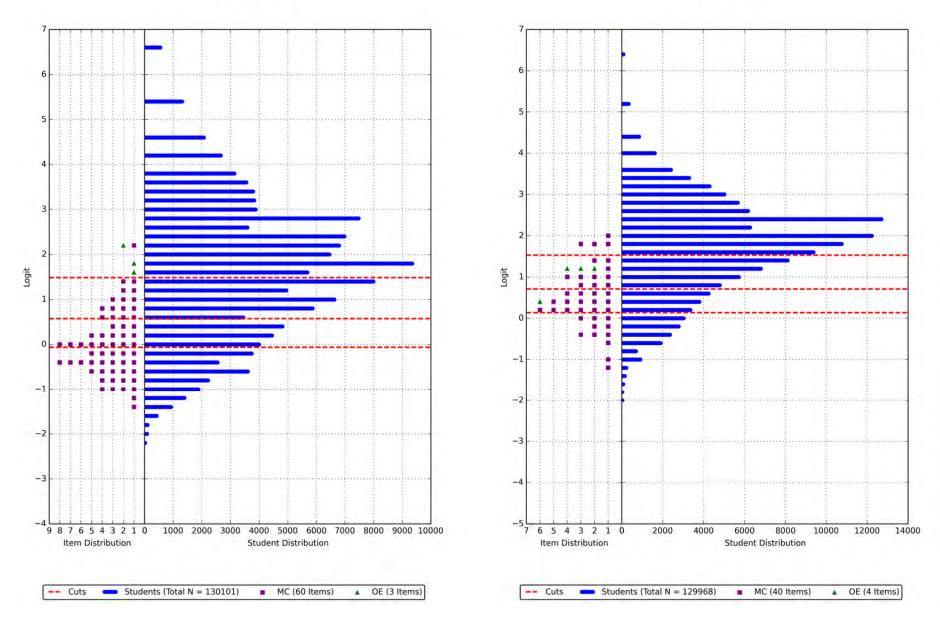


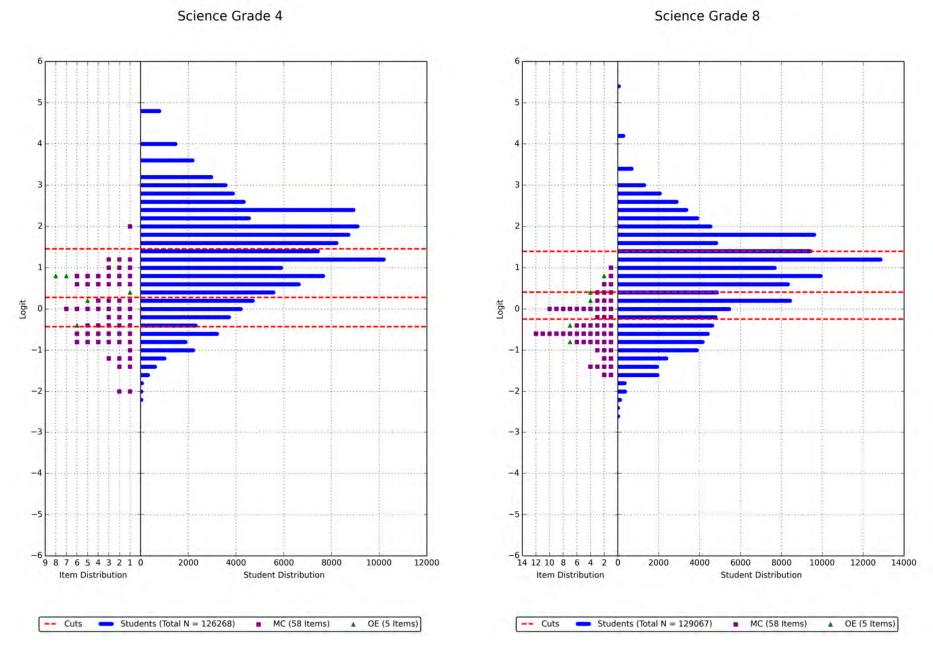


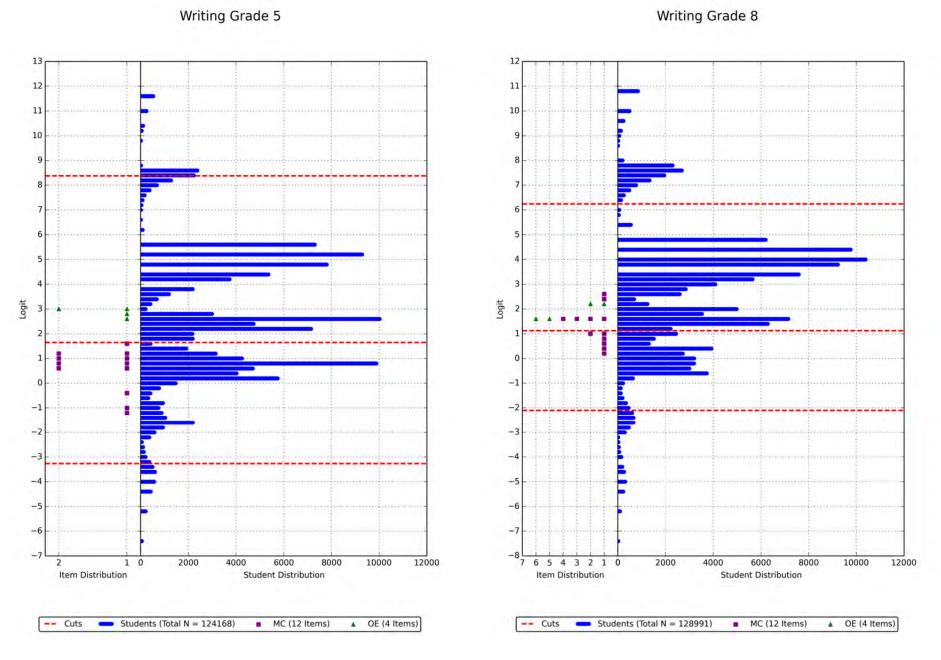












# Chapter Thirteen: Performance Level Setting

No performance level setting events occurred this year. A history (dates and methodology) of prior performance level setting or validation events are provided in Table 13–1. Validation events utilized starting values; more details of this are provided in the table note. The resulting cut scores from those events are provided in Tables 13–2 and 13–3. For additional details about any given event, refer to the technical report for the year that the event occurred (Data Recognition Corporation, 2005, 2007a, 2007b, 2008a, 2008b).

Table 13–1. Performance Level Setting/Validation Event Dates and Methodology

| Subject     | Grade    | Methodology  | Validation?      | <b>Event Date</b> |
|-------------|----------|--------------|------------------|-------------------|
| Reading     | 5, 8, 11 | Bookmark     | Yes <sup>1</sup> | Summer 2005       |
| Mathematics | 5, 8, 11 | Bookmark     | Yes <sup>1</sup> | Summer 2005       |
| Writing     | 5, 8, 11 | Body of Work | Yes <sup>2</sup> | Summer 2006       |
| Reading     | 4, 6, 7  | Bookmark     | Yes <sup>2</sup> | Summer 2006       |
| Mathematics | 4, 6, 7  | Bookmark     | Yes <sup>2</sup> | Summer 2006       |
| Reading     | 3        | Bookmark     | Yes <sup>3</sup> | Summer 2007       |
| Mathematics | 3        | Bookmark     | Yes <sup>3</sup> | Summer 2007       |
| Science     | 4, 8, 11 | Bookmark     | No               | Summer 2008       |

Note.

- 1. Starting values exponentially smoothed using post-equated 2005 results for Grades 5, 8, and 11.
- 2. Starting values exponentially smoothed using post-equated 2006 results for Grades 4, 6, and 7.
- 3. Starting values were determined using post-equated 2007 results for Grades 4

### **PSSA CUT SCORES**

Appendix M provides the Rasch ability and scaled score cuts for each PSSA test. For reader convenience, these are documented next in a different format. Table 13–2 documents the Rasch ability (Theta) cut scores for each grade and subject-area test. Table 13–3 documents the same but provides the cut scores on the scaled-score metric. PSSA scaling procedures are discussed further in Chapter Fourteen.

Table 13–2. PSSA Theta (θ) Metric Cut Scores by Grade and Subject Area

|               |       |         | θ Cuts  |        |
|---------------|-------|---------|---------|--------|
| Subject       | Grade | BB/B    | B/P     | P/A    |
|               | 3     | 0.6192  | 1.6750  | 3.1501 |
| Š             | 4     | -0.1376 | 0.3124  | 1.3074 |
| Mathematics   | 5     | 0.1259  | 0.9373  | 1.8383 |
| hem           | 6     | -0.1377 | 0.4823  | 1.3723 |
| /at]          | 7     | -0.2114 | 0.3636  | 1.2336 |
| <b>A</b>      | 8     | -0.0637 | 0.5729  | 1.4854 |
|               | 11    | -0.1749 | 0.4888  | 1.4819 |
|               | 3     | -0.3207 | 0.2205  | 1.8926 |
|               | 4     | -0.2215 | 0.4935  | 1.5635 |
| 8<br><b>E</b> | 5     | 0.2133  | 0.9074  | 2.0241 |
| Reading       | 6     | -0.2398 | 0.5452  | 1.4352 |
| 8             | 7     | -0.3170 | 0.4230  | 1.3780 |
|               | 8     | 0.1376  | 0.7082  | 1.5301 |
|               | 11    | -0.0130 | 0.5777  | 1.5351 |
| e             | 4     | -0.4280 | 0.2792  | 1.4560 |
| Science       | 8     | -0.2435 | 0.4091  | 1.3958 |
| <b>S</b>      | 11    | -0.4390 | 0.7888  | 1.4960 |
|               | 5     | -3.2644 | 1.6456  | 8.3756 |
| Writing       | 8     | -2.0984 | 1.1216  | 6.2416 |
| <b>&gt;</b>   | 11    | -2.9230 | -0.0830 | 5.6170 |

Note.  $BB = Below\ Basic;\ B = Basic;\ P = Proficient;\ and$  A = Advanced.

Table 13-3. PSSA Scaled-Score Metric Cut Scores by Grade and Subject Area

|             |       | Scal | led Score ( | Cuts |
|-------------|-------|------|-------------|------|
| Subject     | Grade | BB/B | B/P         | P/A  |
|             | 3     | 1044 | 1180        | 1370 |
| Š           | 4     | 1156 | 1246        | 1445 |
| Mathematics | 5     | 1158 | 1312        | 1483 |
| ıem         | 6     | 1174 | 1298        | 1476 |
| fatl        | 7     | 1183 | 1298        | 1472 |
| 2           | 8     | 1171 | 1284        | 1446 |
|             | 11    | 1167 | 1304        | 1509 |
|             | 3     | 1168 | 1235        | 1442 |
|             | 4     | 1112 | 1255        | 1469 |
| <b>8</b>    | 5     | 1137 | 1275        | 1497 |
| Reading     | 6     | 1121 | 1278        | 1456 |
| 8           | 7     | 1131 | 1279        | 1470 |
|             | 8     | 1146 | 1280        | 1473 |
|             | 11    | 1112 | 1257        | 1492 |
| ce          | 4     | 1150 | 1275        | 1483 |
| Science     | 8     | 1150 | 1275        | 1464 |
| Š           | 11    | 1150 | 1275        | 1347 |
| gu          | 5     | 745  | 1236        | 1909 |
| Writing     | 8     | 914  | 1236        | 1748 |
| <b>≥</b>    | 11    | 952  | 1236        | 1806 |

Note.  $BB = Below\ Basic;\ B = Basic;\ P = Proficient;\ and A = Advanced.$ 

# Chapter Fourteen: Scaling

The purpose of a scaling analysis is to create a score scale. Scaling is used to transform test score values onto a scale more easily interpreted by users. For the PSSA, the resulting scale scores will be used for score reporting and performance level classification. The PSSA classifies students into four achievement levels: Below Basic, Basic, Proficient, and Advanced.

### **HISTORICAL INFORMATION**

Prior to 2000, when the PSSA design was heavily matrix sampling, estimating school-level scaled scores presented some statistical and psychometric challenges. The statistically correct method to compute the school-level scaled score often gave an answer different from what would be obtained by averaging student ability estimates. To avoid this source of misunderstanding, the school-level scores were made to equal the average of the appropriate students. The matrix sampling component of the design, together with items from the common section, was used at the academic standard category level to estimate relative strengths and weaknesses for schools.

The adoption of the Pennsylvania Academic Standards in 1999 brought structural changes to the PSSA that were implemented in 2000. Beginning with the new reporting design in 2000, subject-area total scores for students and schools were based exclusively on the common sections. Thus, greater emphasis was placed on ensuring that the common sections possessed optimal balance at the content-standard level and yielded reliable estimates of student-level abilities, as indicated by the standard errors. It was then possible to aggregate all scaled scores at the school, district, and state levels without resorting to any complex algorithms, making the results more understandable.

Since the original design of the PSSA was intended to produce school-level estimates only, the reporting metric was defined at the school level. For the 1996 base year, the mean of all schools in the norming sample was set at 1300 and the standard deviation at 100. The distribution to which these parameters applied was the subject-area scaled score with all schools weighted equally. Consequently, the expectation in the base year was for the state-level means to be near 1300 and for standard deviations to be near 100. The state mean of student-level scaled scores was, in general, somewhat different. This difference occurred because the mean of the school-level scores counted schools equally, regardless of size, while the mean of the student-level scores counted students equally.

Although it affected very few students, many administrators believed that their schools were being penalized by the presence of extremely low-scoring special-needs students who took the PSSA. A change was made to reduce the impact of these students on the overall school score. Namely, a minimum scaled score of 700 was implemented for all PSSA mathematics, reading, and writing tests beginning in 2002. The Grade 3 mathematics and Grade 3 reading tests as well as all grade levels of science were added after 2002. The minimum of 700 was not applied to these other tests in order to preserve other scale characteristics (e.g., the percentages in performance level categories recommended by standard setting participants and preventing students from achieving Proficient level through random response). Table 14–1 documents the minimum possible scaled scores for all PSSA tests. (There is no prescribed maximum scaled score or upper bound for the PSSA.)

Beginning with the design changes implemented for the 2000 PSSA, student-level scores were based on the common items only. This ensured that any decision made about students was done in the most equitable manner. School-level scaled scores for the subject areas were based on the mean of the student-level scaled scores. This ensured that the scaled scores used for school accountability directly reflected the student-level results. Thus, it is a simple matter to aggregate up to the school, district, and state levels.

As noted earlier, the PSSA scaled-score metric was originally anchored to the mean school-level scaled score for a base year and arbitrarily labeled as 1300. In the base year, the standard deviation of the school-level scaled scores was set to a value of 100. If school scores are approximately normally distributed, a scaled score of 1400, one standard deviation above the base year mean, means the school did better than about five-sixths of the schools in the base year. About two-thirds of the schools will have scaled scores between 1200 and 1400. About 16 percent of the schools will be below 1200. Scaled scores of 1000 and 1600 are three standard deviations from the mean, so scores more extreme than this are very rare.

These labels of 1300, 1200, etc., are completely arbitrary; they could have been called zero and one, or 100 and 110, or any other ordered pair without affecting any of the relationships among schools, years, students, or items. Changing the scale would simply be changing the labels on the axis of a graph without moving any of the points.

Setting the mean at 1300 and the standard deviation at 100 was originally chosen to avoid producing negative scores and so that scores on the PSSA would not be confused with the results from any other testing program. Users would acquire greater knowledge of the PSSA scales with experience.

### SCALED SCORES

Individual student scores are reported as scaled scores. However, they are initially estimated as Rasch abilities (more information on the Rasch model is given in Chapter Twelve). Generally, scaled scores are preferred over Rasch ability values for reporting purposes. One issue is that Rasch ability values are on a scale that includes negative and decimal values. By transforming the Rasch ability values to scaled scores, all reported values can become positive integers. Scaled scores are usually obtained through some linear transformation of the Rasch ability values. The linear transformations used for the PSSA produce numeric values with three or four digits that are unit interval scaled scores. Each grade and subject has its own unique PSSA scaled score. Positive scores with no decimals make more sense to parents and students. Since Rasch ability values are comparative after linking to the base year, the transformed scaled scores have a common scale across years, even though the corresponding raw scores may differ. (Linking is discussed further in Chapter Fifteen.)

Essentially, PSSA scaled scores are derived through a two-step process. First, there is a nonlinear transformation that converts number-correct scores to Rasch ability logits. Second, a linear transformation is used to convert logits to scaled scores. These and some additional considerations (e.g., rounding rules), are discussed further below.

## Definition of Scoreability

Answer documents are considered scoreable if they meet the criteria for inclusion in the data files (see Chapter Nine). For MC items, all omit (no response) and multiple marks (more than one response selected without machine-discernable erasures) were scored as zeroes. For OE items, all blank, foreign language, off-task, or unreadable responses were scored as zeroes.

### **WINSTEPS Scaling**

Parameter estimates are derived using the WINSTEPS 3.54 computer program (Linacre & Wright, 2003), which employs unconditional (UCON), joint-maximum-likelihood estimation (JMLE). WINSTEPS provides a conversion table that maps raw scores to logits (Rasch ability estimates). The logits are transformed to scaled scores as discussed below. Every year each test is scaled separately and then linked (see Chapter Fifteen).

#### ZERO AND PERFECT SCORES

WINSTEPS does not provide a direct ability estimate for zero (no points earned) or perfect (all points earned) raw scores. However, WINSTEPS has a default procedure for estimating such extreme scores, and this was used for the PSSA. Essentially, a fractional raw score (a value less than one) is added to zero scores and subtracted from perfect scores to determine the corresponding logit values for these extreme scores.

# Linear Transformation Formulas

PSSA scaled scores are obtained through a linear transformation of the Rasch ability estimates  $(\hat{\theta})$ . Specifically,

$$SS=m\hat{\theta}+b$$
.

where *m* is the slope and *b* is the intercept. The slopes and intercepts for deriving PSSA scaled scores are provided in Table 14–2. For reference purposes, the PSSA theta cut scores have been reproduced in this table as well.

# Rounding

The linearly transformed scaled scores are generally rounded to the nearest integer value for reporting purposes. Values greater than or equal to 0.50 are rounded up. Values less than 0.50 are rounded down. However, at each performance level cut point, scores are rounded up (even if less than 0.50) if this action would put the rounded score into a higher performance level. As an example, the Grade 3 reading proficient cut score (in scaled-score units) is 1235. If there had been a raw score that converted to an unrounded scaled score of 1234.20, this scaled score would have been rounded up to 1235 for reporting purposes.

#### Lowest Obtainable Scaled Scores

Most PSSA mathematics, reading, and writing tests have a lowest obtainable scaled score (LOSS) of 700. The exception is Grade 3 mathematics and reading, which have LOSS values of 750 and 1000, respectively. For PSSA science, the LOSS values have been set to 1050 at Grades 4 and 11, and 925 for Grade 8. These LOSS values are documented in Table 14–1. See tables in Appendix N for LOSS *n*-counts.

### Highest Obtainable Scaled Scores

A highest obtainable scaled score (HOSS) is not set for the PSSA. Thus, the maximum possible scaled-score value is allowed to float for each subject and grade. The upper bound varies from year to year, depending on the difficulty of the test form. Table 14–1 shows the maximum possible observed score for the current year's test. (Note: It may be that no student actually earned the maximum possible.) See tables in Appendix N for HOSS *n*-counts.

# **RAW-SCORE-TO-SCALED-SCORE TABLES**

Raw-to-scaled-score tables can be found in Appendix N.

Table 14–1. PSSA Scaled Score Cuts for each Performance Level by Grade and Subject Area

|             |       |      | Scaled Score Cuts <sup>1</sup> |      |      |                  |  |
|-------------|-------|------|--------------------------------|------|------|------------------|--|
| Subject     | Grade | Min  | BB/B                           | B/P  | P/A  | Max <sup>2</sup> |  |
|             | 3     | 750  | 1044                           | 1180 | 1370 | 1914             |  |
|             | 4     | 700  | 1156                           | 1246 | 1445 | 2408             |  |
| Mathematics | 5     | 700  | 1158                           | 1312 | 1483 | 2460             |  |
| Mainematics | 6     | 700  | 1174                           | 1298 | 1476 | 2649             |  |
|             | 7     | 700  | 1183                           | 1298 | 1472 | 2561             |  |
|             | 8     | 700  | 1171                           | 1284 | 1446 | 2337             |  |
|             | 3     | 1000 | 1168                           | 1235 | 1442 | 1932             |  |
|             | 4     | 700  | 1112                           | 1255 | 1469 | 2255             |  |
| Dandina     | 5     | 700  | 1137                           | 1275 | 1497 | 2312             |  |
| Reading     | 6     | 700  | 1121                           | 1278 | 1456 | 2391             |  |
|             | 7     | 700  | 1131                           | 1279 | 1470 | 2319             |  |
|             | 8     | 700  | 1146                           | 1280 | 1473 | 2610             |  |
| Science     | 4     | 1050 | 1150                           | 1275 | 1483 | 2259             |  |
|             | 8     | 925  | 1150                           | 1275 | 1464 | 2213             |  |
| Writing     | 5     | 700  | 745                            | 1236 | 1909 | 2354             |  |
|             | 8     | 700  | 914                            | 1236 | 1748 | 2321             |  |

*Notes.* 1. BB = Below Basic; B = Basic; P = Proficient; and A = Advanced.

<sup>2.</sup> Scaled Score Maximum Values are unique for the current year's test.

Table 14–2. PSSA Cut Scores (on  $\theta$  metric), Intercept, and Slope by Grade and Subject Area

|             |       |         | θ Cuts |        |           |        |
|-------------|-------|---------|--------|--------|-----------|--------|
| Subject     | Grade | BB/B    | B/P    | P/A    | Intercept | Slope  |
|             | 3     | 0.6192  | 1.6750 | 3.1501 | 964.24    | 128.81 |
|             | 4     | -0.1376 | 0.3124 | 1.3074 | 1183.52   | 200.00 |
| Mathematics | 5     | 0.1259  | 0.9373 | 1.8383 | 1134.10   | 189.80 |
| Mathematics | 6     | -0.1377 | 0.4823 | 1.3723 | 1201.54   | 200.00 |
|             | 7     | -0.2114 | 0.3636 | 1.2336 | 1225.28   | 200.00 |
|             | 8     | -0.0637 | 0.5729 | 1.4854 | 1182.30   | 177.53 |
|             | 3     | -0.3207 | 0.2205 | 1.8926 | 1207.70   | 123.80 |
|             | 4     | -0.2215 | 0.4935 | 1.5635 | 1156.30   | 200.00 |
| Dooding     | 5     | 0.2133  | 0.9074 | 2.0241 | 1094.60   | 198.80 |
| Reading     | 6     | -0.2398 | 0.5452 | 1.4352 | 1168.96   | 200.00 |
|             | 7     | -0.3170 | 0.4230 | 1.3780 | 1194.40   | 200.00 |
|             | 8     | 0.1376  | 0.7082 | 1.5301 | 1113.70   | 234.82 |
| Science     | 4     | -0.4280 | 0.2792 | 1.4560 | 1225.65   | 176.75 |
|             | 8     | -0.2435 | 0.4091 | 1.3958 | 1196.64   | 191.54 |
| Whiting     | 5     | -3.2644 | 1.6456 | 8.3756 | 1071.44   | 100.00 |
| Writing     | 8     | -2.0984 | 1.1216 | 6.2416 | 1123.84   | 100.00 |

Notes. Linear Transformation Intercepts and Slopes are used to derive the Scaled Scores.  $BB = Below\ Basic;\ B = Basic;\ P = Proficient;\ and\ A = Advanced$ 

# STRAND (REPORTING CATEGORY) SCORE STRENGTH PROFILE

Strength profiles for strand (reporting category) scores have been provided since 2009. The following process was followed to derive the profile:

- The items for each strand were identified.
- WINSTEPS runs were undertaken that anchored the logit values for each strand's items to get the raw-to-logit score table for each strand. This is sometimes referred to as fixed-item parameter scaling.
- The appropriate linear transformations (based on content and grade from Table 14–2) were applied to the logit values to derive strand scaled scores.

The strand scaled scores were categorized as follows: L=Low (equivalent to Below Basic and Basic); M=Medium (equivalent to Proficient); H=High (equivalent to Advanced). The maximum possible strand scaled score was converted to H in cases where no strand scaled score equaled or exceeded the Advanced scaled score cut. See Chapter Sixteen for more information on strand scores and how they are used in score reports.

# Chapter Fifteen: Linking

In large-scale testing programs it is a common practice to have different item sets appear in test forms within and/or across years. Linking operational scores from the different test forms to a common scale of measurement ensures that all forms for a given grade and subject area provide comparable scores. Consequently, students are not given an unfair advantage or disadvantage because the particular test form they took is easier or harder than a test form taken by other students.

In order to account for the differences between different test forms, an application of an item response theory (IRT) linking methodology is required to place the item parameters and student ability estimates on the same scale as other forms. (As cautioned earlier, the success of these methods depends on how well the IRT assumptions are met.) The IRT model used for the PSSA is the Rasch Partial Credit Model (RPCM; Masters, 1982). Further descriptions of the RPCM are given in Chapter Twelve. Without linking analyses, the Rasch item calibrations for the new test items and associated scores on these items would be unique to the new test administration.

A chained linking design is utilized for the PSSA operational scores in mathematics, reading, and science. Here, scores from the new test form are linked to the scale of previous test forms. The chain originates from scale of measurement defined for each test's base form, which is used as the reference for calibrating all items in the item pool. The base form is usually the form upon which the cut scores were established (see Chapter Thirteen). When the item parameters from the new test are placed on the bank's scale, the resulting scaled scores for the new test form will be expressed on the same as the scale as defined by the base form.

This chapter begins with an explanation of specific PSSA design elements and associated analysis procedures. This is followed by a summary of the entire PSSA linking procedure. Some summary results are also provided. Procedures for mathematics, reading, and science are reviewed first. Writing is addressed at the end of the chapter.

# PSSA MATHEMATICS, READING, AND SCIENCE

The test designs for the operational PSSA mathematics, reading, and science assessments used multiple test forms that shared several common elements. The operational items are the same on all forms and for all students. Student total raw scores and scaled scores, as well as AYP reporting, are based exclusively on the operational items. In addition, each test form has a different set of nonoperational items (i.e., items that are not part of student scores). One such example is the embedded field-test items that are tested for possible inclusion in the PSSA item pool. Equating block items were included to bolster the linking design (discussed further below). The forms containing the nonoperational items were spiraled to ensure the items would have randomly equivalent samples of students responding to them. In summary, each test form for 2014 mathematics, reading, and science was composed of core operational, equating block, and field-test sections.

### Data Collection Design

The item status codes used in the IDEAS item banking system are given in Table 15–1. For brevity, these codes are used for the remainder of this chapter.

The link between years was based on the core linking (LK) and equating block (EB) items. These items had been used in previous administrations (most often from the prior year). The LK and EB items were used in approximately the same context. That is, the items were not altered in any way, they appeared in about the same position in the booklet, and they were administered at about the same time of year.

The equivalence of student samples across years cannot be assumed. Further, the same item can have different properties in different years because of changes in the item's position or changes in the students' experiences. Consequently, between-year linking requires more scrutiny than within-year linking. This chapter focuses more on the linking between years.

The linking design employed for PSSA is often referred to as a common-item nonequivalent groups design. Test forms contained a set of common items, called core LK items or EB items, which served as anchors for linking test forms across years to a common scale. LK items were internal anchor items (i.e., they contribute to student test scores) and EB items were external anchor items (i.e., they did not contribute to student test scores). All EB items were MC items.

Since LK items were in the tests' operational sections, they were common across all test forms within a year. The majority of core MC LK items were selected from the previous administration. However, in some cases to meet the test blueprint, several core MC LK items were used from older administrations. Please note that for reading, all core MC LK items came from 2013. For mathematics and science, most core MC LK items were from 2013, but in several spots items from 2011, 2012, and 2013 were used.

The core OE LK items were typically selected from the previous administration. However, for mathematics grade 8 the core OE LK item came from 2012. With writing, core OE LK items were from 2012 and 2011 for grade 5 and from 2011 and 2013 for grade 8. To align both sets of standards, mathematics grade 4 did not have operational core OE LK items. With mathematics grades 5, 6, and 8, there was one, instead of two, core OE LK items. For those grades with fewer than two core OE LK items, the total numbers of core MC LK items were increased (Table 15–3).

The forms containing EB items were spiraled, and thus, randomly distributed across the student population. Reading used two EB item sets across forms. All EB items in the 2014 PSSA tests were pulled from the 2013 tests, except one item in mathematics grade 6 and another item in science grade 4.

The number of the LK/EB items differed depending on the subject and grade. These are summarized in Table 15–2. Specifically, there were 13 to 24 LK MC items and 0 to 2 LK openended items for all mathematics, reading, and science grade levels. The number of EB items shown in Table 15–2 is the total number of EB items across all forms. With reading, there were eight EB items with one passage per form. Half of the forms contained one set, while the rest of the forms contained the second set. With mathematics and science, there were two EB items per form. In 2014, there were a total of 18 EB items and 24 EB items with mathematics and science, respectively, and a unique set of two EB items was distributed across forms.

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<sup>&</sup>lt;sup>15</sup> In other words, Forms 1, 2, and 3 had the same set of EB MC items, while Forms 4 and 5 shared a different set of EB MC items.

There were 40, 60, and 58 core MC items in reading, mathematics, and science, respectively. There were four core OE items in reading with the exception of Grade 3, which had two. There were three core OE items in mathematics. Science had five OE items.

Table 15-1. Item Status Codes in IDEAS

| Item           | Code in IDEAS   |    |
|----------------|---|----|
| Core           | Include core linking (i.e., anchor) items and unique core items | OP |
| Core Linking   | Linking items in the core section which include MC and OE items | LK |
| Equating Block | All items in the EB are MC linking items                        | EB |
| Field Test     | Items in the embedded FT section                                | FT |

Table 15-2. 2014 PSSA Linking Designs: Mathematics, Reading, and Science

|             |       | Number      | <b>Total Core</b> |    | Core Links |    | EB* |
|-------------|-------|-------------|-------------------|----|------------|----|-----|
| Subject     | Grade | of<br>Forms | MC                | OE | MC         | OE | MC  |
|             | 3     | 9           | 60                | 3  | 18         | 2  | 18  |
|             | 4     | 9           | 60                | 3  | 24         | 0  | 18  |
| N/I 41 41   | 5     | 9           | 60                | 3  | 20         | 1  | 18  |
| Mathematics | 6     | 20          | 60                | 3  | 20         | 1  | 18  |
|             | 7     | 20          | 60                | 3  | 17         | 2  | 18  |
|             | 8     | 20          | 60                | 3  | 20         | 1  | 18  |
|             | 3     | 9           | 40                | 2  | 14         | 1  | 16  |
|             | 4     | 9           | 40                | 4  | 14         | 2  | 16  |
|             | 5     | 9           | 40                | 4  | 14         | 2  | 16  |
| Reading     | 6     | 20          | 40                | 4  | 13         | 2  | 16  |
|             | 7     | 20          | 40                | 4  | 13         | 2  | 16  |
|             | 8     | 20          | 40                | 4  | 13         | 2  | 16  |
| Science     | 4     | 12          | 58                | 5  | 16         | 2  | 24  |
|             | 8     | 12          | 58                | 5  | 16         | 2  | 24  |

<sup>\* 2</sup> EB items per form for mathematics and science. For reading, there was one passage with 8 EB items per form.

# LINKING METHOD FOR PSSA MATHEMATICS, READING, AND SCIENCE

The first step in linking the 2014 PSSA to the base scale was to express all 2014 item parameters on the same scale. This was accomplished by calibrating all OP (including LK) MC items with master core and paper students. Then the OP MC items were anchored to calibrate EB MC items with all forms and paper students. Next, the resulting MC item parameters were anchored in WINSTEPS while all OE items in the operational section (including OP LKs) items were calibrated including paper students. At this point all OP and EB item parameters were on a unique scale for 2014. Between-year linking was required to place these items on the bank scale.

Between-year linking utilized the 2014 LK and EB item parameters and their banked counterparts. The scale transformation methodology used for PSSA is the mean-shift procedure. This has been the procedure employed by the PSSA program for some time. After evaluating the robustness of the link by identifying items that did not maintain their relative difficulty across years, the difference between the 2014 and banked parameters was then determined. The mean of the differences was then used to statistically adjust the 2014 parameters to the bank scale. The final (linking) item parameters were then used to estimate student abilities, which were, in turn, transformed to scaled scores. (Transformation formulas are provided in Chapter Fourteen.)

# Rater Drift

Before the final mean-shift value was determined, a rater-effect adjustment was applied to the OE LK items. All OE linking items were in the Core section (LK OE). Students' responses from the previous administration (n = 1,000 per item) for the OE linking items were selected for the rater drift study (DRC jointly stratified by point value and on ability). The selected responses were scored by 2014 raters. Thus, the selected students' responses had scores from previous year and 2014 raters and the difference between them was used to adjust for the rater effect. See Tables 18–11 through 18–13 (see Chapter Eighteen) for the correlations between the old and new scores for these OE LK items.

### SUMMARY OF THE PSSA LINKING PROCEDURE

The following steps outline the linking procedure. It should be noted that the first two steps are actually item calibration, which is referred to as within-year linking in this chapter.

- **1.** Calibrate all operational (OP) multiple-choice (MC) items in an unanchored Winsteps run:
  - **a.** Include only the Master Core and paper students with completeness status "01" and "00" (all students with MC responses).
  - **b.** Include all MC items in the core operational section (OP MC).
  - **c.** Do not include any equating block (EB) items.
  - **d.** Do not include any field-test (FT) items.

<sup>&</sup>lt;sup>16</sup> No field-test items were included in any of these calibrations. FT items were calibrated after the operational linking by anchoring all OP and EB items. This placed all FT items on the bank scale.

- 2. Calibrate selected multiple-choice (MC) items in an anchored run:
  - **a.** Include all forms, but only paper students with completeness status "01" and "00" (all students with MC responses).
  - **b.** Include all MC items in the core operational section (OP MC).
  - **c.** Include all equating block (EB) items.
  - **d.** Do not include any field-test (FT) items.
  - **e.** Fix all OP MC items from Step 1.
- **3.** Calibrate selected open-ended (OE) items in an anchored run by putting them on the MC item scale from Step 3:
  - **a.** Include all forms, but only paper students.
  - **b.** Include all OE items in the Core section (OP OE).
  - **c.** Do not include any FT items.
  - **d.** Fix all MC items from Step 2.
- **4.** Compute the rater-effect constant for each OE-Link item:
  - **a.** Pull sample responses from the previous year  $(N \sim 1,000 \text{ students})^{17}$  and create a data file including the selected students' MC and OE response scores (from the previous year's raters).
  - **b.** Have the current year's raters score the selected OE responses.
  - **c.** Calibrate the difficulty parameters for OE items based on the previous year's scores. (This is done separately for each OE item.)
    - i. Calibrate all MC items (from the previous year's test) in an unanchored run using the data file from Step 4.a.
    - ii. Calibrate each OE item separately using an anchored run for each item.
  - **d.** Compute the rater-effect constant for each OE-Link item based on OE parameters from Step 4.c.ii.
    - i. Use current and previous year's rater raw score means as the true/expected raw scores.
    - ii. Using expected score distribution conditional on ability (item characteristic curve) for the previous year's rater scores, determine the two ability values for the two expected raw scores (i.e., the current and previous year's rater score means).
    - iii. The rater-effect constant is the difference between the two abilities.

<sup>&</sup>lt;sup>17</sup> This sample is generally stratified on previous year's total test scores; however, a minimum of 100 responses are selected for each possible score point.

- **5.** For each OE linking item, adjust the item parameter estimate obtained in Step 3 by the Step 4 Value—remove the rater effect:
  - **a.** Each OE linking item (LK OE) has a specific rater-effect adjustment value.
- **6.** Evaluate the stability of the linking items using Robust *Z*:
  - **a.** Include all core linking (LK) items—LK MC and LK OE.
  - **b.** Include all EB items.
  - **c.** LK OE item parameters should be obtained from Step 5.
  - **d.** Calculate Robust *Z* for each item in the linking.

Once the above calculations were made, the following guidelines were used in determining possible sets of linking items used for the equating:

- **e.** Items with an absolute value of Robust Z exceeding 1.645 may be considered for exclusion.
- **f.** No more than 20 percent of the pool of linking items may be considered for exclusion.
- **g.** The ratio of the standard deviations of previous year and current Rasch difficulties should be in the 90 to 110 percent range.
- **h.** The correlation of previous year and current year Rasch difficulties is greater than 0.95.

Final decisions about the linking items were made in the national technical advisory committee (TAC) meeting in collaboration with PDE and DRC staff following these rules:

- i. Drop items that DRC identified as having a large Robust Z and were out of sequence because they were pulled from a separate FT form.
- **j.** If an item has been changed in any way from the previous year, it may no longer be used for linking.

Scatterplots of the linking item difficulties (logits) were constructed (i.e., the current year values were plotted against those from the prior year). Ideally, these plots should have a strong linear trend. Items straying from the trend line did not perform in the same way in both years. As noted above, items that departed significantly from this were further evaluated. The scatterplots with final LK/EB item sets are shown in Figure 15–1.

- 7. Calculate the mean shift over MC and OE linking items using global item difficulties (weighted by number of score points) for OE items:
  - **a.** Include all core linking (LK) items—LK MC and LK OE.
  - **b.** Include all EB items.
  - **c.** Weight LK OE items by maximum possible score.

- **8.** Apply the mean shift to the item parameters calibrated in Steps 2 and 3:
  - a. All OP items (OP MC + OP OE).
  - **b.** All EB items.
- **9.** Scale the operational test by fixing all operational (OP) items obtained in Step 8:
  - **a.** Include all students (all forms and all modes)
  - **b.** The result from this step is a Raw-to-Logit (Rasch Ability) table.
- **10.** Apply the appropriate linear transformation to the logit values to derive the scaled scores and SEMs:
  - **a.** The result from this step is a Raw-to-Scaled-Score table.

#### RESULTS SUMMARY

Table 15–3 shows the number of linking items and the shift parameters associated with those over the two years, and the correlation of item difficulties across years for each grade/content area. At first glance, some of the mean shift values may appear large. However, the shift constants are being applied to parameter estimates from Step 1 in the equating process (where the mean of the unanchored MC items is fixed at zero). The adjustment needed to place the Step 1 estimates on the current scale can be large in magnitude as it must take into account multiple factors (e.g., weighting in the case of the writing test, rater drift, changes in student ability since the base-year administration, and differences in difficulty).

Table 15–3. Summary Data for Linking Items

|             |       | <b>Final Counts</b> |    | 2013    | 2014    | 2014        |  |
|-------------|-------|---------------------|----|---------|---------|-------------|--|
| Subject     | Grade | MC                  | OE | Shift   | Shift   | Correlation |  |
|             | 3     | 36                  | 2  | 0.4890  | 0.9549  | 0.9840      |  |
|             | 4     | 42                  | 0  | 0.0662  | -0.1389 | 0.9738      |  |
| Mathematics | 5     | 38                  | 1  | 0.4843  | 0.5360  | 0.9702      |  |
| Mathematics | 6     | 38                  | 1  | 0.0958  | 0.0759  | 0.9807      |  |
|             | 7     | 35                  | 2  | 0.1517  | 0.3472  | 0.9810      |  |
|             | 8     | 38                  | 1  | 0.1735  | 0.1220  | 0.9549      |  |
|             | 3     | 30                  | 1  | -0.1306 | -0.1148 | 0.9925      |  |
|             | 4     | 30                  | 2  | -0.0434 | -0.1087 | 0.9897      |  |
| Reading     | 5     | 30                  | 2  | 0.0808  | -0.0128 | 0.9912      |  |
| Keading     | 6     | 29                  | 2  | -0.1493 | -0.0840 | 0.9884      |  |
|             | 7     | 29                  | 2  | 0.0463  | -0.0471 | 0.9818      |  |
|             | 8     | 29                  | 2  | 0.7172  | 0.5676  | 0.9834      |  |
| Science     | 4     | 40                  | 2  | 0.1013  | 0.0215  | 0.9828      |  |
|             | 8     | 40                  | 2  | -0.2274 | -0.3202 | 0.9484      |  |
| Writing     | 5     | 12                  | 4  | 1.5596  | 2.1067  | 0.9743      |  |
|             | 8     | 12                  | 4  | 1.8092  | 1.7502  | 0.9512      |  |

Note. No item was dropped.

Appendix O provides the statistics for the linking items used. The previous and current values for item sequence, *p*-values, and logits are also provided. Appendix Q provides the mean raw and scaled-score points across years. Together, these appendices provide a summary of how the items and test changed across years.

#### VISUALIZATION SUPPLEMENT

Linking analyses require considerable scrutiny given their critical role in reporting student performance. Items repeated over administrations can behave differently because of contextual changes or changes in the students' experiences. In addition to evaluating the linking items using Robust Z analyses, the graphs in Figure 15–1 provide a visualization to help identify extreme differences over different test administrations. The calibration data file described in Chapter Nine was used to construct these plots.

# Graphs

This technical report uses figures to help one visualize the across-year differences in linking items for mathematics, reading, and science at each grade. This section presents four types of figures, three of which illustrate the stability between the old (banked) and new (2014) item data:

- **1.** Scatterplot of new-year *p*-values (2014) on old-year *p*-values (2013 generally).
- **2.** Scatterplot of new-year logits (2014) on old-year logits (2013 generally).
- **3.** Scatterplot of old and new *p*-values on new logits.
- **4.** Test Characteristic Curves (TCCs) for the linked score distribution.

All four plots are presented for each grade and subject-area test. It should be noted that some of the linking items were not used to determine the final linking adjustments. These items are not included in the following scatterplots. As a consequence, some graphs will have fewer MC and/or OE items than expected. Each plot is described further below, and Grade 3 mathematics results are considered as an example of each.

### NEW-YEAR P-VALUES ON OLD-YEAR P-VALUES

The top left-hand plot in Figure 15–1 describes the relationship between the item *p*-values for the two years. The data points in these plots should have a clear trend where the vertical axis values rise as the horizontal axis values increase (i.e., as one moves from left to right). If the *p*-values for both years were correlated at 1.0, the relationship would be expected to fall on a straight line. Generally, linking items are not perfectly stable across years, so some scatter is expected. As an example, the plot for Grade 3 mathematics shows excellent across-year stability. The extent to which the trend does not pass through the origin indicates a change in student performance.

Many test score users are familiar with the *p*-value metric, which is why these charts are provided. However, the logit charts discussed below have advantages for visualizing this trend data.

#### **NEW-YEAR LOGITS ON OLD-YEAR LOGITS**

The top right-hand plot in Figure 15–1 focuses on the logit difficulties. It shows more clearly the relationship between new- and old-year item difficulties. Logit plots often provide more defined trends, but still can present varying degrees of scatter and in some instances reveal outlier data points. As with the associated *p*-value plot, this figure for Grade 3 mathematics suggests excellent across-year stability (with a very strong, but not perfect relationship).

#### OLD- AND NEW-YEAR P-VALUES ON NEW-YEAR LOGITS

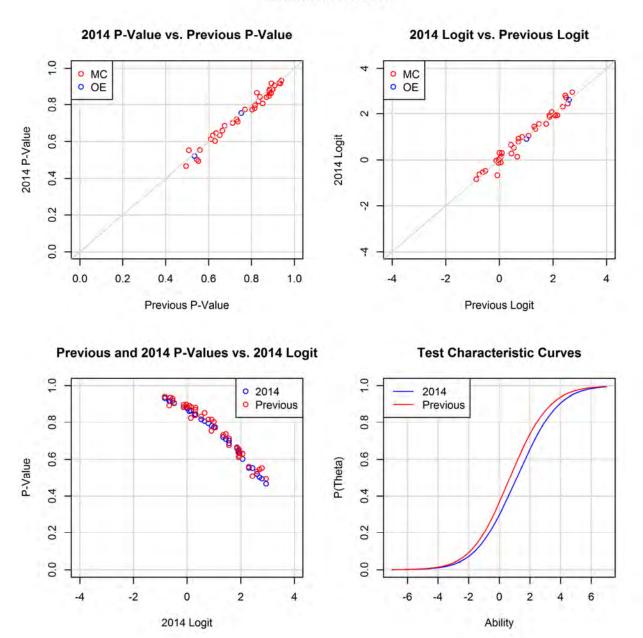
Plotting *p*-values against logit difficulties across years is not as reliable as it is within a year. Using spiraled forms within a year, a given *p*-value will translate to a given logit regardless of the form on which it is used, within the limits of statistical precision. Within a year, the *p*-values-on-logit plot should be a single curved line. The corresponding between-year plots could have separate lines for each year. The difference between the two lines is a reflection of the adjustment (positive or negative) that is required to link the two item sets.

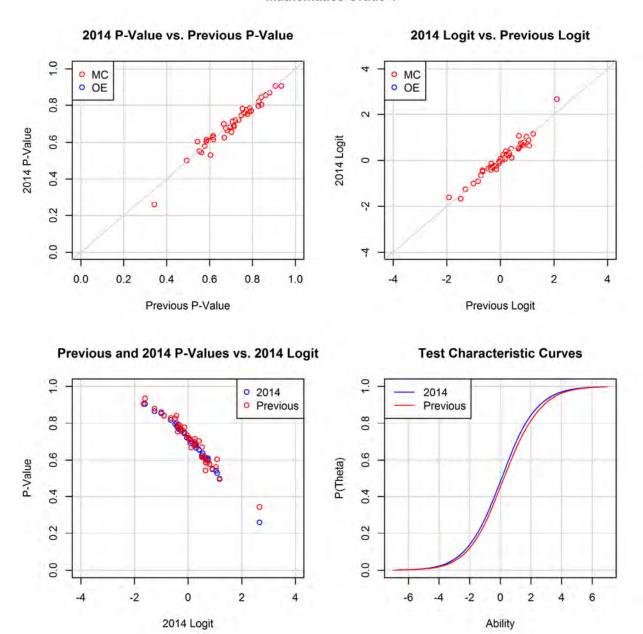
To bolster the number of linking items, different sets of EB linking items were included on different forms. Because the forms were spiraled within classrooms, the samples generated are randomly equivalent and the same *p*-values would be expected to translate into roughly the same logit, with some random variation expected. This is the case with the Grade 3 mathematics data as the relative smoothness of this curve indicates very good agreement among the forms.

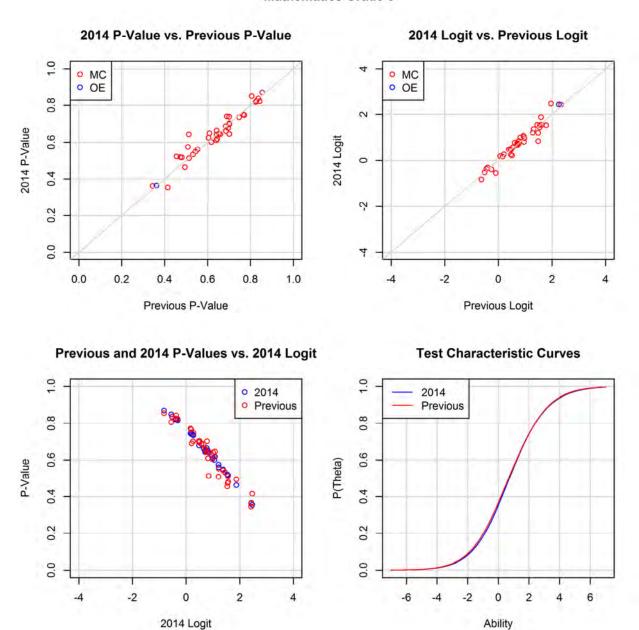
#### TEST CHARACTERISTIC CURVES

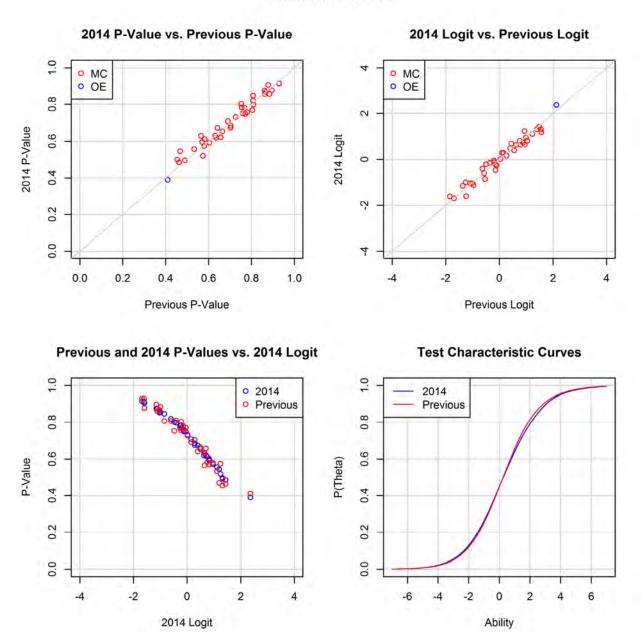
The old and new-year Test Characteristic Curves (TCCs) by grade and subject are shown in the bottom right-hand plot figures. The TCCs show the similarity between the new- and old-year tests in terms of difficulty in the logit metric (new-year results are for the final, linked values). Assuming equal numbers of items for the two years, curves that are close to being coincident will translate into similar raw score cut points. With extreme differences in test difficulties, some loss of precision and reliability may result. However, this is generally not evidenced in the figures, which display a close match across years. For Grade 3 mathematics the TCCs were essentially coincident.

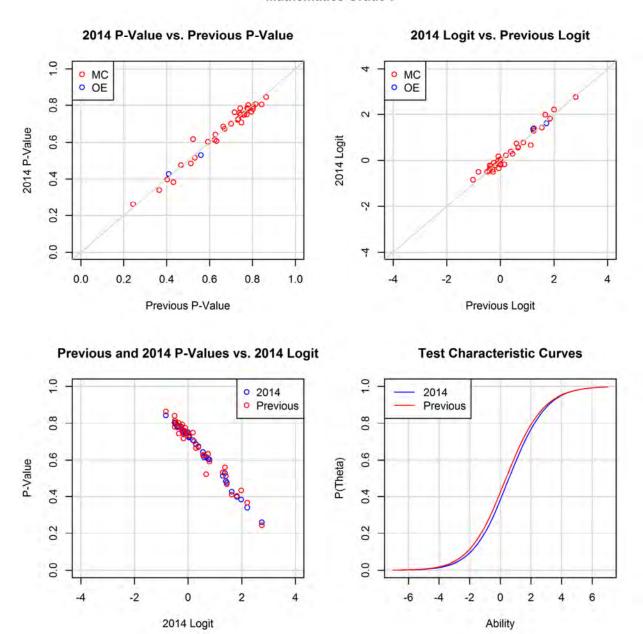
Figure 15–1. Item Stability Plots and Test Characteristic Curves

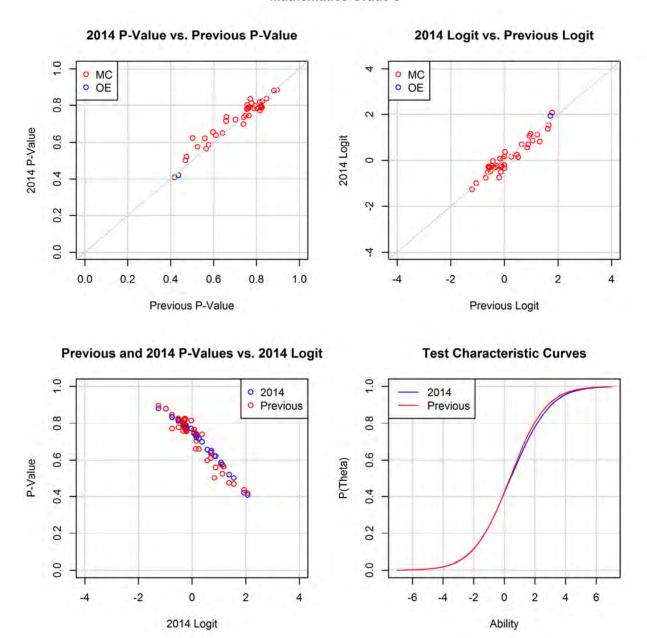


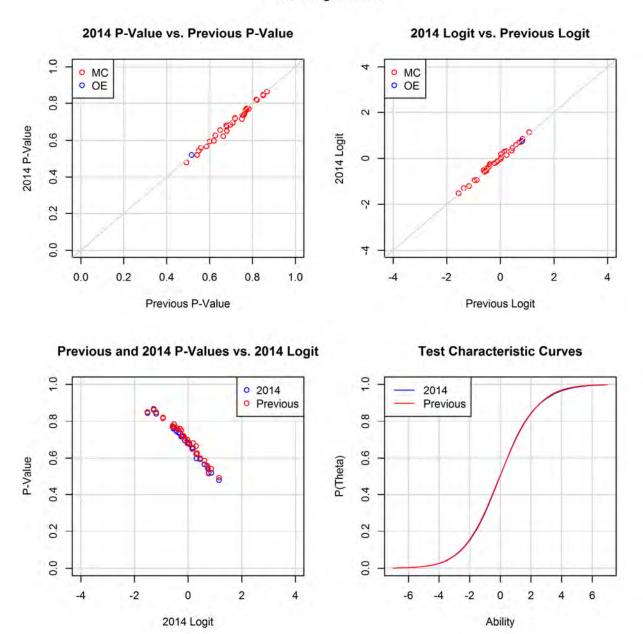


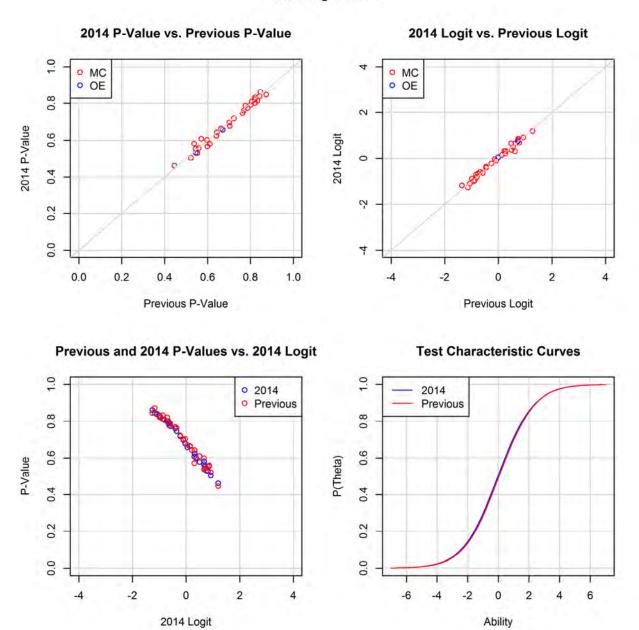


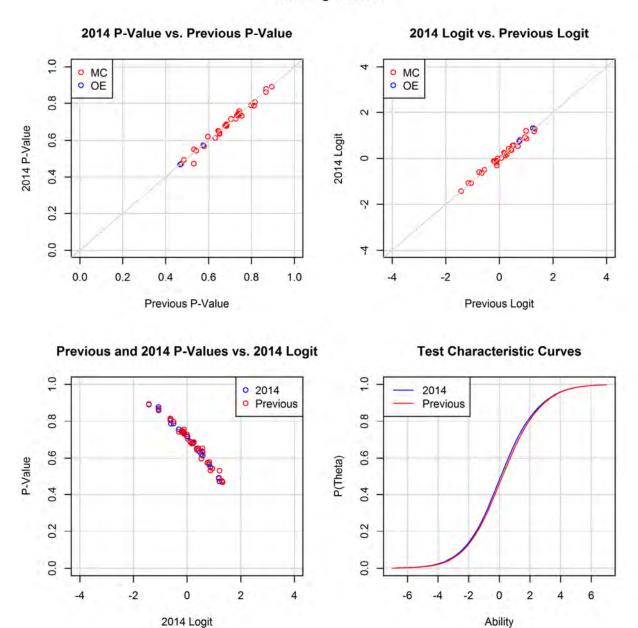


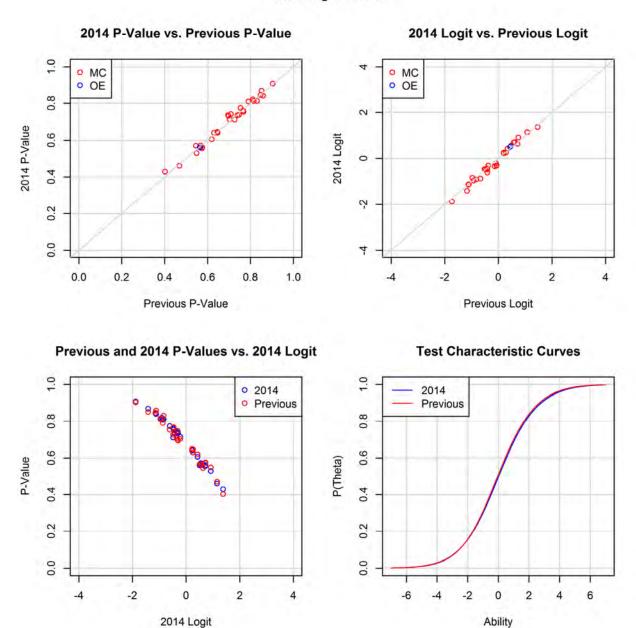


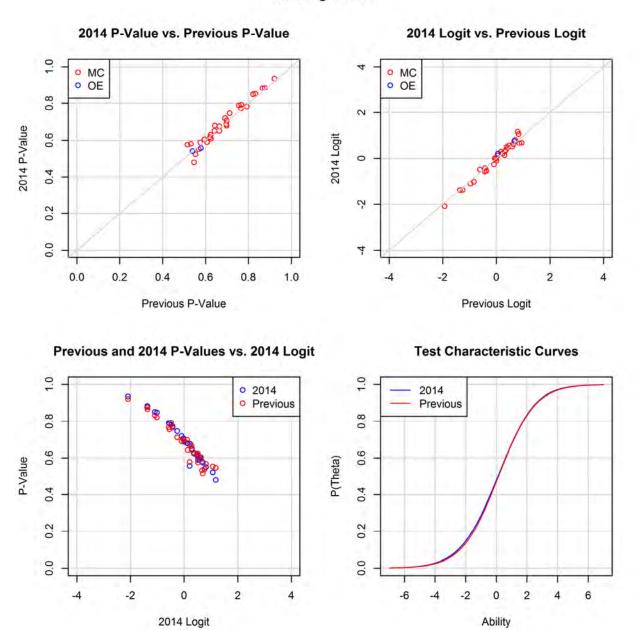


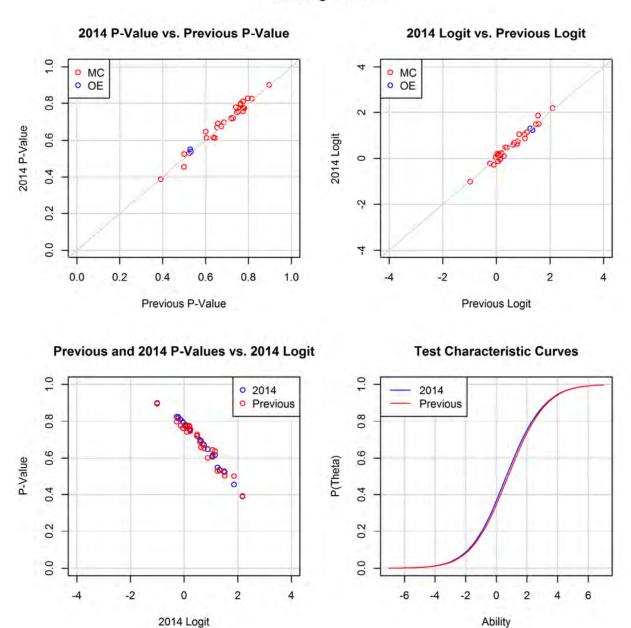




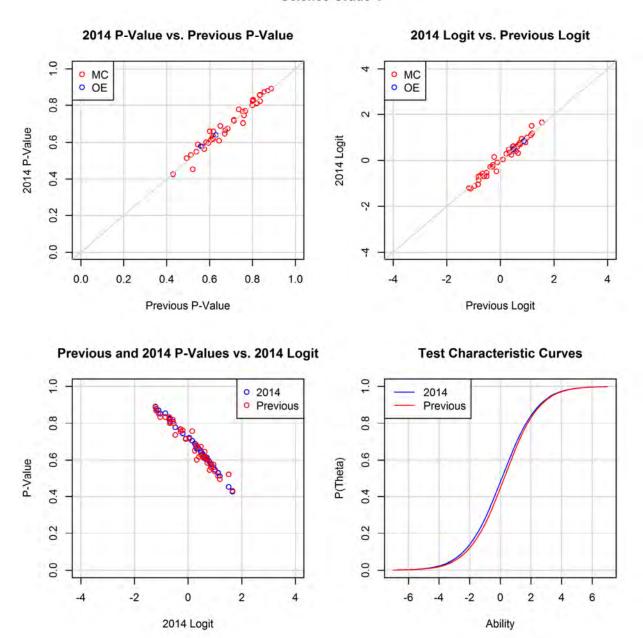




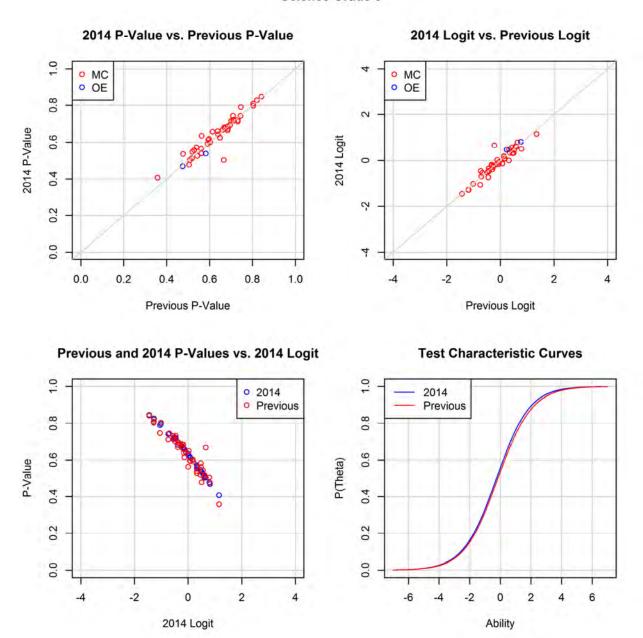




#### Science Grade 4



#### Science Grade 8



### **WRITING**

In 2014, the writing exams were composed of only one form for grades 5 and 8. The form contained 12 core operational revising and editing (R&E) MC items and two core operational writing prompts (WP). There were no FT items administered with writing in 2014. As with previous years, student scores were based on the core operational MC and core operational WP items. Table 15–4 summarizes the 2014 PSSA writing equating design.

Raw-to-scaled-score tables for the writing tests were derived somewhat differently from the other subject areas. Essentially, all operational items were treated as core linking items and there were no EB items. However, the actual linking procedure is essentially the same as described at the beginning of this chapter (i.e., prompt scores get a rater effect adjustment; prompt scores are weighted accordingly when computing the mean shift; and the mean shift is applied to all item parameter estimates before scoring tables are derived in a fully anchored WINSTEPS run).

Core FT Total # Total # Unique Core Core Grade Core **Forms** (MC/WP) Core Linking Linking MC WP **Points** WP MC MC 0 2 5 12 0 0 12/2 100 1 8 0 12 2 0 0 12/2 100 1

Table 15–4. 2014 Writing Test Design

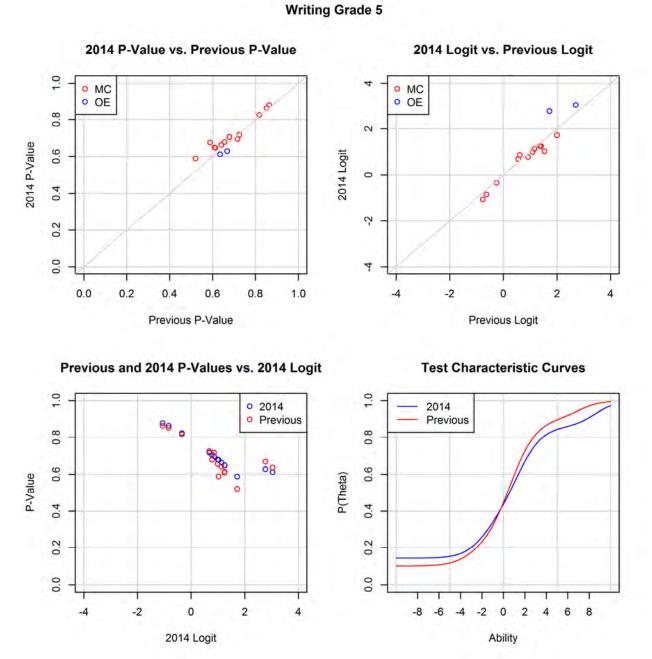
*Note.* Each WP is worth four points for conventions and four points for mode. However, the mode score is weighted by 10 to get the total possible points of 100.

### Graphs

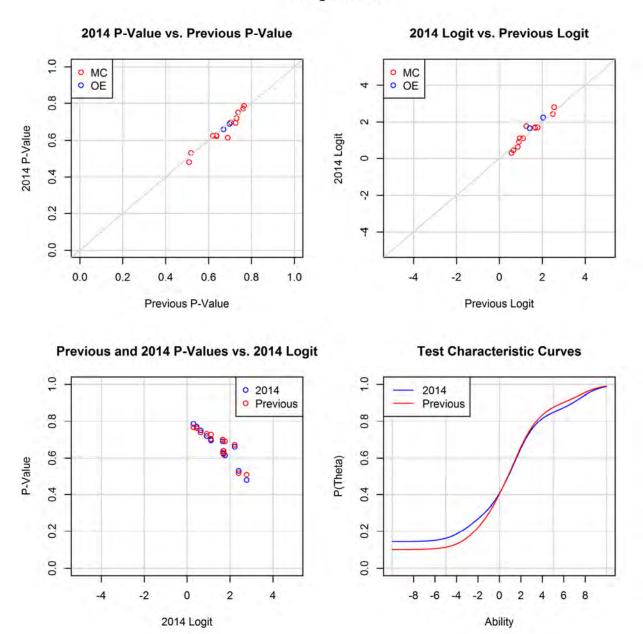
Graphs, similar to those presented for other subject areas, are provided for writing in Figure 15–2. The TCCs for writing are less parallel and more irregular than those for the other subjects. The writing assessment is much shorter than the other subjects and the writing prompt is weighted. Not surprisingly, the plots suggest that the writing results are less stable than the other content areas.

<sup>&</sup>lt;sup>18</sup> In other subjects only a subset of operational items are treated as core linking items, and there were EB linking items as well.

Figure 15–2. Item Stability Plots and Test Characteristic Curves for Writing



# Writing Grade 8



# Chapter Sixteen: Scores and Score Reports

This chapter provides information about the scores provided for the PSSA (e.g., scaled scores, performance levels, and strand scores), how they are presented on score reports, and appropriate and inappropriate uses of the scores.

### SCORING THE PSSA

PSSA items are composed of multiple-choice (MC) and open-ended (OE) items. Each correct response to an MC item receives a score of 1. Incorrect responses receive a score of zero. Scores on OE items range from zero to four, depending on the grade and subject area. Table 16–1 summarizes the types of items used on each subject-area test. More detailed information about the various item types is provided in Chapter Three.

SubjectItem TypeMathematicsReadingScienceWritingMultiple-Choice (1 point)••••Open-Ended (2 point)•••Open-Ended (3 point)•••Open-Ended (4 point)•••Prompt (4 point)•••

Table 16–1. Item Types Used by Subject Area

### **DESCRIPTION OF TOTAL TEST SCORES**

Different types of scores have been developed for PSSA reporting. Since the underlying properties of these scores are not necessarily the same, the particular scores used depend on the purposes for which the test has been given. The following types of scores are provided for reporting a student's overall performance on each PSSA subject-area test:

- Raw scores
- Scaled scores
- Performance levels

#### Raw Scores

A raw score is the number of points a student earned over the operational MC and OE items. By itself, the raw score has very limited utility. One limitation is that it can only be interpreted with reference to the total number of items on a subject-area test (e.g., a raw score of 15 on a 20-item test is different than a raw score of 15 on a 30-item test). In addition, raw scores depend on the difficulty of test items across test forms (e.g., a raw score of 15 on a test with 20 easy items is different than a raw score of 15 on a test with 20 difficult items). Because the difficulty of the items on a test can change from year to year, raw scores should not be compared across tests or administrations.

### Scaled Scores

Scaled scores are introduced in Chapter Fourteen, and additional information is provided there including historical information about the development of the PSSA scaled-score system. In the simplest sense, a scaled score is a transformed number-correct score. The specifics of the transformation processes for the PSSA are also discussed in Chapter Fourteen. When all students take the same items, as with the operational items on the PSSA, the more points the student earns, and the higher the associated scaled score will be.

The value of switching to the more abstract scaled-score metric is that it produces more general, interpretable, and equitable results. As previously noted, a raw score of 30 is meaningless unless the maximum raw score is known. The difficulty of the test items was also mentioned as an additional challenge with interpreting raw scores. Number-correct scores are transformed to scaled scores to remove the effects of test length and item difficulty. (Strictly speaking, transformation of number-correct scores to percent-correct scores would also remove the effect of test length, but it would do nothing to adjust for the difficulty of the items.)

Another advantage of scaled scores is that they lend themselves to interpretations of what is referred to as an interval level, while raw scores do not. Interval-level scales allow an interpretation of a scaled score difference of 5 points to be the same whether the scores are 1295 vs. 1300 or 1445 vs. 1450. Raw score differences, in this context, cannot be interpreted in this manner and are thus neither generalizable nor equitable.

When test scores are properly linked across years, a scaled score of 1300—or any other value for a particular grade and content-area test, such as Grade 4 reading—should have the same absolute meaning in the current year as it had in previous years. For example, a school with a scaled score above 1300 in Grade 4 reading in 2014 performed better than the average school in the base year in Grade 4 reading.

More importantly, an increase in the scaled score for Grade 4 reading from last year to the current year means that student performance improved;<sup>19</sup> it does not say anything about whether this year's test is easier or harder than last year's test. To make these interpretations requires no information about the length or the difficulty of the test in either year, although these variables are essential for the process of deriving the scaled scores.

There is considerable auxiliary information presented in this report that might aid the reader in further contextualizing PSSA scaled scores. The reader is specifically referred to the following information:

- Chapter Fourteen provides information on the development of the PSSA scaled-score system, including historical information, transformation formulas, rounding rules, and general scale characteristics (e.g., minimum values).
- Chapter Seventeen provides total test score statistics. In particular, Table 17–2 lists the scaled score means and standard deviations for this year's test results.

<sup>&</sup>lt;sup>19</sup> This example is not an endorsement of conducting a trend analysis with only two years of results. Further, small differences may not be statistically or practically significant.

# Performance Levels

PSSA results are also reported using four Performance Levels: Below Basic, Basic, Proficient, and Advanced. The cut scores on the scaled-score metric (i.e., the lowest possible scaled score to enter the Basic, Proficient, and Advanced levels) were presented earlier in this report. However, the information is repeated below (Table 16–2) for convenience.

Table 16–2. PSSA Scaled Score Cuts for Each Performance Level by Grade and Subject Area

|             |       |      | Scaled Score Cuts <sup>1</sup> |      |      |                  |
|-------------|-------|------|--------------------------------|------|------|------------------|
| Subject     | Grade | Min  | BB/B                           | B/P  | P/A  | Max <sup>2</sup> |
|             | 3     | 750  | 1044                           | 1180 | 1370 | 1914             |
|             | 4     | 700  | 1156                           | 1246 | 1445 | 2408             |
| Mathematics | 5     | 700  | 1158                           | 1312 | 1483 | 2460             |
| Mathematics | 6     | 700  | 1174                           | 1298 | 1476 | 2649             |
|             | 7     | 700  | 1183                           | 1298 | 1472 | 2561             |
|             | 8     | 700  | 1171                           | 1284 | 1446 | 2337             |
|             | 3     | 1000 | 1168                           | 1235 | 1442 | 1932             |
|             | 4     | 700  | 1112                           | 1255 | 1469 | 2255             |
| Daadina     | 5     | 700  | 1137                           | 1275 | 1497 | 2312             |
| Reading     | 6     | 700  | 1121                           | 1278 | 1456 | 2391             |
|             | 7     | 700  | 1131                           | 1279 | 1470 | 2319             |
|             | 8     | 700  | 1146                           | 1280 | 1473 | 2610             |
| Science     | 4     | 1050 | 1150                           | 1275 | 1483 | 2259             |
|             | 8     | 925  | 1150                           | 1275 | 1464 | 2213             |
| Writing     | 5     | 700  | 745                            | 1236 | 1909 | 2354             |
|             | 8     | 700  | 914                            | 1236 | 1748 | 2321             |

*Notes.* <sup>1</sup> BB = Below Basic; B = Basic; P = Proficient; and A = Advanced.

Performance level descriptors (PLDs) are another way to attach meaning to the scaled-score metric. PLDs associate precise quantitative ranges of scaled scores with verbal, qualitative descriptions of student status. While much less precise, the qualitative description of the levels is one way for parents and teachers to interpret the student scores. They are also useful in assessing the status of the school. The Pennsylvania General Performance Level Descriptors, as developed by PDE and teacher panels, are given below. These are also included on student score reports.

- Advanced: The Advanced Level reflects superior academic performance. Advanced work indicates an in-depth understanding and exemplary display of the skills included in the Pennsylvania Academic Content Standards.
- Proficient: The Proficient Level reflects satisfactory academic performance. Proficient work indicates a solid understanding and adequate display of the skills included in the Pennsylvania Academic Content Standards.

<sup>&</sup>lt;sup>2</sup> Scaled Score Maximum Values are unique for the current year's test.

- Basic: The Basic Level reflects marginal academic performance. Basic work indicates a partial understanding and limited display of the skills included in the Pennsylvania Academic Content Standards. This work is approaching satisfactory performance, but has not yet reached it. There is a need for additional instructional opportunities and/or increased student academic commitment to achieve the Proficient Level.
- Below Basic: The Below Basic Level reflects inadequate academic performance. Below Basic work indicates little understanding and minimal display of the skills included in the Pennsylvania Academic Content Standards. There is a major need for additional instructional opportunities and/or increased student academic commitment to achieve the Proficient Level.

### **DESCRIPTION OF STRAND (REPORTING CATEGORY) SCORES**

The following types of scores are provided for PSSA strand scores:

- Strand (Reporting Category) Scores
- Strength Profile

# Strand (Reporting Category) Scores

A strand (reporting category) score describes performance of a student, school, or district on a particular strand (content standard defined in the test). For the PSSA, strand scores are raw scores, indicating the points a student or a school/district earned for that strand. (Attributes of raw scores are described earlier in this chapter.)

Strand scores cannot be compared across years because they are not statistically linked, nor are they interval scores. Also, it is not advisable to compare strand raw scores even within the same form because some strands may contain items that are easier or more difficult than other strands (the strength profile, discussed below, mitigates this problem to some degree). A greater concern is the low reliability of many of these scores, especially for strand scores based on a small number of possible points. Chapter Eighteen provides more information about strand-score reliability.

When compared to other results from the same year, strand scores can be somewhat helpful in identifying a group's strengths and weaknesses as measured by the test. For example, it can be informative to compare average strand scores of a school against the scores of another reference group (e.g., the state average). Hence, strand scores can suggest group strengths and weaknesses relative to another reference group. (Challenges pertaining to interpreting results for individual students are discussed below.)

# Strength Profile

The strength profile provides another indication of a student's performance within each of the strands. This profile can be used to identify areas in which a student needs to improve and areas in which a student has performed more successfully. Unlike strand scores that are reported as raw scores, strength profile scores categorize students into one of three levels: Low, Medium, and High. These categories take into account the difficulty of the items and are based on the same scaling techniques used to derive the PSSA scaled scores. (Details regarding the creation of the strength profile are provided in Chapter Fourteen. These scaled scores are not printed on score reports. They only exist to determine whether performance in the strands was Low, Medium, or High.) A Low score on the strength profile indicates performance that is below

Proficient on the overall PSSA scale. A Medium score on the strength profile indicates performance that is comparable to Proficient on the PSSA. A High score on the strength profile indicates performance that is comparable to Advanced.

#### APPROPRIATE SCORE USES

#### **Individual Students**

Scaled scores on the PSSA indicate a student's achievement of the PSSA Assessment Anchors and Eligible Content. Scaled scores are primarily used to determine student performance level classifications (i.e., a criterion-referenced inference). Scaled scores that are based on Item Response Theory (IRT) models are typically assumed to be of the interval type; so comparisons may be made on differences in scaled scores. If this assumption holds, then it would be safe to infer for Grade 4 reading that the ability difference between 1110 and 1120 represents the same ability difference that separates 1250 and 1260. Scaled scores can also be used to compare the performance of an individual student to the performance of a similar demographic or subgroup at a school or district. However, when comparing performance of an individual student, test score standard errors (discussed in Chapter Eighteen) should be considered because scale scores are estimate of students' achievement which comes with estimation error.

### Groups of Students

Test results can be used to evaluate performance over time. Mean scaled scores can be compared across administrations within the same grade and subject area to indicate whether student performance is improving across years. Generally, such trend analyses benefit from using mean results from as many test administration years as possible. Different cohorts of students are used (i.e., the same student or students are not tracked across grade levels). All scores can be analyzed within the same subject and grade for any single administration to determine which demographic or program group had, for example, the highest average performance or the highest percentage of students at or above the Proficient standard.

Strand scores can help evaluate academic areas for relative strengths or weaknesses. These category scores provide information to identify areas where further diagnosis is warranted. Generalizations from test results may be made to the specific content domain represented by the academic standards measured in the PSSA. However, all instruction and program evaluations should include as much information from other sources as possible to provide a more complete picture of performance.

### **CAUTIONS FOR SCORE USES**

# Extreme Error for Extreme Scores

Student scores toward the minimum or maximum ends of the score range will have very large standard errors of measurement and, therefore, such scores should be viewed very cautiously. The maximum scaled score only provides a very rough estimate of a student's ability. For instance, if the maximum score for the PSSA Grade 6 mathematics test were  $2500^{20}$  and a student achieved this score, it could not be determined whether the student could have achieved an even higher scaled score. If the test were 10 items longer, a different estimate might have been obtained. Similarly, if the items in a new test were more difficult than the items on a previous administration, the maximum scaled score would likely be higher on the new test

<sup>&</sup>lt;sup>20</sup> It is not, at least for this year.

because it would take a greater level of achievement to answer the items correctly. In this manner, extreme scaled scores may vary from one administration to the next even if the number of test items does not change. The fluctuation of extreme scaled scores complicates the comparisons of students with scaled scores at the extreme ends of the score distribution. To minimize confusion and potential misinterpretation, the minimum scaled scores possible on the PSSA tests have been fixed (see Table 16–2) so they do not change between administrations. However, the maximum scaled-score values have not been fixed. Therefore, caution must be taken when comparing scores at the maximum end of the scale.

### Each Test Has a Unique Scale

Scaling was conducted for each grade and subject-area test separately. Therefore, PSSA scale scores should be interpreted only within each content area. PSSA scaled scores are not status indicators in the same sense as percentile ranks (or scales that are essentially transformations of percentile ranks) and, therefore, cannot be used to profile relative strengths and weaknesses across subject areas. As an example, student scaled scores of 1450 in Grade 4 reading and 1400 in Grade 4 mathematics do not necessarily imply that the student performed better in reading than in mathematics. Neither do the PSSA scaled scores represent a developmental or vertical scale. This means that no across-grade comparisons or growth statements for a student are appropriate. For example, a 1400 in Grade 4 reading and a 1400 in Grade 5 reading does not indicate a student had no achievement growth in reading from Grade 4 to Grade 5.

### Strength Profile Caveats

The category labels of Low, Medium, and High are deliberately used instead of the PSSA performance level names—Below Basic, Basic, Proficient, and Advanced—to acknowledge that the PSSA cut scores were established on the basis of the total test score. Therefore, the categories should not be interpreted in the same way as PSSA performance levels because they likely do not carry the same meaning.

While the strength profile might facilitate comparisons of a student's strengths and weaknesses across strands in some cases, several factors merit caution. As noted earlier, many of the strand scores are very unreliable. The scaling underlying the strength profile does not mitigate this problem.

Additionally, the categories reflect more absolute comparisons. Relative comparisons are more difficult to make. As an example, if one scored High in both strand A and B, we know the student did very well in both strands compared to overall performance in the state (i.e., absolute status). However, we do not know whether the student's performance in strand A was better or worse relative to the performance in strand B (relative status).

Finally, some seemingly unusual results might occur that may be difficult for users to understand. As one example, it may be possible for a student to earn Medium in all strands but have an Advanced performance level. This can happen because the strand scores are correlated, meaning the distributional properties of the total score depends not only on the variances of the strand scores, but also on the covariances among the strand scores. (An analogy would be when a school track team places first overall in a competition although they did not win a single event.)

## Using PSSA Results for Other Purposes

Should PSSA results be used for placement decisions such as eligibility for gifted/talented programs or for other special programs or services? Frequently asked questions about the PSSA pertain to the maximum possible PSSA scaled scores for various subjects or to which PSSA score represents the 90th percentile. The motivation behind many of these questions may be associated with special program eligibility.

Other uses or inferences based on PSSA results may or may not be valid as the validity evidence and arguments provided in Chapter Nineteen may not necessarily support other score uses and interpretations. According to the AERA/APA/NCME *Standards* (1999) (i.e., Standard 1.4), if a test is used in a way that has not been validated, it is incumbent on the user to justify the new use, collecting new evidence if necessary. Finally, a universal caveat for any test's result is that it should not be used for placement and educational planning alone. Instead, other information about the student (e.g., other test performance data) should be considered.

#### REPORTS

The following score reports are provided to students, parents, schools, and districts for the PSSA tests in mathematics, reading, science, and writing:

- Parent Letter
- Individual Student Report
- School Summary Report
- District Summary Report
- Interpretive Guide

#### Parent Letter

Parent letters were delivered to Pennsylvania districts on June 16, 2014. This score report provided parents and students with their first glimpse of performance on the spring 2013 PSSA tests. This report provides results at the student level. A sample of the report is provided in Figure 16–1.

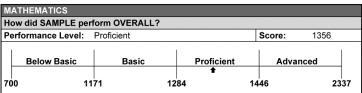
### Figure 16–1. Parent Letter

#### Dear Parents:

I am pleased to provide you with information about your child's performance on the 2014 Pennsylvania System of School Assessment (PSSA) exam. The annual PSSA is a standards-based assessment used to measure a student's attainment of the academic standards while also determining the degree to which school programs enable students to attain academic proficiency.

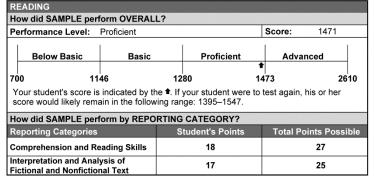
For additional information about the PSSA, visit the Pennsylvania Department of Education's website at www.education.state.pa.us, or contact your child's school.

Sincerely, Carolyn C. Dumaresq, Ed.D. Acting Secretary of Education



Your student's score is indicated by the ♠. If your student were to test again, his or her score would likely remain in the following range: 1307–1405.

| How did SAMPLE perform by REPORTING CATEGORY? |                  |                       |  |  |  |  |
|---|------------------|-----------------------|--|--|--|--|
| Reporting Categories                          | Student's Points | Total Points Possible |  |  |  |  |
| Numbers and Operations                        | 9                | 13                    |  |  |  |  |
| Measurement                                   | Not Assessed     | Not Assessed          |  |  |  |  |
| Geometry                                      | 3                | 14                    |  |  |  |  |
| Algebraic Concepts                            | 23               | 34                    |  |  |  |  |
| Data Analysis and Probability                 | 9                | 11                    |  |  |  |  |



Note that the performance level line graphs are not drawn to scale because some performance levels have more scaled score points than others. Additionally, the graphs do not display the actual percentage of students in each performance level.



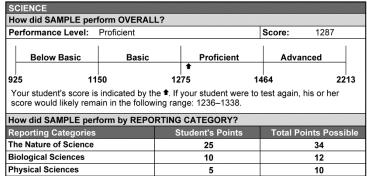
Student Name: SAMPLE STUDENT
PA Student ID: \*\*\*\*\*00000

School: SAMPLE JSHS
District: SAMPLE SD
Test Date: Spring 2014

Grade: 8

| WR      | ITING  |               |          |            |                |            |
|---------|--|---------------|----------|------------|----------------|------------|
| Hov     | w did SAMPLE pe                              | rform OVERALL | .?       |            |                |            |
| Per     | formance Level:                              | Proficient    |          |            | Score:         | 1417       |
|         | Below Basic                                  | Basic         | F        | Proficient | Adva           | nced       |
| <br>700 | 9  | <br>14        | <br>1236 | Ť          | <br>1748       | 2321       |
|         | ur student's score i<br>ore would likely rem |               |          |            | to test again, | his or her |

| How did SAMPLE perform by REPORTING CATEGORY? |                  |                       |  |  |  |  |  |
|---|------------------|-----------------------|--|--|--|--|--|
| Reporting Categories                          | Student's Points | Total Points Possible |  |  |  |  |  |
| Composition                                   | 60               | 80                    |  |  |  |  |  |
| Informational                                 | 30               | 40                    |  |  |  |  |  |
| Persuasive                                    | 30               | 40                    |  |  |  |  |  |
| Revising and Editing                          | 12               | 20                    |  |  |  |  |  |
| Informational                                 | 3                | 4                     |  |  |  |  |  |
| Persuasive                                    | 3                | 4                     |  |  |  |  |  |
| Multiple Choice                               | 6                | 12                    |  |  |  |  |  |



5

Earth and Space Sciences

12

## **Individual Student Report**

An individual student report is provided for all students who took the PSSA. This report was delivered to Pennsylvania school districts in September 2014. Districts are responsible for sending the reports home to individual students. This report is a four-page color document that provides the types of scores explained earlier in this chapter. Screen shots of the four pages from a sample individual student report are provided in Figures 16–2 through 16–5.

Figure 16-2. Page 1 of the Individual Student Report

| PENNS<br>Student Report  | YL  | VA             |           | II.        | <b>A</b> |
|--|---|----------------|-----------|------------|----------|
|  |   |                |           |            |          |
| Dear Parents:  | Student Nan                                       | ne:            |           |            |          |
| I am pleased to provide you with information about your child's performance on the 2014 Pennsylvania System of School Assessment (PSSA) exam. The PSSA is an annual, standards-based assessment used to measure a student's attainment of the academic standards while also determining the degree to which school programs enable students to achieve academic proficiency.  For additional information about the PSSA, visit the Pennsylvania Department of Education's website at | PA Student I<br>Scho<br>Distri<br>Test Da<br>Grad | ol:<br>ct:     |           |            | 1        |
| www.education.state.pa.us, or contact your child's   | Stur  | lant's PSSA    | Posulte   | by Subject |          |
| school.  | State   | icite 3 7 337  | r results |            | Range    |
| Sincerely,   | Subject   | Below<br>Basic | Basic     |            | Advanced |
| Carolin C. Surranasa   | Mathematics                                       |                |           | 1          |          |
| 0  | Reading   |                |           | 1          |          |
| Carolyn C. Dumaresq, Ed.D.   | Science   |                | 1         |            |          |
| Acting Secretary of Education  | Writing   |                | 1         |            |          |
| Page 1 General Overview Page 2 Math, Reading, and Science Detailed Results   |   |                |           |            |          |

.Writing Detailed Results 

An Interpretation Guide for this report is available at www.education.state.pa.us (type "student report guide" in the search box) or see your local school district.



The Pennsylvania System of School Assessment

page 1

www.education.state.pa.us

The Pennsylvania System of School Assessmen **PSSA** Performance Level: Proficient Score: 1432 1167 1304 1509 2425 Your student's score is indicated by the ♥. If your student were to test again, his or her score would likely remain in the following range: 1372-1492. Strength Profile Total Points Student's Mathematics Reporting Categories Points Possible Low Medium High 7 Numbers and Operations 11 0 0 8 Measurement 1.1 0 0 9 13 0 0 Geometry 20 27 0 Algebraic Concepts 0 Data Analysis and Probability 0 10 10 0 **PSSA** Performance Level: Proficient Score: 1371 1112 1257 1492 3514 Your student's score is indicated by the ★. If your student were to test again, his or her score would likely remain in the following range: 1283-1454. Student's **Total Points** Strength Profile! Reading Reporting Categories **Points** Possible Medium High Low Comprehension and Reading Skills 14 22 0 0 Interpretation and Analysis of 23 30 0 0 Fictional and Nonfictional Text **PSSA** Performance Level: Score: 1213 1822 Your student's score is indicated by the **1**. If your student were to test again, his or her score would likely remain in the following range: 1188-1238. Students **Total Points** Strength Profile<sup>1</sup> Science Reporting Categories **Points** Possible Medium High The Nature of Science 23 38 0 Biological Sciences 2 12 0 0 8 Physical Sciences 14 0 0 Earth and Space Sciences 2 10 0 0

Figure 16-3. Page 2 of the Individual Student Report

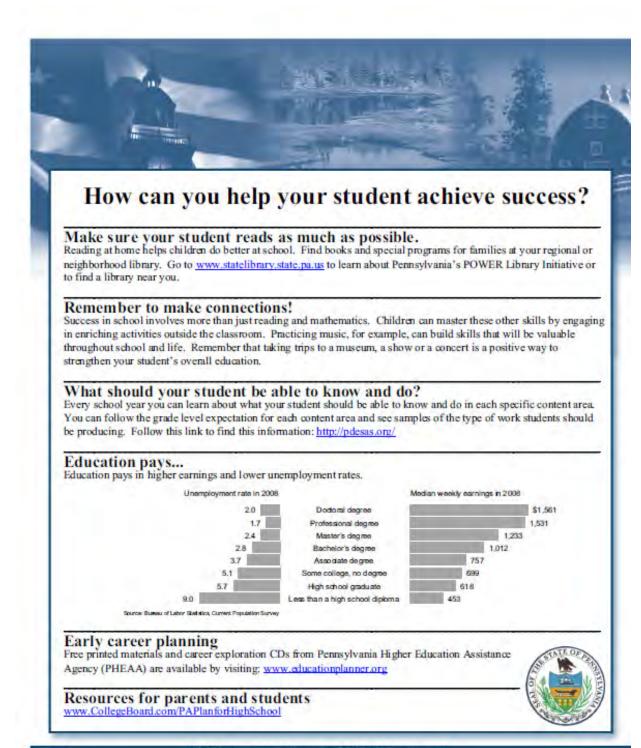
Pennsylvania Student Report PSSA Performance Level: Basic Score: 1227 1236 1806 2364 Your student's score is indicated by the 🏚 If your student were to test again, his or her score would likely remain in the following range: 1193-1261. Student's **Total Points** Strength Profile' Writing Reporting Categories Possible Medium High Composition 40 80 0 Informational 20 40 Persuasive 20 40 Revising and Editing 14 0 20 0 Informational 2 4 Persuasive 2 4 Multiple Choice 10 12 Below Basic Basic Proficient Advanced Inadequate academic Marginal academic Satisfactory academic Superior academic performance performance that indicates performance, work approaching, performance indicating a solid indicating an in-depth little understanding and but not yet reaching, satisfactory understanding and adequate understanding and exemplary minimal display of the skills performance. Performance display of the skills included in display of the skills included in included in Pennsylvania's indicates a partial understanding Pennsylvaria's Academic Pennsylvania's Academic Academic Content Standards. and limited display of the skills Content Standards. Content Standards. There is a major need for included in Pennsylvania's additional instructional Academic Content Standards, opportunities and/or and the student may need increased student academic additional instructional commitment to achieve the opportunities and/or increased Proficient level. student academic commitment to achieve the Proficient level.

Figure 16-4. Page 3 of the Individual Student Report

The Strength Profile provides you with an indication of your student's performance within each of the reporting categories. The profile measure takes into account the difficulty of the items and can be used to help identify areas in which your student needs to improve and where he or she has performed more successfully.

Note that the performance level line graphs are not drawn to scale because some performance levels have more scaled score points than others. Additionally, the graphs do not display the actual percentage of students in each performance level.

Figure 16-5. Page 4 of the Individual Student Report



page 4

The Pennsylvania System of School Assessment

www.education.state.pa.us

00577042

## School and District Summary Reports

Summary reports are provided at the school and district levels. These reports contain summary information about the percentage of students in each of the four performance levels. Raw scores are also provided by assessment anchor to allow schools or districts to identify strengths or weaknesses at the content strand level.

## Interpretative Guide

An interpretative guide is provided to help parents and other PSSA stakeholders better understand test result information presented in the individual student report. The interpretative guide can be found on the PDE website.

# Chapter Seventeen: Operational Test Statistics

This chapter presents various summary statistics for the PSSA total test scores based on the final data file described in Chapter Nine. Related information covered elsewhere in this report includes the item-level statistics presented in Chapter Eleven (classical item statistics) and Chapter Twelve (Rasch item statistics). These chapters provide additional consideration as item difficulty distributions can affect total score distributions.

## PERFORMANCE LEVEL STATISTICS

Table 17–1 presents performance level percentages by grade and content. Appendix Q provides performance level percentages for prior years.

Table 17-1. Performance Level Percentages for 2014 PSSA

|             |       | Percentage  | e in Eac | h Performar | ice Level |
|-------------|-------|-------------|----------|-------------|-----------|
| Subject     | Grade | Below Basic | Basic    | Proficient  | Advanced  |
| Mathematics | 3     | 10.3        | 14.6     | 35.3        | 39.7      |
| Reading     | 3     | 19.3        | 10.4     | 44.5        | 25.8      |
| Mathematics |       | 14.9        | 8.8      | 27.0        | 49.2      |
| Reading     | 4     | 15.7        | 15.6     | 36.2        | 32.4      |
| Science     |       | 9.4         | 11.4     | 36.0        | 43.2      |
| Mathematics |       | 15.4        | 17.4     | 22.8        | 44.4      |
| Reading     | 5     | 21.4        | 18.0     | 36.3        | 24.2      |
| Writing     |       | 2.3         | 36.5     | 56.2        | 5.1       |
| Mathematics | 6     | 14.1        | 13.9     | 23.2        | 48.7      |
| Reading     | O     | 18.0        | 17.5     | 27.1        | 37.4      |
| Mathematics | 7     | 12.6        | 11.7     | 23.6        | 52.1      |
| Reading     | ,     | 12.2        | 15.7     | 30.3        | 41.7      |
| Mathematics |       | 15.6        | 10.8     | 21.6        | 52.0      |
| Reading     | 8     | 11.0        | 9.4      | 24.9        | 54.7      |
| Science     | o     | 22.9        | 16.6     | 34.9        | 25.6      |
| Writing     |       | 3.8         | 22.6     | 63.7        | 9.8       |

## SCALED SCORES

## **Summary Statistics**

Table 17–2 provides the scaled-score means and standard deviations. See the section Every Test has a Unique Scale in Chapter Sixteen for caveats regarding interpretation of scale scores.

Table 17-2. Means and Standard Deviations for the 2014 PSSA Scaled Scores

|       | Mathe  | matics | Read   | ling  | Scie   | nce   | Writ   | ting  |
|-------|--------|--------|--------|-------|--------|-------|--------|-------|
| Grade | Mean   | SD     | Mean   | SD    | Mean   | SD    | Mean   | SD    |
| 3     | 1312.6 | 199.3  | 1332.5 | 164.8 |        |       |        |       |
| 4     | 1434.0 | 264.0  | 1350.4 | 232.8 | 1447.8 | 206.9 |        |       |
| 5     | 1447.8 | 263.0  | 1321.9 | 227.8 |        |       | 1330.6 | 282.0 |
| 6     | 1479.4 | 279.8  | 1365.9 | 246.0 |        |       |        |       |
| 7     | 1494.4 | 264.6  | 1409.0 | 231.0 |        |       |        |       |
| 8     | 1456.1 | 260.9  | 1494.4 | 263.0 | 1324.1 | 209.3 | 1391.4 | 264.8 |

#### Scaled-Score Distributions

Scaled scores are based on a linear transformation of the Rasch ability estimates. Distributions of the Rasch abilities are provided at the end of Chapter Twelve.

#### **RAW SCORES**

## **Summary Statistics**

Appendix P provides summary statistics for the operational raw scores. The statistics reported include the number of points possible (Pts.), number of items (Len.), number of students tested (N), mean number of score points received (Mean), standard deviation of test scores (SD), reliability (r), traditional standard error of measurement (SEM), and item types (Items) used to determine each score. These statistics are based on the total test using both multiple-choice (MC) and open-ended (OE) items for the operational sections of each form. (For information disaggregated by item type, Chapter Eleven provides breakout statistics for MC and OE items.)

## Score Distributions

Raw score relative-frequency (rf) distributions are provided in Figure 17–1. Most distributions are negatively skewed and unimodal. Writing has one major mode and several minor modes (because of the differential weighting given to the writing prompt scores).

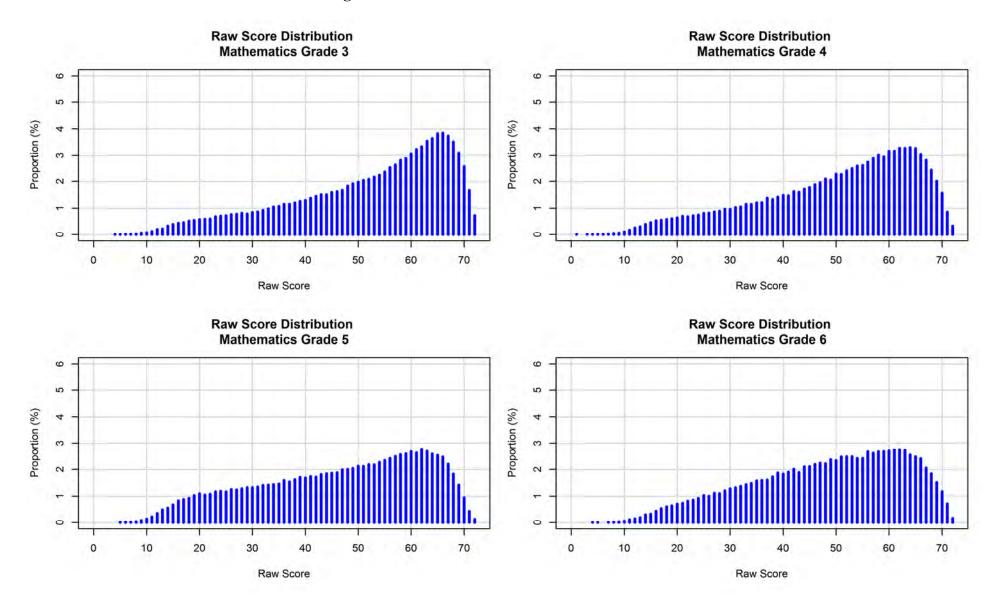
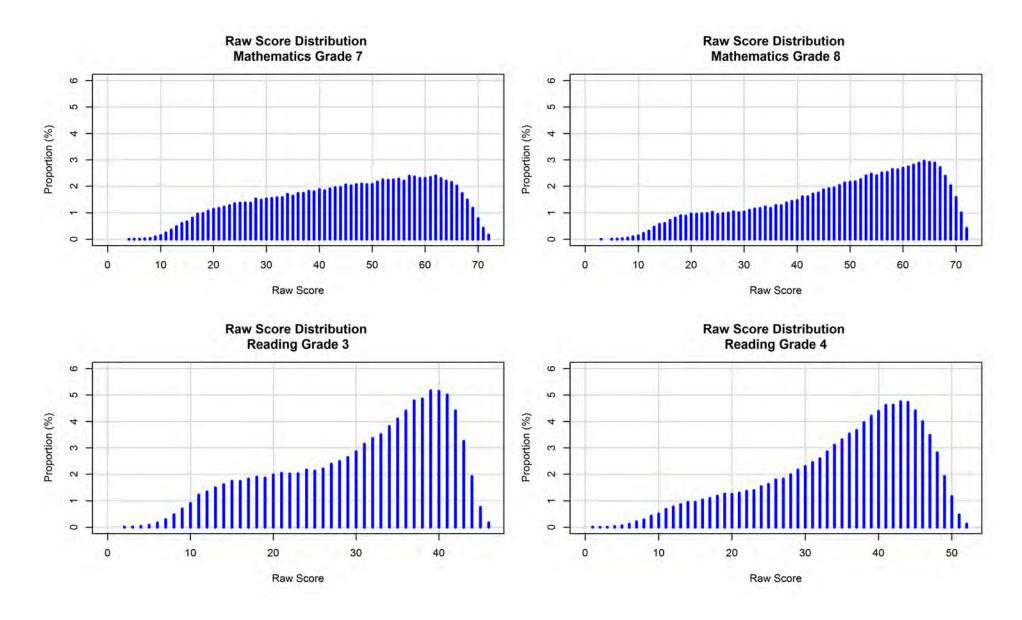
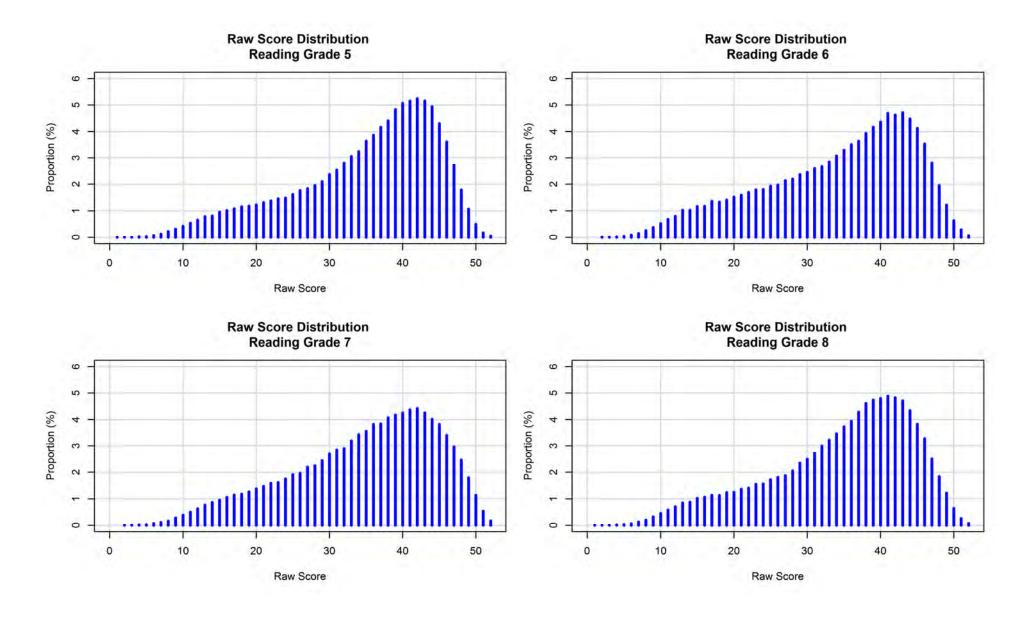
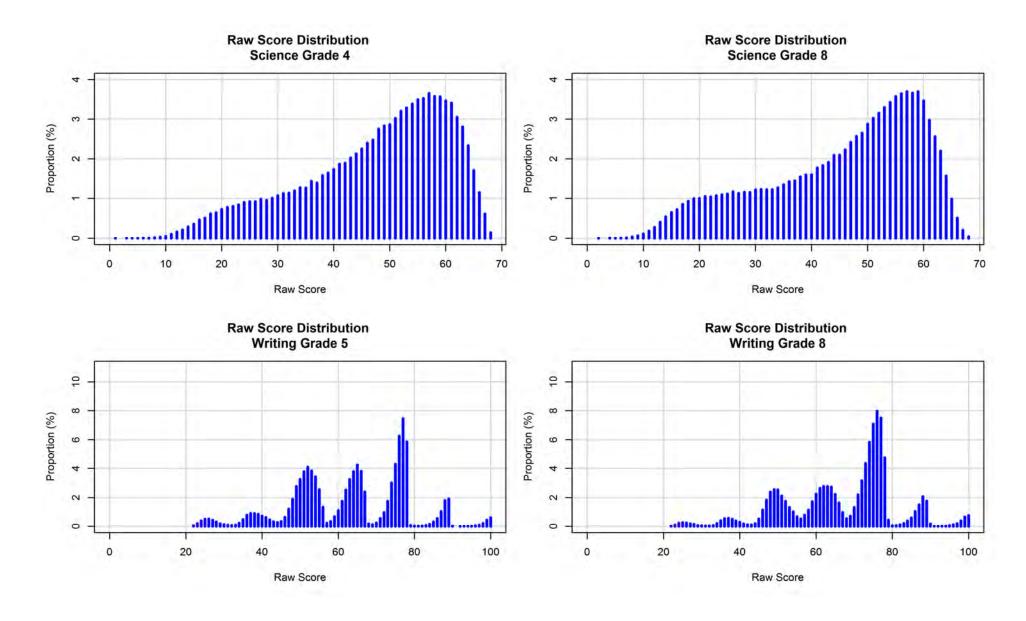


Figure 17-1. 2014 PSSA Raw Score Distributions







# Chapter Eighteen: Reliability

This chapter<sup>21</sup> addresses the reliability of PSSA test scores. According to the *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 1999), reliability refers to:

the degree to which test scores for a group of test takers are consistent over repeated applications of a measurement procedure and hence are inferred to be dependable and repeatable for an individual test taker; the degree to which scores are free of errors of measurement for a given group (p. 25).

Frisbie (2005) highlighted several elements of this definition. First, reliability is a property of test scores, not a test itself. Many may appreciate this distinction, but in casual usage, individuals frequently make reference to a reliable test. While reliability concerns test scores (and not the test specifically), it is important to appreciate the fact that test scores can be affected by characteristics of the instrument. For example, all other things being equal, tests with more items/points tend to be more reliable than tests with fewer items/points. Second, reliability coefficients are group specific. Reliabilities tend to be higher in populations that are more heterogeneous and lower in populations that are more homogeneous. Consequently, both test length and population heterogeneity should be considered when evaluating reliability.

There are other reliability considerations that may be less evident from the *Standard's* definition, yet are still important for test users to understand. While freedom from measurement error is highlighted in the definition above, reliability is specifically concerned with random sources of error. Indeed, the degree of inconsistency due to random error sources is what determines reliability: less consistency is associated with lower reliability and more consistency is associated with higher reliability. Of course, systematic error sources also exist. These can artificially increase reliability and decrease validity. (Validity is further discussed in Chapter Nineteen.)

Another noteworthy issue is that multiple sources of error exist (e.g., the day of testing, the items used, the raters who score the items). However, most widely used reliability indices only reflect a single type of error. Consequently, it is important for test users to understand what specific type of error is being considered in a reliability study, and equally, if not more important, what types are not.

Understanding the distinction between relative error and absolute error is also important as many reliability indices only reflect relative error. Relative error is of interest whenever the relative ordering of individuals respective to their test performance is of interest. Understanding examinee rank-order stability is important; however, such stability might be well achieved even when the specific score values are considerably different. When specific score values are considered important (e.g., if cuts cores are used), then absolute error is, too. Generally, there is more error variance when considering the absolute scores of examinees, which in turn suggests lower reliability.

-

<sup>&</sup>lt;sup>21</sup> Please note that some of the material in this chapter is technical in nature.

As suggested, reliability is a complex, nonunitary notion that cannot be adequately represented by a single number. There are several reliability indices available, and these may not provide the same results (Frisbie, 2005). The remainder of this chapter covers the following:

- Reliability coefficients and their interpretation
- Unconditional and conditional standard errors of measurement (SEMs and CSEMs)
- Decision consistency
- Rater agreement

#### **RELIABILITY INDICES**

As shown below, the reliability coefficient expresses the consistency of test scores as the ratio of true score variance to total score variance. The total variance contains two components: 1) the variance in true scores and 2) the variance due to the imperfections in the measurement process. Put differently, total variance equals true score variance plus error variance.<sup>22</sup>

$$\rho_X^2 = \frac{\sigma_T^2}{\sigma_X^2} = \frac{\sigma_T^2}{\sigma_T^2 + \sigma_E^2}$$

Reliability coefficients indicate the degree to which differences in test scores reflect true differences in the attribute being tested rather than random fluctuations. Total test score variance (i.e., individual differences) is partly due to real differences in the attribute (true variance) and partly due to random error in the measurement process (error variance).

Reliability coefficients range from 0.0 to 1.0. If all test score variances were true, the index would equal 1.0. The index will be 0.0 if none of the test score variances were true. Such scores would be pure random noise (i.e., all measurement error). If the index achieved a value of 1.0, scores would be perfectly consistent (i.e., contain no measurement error). Although values of 1.0 are never achieved in practice, it is clear that larger coefficients are more desirable because they indicate that test scores are less influenced by random error. (How big is big enough and how small is too small are issues considered in a later section.)

As noted in the introduction, there are several different indices that can be used to estimate this ratio. One approach is referred to as internal consistency, which is derived from analyzing the performance consistency of individuals over the items within a test. As discussed below, these internal consistency indices do not take into account other sources of error, for example, variations due to random errors associated with the linking process, day-to-day variations (student health, testing environment, etc.), and rater inconsistency.

#### **COEFFICIENT ALPHA**

Although a number of reliability indices exist, perhaps the one most frequently reported for achievement tests is Coefficient Alpha. Consequently, this index is the one reported for the PSSA. Alpha indicates the internal consistency over the responses to a set of items measuring an underlying trait, in this case, academic achievement in subject areas such as mathematics, reading, and science. (The approach taken for writing is slightly different and is described later in this chapter.)

<sup>&</sup>lt;sup>22</sup> A covariance term is not required, as true scores and error are assumed to be uncorrelated in classical test theory.

Alpha is an internal consistency index. It can be conceptualized as the extent to which an exchangeable set of items from the same domain would result in a similar rank ordering of students. Note that relative error is reflected in this index. Variation in student performance from one sample of items to the next should be of particular concern for any achievement test user. Consider two hypothetical vocabulary tests intended for the same group of students. Each test contains different sets of unique words that are believed to be randomly equivalent, perhaps like the ones shown below.

Table 18–1. Two Hypothetical Vocabulary Tests

| Test One   | Test Two   |
|------------|------------|
| Abase      | Abate      |
| Boon       | Bilk       |
| Capricious | Circuitous |
| Deface     | Debase     |
|            | ••••       |
| Zealous    | Zenith     |

If a representative group of students could take both of these tests, and the correlation between the scores could be obtained, then that result would represent the parallel forms reliability of the test scores. However, such data-collection designs are impractical in large-scale settings and experimental confounds like fatigue and practice effects are likely to affect the results. Internal-consistency reliability indices arose in part to provide reliability measures using the data from just a single test administration. So, if students only took Test One and the Coefficient Alpha index for those test scores was high, then this would suggest that Test Two would provide a very similar rank ordering of the students if they had taken it instead. If Coefficient Alpha were low, dissimilar rank orderings would likely be observed—again, relative-error variance is reflected in Alpha. (It should also be noted that Coefficient Alpha is algebraically identical to a *Person* × *Item* design under Generalizability Theory when relative error variance is assumed.)

## **Formula**

Consider the following data matrix representing the scores of persons (rows) on items (columns).

Table 18–2. Person  $\times$  Item Score ( $X_{pi}$ ) Infinite (Population-Universe) Matrix

|             | Item        |             |             |             |  |  |
|-------------|-------------|-------------|-------------|-------------|--|--|
| Person      | 1           | 2           | <i>I</i>    | k           |  |  |
| 1           | Y11         | <i>Y</i> 12 | Y1 i        | $\dots X1k$ |  |  |
| 2           | <i>Y</i> 21 | <i>Y</i> 22 | Y2i         | X2k         |  |  |
|             |             |             |             |             |  |  |
| • • • • • • |             |             |             |             |  |  |
| P           | Yp1         | Yp2         | $\dots Ypi$ | $\dots Xpk$ |  |  |
|             |             |             |             |             |  |  |
|             |             |             |             |             |  |  |
| N           | YN1         | YN2         | $\dots YNi$ | $\dots XNk$ |  |  |

Notes. Adapted from Cronbach and Shavelson (2004).

Then, a general computational formula for Alpha is as follows:

$$\alpha = \frac{N}{N-1} \left( 1 - \frac{\sum_{i=1}^{N} \sigma_{Yi}^2}{\sigma_X^2} \right),$$

where *N* is the number of parts (items or testlets),  $\sigma_X^2$  is the variance of the observed total test scores, and  $\sigma_{Vi}^2$  is the variance of part *i*.

## **FURTHER INTERPRETATIONS**

## Rules of Thumb

What reliability value is considered high enough? What values are considered too low? Although frequently asked for, any rules of thumb for interpreting the magnitude of reliability indices are mostly arbitrary. Another approach is to research the reliabilities from similar testing instruments to see what values are commonly observed. For the PSSA, comparisons to tests of similar lengths that were administered to similar student populations from other large-scale assessment programs would be relevant. For many other state assessment programs, reliabilities in the low 0.90s are usually the highest ever observed and reliabilities in the high 0.80s are very common.

The lower a given reliability coefficient, the greater the potential for over-interpretation of the associated results. As suggested above, there is no firm guideline regarding how low is too low. However, as an informative point of reference, a reliability coefficient of 0.50 would suggest that there is as much error variance as true-score variance in the scores.

## Is Alpha a Lower Limit to Reliability?

According to Brennan (1998), "the conventional wisdom that Coefficient Alpha is a lower limit to reliability is based largely on a misunderstanding." In reflecting on the 50th anniversary of his seminal 1951 article, Cronbach—in Cronbach and Shavelson (2004)—expressed similar misgivings about this conventional wisdom:

one could argue that alpha was almost an unbiased estimate of the desired reliability....the almost in the preceding sentence refers to a small mathematical detail that causes the alpha coefficient to run a trifle lower than the desired value. This detail is of no consequence and does not support the statement made frequently in textbooks or in articles that alpha is a lower value to the reliability coefficient. That statement is justified by reasoning that starts with the definition of the desired coefficient as the expected consistency among measurements that had a higher degree of parallelism than the random parallel concept implied.

The assumptions for three common parallelism models are presented in Table 18–3. Alpha's assumptions come from the Essentially-Tau Equivalent model, which does not require equal means or equal variances across test parts. Based on this, Brennan (1998) asserts that the lower-limit issue, as conceptualized by many, provides an answer to a question that is of minimal importance. Reframed differently, the goal of selecting a reliability coefficient is not to find the one that provides the highest coefficient, but the one that most accurately reflects the test data under study.

It is important to note that there are factors encountered in practice that may legitimately make Coefficient Alpha an underestimate of reliability. However, there are also factors that might make Coefficient Alpha an overestimate of reliability. Both possibilities are discussed further below and generally arise when the Essentially-Tau Equivalent assumptions are strained.

Table 18–3. Summary of Expectations/Observable Relationships for Different Parallelism Models

|  | Degree of Measurement Parallelism* |                                |            |  |  |
|--|------------------------------------|--------------------------------|------------|--|--|
| Relationship                           | Classically<br>Parallel            | Essentially-<br>Tau Equivalent | Congeneric |  |  |
| Content Similarity                     | Yes                                | Yes                            | Yes        |  |  |
| Equal Means across Parts               | Yes                                | No                             | No         |  |  |
| Equal Variances across Parts           | Yes                                | No                             | No         |  |  |
| Equal Covariances across Parts         | Yes                                | Yes                            | No         |  |  |
| Equal Covariances with Other Variables | Yes                                | Yes                            | No         |  |  |

<sup>\*</sup> Other models exist, but are not considered here due to their limited application in practice.

## Biases That Might Make Alpha an Underestimate of Reliability

There are factors that might negatively bias Coefficent Alpha, making the apparent reliability lower than it may actually be. Two situations frequently encountered in practice that might cause this include tests that are composed of mixed item types (e.g., multiple-choice (MC) and openended (OE) items) and tests that include a planned stratification of the test items according to topics or subdomains.

Although both situations strictly violate the assumptions on which Coefficient Alpha is derived (i.e., the tests are not based on equal part lengths in the former case and are not randomly parallel in the latter case), neither necessarily guarantees that the reliability will be markedly lower. In the latter case, reliability will be underestimated only when strand items are homogeneous enough for the average covariance within strata to exceed the average covariance between strata. Although both are potential influences for the PSSAs, most of the total test score reliabilities reported in Appendix P are all close to or above 0.90, indicating highly consistent test scores for these instruments. Writing is an exception discussed further below.

## Biases That Might Make Alpha an Overestimate of Reliability

As emphasized in earlier sections, Coefficient Alpha only takes into account measurement error that arises from the selection of items used on a particular test form. There are other sources of random inaccuracy. One is due to the occasion of testing. Other various random conditions that might affect students on any particular testing occasions include illness, fatigue, and anxiety. Also, when a test includes OE items, as the PSSA does, another source that can cause random fluctuation is the OE item scorers. In a sense, Alpha may be positively biased because it does not take into account these other important sources of random error. Any internal consistency reliability index could understate the overall problem of measurement error because it ignores such sources or random error.

Another positive bias can occur when items are associated (clustered) with a common stimulus. Item bundles and testlets are other frequently used terms for this situation. One concrete example is when multiple reading comprehension items are associated with a common passage selection. Again, such a situation does not guarantee that the reliability estimate will be markedly affected, but the potential exists.

## **Strand Scores**

As noted in the introduction, reliabilities tend to go up in value with an increase in test length and go down in value with a decrease in test length. Figure 18–1 illustrates this relationship for a hypothetical 45-point test with three total score reliabilities: 0.95, 0.90, and 0.85. As an example, the curve for reliability equal to 0.90 suggests that a 10-item strand would be expected to have a score reliability of just over 0.65. The use of the Spearman-Brown prophecy formula assumes all items are exchangeable, which in practice they may not be. While such a chart may not perfectly model actual strand correlations, the intent is only to illustrate the substantial impact that limited numbers of strand items can have on strand-score reliability. One should not be surprised that strand scores with more points tend to show higher reliability coefficients and those with fewer points tend to show lower reliability coefficients. Further, what is most important for PSSA users to note is that some strand score reliabilities may be too low to warrant interpretation at the individual student level.

**Reliability Curves** Rel. = 0.95 —— Rel. = 0.90 —— Rel. = 0.85 0.95 0.85 0.8 0.75 Reliability 0.7 0.65 0.6 0.55 **Estimated** 0.45 0.35 0.25 0 5 10 15 20 25 30 35 40 45 Number of Items

Figure 18-1. Example of the Relationship between Test Length and Reliability

Note. Tabled values derived using the Spearman-Brown formula.

## Individual-Level versus Group-Level Scores

The results presented in this chapter pertain to the reliability of individual scores. Group results (e.g., state and district levels) are also provided on PSSA score reports, but the reliability of those scores is not specifically calculated here. However, as a general rule, the reliabilities of group mean scores are almost always higher (sometimes substantially) than the corresponding reliabilities for individual scores. This is especially important to remember for strand scores because those scores can be quite reliable at the group level, even though their individual reliabilities may be too low. Because the reliability of group mean scores (e.g., school or district means) tends to be higher than that of individual scores, the interpretation of strand scores at these aggregate levels is likely very reasonable in most instances. Even though the reliability for mean scores based on only a few items might be adequate, the validity of those same scores might be suspect because use of only a few items may not adequately cover the construct of interest. Validity is further discussed in Chapter Nineteen.

#### RELIABILITY OF WRITING SCORES

An extension of Coefficient Alpha that was derived to specifically fit stratified parallel tests (sometimes called stratified alpha; Cronbach, Schonemann, & McKie, 1965) was used to compute the PSSA writing score reliabilities. This approach is often used when it is believed that Alpha may be yielding a lower coefficient than it should for the reasons noted above. Although originally developed for content-stratified tests, Qualls (1995) demonstrated its utility for mixed-format tests as well when the stratification is based on item type. It may be computed as

$$\rho_{\chi\chi'} = 1 - \frac{\Sigma \sigma^2 \chi_h (1 - \alpha \rho_{\chi_h \chi_{h'}})}{\sigma^2 \chi}$$

where *h* indexes the individual strata.

The reliability of writing assessments (and many other performance-based tests) tends to be lower than reliabilities for other tests. Part of the reason for this is that there tends to be large student-by-task interactions on such assessments. For writing, this means individual student performance fluctuates significantly across different writing prompts, a student may score high on one prompt but much lower on another. In principle, adding more prompts can improve reliability to a more acceptable level. However, this is challenging in practice because of costs, testing time, and student fatigue. In sum, the large student-by-task interaction combined with the limited number of tasks often results in a relatively low reliability for writing assessments.

### STANDARD ERROR OF MEASUREMENT

The reliability coefficient is a unit-free indicator that reflects the degree to which scores are free of measurement error. It always ranges between 0.0 and 1.0 regardless of the test's scale. Reliability coefficients best reflect the extent to which measurement inconsistencies may be present or absent in a group. However, they are not that useful for helping users interpret test scores. The standard error of measurement (SEM) is another indicator of test score precision that is better suited for determining the effect of measurement inconsistencies for the scores obtained by individual examinees. This is particularly so for Conditional SEMs (CSEM) discussed further below.

## Traditional Standard Error of Measurement

A precise, theoretical interpretation of the SEM is somewhat unwieldy. A beginning point for understanding the concept is as follows. If everyone being tested had the same true score, <sup>23</sup> there would still be some variation in observed scores due to imperfections in the measurement process, such as random differences in attention during instruction or concentration during testing and the sampling of test items. The standard error is defined as the standard deviation<sup>24</sup> of the distribution of observed scores for students with identical true scores. Because the SEM is an index of the random variability in test scores in actual score units, it represents very important information for test score users.

The SEM formula is provided below.

$$SEM = SD\sqrt{1 - reliability}$$

This formula indicates the value of the SEM depends on both the reliability coefficient and the standard deviation of test scores. If the reliability were equal to 0.00 (the lowest possible value), the SEM would be equal to the standard deviation of the test scores. If test reliability were equal to 1.00 (the highest possible value), the SEM would be 0.0. In other words, a perfectly reliable test has no measurement error (Harvill, 1991). Additionally, the value of the SEM takes the group variation (i.e., score standard deviation) into account. Consider that an SEM of 3 on a 10-point test would be very different than an SEM of 3 on a 100-point test.

## Traditional Standard Error of Measurement Confidence Intervals

The SEM is an index of the random variability in test scores in actual score units, which is why it has such great utility for test score users. SEMs allow statements regarding the precision of individual test scores. SEMs help place "reasonable limits" (Gulliksen, 1950) around observed scores through construction of an approximate score band. Often referred to as confidence intervals, these bands are constructed by taking the observed scores, *X*, and adding and subtracting a multiplicative factor of the SEM. As an example, students with a given true score will have observed scores that fall between +/-1 SEM about two-thirds of the time. For +/-2 SEM confidence intervals, this increases to about 95 percent.

## Further Interpretations

#### ONE STANDARD ERROR OF MEASUREMENT FOR ALL TEST SCORES

The SEM approach described above only provides a single numerical estimate for constructing the confidence intervals for examinees regardless of their score level. In reality however, such confidence intervals vary according to a student's score. Consequently, care should be taken using the SEM for students with extreme scores. (In the next sections, an alternate approach is described that conditions the SEM on a student's score estimate.)

<sup>&</sup>lt;sup>23</sup> True score is the score the person would receive if the measurement process were perfect.

The standard deviation of a distribution is a measure of the dispersion of the observations. For the normal distribution, about 16 percent of the observations are more than one standard deviation above the mean.

<sup>&</sup>lt;sup>25</sup> Some prefer the following interpretation: if a student were tested an infinite number of times, the +/-1 SEM confidence intervals constructed for each score would capture the student's true score 68 percent of the time.

#### **GROUP SPECIFIC**

As noted in the introduction, reliabilities are group specific. The same is true for SEMs because both score reliabilities and score standard deviations vary across groups.

#### **RAW-SCORE METRIC**

The SEM approach is calculated using raw scores, and as such, the resulting confidence interval bands are on the raw-score metric. Error bands on the scaled-score metric are considered in the next section.

#### Type of Error Reflected

The interpretation of the SEM should be driven by the type of score reliability that underpins it. So, the PSSA SEMs involve the same source of error relevant to internal consistency indices. As noted earlier, a precise technical explanation of the SEM (and resulting confidence intervals) can be unwieldy. Because of this, score users are often provided less complex interpretations.

One simpler description is that a confidence interval represents the possible score range one would observe if a student could be tested twice with the same instrument. Taking the same test on a different day implies the only source of random error being considered is related to the occasion of testing, such as a student might be sleepier one day than another, or may be sick, or did not get a good breakfast. There is a reliability index that captures this source of random error, and it is referred to as the test-retest reliability coefficient. This is not the type of reliability computed for the PSSAs. When internal consistency reliability estimates are used, such an explanation blurs the fact that random error based on the occasion of testing is not considered.

When SEMs are derived from internal consistency reliability estimates, a better approach is to describe the confidence interval as providing reasonable bounds for the range of scores that a student might receive if he or she took an equivalent version of the test; that is, the student took a test that covered exactly the same content but included a different set of items (if an infinite number of tests with equivalent content were taken, the student's true score will lie within the constructed confidence intervals 68 percent of the time). As an example, if the PSSA score was 1750 and the SEM band was 1700 to 1800, then a student would be likely to receive a score somewhere between 1700 and 1800 if a different version of the test had been taken.

#### RESULTS AND OBSERVATIONS

Coefficient Alpha results and associated (traditional) SEMs for various PSSA scores are documented in Table 18–4 and Appendix P. Values were derived using the PSSA final data file (see Chapter Nine). The results are organized by subject area and grade. Each table in Appendix P also breaks out the various reporting strands and groups of interest (i.e., the total student population, gender and ethnic groups, English language learners (ELL), students with individualized education plan (IEP), and the economically disadvantaged (ED)). The statistics reported in Appendix P include number of points possible (Pts.), number of items (Len.), number of students tested (N), mean number of score points received (Mean), standard deviation of test scores (SD), reliability (r), traditional standard error of measurement (SEM), and item types (Items) used to determine each score.

Table 18-4. Reliabilities and Standard Errors of Measurement

| Subject     | Grade | Reliability | SEM |
|-------------|-------|-------------|-----|
|             | 3     | 0.95        | 3.3 |
|             | 4     | 0.94        | 3.6 |
| Mathematics | 5     | 0.95        | 3.6 |
| watnematics | 6     | 0.94        | 3.4 |
|             | 7     | 0.94        | 3.7 |
|             | 8     | 0.95        | 3.5 |
|             | 3     | 0.92        | 2.7 |
|             | 4     | 0.91        | 3.0 |
| Reading     | 5     | 0.91        | 2.9 |
| Keauing     | 6     | 0.92        | 2.9 |
|             | 7     | 0.91        | 3.0 |
|             | 8     | 0.90        | 3.0 |
| Science     | 4     | 0.93        | 3.3 |
| Science     | 8     | 0.94        | 3.5 |
| Writing     | 5     | 0.81        | 6.5 |
|             | 8     | 0.81        | 6.1 |

Note that these tables in Appendix P report the standard deviations of observed scores. Assuming normally distributed scores, one would expect about two-thirds of the observations to be within one standard deviation of the mean. An estimate of the standard deviation of the true scores can be computed as

$$\hat{\sigma}_T = \sqrt{\hat{\sigma}_x^2 - \hat{\sigma}_x^2 (1 - \hat{\rho}_{xx})} \ .$$

The results are historically consistent with past PSSA reliability results. The overall test score reliability values are excellent, with many in the low 0.90s for mathematics, reading, and science. Writing reliabilities are lower, as they have been historically. (Possible reasons for this were discussed earlier.) It was also noted that reliabilities tend to go up in value with an increase in test length and population heterogeneity and go down in value with a decrease in test length and more homogeneous populations. Across the grades and subjects tabled in Appendix P, reliabilities for the sub-strands tended to follow these same trends. That is, strands with more items tended to show higher reliability coefficients. Also, groups exhibiting more variability in test scores tended to have higher reliability coefficients. Perhaps the most significant result pertains to an earlier caution (i.e., that some strand score reliabilities may be too low to warrant interpretation at the individual student level). Once again, there is no firm guideline regarding how low is too low. The lower a given reliability coefficient, the greater the potential for overinterpretation. As a point of reference, a reliability coefficient of 0.50 would suggest that there is as much error variance as true-score variance in the scores. It should be noted that the reliability of group mean scores (e.g., school or district means) tends to be higher than that of individual scores, suggesting interpretation of strand scores at these aggregate levels is likely reasonable.

## RASCH CONDITIONAL STANDARD ERROR OF MEASUREMENT

The CSEM also indicates the degree of measurement error but does so in scaled-score units and varies as a function of a student's actual scaled score. Therefore, the CSEM may be especially useful in characterizing measurement precision in the neighborhood of a score level used for decision making—such as cut scores for identifying students who meet a performance standard.

Technically, when a Rasch model is applied, the CSEM at any given point on the ability continuum is defined as the reciprocal of the square root of the test information function derived from the Rasch scaling model.

$$CSEM(\hat{\theta}) = \frac{1}{\sqrt{I(\hat{\theta})}}$$

where  $CSEM(\hat{\theta})$  is the conditional standard error of measurement and  $I(\hat{\theta})$  is the test information function. Test information depends on the sum of the corresponding information functions for the test items. Item information depends on each item's difficulty and conditional item score variance. The formula above utilizes the Rasch ability ( $\theta$ ) metric. The conditional standard error on the scaled-score (SS) metric is determined by simply multiplying the  $CSEM(\hat{\theta})$  by the slope (multiplicative constant, m) of the linear transformation equation used to convert the Rasch ability estimates to scaled scores.

$$CSEM(SS) = CSEM(\hat{\theta}) * m$$

Chapter Fourteen provides the linear transformation formulas for each PSSA test.

## Rasch Conditional Standard Error of Measurement Confidence Intervals

CSEMs also allow statements regarding the precision of individual tests scores. And like SEMs, they help place reasonable limits around observed scaled scores through construction of an approximate score band. The confidence intervals are constructed by adding and subtracting a multiplicative factor of the CSEM and may be interpreted as described in the earlier section.

## Further Interpretations

### DIFFERENT CONDITIONAL STANDARD ERROR OF MEASUREMENT FOR DIFFERENT TEST SCORES

The CSEM approach provides different numerical estimates for constructing the confidence intervals for examinees depending on their specific score level. The magnitude of the CSEM values is U-shaped, with larger CSEM values associated with lower and higher scores.

#### **GROUP SPECIFIC**

Assuming reasonable model-data fit—as explored in Chapter Twelve—the Rasch-based CSEMs (conditioned on score level) should not vary across groups.

#### **SCALED-SCORE METRIC**

The CSEM and associated confidence interval bands are on the scaled-score metric.

#### Type of Error Reflected

The SEMs documented on the PSSA score reports are the Rasch-based conditional standard errors of measurement described in the previous section. These are provided by the WINSTEPS scaling program described in Chapter Twelve. As noted earlier, these CSEMs are based on the concept of statistical information. For the purpose of providing a simpler explanation of SEMs to test score users, the earlier description of SEMs framed using the idea of internal consistency reliability was provided in the PSSA score report interpretive documents. <sup>26</sup> Score report content is considered in greater detail in Chapter Sixteen.

#### **RESULTS AND OBSERVATIONS**

Figure 18–2 shows the Rasch CSEMs associated with each scaled-score level. (This information is also provided in tabular form in Appendix P.) Values were derived using the calibration data file described in Chapter Nine. The values are fairly consistent across a noticeably large range of the scaled scores, as demonstrated by the relatively flat bottoms of most plots. The values increase at both extremes (i.e., at smaller and larger scaled scores), giving these figures their typical U-shaped pattern. (Only the SEMs for scores greater than the lowest observable scaled scores [LOSS] are shown in the figures; consequently, the complete U-shape does not appear in most plots.) The three red-dashed lines represent the Basic, Proficient, and Advanced scaled score cuts, respectively, moving from lower to higher scaled-score values. SEM values at the cut score lines were generally associated with smaller SEM values, indicating more precise measurement occurs at these cuts. The plots for writing are somewhat irregular in shape, which is likely due to the differential weighting that occurs for portions of these tests.

<sup>&</sup>lt;sup>26</sup> Because IRT CSEMs are based on statistical information, it is questionable whether they account for error variance due to items. However, it seems difficult to construct a simple explanation of IRT CSEMs for the general public.

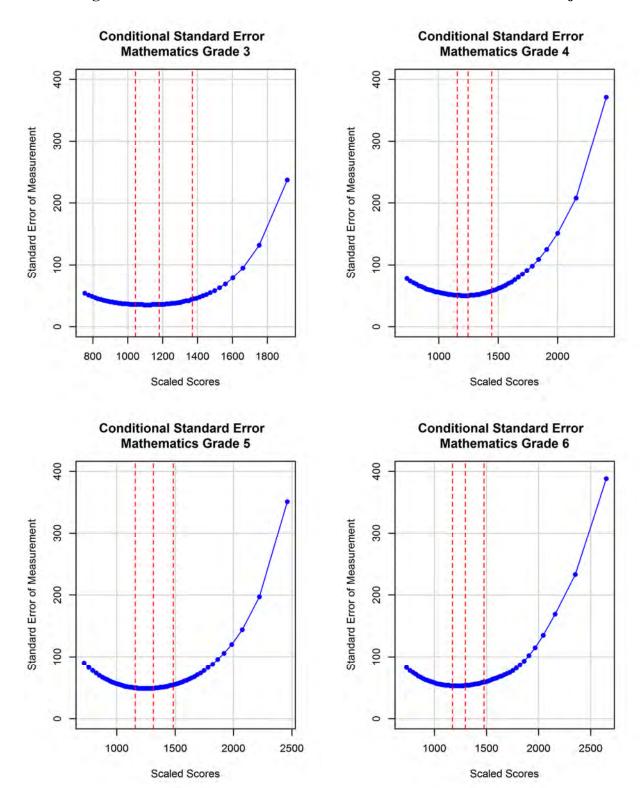
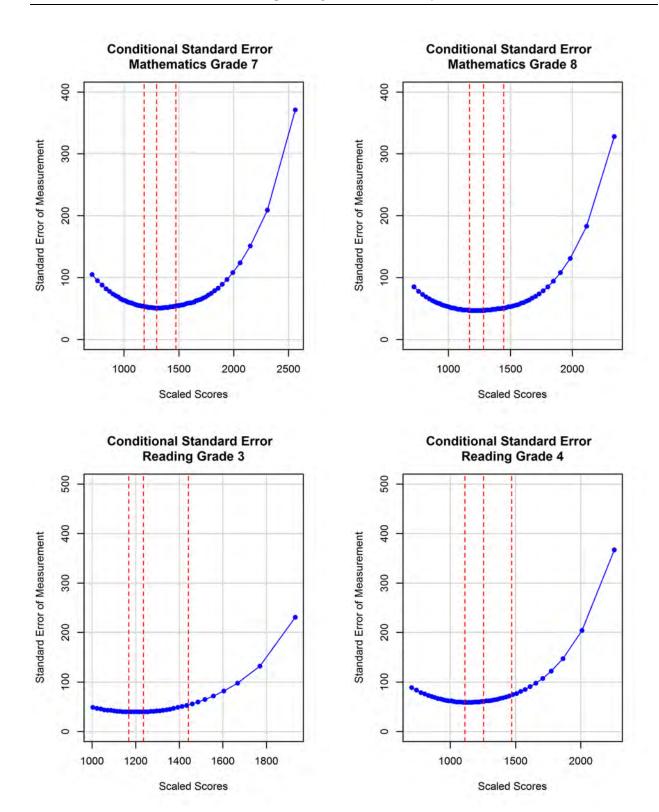
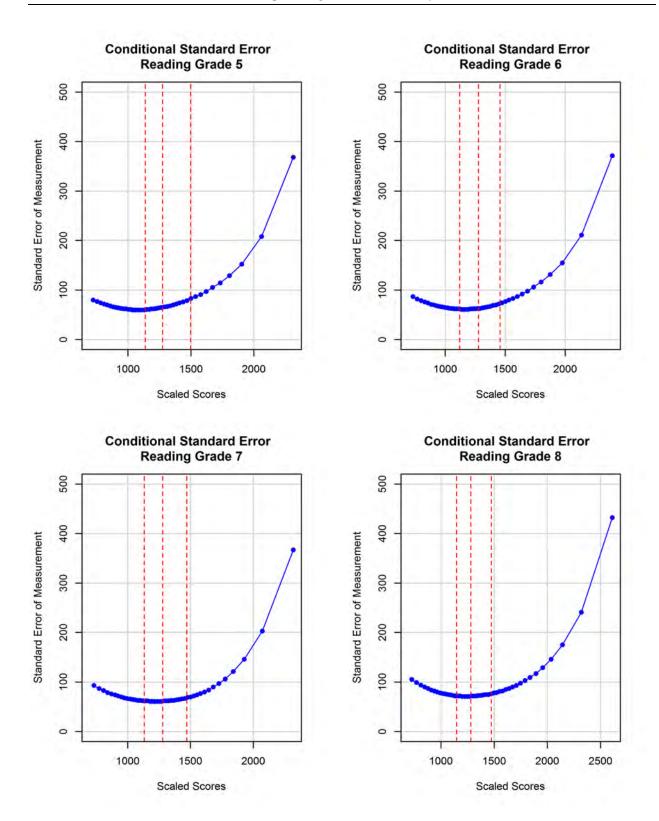
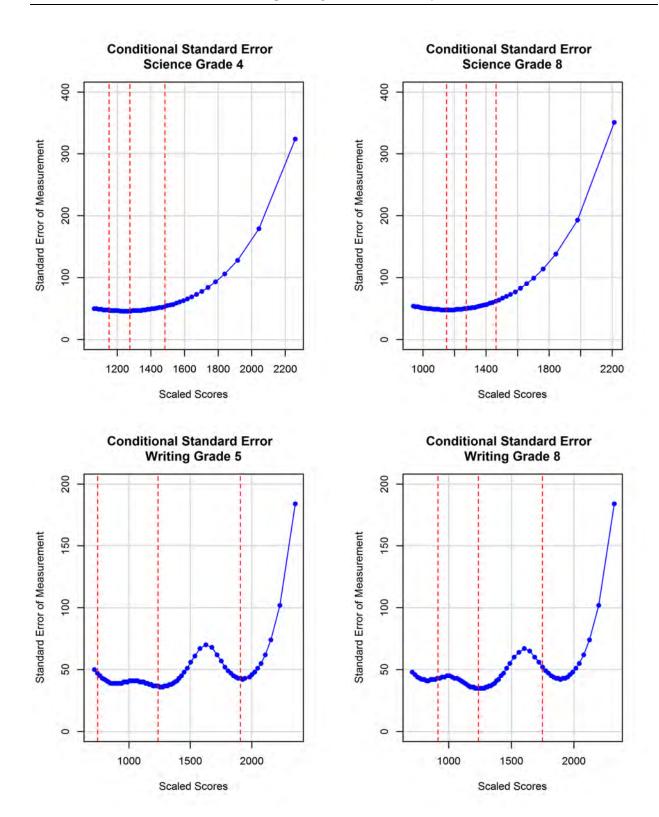


Figure 18-2. Conditional Standard Error Plots for Each Grade and Subject







#### **DECISION CONSISTENCY AND ACCURACY**

In a standards-based testing program there should be great interest in knowing how accurately students are classified into performance categories. In contrast to Coefficient Alpha that is concerned with the relative rank-ordering of students, it is the absolute values of student scores that are important in decision consistency and accuracy.

Classification consistency refers to the degree to which the achievement level for each student can be replicated upon retesting using an equivalent form (Huynh, 1976). Decision consistency answers the question: What is the agreement between the classifications based on two non-overlapping, equally difficult forms of the test. If two parallel forms of the test were given to the same students, the consistency of the measure would be reflected by the extent that the classification decisions made from the first set of test scores matched the decisions based on the second set of test scores. Consider Tables 18–5 and 18–6 below.

Table 18–5. Pseudo-Decision Table for Two Hypothetical Categories

|                  |          | TEST ONE |          |          |  |  |
|------------------|----------|----------|----------|----------|--|--|
|                  |          | LEVEL I  | LEVEL II | MARGINAL |  |  |
| <b>H</b> $\circ$ | LEVEL I  | φ11      | φ12      | φ1●      |  |  |
| ES               | LEVEL II | φ21      | φ22      | φ2●      |  |  |
|                  | MARGINAL | φ•1      | φ•2      | 1        |  |  |

Table 18-6. Pseudo-Decision Table for Four Hypothetical Categories

|              |           |         | TEST ONE |           |          |          |  |  |
|--------------|-----------|---------|----------|-----------|----------|----------|--|--|
|              |           | LEVEL I | LEVEL II | LEVEL III | LEVEL IV | MARGINAL |  |  |
|              | LEVEL I   | φ11     | φ12      | φ13       | φ14      | φ1●      |  |  |
| MO           | LEVEL II  | φ21     | φ22      | φ23       | φ24      | φ2●      |  |  |
| $\mathbf{T}$ | LEVEL III | φ31     | φ32      | φ33       | φ34      | φ3•      |  |  |
| TEST         | LEVEL IV  | φ41     | φ42      | φ43       | φ44      | φ4●      |  |  |
|              | MARGINAL  | φ•1     | φ•2      | φ●3       | φ●4      | 1        |  |  |

If a student is classified as being in one category based on Test One's score, how probable would it be that the student would be reclassified as being in the same category if he or she took Test Two (a non-overlapping, equally difficult form of the test)?

The proportions of correct decisions,  $\varphi$ , for two and four categories are computed by the following two formulas, respectively:

$$\begin{split} \phi &= \phi_{11} + \phi_{22} \\ \phi &= \phi_{11} + \phi_{22} + \phi_{33} + \phi_{44} \end{split}$$

It is the sum of the diagonal entries—that is, the proportion of students classified by the two forms into exactly the same achievement level—that signifies the overall consistency.

Classification accuracy refers to the agreement of the observed classifications of students with the classifications made on the basis of their true scores. An observed score contains measurement error while a true score is free of measurement error. A student's observed score can be formulated by the sum of his or her true score plus measurement error, or Observed = True + Error. Decision accuracy is an index to determine the extent to which measurement error causes a classification different than expected from the true score.

Since true scores are unobserved and since it is not feasible to repeat PSSA testing in order to estimate the proportion of students who would be reclassified in the same performance levels, a statistical model needs to be imposed on the data to estimate the true scores and to project the consistency and accuracy of classifications solely using data from the available administration (Hambleton & Novick, 1973). Although a number of procedures are available, one well-known method was developed by Livingston and Lewis (1995) utilizing a specific True Score Model. This approach is fairly complex, and the cited source contains details regarding the statistical model used to calculate decision consistency and accuracy from the single PSSA administration.

## Further Interpretations

Several factors might affect decision consistency and accuracy. One important factor is the reliability of the scores. All other things being equal, more reliable test scores tend to result in more similar reclassifications and less measurement error. Another factor is the location of the cut score in the score distribution. More consistent and accurate classifications are observed when the cut scores are located away from the mass of the score distribution. For example, when scores are close to being normally distributed, the mass is concentrated in the middle of the distribution, and, thus classifications tend to become more consistent when cut scores go up from 70 percent to 80 percent to 90 percent or, alternatively, go down from 30 percent to 20 percent to 10 percent. The number of performance levels is also a consideration. Consistency and accuracy indices for four performance levels should be lower than those based on two categories. This is not surprising since classification and accuracy using four levels would allow more opportunity to change achievement levels. Hence, there would be more classification errors and less accuracy with four achievement levels, resulting in lower consistency indices.

#### **RESULTS AND OBSERVATIONS**

The results for the overall consistency across all four performance levels as well as for the dichotomies created by the three cut scores are presented in Table 18–7. The tabled values are derived with the program *BB-Class* (Brennan, 2004) using the Livingston and Lewis method. Across all subject areas, the overall decision consistency ranged from the mid-0.60s to the high 0.70s while the decision accuracy ranged from the low 0.70s to the mid-0.80s. The overall consistency and accuracy in reading was slightly lower than the other subject areas on average. It should be noted that consistency and accuracy indices for the four performance levels should be lower than those based on two categories (discussed above).

Dichotomous decisions using the Below Basic/Basic cuts generally have the highest consistency and accuracy values and exceeded 0.90 in all cases. The next highest values, on average, are associated with the Basic/Proficient and Proficient/Advanced cuts, respectively, for mathematics, reading, and science. In writing, the latter two are reversed.

Table 18–7. Decision Consistency and Accuracy Results

|             | Grade | Statistic | Overall | BBas/Bas | Bas/Prof | Prof/Adv |
|-------------|-------|-----------|---------|----------|----------|----------|
|             | 3     | Consist.  | 0.79    | 0.96     | 0.93     | 0.90     |
|             |       | Accuracy  | 0.85    | 0.97     | 0.95     | 0.93     |
|             | 4     | Consist.  | 0.78    | 0.94     | 0.93     | 0.90     |
|             |       | Accuracy  | 0.84    | 0.96     | 0.95     | 0.93     |
| tics        | 5     | Consist.  | 0.78    | 0.94     | 0.92     | 0.91     |
| Mathematics |       | Accuracy  | 0.84    | 0.96     | 0.95     | 0.94     |
|             | 6     | Consist.  | 0.76    | 0.94     | 0.92     | 0.90     |
|             |       | Accuracy  | 0.83    | 0.96     | 0.94     | 0.93     |
|             | 7     | Consist.  | 0.77    | 0.94     | 0.92     | 0.91     |
|             | 1     | Accuracy  | 0.83    | 0.96     | 0.94     | 0.93     |
|             | 8     | Consist.  | 0.80    | 0.94     | 0.93     | 0.91     |
|             | o     | Accuracy  | 0.85    | 0.96     | 0.95     | 0.94     |
|             | 3     | Consist.  | 0.71    | 0.93     | 0.91     | 0.85     |
|             | 3     | Accuracy  | 0.79    | 0.95     | 0.94     | 0.89     |
|             | 4     | Consist.  | 0.69    | 0.93     | 0.90     | 0.85     |
|             | 4     | Accuracy  | 0.78    | 0.95     | 0.93     | 0.89     |
| 50          |       | Consist.  | 0.65    | 0.92     | 0.88     | 0.83     |
| Reading     | 5     | Accuracy  | 0.74    | 0.94     | 0.92     | 0.88     |
|             |       | Consist.  | 0.71    | 0.93     | 0.90     | 0.87     |
|             | 6     | Accuracy  | 0.79    | 0.95     | 0.93     | 0.91     |
|             | 7     | Consist.  | 0.71    | 0.94     | 0.90     | 0.87     |
|             |       | Accuracy  | 0.79    | 0.96     | 0.93     | 0.91     |
|             |       | Consist.  | 0.75    | 0.94     | 0.92     | 0.87     |
|             | 8     | Accuracy  | 0.82    | 0.96     | 0.94     | 0.91     |
| 4)          | 4     | Consist.  | 0.77    | 0.95     | 0.93     | 0.88     |
| cience      | 4     | Accuracy  | 0.84    | 0.97     | 0.95     | 0.92     |
| Scie        | 8     | Consist.  | 0.72    | 0.93     | 0.91     | 0.87     |
| <b>J</b> 1  | σ     | Accuracy  | 0.80    | 0.95     | 0.94     | 0.91     |
| <b>D</b> 0  | 5     | Consist.  | 0.75    | 0.98     | 0.81     | 0.95     |
| ting        |       | Accuracy  | 0.81    | 0.98     | 0.87     | 0.96     |
| Writing     | 8     | Consist.  | 0.69    | 0.96     | 0.84     | 0.89     |
|             |       | Accuracy  | 0.79    | 0.97     | 0.89     | 0.93     |

Note. Results derived using PSSA final data file (see Chapter Nine).

#### RATER AGREEMENT

Because open-ended items are included on the PSSAs, another source of random error is related to the scorers of those items. Frisbie (2005) noted that "test score reliability differs from scorer reliability" and that "the need for one kind of estimate cannot be satisfied by the other." Additionally, the data most easily obtainable that captures this information comes from the "10 percent read behinds" collected during the scoring process (see Chapter Eight for a description). Partly because of the way that this data is obtained and reported (i.e., it is not a ratio of true score variance over observed score variance), the term rater agreement is used here, not rater reliability, or inter-rater reliability, as these terms are somewhat misleading, as explained above.

## Further Interpretations

For the PSSAs, both within-year and across-year rater consistency are available. As noted earlier, the linking process adjusts for across-year changes (see Chapter Sixteen). As part of the data collected for that process, additional across-year rater consistency data is available for consideration.

#### **RESULTS AND OBSERVATIONS**

Within-year rater agreement information is provided in Chapter Eight. This information is reformatted in Tables 18–8 through 18–11 for PSSA mathematics, reading, science, and writing OE items, respectively. In addition, the percentages awarded to each score point are also presented in these tables. As seen from these tables, the inter-rater agreement percentages range from 87 percent to 97 percent for mathematics, 74 percent to 86 percent for reading, 78 percent to 97 percent for science, and 76 percent to 84 percent for writing. Mathematics had validity ranging from 84 percent to 98 percent; reading had validity ranging from 74 percent to 89 percent; and science had validity ranging from 90 percent to 99 percent. (Validity is discussed further in Chapter Eighteen.) The ranges above are similar to prior results for the PSSA.

Across-year data are presented in Tables 18–12 through 18–14 for mathematics, reading, and science. Note that for these subjects, data are only available for the designated OE core anchor items. In 2014, to align both sets of standards, there were no OE core anchor items with mathematics grade 4. With mathematics grades 5, 6, and 8, there was one, instead of two, OE core anchor items. The number of responses (N), the old score and new score means, and the Pearson correlations are tabled. Mathematics correlations range from 0.91 to 0.98. Reading correlations range from 0.69 to 0.84. Science correlations range from 0.73 to 0.97. Correlations for the writing prompt scores are reported in Table 18–15 and range from 0.63 to 0.73. The correlation ranges above are similar to prior results for the PSSAs.

Table 18–8. Inter-Rater Agreement and Percentage Awarded for Each Score Point for OE Items—Mathematics

|       |      | Inter-Rater<br>Agreement % |          |          | Percentage Awarded for Each Score<br>Point % |    |    |    |    |      |
|-------|------|----------------------------|----------|----------|--|----|----|----|----|------|
| Grade | Item | Exact                      | Adjacent | Validity | 0  | 1  | 2  | 3  | 4  | B/NS |
|       | 1    | 94                         | 6        | 91       | 14   | 21 | 21 | 29 | 14 | 1    |
| 3     | 2    | 94                         | 6        | 97       | 15   | 28 | 26 | 17 | 14 | 2    |
|       | 3    | 96                         | 4        | 97       | 2  | 7  | 23 | 23 | 44 | 1    |
|       | 1    | 92                         | 8        | 90       | 16   | 14 | 20 | 40 | 9  | 2    |
| 4     | 2    | 94                         | 5        | 95       | 4  | 14 | 17 | 26 | 31 | 8    |
|       | 3    | 87                         | 12       | 84       | 27   | 21 | 23 | 17 | 11 | 1    |
|       | 1    | 84                         | 16       | 92       | 13   | 22 | 24 | 23 | 17 | 1    |
| 5     | 2    | 94                         | 6        | 98       | 5  | 13 | 54 | 19 | 5  | 5    |
|       | 3    | 88                         | 13       | 92       | 27   | 30 | 17 | 18 | 7  | 1    |
|       | 1    | 97                         | 3        | 94       | 13   | 63 | 5  | 12 | 7  | 1    |
| 6     | 2    | 89                         | 11       | 92       | 12   | 34 | 26 | 20 | 2  | 6    |
|       | 3    | 93                         | 7        | 96       | 5  | 8  | 20 | 45 | 21 | 1    |
| 7     | 1    | 91                         | 9        | 95       | 26   | 45 | 10 | 13 | 4  | 2    |
|       | 2    | 87                         | 13       | 92       | 21   | 26 | 21 | 10 | 17 | 5    |
|       | 3    | 91                         | 9        | 95       | 18   | 8  | 27 | 36 | 10 | 1    |
|       | 1    | 90                         | 10       | 88       | 43   | 6  | 27 | 9  | 13 | 2    |
| 8     | 2    | 87                         | 13       | 93       | 13   | 35 | 20 | 16 | 10 | 5    |
|       | 3    | 89                         | 11       | 88       | 6  | 53 | 8  | 24 | 8  | 2    |

*Note*. B = blank; NS = non-scoreable

Table 18–9. Inter-Rater Agreement and Percentage Awarded for Each Score Point for OE Items—Reading

|       |      |       | r-Rater<br>ement % |          | Percentage Awarded for<br>Each Score Point % |    |    |    |      |
|-------|------|-------|--------------------|----------|--|----|----|----|------|
| Grade | Item | Exact | Adjacent           | Validity | 0  | 1  | 2  | 3  | B/NS |
| 3     | 1    | 78    | 22                 | 76       | 8  | 40 | 40 | 9  | 3    |
|       | 2    | 77    | 23                 | 82       | 6  | 41 | 41 | 10 | 2    |
|       | 1    | 81    | 19                 | 84       | 5  | 24 | 41 | 27 | 3    |
| 4     | 2    | 80    | 20                 | 81       | 5  | 20 | 42 | 30 | 3    |
| 4     | 3    | 80    | 20                 | 84       | 6  | 26 | 44 | 22 | 2    |
|       | 4    | 83    | 17                 | 87       | 12   | 33 | 33 | 19 | 3    |
|       | 1    | 78    | 22                 | 87       | 2  | 23 | 57 | 16 | 2    |
| 5     | 2    | 78    | 21                 | 81       | 7  | 25 | 53 | 13 | 2    |
|       | 3    | 80    | 20                 | 89       | 8  | 19 | 57 | 15 | 1    |
|       | 4    | 75    | 25                 | 79       | 14   | 40 | 34 | 10 | 2    |
|       | 1    | 77    | 23                 | 81       | 2  | 30 | 45 | 21 | 2    |
| -     | 2    | 81    | 18                 | 75       | 5  | 34 | 47 | 13 | 1    |
| 6     | 3    | 82    | 18                 | 82       | 5  | 32 | 53 | 10 | 0    |
|       | 4    | 83    | 17                 | 85       | 16   | 26 | 43 | 9  | 6    |
| 7     | 1    | 86    | 14                 | 86       | 2  | 49 | 27 | 21 | 1    |
|       | 2    | 78    | 22                 | 80       | 6  | 31 | 43 | 17 | 3    |
|       | 3    | 81    | 19                 | 86       | 7  | 30 | 35 | 26 | 2    |
|       | 4    | 82    | 18                 | 75       | 11   | 36 | 31 | 21 | 1    |
|       | 1    | 74    | 26                 | 89       | 7  | 35 | 42 | 14 | 2    |
| 8     | 2    | 77    | 23                 | 89       | 3  | 15 | 53 | 26 | 3    |
|       | 3    | 74    | 26                 | 81       | 7  | 29 | 46 | 16 | 2    |
|       | 4    | 78    | 22                 | 74       | 9  | 37 | 32 | 19 | 3    |

*Note.* B = blank; NS = non-scoreable.

Table 18–10. Inter-Rater Agreement and Percentage Awarded for Each Score Point for OE Items—Science

|       |      |       | er-Rater<br>ement % | _        | Percentage Awarded for Each Score Point % |    |    |      |  |  |
|-------|------|-------|---------------------|----------|---|----|----|------|--|--|
| Grade | Item | Exact | Adjacent            | Validity | 0   | 1  | 2  | B/NS |  |  |
|       | 1    | 95    | 5                   | 98       | 21  | 42 | 36 | 1    |  |  |
|       | 2    | 93    | 7                   | 96       | 13  | 38 | 47 | 1    |  |  |
| 4     | 3    | 96    | 4                   | 99       | 5   | 46 | 48 | 2    |  |  |
|       | 4    | 97    | 3                   | 99       | 23  | 35 | 40 | 1    |  |  |
|       | 5    | 83    | 17                  | 92       | 16  | 38 | 45 | 2    |  |  |
|       | 1    | 86    | 14                  | 94       | 11  | 27 | 60 | 2    |  |  |
|       | 2    | 78    | 21                  | 90       | 13  | 36 | 49 | 3    |  |  |
| 8     | 3    | 84    | 15                  | 95       | 33  | 34 | 29 | 4    |  |  |
|       | 4    | 86    | 14                  | 94       | 24  | 29 | 44 | 3    |  |  |
|       | 5    | 93    | 7                   | 98       | 26  | 36 | 35 | 3    |  |  |

Note. B = blank; NS = non-scoreable. For more information regarding validity, see the section on Handscoring Validity Process in Chapter Eight.

Table 18–11. Inter-Rater Agreement and Percentage Awarded for Each Score Point for OE Items—Writing

|       |         |       | r-Rater<br>ement % | Percentage Awarded for Each Score Point % |    |    |   |       |  |  |
|-------|---------|-------|--------------------|---|----|----|---|-------|--|--|
| Grade | Promp   | Exact | Adjacent           | 1   | 2  | 3  | 4 | NT/NS |  |  |
|       | 1 (Com) | 84    | 16                 | 6   | 41 | 46 | 4 | 2     |  |  |
| _     | 1 (R&E) | 82    | 18                 | 7   | 43 | 44 | 4 | 2     |  |  |
| 5     | 2 (Com) | 84    | 16                 | 7   | 45 | 41 | 4 | 2     |  |  |
|       | 2 (R&E) | 83    | 17                 | 8   | 45 | 41 | 4 | 2     |  |  |
|       | 1 (Com) | 83    | 17                 | 3   | 26 | 63 | 6 | 2     |  |  |
| 0     | 1 (R&E) | 79    | 21                 | 3   | 28 | 61 | 7 | 2     |  |  |
| 8     | 2 (Com) | 80    | 20                 | 4   | 34 | 55 | 6 | 2     |  |  |
|       | 2 (R&E) | 76    | 24                 | 5   | 33 | 55 | 6 | 2     |  |  |

*Note*. NT = not taken; NS = non-scoreable.

Table 18–12. Mathematics Mean Scores and Correlations

| Grade | Item ID | N    | Prev.<br>Mean | 2014<br>Mean | Corr. |
|-------|---------|------|---------------|--------------|-------|
| 3     | 1       | 1000 | 2.77          | 2.77         | 0.98  |
| 3     | 2       | 1000 | 2.14          | 2.16         | 0.95  |
| 5     | 1       | 1000 | 1.54          | 1.51         | 0.94  |
| 6     | 1       | 999  | 1.89          | 1.83         | 0.91  |
| 7     | 1       | 1000 | 1.72          | 1.72         | 0.94  |
|       | 2       | 999  | 2.22          | 2.24         | 0.95  |
| 8     | 1       | 1000 | 1.81*         | 1.80         | 0.91  |

<sup>\*</sup> OE linking item is from 2012.

Table 18–13. Reading Mean Scores and Correlations

| Grade | Item ID | N    | Prev.<br>Mean | 2014<br>Mean | Corr. |
|-------|---------|------|---------------|--------------|-------|
| 3     | 1       | 997  | 1.51          | 1.42         | 0.73  |
| 4     | 1       | 999  | 1.65          | 1.57         | 0.79  |
| 4     | 2       | 1000 | 1.93          | 1.87         | 0.84  |
| 5     | 1       | 1000 | 1.42          | 1.42         | 0.73  |
|       | 2       | 999  | 1.67          | 1.65         | 0.74  |
| 6     | 1       | 997  | 1.60          | 1.64         | 0.74  |
|       | 2       | 998  | 1.60          | 1.64         | 0.78  |
| 7     | 1       | 999  | 1.62          | 1.49         | 0.80  |
|       | 2       | 995  | 1.60          | 1.69         | 0.84  |
| 8     | 1       | 1000 | 1.56          | 1.57         | 0.69  |
| o     | 2       | 999  | 1.60          | 1.62         | 0.79  |

**Table 18–14. Science Mean Scores and Correlations** 

| Grade | Item ID | N    | Prev.<br>Mean | 2014<br>Mean | Corr. |
|-------|---------|------|---------------|--------------|-------|
|       | 1       | 1000 | 1.27          | 1.29         | 0.73  |
| 4     | 2       | 1000 | 1.13          | 1.13         | 0.97  |
| 8     | 1       | 999  | 0.98          | 0.97         | 0.82  |
|       | 2       | 1000 | 1.19          | 1.15         | 0.92  |

Table 18–15. Writing Mean Scores and Correlations

| Grade | Item ID | N    | Prev.<br>Mean | 2014<br>Mean | Corr. |
|-------|---------|------|---------------|--------------|-------|
|       | 1-A     | 998  | 2.52          | 2.38         | 0.72  |
| 5     | 1-B     | 998  | 2.56          | 2.38         | 0.71  |
| 5     | 2-A     | 1000 | 2.67          | 2.52         | 0.70  |
|       | 2-B     | 1000 | 2.64          | 2.47         | 0.69  |
|       | 1-A     | 999  | 2.69          | 2.59         | 0.73  |
| Q     | 1-B     | 999  | 2.66          | 2.61         | 0.69  |
| 8     | 2-A     | 1000 | 2.81          | 2.82         | 0.64  |
|       | 2-B     | 1000 | 2.75          | 2.77         | 0.63  |

## Chapter Nineteen: Validity

As defined in the *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 1999), validity refers to "the degree to which evidence and theory support the interpretation of test scores entailed by proposed uses of tests" (p. 9). The *Standards* provides a framework for describing the sources of evidence that should be considered when evaluating validity. These sources include evidence based on 1) test content, 2) response processes, 3) the internal structure of the test, 4) the relationships between test scores and other variables, and 5) the consequences of testing. In addition, when Item Response Theory (IRT) models are used to analyze assessment data, validity considerations related to those processes should also be explored.

The validity process involves the collection of a variety of evidence to support the proposed test score interpretations and uses. This entire technical report describes the technical aspects of the PSSA tests in support of their score interpretations and uses. Each of the previous chapters contributes important evidence components that pertain to score validation: test development, test administration, test scoring, item analysis, Rasch calibration, scaling, linking, score reporting, and reliability. This chapter summarizes and synthesizes the evidence based on the *Standards*' framework. The purposes and intended uses of PSSA test scores are reviewed first, then each type of validity evidence is addressed in turn.

### PURPOSES AND INTENDED USES OF THE PSSA

The *Standards* emphasize that validity pertains to how test scores are used. To help contextualize the evidence that will be presented below, the purposes of the PSSA will be reviewed first. As stated in Chapter One, the three main purposes of the PSSA include the following:

- 1. Measuring how well students acquire the knowledge and skills described in the *Pennsylvania Assessment Anchor Content Standards* (Assessment Anchors) as defined by the Eligible Content for Mathematics, Reading, and Science and the Academic Content Standards for Writing.
- 2. Providing information on school and district accountability.
- **3.** Improving curricular and instructional practices in order to help students reach proficiency in the Academic Standards.

### **EVIDENCE BASED ON TEST CONTENT**

Test content validity evidence for the PSSA rests greatly on establishing a link between each piece of the assessment (i.e., the items) and what the students should know and be able to do as required by the Assessment Anchors, Eligible Content, and/or the Academic Content Standards. The PSSA tests are intended to measure students' knowledge and skills described in the Assessment Anchors as defined by the Eligible Content for Mathematics, Reading, and Science and the Academic Content Standards for Writing. Thus the evidence supporting the alignment among the PSSA tasks, the Assessment Anchors as defined by the Eligible Content, and the Academic Content Standards should be provided.

Lane (1999) suggests taking the following steps to support the content validity of the PSSA:

- Evaluate the degree to which the PSSA test specifications represent and align with the knowledge and skills described in the Assessment Anchors as defined by the Eligible Content for Mathematics, Reading, and Science and the Academic Content Standards for Writing in terms of both content and cognitive processes.
- Evaluate the alignment between the PSSA items and test specifications to ensure representativeness.
- Evaluate the extent to which the curriculum aligns with the Assessment Anchors. If some contents are not included in the curriculum, then low scores on the PSSA should not be interpreted as meaning that instruction was ineffective.
- Conduct content reviews of the PSSA items using a panel of content experts to see whether they measure the intended construct or are the sources of construct-irrelevant variance.
- Conduct fairness reviews of the items to avoid issues related to a specific subpopulation.
- Evaluate procedures for administration and scoring, such as the appropriateness of instructions to examinees, time limit for the assessment, and training of raters.
- Submit operational tests to third-party, independent reviews (i.e., Achieve.org).

Chapters Two through Eight of this report present a considerable amount of evidence related to test content. As described in these chapters, all the PSSA items were developed and aligned with the PSSA Assessment Anchors and Eligible Content for Mathematics, Reading, and Science and the Academic Content Standards for Writing following well-established procedures. After the items were developed, they underwent multiple rounds of content and bias reviews. After they were field tested, they were reviewed with respect to their statistical properties. Items selected for the operational assessment had to pass content, psychometric, and PDE reviews. Tests were administered according to standardized procedures with allowable accommodations.

Some efforts made to ensure content validity are summarized below:

- DRC used Webb's (1999) Depth of Knowledge (DOK) model to ensure the PSSA items aligned with the Assessment Anchors as defined by the Eligible Content and the Academic Content Standards in terms of both content and cognitive levels.
- DRC established detailed test and item/passage development specifications and ensured the items were sufficient in number and adequately distributed across content and levels of cognitive complexity and difficulty.
- DRC and WestEd selected qualified item writers and provided training to help ensure they wrote high-quality items.
- Each newly developed item was first reviewed by content specialists and editors at DRC and/or WestEd to make sure that all items measured the intended Assessment Anchors, as defined by the Eligible Content for Mathematics, Reading, and Science and the Academic Content Standards for Writing. Appropriateness for the intended grade was also considered, as well as depth of knowledge, graphics, grammar/punctuation, language demand, and distractor reasonableness.

- Before field testing, the test items were submitted to content committees (composed of Pennsylvania educators) for review using, but not limited to, the following categories:
  - o Overall quality and clarity
  - o Anchor, eligible content, and/or standard alignment
  - o Grade-level appropriateness
  - o Difficulty level
  - Depth of knowledge
  - o Appropriate sources of challenge (e.g., unintended content and skills)
  - o Correct answer
  - Quality of distractors
  - o Graphics
  - o Appropriate language demand
  - Freedom from bias
- The items were also submitted to a Bias, Fairness, and Sensitivity Committee for review. This committee reviewed items for issues related to diversity, gender, and other pertinent factors.
- Items passing all the prior hurdles were tried out in a field-test event. Several statistical analyses were conducted on the field-test data, including classical item analyses, distractor analyses, and differential item functioning (DIF). Items were once again carefully reviewed by DRC staff and a committee of Pennsylvania teachers with respect to their statistical characteristics. DIF was used to detect test items that might bias test scores for particular groups. Empirical investigation of DIF strengthens the validity evidence related to score interpretations for students in particular groups by eliminating potential sources of construct-irrelevant variance; as such, DIF results might be better considered as internal structure validity evidence.
- The PSSA tests were administered according to standardized procedures with allowable accommodations. Students were given ample time to complete the tests (i.e., there were no speededness issues).
- As shown in Chapter Eight, the raters for open-ended (OE) items were carefully recruited and well trained. Their scoring was monitored throughout the scoring session to ensure that an acceptable level of scoring accuracy was maintained.

### EVIDENCE BASED ON RESPONSE PROCESSES

Response-process evidence is used to examine the extent to which the cognitive skills and processes employed by students match those identified in the test developer's defined construct domains for all students and for each subgroup. Think-aloud procedures or cognitive labs can be used to collect this type of evidence. In addition, when an assessment includes OE items, an examination of the extent to which the raters interpret and apply the scoring criteria accurately when assigning scores to students' responses on OE items also provides validity of the response-processes evidence.

For the PSSA science tests, DRC conducted a science cognitive lab study to gather relative information about the thinking processes students used to solve science scenario items. The use of the cognitive lab helped ensure that the intended response processes were employed by students. (No cognitive lab studies have been conducted for the PSSA mathematics, reading, or writing assessments because these assessments do not have scenarios.)

For all the PSSA tests, well-organized scorer training and subsequent monitoring of rating accuracy helped ensure that raters strictly followed the scoring criteria and that no rubric-unrelated features significantly affected their scoring.

### EVIDENCE BASED ON INTERNAL STRUCTURE

As described in the *Standards* (1999), internal-structure evidence refers to the degree to which the relationships between test items and test components conform to the construct on which the proposed test interpretations are based. For each PSSA test, one total test score as well as strand scores are reported (see Chapter Sixteen for more information about PSSA scores). Several dimensionality studies were conducted in order to provide internal-structure evidence relating to the use of both types of scores.

### Item-Test Correlations

Item-test correlations are reviewed in Chapter Eleven. All values are positive and of acceptable magnitude.

### Item Response Theory Dimensionality

Results from principle components analyses conducted using WINSTEPS were presented in Chapter Twelve. The PSSA mathematics, reading, and science tests were essentially unidimensional, providing evidence supporting interpretations based on the total scores for the respective PSSA tests. (Writing was not studied for reasons discussed in Chapter Twelve. However, one might expect some dimensionality issues because the writing MC items and Prompt tasks are so different.)

### Strand Correlations

Correlations and disattenuated correlations between strand scores within each subject area are presented in Tables 19–1a through 19–1f and Tables 19–2a through 19–2f. Values were derived from the PSSA final data file (see Chapter Nine). This data can also provide information on score dimensionality that is part of internal-structure evidence. As noted in Chapter Three, typically the PSSA mathematics tests have five strands (denoted by M.A, M.B, M.C, M.D, and M.E). However the cores for 2014 had to align to both the current set of standards and the next set of standards. As such, there were some strands that ended up with zero items eligible for use in mathematics and therefore no items for those strands were selected for the 2014 cores. Grades 3 and 7 mathematics have 4 domains (A, B, D, and E) and grades 6 and 8 mathematics have 4 domains (A, C, D, and E). The PSSA reading tests have two strands (denoted by R.A and R.B), the PSSA science tests have four strands (denoted by S.A, S.B, S.C, and S.D), and the PSSA writing tests include two strands (denoted by W.A and W.B).

For each grade, Pearson's correlation coefficients between these strands are reported in Tables 19–1a through 19–1f. The inter-correlations between the strands within the content areas are positive and generally range from moderate to high in value.

Table 19-1a. Correlations between Mathematics and Reading Strands for Grade 3

|     | M.A  | M.B  | M.C | M.D  | M.E  | R.A  | R.B |
|-----|------|------|-----|------|------|------|-----|
| M.A | -    |      |     |      |      |      |     |
| M.B | 0.74 | -    |     |      |      |      |     |
| M.C | -    | -    | -   |      |      |      |     |
| M.D | 0.79 | 0.60 | -   | -    |      |      |     |
| M.E | 0.75 | 0.57 | -   | 0.69 | -    |      |     |
| R.A | 0.74 | 0.55 | -   | 0.67 | 0.64 | -    |     |
| R.B | 0.70 | 0.51 | -   | 0.65 | 0.64 | 0.82 | -   |

Table 19–1b. Correlations between Mathematics, Reading, and Science Strands for Grade 4

|     | M.A  | M.B  | M.C  | M.D  | M.E  | R.A  | R.B  | S.A  | S.B  | S.C  | S.D |
|-----|------|------|------|------|------|------|------|------|------|------|-----|
| M.A | -    |      |      |      |      |      |      |      |      |      |     |
| M.B | 0.76 | -    |      |      |      |      |      |      |      |      |     |
| M.C | 0.66 | 0.58 | -    |      |      |      |      |      |      |      |     |
| M.D | 0.78 | 0.64 | 0.59 | -    |      |      |      |      |      |      |     |
| M.E | 0.69 | 0.57 | 0.53 | 0.60 | -    |      |      |      |      |      |     |
| R.A | 0.77 | 0.64 | 0.61 | 0.67 | 0.61 | -    |      |      |      |      |     |
| R.B | 0.70 | 0.58 | 0.54 | 0.62 | 0.57 | 0.80 | -    |      |      |      |     |
| S.A | 0.78 | 0.65 | 0.63 | 0.67 | 0.63 | 0.81 | 0.71 | -    |      |      |     |
| S.B | 0.68 | 0.56 | 0.54 | 0.59 | 0.55 | 0.73 | 0.64 | 0.81 | -    |      |     |
| S.C | 0.65 | 0.54 | 0.54 | 0.57 | 0.53 | 0.68 | 0.61 | 0.76 | 0.70 | -    |     |
| S.D | 0.65 | 0.55 | 0.54 | 0.56 | 0.51 | 0.68 | 0.58 | 0.76 | 0.69 | 0.65 | -   |

Table 19–1c. Correlations between Mathematics, Reading, and Writing Strands for Grade 5

|     | M.A  | M.B  | M.C  | M.D  | M.E  | R.A  | R.B  | W.A  | W.B |
|-----|------|------|------|------|------|------|------|------|-----|
| M.A | -    |      |      |      |      |      |      |      |     |
| M.B | 0.77 | -    |      |      |      |      |      |      |     |
| M.C | 0.72 | 0.61 | -    |      |      |      |      |      |     |
| M.D | 0.79 | 0.69 | 0.65 | -    |      |      |      |      |     |
| M.E | 0.72 | 0.65 | 0.58 | 0.65 | -    |      |      |      |     |
| R.A | 0.74 | 0.64 | 0.64 | 0.68 | 0.63 | -    |      |      |     |
| R.B | 0.72 | 0.61 | 0.63 | 0.67 | 0.61 | 0.83 | -    |      |     |
| W.A | 0.56 | 0.46 | 0.48 | 0.52 | 0.45 | 0.59 | 0.61 | -    |     |
| W.B | 0.73 | 0.61 | 0.62 | 0.66 | 0.60 | 0.77 | 0.76 | 0.76 | -   |

Table 19-1d. Correlations between Mathematics and Reading Strands for Grade 6

|     | M.A  | M.B | M.C  | M.D  | M.E  | R.A  | R.B |
|-----|------|-----|------|------|------|------|-----|
| M.A | -    |     |      |      |      |      |     |
| M.B | -    | -   |      |      |      |      |     |
| M.C | 0.57 | -   | -    |      |      |      |     |
| M.D | 0.81 | -   | 0.54 | -    |      |      |     |
| M.E | 0.76 | -   | 0.54 | 0.70 | -    |      |     |
| R.A | 0.73 | -   | 0.48 | 0.74 | 0.65 | -    |     |
| R.B | 0.72 | -   | 0.48 | 0.72 | 0.64 | 0.85 | -   |

Table 19-1e. Correlations between Mathematics and Reading Strands for Grade 7

|     | M.A  | M.B  | M.C | M.D  | M.E  | R.A  | R.B |
|-----|------|------|-----|------|------|------|-----|
| M.A | -    |      |     |      |      |      |     |
| M.B | 0.77 | -    |     |      |      |      |     |
| M.C | -    | -    | -   |      |      |      |     |
| M.D | 0.80 | 0.79 | -   | -    |      |      |     |
| M.E | 0.76 | 0.74 | -   | 0.79 | -    |      |     |
| R.A | 0.71 | 0.69 | -   | 0.74 | 0.69 | -    |     |
| R.B | 0.68 | 0.67 | -   | 0.71 | 0.67 | 0.84 | -   |

Table 19–1f. Correlations between Mathematics, Reading, Science, and Writing Strands for Grade 8

|     | M.A  | M.B | M.C  | M.D  | M.E  | R.A  | R.B  | S.A  | S.B  | S.C  | S.D  | W.A  | W.B |
|-----|------|-----|------|------|------|------|------|------|------|------|------|------|-----|
| M.A | -    |     |      |      |      |      |      |      |      |      |      |      |     |
| M.B | -    | -   |      |      |      |      |      |      |      |      |      |      |     |
| M.C | 0.64 | -   | -    |      |      |      |      |      |      |      |      |      |     |
| M.D | 0.76 | -   | 0.67 | -    |      |      |      |      |      |      |      |      |     |
| M.E | 0.64 | -   | 0.59 | 0.73 | -    |      |      |      |      |      |      |      |     |
| R.A | 0.62 | -   | 0.55 | 0.72 | 0.64 | -    |      |      |      |      |      |      |     |
| R.B | 0.61 | -   | 0.55 | 0.71 | 0.64 | 0.83 | -    |      |      |      |      |      |     |
| S.A | 0.66 | -   | 0.60 | 0.76 | 0.71 | 0.79 | 0.79 | -    |      |      |      |      |     |
| S.B | 0.55 | -   | 0.49 | 0.63 | 0.60 | 0.69 | 0.70 | 0.78 | -    |      |      |      |     |
| S.C | 0.56 | -   | 0.53 | 0.63 | 0.60 | 0.64 | 0.65 | 0.76 | 0.65 | -    |      |      |     |
| S.D | 0.56 | -   | 0.52 | 0.63 | 0.61 | 0.67 | 0.68 | 0.79 | 0.69 | 0.69 | -    |      |     |
| W.A | 0.50 | -   | 0.45 | 0.56 | 0.47 | 0.63 | 0.60 | 0.56 | 0.49 | 0.45 | 0.46 | -    |     |
| W.B | 0.63 | -   | 0.57 | 0.71 | 0.62 | 0.76 | 0.76 | 0.75 | 0.65 | 0.61 | 0.63 | 0.73 | -   |

The correlations in Tables 19–1a through 19–1f are based on the observed strand scores. These observed-score correlations are weakened by existing measurement error contained within each strand. As a result, disattenuating the observed correlations can provide an estimate of the relationships between strands if there were no measurement error. (An important caveat is provided further below.) The disattenuated correlation coefficients ( $R_{xy}$ ) can be computed by using the formula (Spearman 1904, 1910) below:

$$R_{xy} = \frac{r_{xy}}{\sqrt{r_{xx}r_{yy}}},$$

where  $r_{xy}$  is the observed correlation, and  $r_{xx}$  and  $r_{yy}$  are the reliabilities for strand X and strand Y. Disattenuated correlations very near 1.00 might suggest that the same or very similar constructs are being measured. Values somewhat less than 1.00 might suggest that different strands are measuring slightly different aspects of the same construct. Values markedly less than 1.00 might suggest the strands reflect different constructs.

Tables 19–2a through 19–2f show the corresponding disattenuated correlations for the 2014 PSSA tests for each grade. Given that none of these strands has perfect reliabilities (see Chapter Eighteen), the disattenuated strand correlations are higher than their observed score counterparts.

Some within-subject correlations are very high (e.g., above 0.95), suggesting that the withinsubject strands might be measuring essentially the same construct. This, in turn, suggests that some strand scores might not provide unique information about the strengths or weaknesses of students.

On the other hand, some within-subject strand correlations are somewhat lower than 1.00. For such strands, partial evidence is provided regarding the multidimensional structure of some tests and further supporting the validity of those specific strand scores.

On a fairly consistent basis, the correlations between the strands within each subject area were higher than the correlations between strands across different subject areas. In general, within-subject strand disattenuated correlations are higher than across-subject strand disattenuated correlations. As a specific example, Grade 3 disattenuated correlations for the M.A, M.B, M.D, and M.E strands range from 0.77 to 1.07 and the correlations between R.A and R.B was 0.98. In contrast, the disattenuated correlations between the two reading strands with the five mathematics strands range from 0.64 to 0.95. Such a pattern is expected since the two subject-area tests were designed to measure different constructs. Similar patterns are also observed at other grade levels.

Table 19–2a. Disattenuated Strand Correlations for Mathematics and Reading: Grade 3

|     | M.A  | M.B  | M.C | M.D  | M.E  | R.A  | R.B |
|-----|------|------|-----|------|------|------|-----|
| M.A | -    |      |     |      |      |      |     |
| M.B | 0.86 | -    |     |      |      |      |     |
| M.C | -    | -    | -   |      |      |      |     |
| M.D | 1.06 | 0.87 | -   | -    |      |      |     |
| M.E | 0.95 | 0.77 | -   | 1.07 | -    |      |     |
| R.A | 0.82 | 0.65 | -   | 0.92 | 0.83 | -    |     |
| R.B | 0.83 | 0.64 | -   | 0.95 | 0.88 | 0.98 | -   |

Table 19–2b. Disattenuated Strand Correlations for Mathematics, Reading, and Science: Grade 4

|     | M.A  | M.B  | M.C  | M.D  | M.E  | R.A  | R.B  | S.A  | S.B  | S.C  | S.D |
|-----|------|------|------|------|------|------|------|------|------|------|-----|
| M.A | -    |      |      |      |      |      |      |      |      |      |     |
| M.B | 0.98 | -    |      |      |      |      |      |      |      |      |     |
| M.C | 0.83 | 0.83 | -    |      |      |      |      |      |      |      |     |
| M.D | 0.98 | 0.93 | 0.83 | -    |      |      |      |      |      |      |     |
| M.E | 1.01 | 0.97 | 0.87 | 1.00 | -    |      |      |      |      |      |     |
| R.A | 0.86 | 0.83 | 0.77 | 0.85 | 0.91 | -    |      |      |      |      |     |
| R.B | 0.87 | 0.83 | 0.75 | 0.87 | 0.93 | 1.00 | -    |      |      |      |     |
| S.A | 0.88 | 0.84 | 0.79 | 0.85 | 0.93 | 0.91 | 0.88 | -    |      |      |     |
| S.B | 0.84 | 0.80 | 0.75 | 0.82 | 0.90 | 0.91 | 0.88 | 1.01 | -    |      |     |
| S.C | 0.85 | 0.81 | 0.78 | 0.84 | 0.91 | 0.89 | 0.88 | 0.99 | 1.01 | -    |     |
| S.D | 0.85 | 0.82 | 0.79 | 0.81 | 0.88 | 0.89 | 0.84 | 1.00 | 0.99 | 0.98 | -   |

Table 19–2c. Disattenuated Strand Correlations for Mathematics, Reading, and Writing: Grade 5

|     | M.A  | M.B  | M.C  | M.D  | M.E  | R.A  | R.B  | W.A  | W.B |
|-----|------|------|------|------|------|------|------|------|-----|
| M.A | -    |      |      |      |      |      |      |      |     |
| M.B | 0.94 | -    |      |      |      |      |      |      |     |
| M.C | 0.97 | 0.91 | -    |      |      |      |      |      |     |
| M.D | 0.97 | 0.95 | 0.98 | -    |      |      |      |      |     |
| M.E | 0.95 | 0.94 | 0.93 | 0.96 | -    |      |      |      |     |
| R.A | 0.84 | 0.81 | 0.89 | 0.87 | 0.85 | -    |      |      |     |
| R.B | 0.84 | 0.79 | 0.89 | 0.87 | 0.85 | 1.00 | -    |      |     |
| W.A | 0.69 | 0.63 | 0.73 | 0.71 | 0.66 | 0.75 | 0.80 | -    |     |
| W.B | 0.84 | 0.79 | 0.89 | 0.87 | 0.84 | 0.93 | 0.94 | 1.00 | -   |

**Table 19–2d. Disattenuated Strand Correlations for Mathematics and Reading: Grade 6** 

|     | M.A  | M.B | M.C  | M.D  | M.E  | R.A  | R.B |
|-----|------|-----|------|------|------|------|-----|
| M.A | -    |     |      |      |      |      |     |
| M.B | -    | -   |      |      |      |      |     |
| M.C | 0.70 | -   | -    |      |      |      |     |
| M.D | 0.98 | -   | 0.70 | -    |      |      |     |
| M.E | 0.89 | -   | 0.67 | 0.87 | -    |      |     |
| R.A | 0.84 | -   | 0.59 | 0.90 | 0.76 | -    |     |
| R.B | 0.84 | -   | 0.61 | 0.90 | 0.77 | 1.01 | -   |

Table 19–2e. Disattenuated Strand Correlations for Mathematics and Reading: Grade 7

|     | M.A  | M.B  | M.C | M.D  | M.E  | R.A  | R.B |
|-----|------|------|-----|------|------|------|-----|
| M.A | -    |      |     |      |      |      |     |
| M.B | 0.94 | -    |     |      |      |      |     |
| M.C | -    | _    | _   |      |      |      |     |
| M.D | 0.96 | 0.95 | _   | _    |      |      |     |
| M.E | 0.99 | 0.95 | -   | 1.00 | _    |      |     |
| R.A | 0.86 | 0.83 | -   | 0.86 | 0.88 | -    |     |
| R.B | 0.86 | 0.83 | -   | 0.87 | 0.88 | 1.02 | -   |

Table 19–2f. Disattenuated Strand Correlations for Mathematics, Reading, Science, and Writing: Grade 8

|     | M.A  | M.B | M.C  | M.D  | M.E  | R.A  | R.B  | S.A  | S.B  | S.C  | S.D  | W.A  | W.B |
|-----|------|-----|------|------|------|------|------|------|------|------|------|------|-----|
| M.A | -    |     |      |      |      |      |      |      |      |      |      |      |     |
| M.B | -    | -   |      |      |      |      |      |      |      |      |      |      |     |
| M.C | 0.79 | -   | -    |      |      |      |      |      |      |      |      |      |     |
| M.D | 0.90 | -   | 0.76 | -    |      |      |      |      |      |      |      |      |     |
| M.E | 0.86 | -   | 0.75 | 0.90 | -    |      |      |      |      |      |      |      |     |
| R.A | 0.77 | -   | 0.66 | 0.83 | 0.82 | -    |      |      |      |      |      |      |     |
| R.B | 0.77 | -   | 0.66 | 0.82 | 0.82 | 1.01 | -    |      |      |      |      |      |     |
| S.A | 0.80 | -   | 0.69 | 0.84 | 0.88 | 0.92 | 0.93 | -    |      |      |      |      |     |
| S.B | 0.75 | -   | 0.64 | 0.80 | 0.84 | 0.92 | 0.93 | 1.00 | -    |      |      |      |     |
| S.C | 0.78 | -   | 0.70 | 0.81 | 0.87 | 0.86 | 0.88 | 0.99 | 0.96 | -    |      |      |     |
| S.D | 0.74 | -   | 0.66 | 0.77 | 0.84 | 0.86 | 0.88 | 0.98 | 0.97 | 0.98 | -    |      |     |
| W.A | 0.67 | -   | 0.58 | 0.70 | 0.65 | 0.81 | 0.78 | 0.70 | 0.70 | 0.64 | 0.63 | _    |     |
| W.B | 0.79 | -   | 0.68 | 0.83 | 0.80 | 0.93 | 0.93 | 0.88 | 0.87 | 0.83 | 0.82 | 0.95 | -   |

Some caution is needed in interpreting the disattenuated results because the reliabilities used to calculate the disattenuated correlations are subject to both upward and downward biases. (These are discussed in some detail in Chapter Eighteen.) Consequently, some of the values tabled above may be higher or lower than they should be, depending on which bias prevails for any given pair of strand scores. When the reliabilities are lower than they should be, the disattenuated correlations will be inflated (and in some instances can appear larger than the theoretical correlation maximum value of 1.00).

### **Exploratory Factor Analysis**

In order to further explore the internal structure of the PSSA tests, an exploratory factor analysis (EFA) of the strand scores across all the PSSA subject areas was conducted. The PSSA final data file (see Chapter Nine) was used to create the observed correlation matrices shown in Tables 19–1a through 19–1f, which in turn were used in the EFAs. In SPSS, Principle Axis Factor extraction was utilized with an oblique rotation (Promax) of the initial factor solution to improve interpretability. Oblique rotations allow for correlated factors which seemed more appropriate for the PSSA tests because of a priori expectations that academic achievement across subject areas should be correlated.

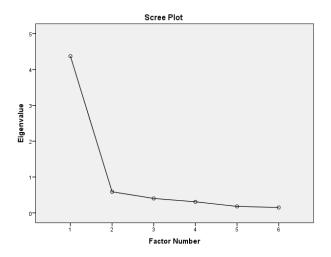
Table 19–3 presents the eigenvalues and the explained variance for the extracted factors for the Grade 3 PSSA tests. The Scree Plot graphing the eigenvalues against the factor number is shown in Figure 19–1. The first factor accounted for about 73 percent of the total variance, while the second factor explained about 10 percent of the total variance. Only the first factor had an eigenvalue greater than 1.0, typically suggesting a one-factor solution using the Kaiser criterion. However, the one-factor solution resulted in many large fitted residual values in the reproduced correlation matrix: 14 of 15 residuals were greater than absolute value 0.005 with one as large as 0.14, while two-factor solution had only 7 out of 15 residuals larger than absolute value 0.005.

Based on this finding and the prior belief that there should be two distinct factors at Grade 3 (one for mathematics and another for reading), a two-factor solution was further explored.

Table 19–3. Eigenvalues and Explained Variance for Grade 3

Figure 19–1. Scree Plot for Grade 3

| Factor | Eigenvalue | %     |
|--------|------------|-------|
| 1      | 4.37       | 72.86 |
| 2      | 0.59       | 9.80  |
| 3      | 0.40       | 6.70  |
| 4      | 0.31       | 5.14  |
| 5      | 0.18       | 3.00  |
| 6      | 0.15       | 2.51  |



The Pattern loadings resulting from the two-factor solution are presented in Table 19–4a. The Pattern loadings have simple structure which show that the five mathematics strands clearly loaded on the first factor while the two reading strands clearly loaded on the second factor. The respective factor loadings are quite high. The factor correlation matrix shows that the correlation between the two latent factors is 0.77, which is similar to the observed correlation between mathematics and reading (0.76 as seen Table 19–5) but just lower than the disattenuated correlation.

Table 19-4a. Pattern Matrix and Factor Correlation for Grade 3

|                               | Factor |       |  |  |  |  |
|-------------------------------|--------|-------|--|--|--|--|
| Domain                        | 1      | 2     |  |  |  |  |
| Mathematics                   |        |       |  |  |  |  |
| M.A                           | 0.93   | 0.05  |  |  |  |  |
| M.B                           | 0.79   | -0.05 |  |  |  |  |
| M.D                           | 0.67   | 0.20  |  |  |  |  |
| M.E                           | 0.61   | 0.23  |  |  |  |  |
| Reading                       |        |       |  |  |  |  |
| R.A                           | 0.16   | 0.76  |  |  |  |  |
| R.B                           | -0.04  | 0.96  |  |  |  |  |
| Correlation $(F1, F2) = 0.77$ |        |       |  |  |  |  |

Other grades have similar results. The eigenvalue scree plots consistently indicate a one-factor solution. This possibly resulted because of the high correlations between the PSSA subjects. (The eigenvalues and explained variances are not shown for the other grades due to space considerations.) The pattern matrices and the factor correlations are reported in Tables 19–4b through 19–4f for the remaining five grades, respectively. The Pattern loadings clearly suggested that the PSSA tests measured different but correlated constructs.

Table 19-4b. Pattern Matrix and Factor Correlations for Grade 4

|  |      | Factor              |            |
|--|------|---------------------|------------|
| Domain   | 1    | 2                   | 3          |
| Mathematics  |      |                     |            |
| M.A  | 0.89 | 0.06                | 0.02       |
| M.B  | 0.76 | 0.04                | 0.00       |
| M.C  | 0.54 | 0.20                | 0.01       |
| M.D  | 0.73 | 0.02                | 0.09       |
| M.E  | 0.58 | 0.10                | 0.08       |
| Reading  |      |                     |            |
| R.A  | 0.12 | 0.26                | 0.60       |
| R.B  | 0.08 | 0.02                | 0.80       |
| Science  |      |                     |            |
| S.A  | 0.13 | 0.81                | 0.03       |
| S.B  | 0.00 | 0.80                | 0.07       |
| S.C  | 0.07 | 0.72                | 0.03       |
| S.D  | 0.09 | 0.76                | -0.03      |
| Correlation (F1, F2) = $0.80$<br>Correlation (F2, F3) = $0.80$ | (    | Correlation (F1, F3 | (3) = 0.79 |

Table 19-4c. Pattern Matrix and Factor Correlations for Grade 5

|  |       | Factor             |            |
|--|-------|--------------------|------------|
| <br>Domain   | 1     | 2                  | 3          |
| Mathematics  |       |                    |            |
| M.A  | 0.90  | 0.05               | 0.00       |
| M.B  | 0.85  | -0.02              | -0.01      |
| <b>M.</b> C  | 0.60  | 0.06               | 0.14       |
| M.D  | 0.76  | 0.06               | 0.05       |
| M.E  | 0.71  | -0.01              | 0.08       |
| Reading  |       |                    |            |
| R.A  | 0.12  | 0.01               | 0.81       |
| R.B  | 0.07  | 0.11               | 0.75       |
| Writing  |       |                    |            |
| W.A  | -0.02 | 0.88               | -0.04      |
| W.B  | 0.11  | 0.74               | 0.14       |
| Correlation (F1, F2) = $0.72$<br>Correlation (F2, F3) = $0.79$ | _     | Correlation (F1, 1 | F3) = 0.80 |

Table 19-4d. Pattern Matrix and Factor Correlation for Grade 6

|             | Factor                        |      |  |  |  |  |  |
|-------------|-------------------------------|------|--|--|--|--|--|
| Domain      | 1                             | 2    |  |  |  |  |  |
| Mathematics |                               |      |  |  |  |  |  |
| M.A         | 0.84                          | 0.10 |  |  |  |  |  |
| M.C         | 0.62                          | 0.01 |  |  |  |  |  |
| M.D         | 0.66                          | 0.25 |  |  |  |  |  |
| M.E         | 0.79                          | 0.05 |  |  |  |  |  |
| Reading     |                               |      |  |  |  |  |  |
| R.A         | 0.06                          | 0.89 |  |  |  |  |  |
| R.B         | 0.05                          | 0.87 |  |  |  |  |  |
| Correlation | Correlation $(F1, F2) = 0.80$ |      |  |  |  |  |  |

 Table 19–4e. Pattern Matrix and Factor Correlation for Grade 7

|                               | Factor |      |  |  |  |  |
|-------------------------------|--------|------|--|--|--|--|
| Domain                        | 1      | 2    |  |  |  |  |
| Mathematics                   |        |      |  |  |  |  |
| M.A                           | 0.80   | 0.10 |  |  |  |  |
| M.B                           | 0.81   | 0.07 |  |  |  |  |
| M.D                           | 0.83   | 0.10 |  |  |  |  |
| M.E                           | 0.79   | 0.09 |  |  |  |  |
| Reading                       |        |      |  |  |  |  |
| R.A                           | 0.11   | 0.83 |  |  |  |  |
| R.B                           | 0.06   | 0.85 |  |  |  |  |
| Correlation $(F1, F2) = 0.80$ |        |      |  |  |  |  |

Table 19-4f. Pattern Matrix and Factor Correlations for Grade 8

|  | Factor                        |       |       |       |  |
|--|-------------------------------|-------|-------|-------|--|
| Domain   | 1                             | 2     | 3     | 4     |  |
| Mathematics  |                               |       |       |       |  |
| M.A  | -0.01                         | 0.83  | 0.05  | -0.03 |  |
| M.C  | 0.06                          | 0.71  | 0.06  | -0.08 |  |
| M.D  | 0.02                          | 0.77  | 0.02  | 0.13  |  |
| <b>M.</b> E  | 0.28                          | 0.56  | -0.04 | 0.04  |  |
| Reading  |                               |       |       |       |  |
| R.A  | 0.14                          | 0.04  | 0.15  | 0.65  |  |
| R.B  | 0.24                          | 0.02  | 0.12  | 0.59  |  |
| Science  |                               |       |       |       |  |
| S.A  | 0.78                          | 0.11  | 0.03  | 0.06  |  |
| S.B  | 0.72                          | -0.04 | 0.05  | 0.12  |  |
| S.C  | 0.76                          | 0.14  | -0.01 | -0.07 |  |
| S.D  | 0.87                          | 0.02  | 0.00  | -0.04 |  |
| Writing  |                               |       |       |       |  |
| W.A  | -0.08                         | 0.04  | 0.81  | 0.02  |  |
| W.B  | 0.19                          | 0.05  | 0.74  | 0.00  |  |
| Correlation (F1, F2) = $0.79$<br>Correlation (F1, F4) = $0.80$ | Correlation $(F1, F3) = 0.71$ |       |       |       |  |
| Correlation (F2, F3) = $0.72$                                  | Correlation $(F2, F4) = 0.74$ |       |       |       |  |
| Correlation (F3, F4) = $0.78$                                  | 3                             |       |       |       |  |

Taken as a whole, all the internal structure evidence presented in Tables 19–4a through 19–4f generally indicates that related elements of each of the PSSA tests correlate in the intended manner. Different PSSA subject-area tests seem to measure different constructs. Additionally, the strands within each subject area have stronger relationships than those across subject strands. This further supports using a total score to report student performance in the different subject areas.

The strand scores present more of a mixed message. Since the strands in each subject area were designed to measure distinct components of the subject area, it is reasonable to expect that the inter-subject strand correlations should be positive and strong, but ideally, not extremely high. However, the disattenuated correlations imply that some strands are essentially measuring the same constructs. Consequently, there may be less support for providing results for some strand scores beyond the total score. While there is content rationale underlying the creation of the strand scores, the empirical correlations illustrate that caution is required when using the strand scores as a way to identify individual student strengths and weaknesses. Certainly, instructional programs should not be based on strand score information alone but in conjunction with other sources of evidence available (e.g., teacher observations, other exam performances).

### EVIDENCE BASED ON RELATIONSHIPS WITH OTHER VARIABLES

As described in the *Standards* (1999), "Evidence based on relationships with other variables addresses questions about the degree to which relationships are consistent with the construct underlying the proposed interpretations" (p. 13). This category of evidence refers to external structure evidence and is classified on three types—convergent, discriminant, and criterion-related evidence. Convergent evidence is provided by relationships between students' performance on different assessments intended to measure a similar construct. Discriminant evidence is provided by relationships between students' performance on different tests intended to measure different constructs. Criterion-related evidence, either predictive or concurrent, is provided by relationships between students' test scores and their performance on a criterion measure (Cronbach, 1971; Messick, 1989).

External evidence for the PSSA tests has been examined by HumRRO in a series of independent studies using 2001–2003 PSSA data (Koger, Thacker, & Dickinson, 2004; Sinclair & Thacker, 2005; Thacker, Dickinson, & Koger, 2004). In their studies, the correlations of PSSA scores with a variety of measures including SAT, CTB, and other commonly administered assessments were investigated to provide the convergent and discriminant evidence. The criterion-related evidence was evaluated by the relationships between PSSA and criterion variables such as grade point average (GPA), course grades, university proficiency exams, and students' GPA in their first college course.

The results from their studies provided strong external evidence in support of PSSA as a valid measure of student achievement. Same-subject correlations were highest for mathematics, typically ranging from about 0.70 to about 0.90. For reading, correlations were also quite high, although slightly weaker than for mathematics and ranging from about 0.60 to about 0.80 (Thacker, Dickinson, & Koger, 2004). For example, the correlations between PSSA and SAT were high (r = 0.78 for reading and r = 0.87 for mathematics in 2003). They also found that PSSA scores positively correlated with students' course grades and GPAs, although not as highly as with SATs (r = 0.46 to r = 0.55) (Koger, Thacker, & Dickinson, 2004). Regarding the predictive evidence, they found that the university proficiency tests were moderately to highly correlated with the PSSA. Students' course GPAs in their first college English and Mathematics

classes generally showed positive relationships with both the PSSA and the university proficiency exams, but these correlations were not as strong as the correlations between the PSSA and the proficiency exams (Sinclair & Thacker, 2005). Moreover, the different assessments measuring the same subject were found to be more highly related to each other than with the assessments measuring different subjects, providing some discriminant evidence. All these results suggest that PSSA subject-area tests measure the intended constructs.

In addition, Thacker and his colleagues also examined the relationship between the PSSA and some irrelevant characteristics to determine whether the PSSA exhibited any differential impact based on gender, ethnicity, English proficiency, or socioeconomic status. None of these characteristics appeared to influence the PSSA scores more than would be expected based on observed differences for SAT scores and other comparison tests. In other words, PSSA items are not injecting any unexpected gender, racial/ethnic, socioeconomic status, or limited English proficiency bias.

For the 2014 PSSA dataset, the correlations between students' test scores on different PSSA tests, including mathematics, reading, science, and writing, are shown in Table 19–5 in order to provide some discriminant validity evidence. In this table, both the observed and disattenuated correlations are reported.

Table 19-5. Correlations among Students' Performance on All PSSA Tests

|           | Mathematics/<br>Reading | Mathematics/<br>Science | Mathematics/<br>Writing | Reading/<br>Science | Reading/<br>Writing | Science/<br>Writing |
|-----------|-------------------------|-------------------------|-------------------------|---------------------|---------------------|---------------------|
| G3        | .76 (.81)               | -                       | -                       | -                   | -                   | -                   |
| G4        | .78 (.85)               | .78 (.84)               | -                       | .80 (.87)           | -                   | -                   |
| <b>G5</b> | .78 (.84)               | -                       | .63 (.72)               | -                   | .68 (.79)           | -                   |
| <b>G6</b> | .77 (.83)               | -                       | -                       | -                   | -                   | -                   |
| <b>G7</b> | .78 (.85)               | -                       | -                       | -                   | -                   | -                   |
| <b>G8</b> | .75 (.81)               | .78 (.83)               | .64 (.73)               | .81 (.88)           | .70 (.82)           | .62 (.71)           |

*Note*. Numbers in the parenthesis are disattenuated correlations. The PSSA final data file was used for these calculations (see Chapter Nine). Case-wise elimination of missing data was used.

Each PSSA assessment measures a different construct, so the correlations between them were not expected to be extremely high. The values in this table are consistent with this expectation. As can be seen, the correlations between the PSSA tests range from 0.62 to 0.81. The correlations between mathematics, reading, and science were relatively higher, while the correlations between writing and other subjects were relatively lower. In addition, the correlations are very stable across different grade levels. For example, the correlation between mathematics and reading tests was around 0.77 for all grades. (Factor correlations between the latent variables are presented in Tables 19–4a through 19–4f.)

### EVIDENCE BASED ON CONSEQUENCES OF TESTING

Based on the *Standards* (1999), evidence of the consequences of implementing an assessment program is an additional source of validity information. Both positive and negative (intended and unintended) consequences of score-based inferences must be investigated to fully evaluate the pool of validity evidence. It is important to note that the consequences of the assessment program themselves to do not serve as indicators of validity. That is, the investigation and evaluation of the consequences provides a richer context for establishing the validity of an assessment program.

Given that the evaluation of consequential validity is broadly defined, it is difficult to specifically measure aspects of consequential validity. Test data only provide one small insight into this type of validation evidence. Chapter Sixteen includes several different types of scores and score reports used for the PSSA. This chapter also provides accurate and clear test score and report information to help users avoid unintended uses and interpretations of the PSSA results. The extent to which various groups of users (e.g., students, teachers, and parents) interpret these scores and reports appropriately affects the validity of subsequent uses of these results. PDE continues to gather evidence to improve or guide decisions pertaining to all aspects of intended and unintended consequences of the PSSA program.

### EVIDENCE RELATED TO THE USE OF THE RASCH MODEL

Since the Rasch model is the basis of all calibration, scaling, and linking analyses associated with the PSSA, the validity of the inferences from these results depends on the degree to which the assumptions of the model are met, as well as the fit between the model and test data. As discussed at length in Chapter Twelve, the underlying assumptions of Rasch models were essentially met for all the PSSA data, indicating the appropriateness of using the Rasch models to analyze the PSSA data.

In addition, the Rasch model was also used to link different operational PSSA tests across years. The accuracy of the linking also affects the accuracy of student scores and the validity of score uses. As described in Chapter Fifteen, DRC Psychometric Services staffers follow linking procedures previously vetted by the Pennsylvania National TAC. Moreover, DRC internal and the third-party (HumRRO) checks ensured the accuracy of the linking results.

### VALIDITY EVIDENCE SUMMARY

Validity evidence related to test content was reviewed earlier in this chapter. On the whole, the early chapters of this technical report show that a strong link can be established between each PSSA item and its associated eligible content. Details regarding how the PSSA operational assessments were assembled to reflect the state content standards and detailed information regarding educator reviews (including content, bias, and sensitivity reviews) are presented in Chapter Three.

Strand score intercorrelations are also presented in this chapter. In general, within-subject-area strands (e.g., mathematics) correlate more highly with themselves than they do with other subject-area strands (e.g., reading). Consequently, this provides some favorable evidence regarding the internal and external relationships between the tests' components.

PDE's commitment to validity is also evidenced by the fact that the Pennsylvania State Board of Education commissioned an independent study of an earlier version of the PSSA. That study, conducted by HumRRO, included an extensive evaluation of the items (Thacker & Dickinson, 2004) and statistical relationships of the PSSA, including convergent and discriminant validity (Thacker, Dickinson, & Koger, 2004).

Validity of score inferences is bolstered when test scores are consistent. Here, the reliabilities of the total test scores (see Chapter Eighteen) are very good, with many being in the low 0.90s.

Additionally, reported in Chapter Five, differential item functioning with respect to gender and ethnicity helps address construct-irrelevant variance, which represents an important threat to the validity of inferences made from achievement test scores. As noted in that chapter, field-test items are screened and reviewed for DIF. Only items approved by teacher committees are eligible for operational use.

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Appendix A:

General Scoring Guidelines

# PENNSYLVANIA DEPARTMENT OF EDUCATION PSSA

### General Description of Scoring Guidelines for Mathematics Open-Ended Questions

4 – The response demonstrates a *thorough* understanding of the mathematical concepts and procedures required by the task.

The response provides correct answer(s) with clear and complete mathematical procedures shown and a correct explanation, as required by the task. Response may contain a minor "blemish" (e.g., missing \$) or omission in work or explanation that does not detract from demonstrating a *thorough* understanding.

3 – The response demonstrates a *general* understanding of the mathematical concepts and procedures required by the task.

The response and explanation (as required by the task) are mostly complete and correct. The response may have minor errors or omissions that do not detract from demonstrating a *general* understanding.

2 – The response demonstrates a *partial* understanding of the mathematical concepts and procedures required by the task.

The response is somewhat correct with *partial* understanding of the required mathematical concepts and/or procedures demonstrated and/or explained. The response may contain some work that is incomplete or unclear.

- 1 The response demonstrates a *minimal* understanding of the mathematical concepts and procedures required by the task.
- 0 The response has no correct answer and *insufficient* evidence to demonstrate any understanding of the mathematical concepts and procedures required by the task for that grade level.

Response may show only information copied from the question.

Special Categories within zero reported separately:
BLK (blank) ..Blank, entirely erased, or written refusal to respond
OT ......Off task
IL ......Illegible
LOE ......Response in a language other than English

The Scoring Guideline documents are available on the PDE website.

## PENNSYLVANIA DEPARTMENT OF EDUCATION PSSA

### General Description of Scoring Guidelines for Reading Short-Answer Questions

#### 3 Points

- The response provides a complete answer to the task (e.g., a statement that offers a correct answer as well as text-based support).
- The response provides specific, appropriate and accurate details (e.g., naming, describing, explaining, or comparing) or examples.

### 2 Points

- The response provides a partial answer to the task (e.g., indicates some awareness of the task and at least one text-based detail).
- The response attempts to provide sufficient, appropriate details (e.g., naming, describing, explaining, or comparing) or examples; may contain minor inaccuracies.

### 1 Point

- The response provides an incomplete answer to the task (e.g., indicating either a misunderstanding of the task or no text-based details).
- The response provides insufficient or inappropriate details or examples that have a major effect on accuracy.
- The response consists entirely of relevant copied text.

#### 0 Points

- The response provides insufficient material for scoring.
- The response is inaccurate in all aspects.

## Categories within zero reported separately:

- BLK (blank) = no response or written refusal to respond or too brief to determine response.
- OT = off task/topic.
- LOE = response in a language other than English.
- IL = illegible.

## PENNSYLVANIA DEPARTMENT OF EDUCATION PSSA

### General Description of Scoring Guidelines for Science Open-Ended Questions

2 – The response demonstrates a *thorough* understanding of the scientific content, concepts, and procedures required by the task/s.

The response provides a clear, complete, and correct response as required by the task/s. Response may contain a minor blemish (e.g., misspelled words) or omission in work or explanation that does not detract from demonstrating a thorough understanding.

1 – The response demonstrates a *partial* understanding of the scientific content, concepts, and procedures required by the task/s.

The response is somewhat correct with partial understanding of the required scientific content, concepts, and/or procedures demonstrated and/or explained. The response may contain some work that is incomplete or unclear.

0 – The response provides *insufficient* evidence to demonstrate any understanding of the scientific content, concepts, and procedures as required by the task/s for that grade level.

Response may show only information copied or rephrased from the question or insufficient correct information to receive a score of 1.

Special Categories within zero reported separately:

BLK – Blank, entirely erased or written refusal to respond

OT – Off Task

IL – Illegible

LOE – Response in a language other than English

# PSSA CONVENTIONS SCORING GUIDELINE FOR WRITING



Thorough control of sentence formation.

Few errors, if any, are present in grammar, usage, spelling, and punctuation, but the errors that are present do not interfere with meaning.



Adequate control of sentence formation.

Some errors may be present in grammar, usage, spelling, and punctuation, but few, if any, of the errors that are present may interfere with meaning.

Limited and/or inconsistent control of sentence formation. Some sentences may be awkward or fragmented

Many errors may be present in grammar, usage, spelling, and punctuation, and some of those errors may interfere with meaning.

1

Minimal control of sentence formation. Many sentences are awkward and fragmented.

Many errors may be present in grammar, usage, spelling, and punctuation, and many of those errors may interfere with meaning.

## PSSA INFORMATIONAL SCORING GUIDELINE FOR WRITING

FOCUS Sharp, distinct controlling point made about a single topic with evident awareness of task and audience. Substantial, relevant, and illustrative content that demonstrates a clear understanding of the purpose. DEVELOPMENT Thorough elaboration with effectively presented information consistently supported with well-chosen details. Effective organizational strategies and structures, such as logical order and transitions, which develop a ORGANIZATION controlling idea. STYLE Precise control of language, stylistic techniques, and sentence structures that creates a consistent and **FOCUS** Clear controlling point made about a single topic with general awareness of task and audience. Adequate, specific, and/or illustrative content that demonstrates an understanding of the purpose. Sufficient CONTENT **DEVELOPMENT** elaboration with clearly presented information supported with well-chosen details. ORGANIZATION Organizational strategies and structures, such as logical order and transitions, which develop a controlling idea. STYLE Appropriate control of language, stylistic techniques, and sentence structures that creates a consistent tone. Vague evidence of a controlling point made about a single topic with an inconsistent awareness of task and Focus audience. Inadequate, vague content that demonstrates a weak understanding of the purpose. Underdeveloped and/or **DEVELOPMENT** repetitive elaboration with inconsistently supported information. May be an extended list. ORGANIZATION Inconsistent organizational strategies and structures, such as logical order and transitions, which ineffectively develop a controlling idea. STYLE Limited control of language and sentence structures that creates interference with tone. **Focus** Little or no evidence of a controlling point made about a single topic with a minimal awareness of task and audience. CONTENT Minimal evidence of content that demonstrates a lack of understanding of the purpose. Superficial, undeveloped writing with little or no support. May be a bare list. DEVELOPMENT Little or no evidence of organizational strategies and structures, such as logical order and transitions, which ORGANIZATION inadequately develop a controlling idea. **STYLE** Minimal control of language and sentence structures that creates an inconsistent tone.

## PSSA PERSUASIVE SCORING GUIDELINE FOR WRITING

Focus

Sharp, distinct controlling point presented as a position and made convincing through a clear, thoughtful, and substantiated argument with evident awareness of task and audience.

CONTENT **DEVELOPMENT** 

Substantial, relevant, and illustrative content that demonstrates a clear understanding of the purpose. Thoroughly elaborated argument that includes a clear position consistently supported with precise and relevant evidence. Rhetorical (persuasive) strategies are evident.

**ORGANIZATION** 

Effective organizational strategies and structures, such as logical order and transitions, to develop a position supported with a purposeful presentation of content.

STYLE

Precise control of language, stylistic techniques, and sentence structures that creates a consistent and effective tone.

Focus

Clear controlling point presented as a position and made convincing through a credible and substantiated argument with general awareness of task and audience.

CONTENT **DEVELOPMENT** 

Adequate, specific and/or illustrative content that demonstrates an understanding of the purpose. Sufficiently elaborated argument that includes a clear position supported with some relevant evidence. Rhetorical (persuasive) strategies may be evident.

**O**RGANIZATION

Organizational strategies and structures, such as logical order and transitions, to develop a position supported with sufficient presentation of content.

**S**TYLE **Appropriate** control of language, stylistic techniques, and sentence structures that creates a consistent tone.

Vague evidence of a controlling point presented as a position that may lack a credible and/or substantiated argument with an Focus inconsistent awareness of task and audience.

CONTENT DEVELOPMENT Inadequate, vague content that demonstrates a weak understanding of the purpose. Insufficiently elaborated argument that includes an underdeveloped position supported with little evidence.

**ORGANIZATION** 

Inconsistent organizational strategies and structures, such as logical order and transitions, to develop a position with inadequate presentation of content.

STYLE Limited control of language and sentence structures that creates interference with tone.

Focus Little or no evidence of a controlling point presented as a position that lacks a credible and/or substantiated argument with minimal awareness of task and audience.

CONTENT DEVELOPMENT

Minimal evidence of content that demonstrates a lack of understanding of the purpose. Unelaborated argument that includes an undeveloped position supported with minimal or no evidence.

**ORGANIZATION** 

Little or no evidence of organizational strategies and structures, such as logical order and transitions, to develop a position with insufficient presentation of content.

STYLE | Minimal control of language and sentence structures that creates an inconsistent tone.

Appendix B:

Tally Sheets

| e 03   |   |                  |  | _   |   |   |   |  |   |   | _  |  |  |       | viati | IICIII               | utios  |
|--|---|------------------|--|---|---|---|---|--|---|---|--|--|--|-------|-------|----------------------|--|
|  |   |                  |  |   |   |   | Poin  | ts   |   |   |  |  |  | Iten  | าร    |                      |  |
| ssment<br>nchor  | criptor<br>-anchor)   | igible<br>intent | Focus  | Sco   | res   | Blo   | ock   |  |   |   | Nur  | nber   | of It  | ems   | C     | of Ite               | ms   |
| Asse<br>Ar   | Des<br>(Sub   | ⊟ %              |  | Poir  | nts)  | -   | _   |  | EB)   |   |  |  |  |       |       | EB)                  |  |
|  |   |                  |  | MC  | OE  | MC  | OE  | MC   | OE  | Total   | MC   | OE   | MC   | OE    | MC    | OE                   | Total  |
| 1  |   |                  | representations of numbers and number systems                |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 1  | 1   | 1                | Match word to number   |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 1  | 1   | 2                | Differentiate between even & odd                             |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
|  |   |                  |  |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
|  |   |                  |  | 2   |   |   |   | 2  |   | 2   | 2  |  |  |       | 2     |                      | 2  |
| 1  | 1   | 5                |  |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 1  | 2   | 1                | Write fraction that corresponds to drawing                   | 2   |   |   |   | 2  |   | 2   | 2  |  |  |       | 2     |                      | 2  |
| 1  | 2   | 2                | Draw representation of a fraction                            | 1   |   |   |   | 1  |   | 1   | 1  |  |  |       | 1     |                      | 1  |
| 1  | 3   | 1                | Count a collection of bills & coins                          |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 1  | 3   | 2                | Compare total values of combinations of coins                | 6   |   | 1   |   | 7  |   | 7   | 6  |  | 1  |       | 7     |                      | 7  |
| 1 3 3 Make change up to \$5.00  Total For Assessment Anchor A.1                    |   |                  |  |   |   |   |   | 6  |   | 6   | 6  |  |  |       | 6     |                      | 6  |
| Total For Assessment Anchor A.1  |   |                  |  |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| Total For Assessment Anchor A.1 Understand relationships among and representations |   |                  |  |   |   | 1   |   | 18   |   | 18  | 17   |  | 1  |       | 18    |                      | 18   |
|  |   |                  |  |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 2  |   |                  | Understand meanings, uses and                                |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 2  | 1   | 1                | Represent multiplication as repeated addition                |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 2  | 1   | 2                | Demonstrate inverse relationships                            |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 2  | 1   | 3                | Identify correct operation(s)                                | 7   |   |   |   | 7  |   | 7   | 7  |  |  |       | 7     |                      | 7  |
|  |   |                  |  |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| Unders   | stand r   | neanin           | gs, uses of operations and how                               | 7   |   |   |   | 7  |   | 7   | 7  |  |  |       | 7     |                      | 7  |
| they re  | elate to  | each             | other  |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| they relate to each other  |   |                  |  |   | 4   |   |   |  | 4   | 4   |  | 1  |  |       |       | 1                    | 1  |
| 3  | 1   | 1                | Solve single- & double-digit addition & subtraction problems |   |   |   |   |  |   |   |  |  |  |       |       |                      |  |
| 3 1 2 Solve multiplication problems  |   |                  |  | 4   |   |   |   | 4  |   | 4   | 4  |  |  |       | 4     |                      | 4  |
| 3  | 1   | 3                | Solve triple digit addition &                                | 4   |   |   |   | 4  |   | 4   | 4  |  |  |       | 4     |                      | 4  |
| 3 2 1 Estimate sums and differences  |   |                  |  |   |   | 1   |   | 5  |   | 5   | 4  |  | 1  |       | 5     |                      | 5  |
| Total For Assessment Anchor A.3  |   |                  |  |   |   |   |   |  |   | -   |  |  |  |       |       |                      |  |
| Compute accurately and fluently and make reasonable estimates                      |   |                  |  |   | 4   | 1   |   | 13   | 4   | 17  | 12   | 1  | 1  |       | 13    | 1                    | 14   |
| tal For Reporting Category A   |   |                  |  |   |   | 2   |   | 38   | 4   | 42  | 36   | 1  | 2  |       | 38    | 1                    | 39   |
|  | 1 1 1 1 1 1 1 1 1 1 Total F Understhey ro 3 3 3 3 Total F Comportations | 1                | 1  | Understand relationships and representations of numbers and number systems  1 | Understand relationships and representations of numbers and number systems  1 | Understand relationships and representations of numbers and number systems  1 | Understand relationships and representations of numbers and number systems  1 1 1 3 Compare two whole numbers 1 1 5 Match symbolic representation 1 2 1 Write fraction that corresponds to drawing 1 2 2 Draw representation of a fraction 1 2 3 1 Count a collection of bills & coins 1 3 2 Compare total values of combinations of coins 1 3 3 Make change up to \$5.00 6 1 3 3 Make change up to \$5.00 6 1 Total For Assessment Anchor A.1 Understand relationships among and representations of numbers and number systems 2 Understand meanings, uses and relations of operations 2 1 1 2 Demonstrate inverse relationships 2 1 3 Identify correct operation(s) 7 Total For Assessment Anchor A.2 Understand meanings, uses of operations and how they relate to each other 3 1 2 Solve multiplication problems 3 1 2 Solve multiplication problems 3 1 2 Solve multiplication problems 4 1 Total For Assessment Anchor A.3 Compute accurately and filter substraction problems 3 1 2 Solve multiplication problems 4 1 Total For Assessment Anchor A.3 Compute accurately and filter substraction problems 3 1 2 Solve multiplication problems 4 1 Total For Assessment Anchor A.3 Compute accurately and filter substraction problems 5 2 1 1 Estimate sums and differences 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Focus  Student Scores   Equating Scores   Core Points    Understand relationships and representations of numbers and number systems    1 | Understand relationships and representations of numbers and number systems  1 | Focus  Student Scores (Core Points)  Pous  Student Scores (Core Points)  I Understand relationships and representations of numbers and number systems  Understand relationships and representations of numbers and number systems  I 1 1 2 Differentiate between even & odd  I 1 3 Compare two whole numbers  I 1 4 Order a set of whole numbers  I 1 5 Match symbolic representation  I 2 1 Write fraction that corresponds to drawing  I 2 2 Draw representation of a fraction  I 3 1 Count a collection of bills & coins  I 3 2 Compare total values of combinations of coins  I 3 3 Make change up to \$5.00  Compare total values of relationships among and representations of numbers and number systems  Understand relationships among and representations of numbers and number systems  Understand meanings, uses and repaided addition  Represent multiplication as repeated addition  Represent multiplication as repeated addition  Represent Anchor A.2  Understand meanings, uses of operations and how they relate to each other  Solve single- & double-digit addition & subtraction problems  3 1 2 Solve single- & double-digit addition & subtraction problems  3 1 2 Solve triple digit addition & subtraction problems  3 1 2 Estimate sums and differences  4 1 1 5 Total For Assessment Anchor A.3  Compute accurately and fluently and make reasonable estimates  10 1 2 4 1 1 5 Total For Assessment Anchor A.3  Compute accurately and fluently and make reasonable estimates | Focus  Student Scores (Core & Points)  Focus  Student Scores (Core & Points)  MC OE MC OE MC OE Total  Understand relationships and representations of numbers and number systems  1 1 1 1 Match word to number  1 1 2 Differentiate between even & odd  1 1 3 Compare two whole numbers  1 1 1 4 Order a set of whole numbers  1 1 1 5 Match symbolic representation  Write fraction that corresponds to drawling  Write fraction that corresponds to drawling  1 2 2 Draw representation of a fraction  1 3 1 Count a collection of bills & coins  Compare total values of combinations of coins  1 3 2 Compare total values of combinations of coins  1 3 3 Make change up to \$5.00  Total For Assessment Anchor A.1  Understand relationships among and representations of numbers and number systems  Understand meanings, uses and relations of operations  2 1 1 2 Demonstrate inverse relationships  2 1 2 Demonstrate inverse relationships  2 1 1 3 Identify correct operation(s)  Total For Assessment Anchor A.2  Understand meanings, uses of operations and how they relate to each other  3 1 2 Solve multiplication problems  3 1 2 Solve single- & double-digit addition & subtraction problems  3 1 2 Solve multiplication problems  3 1 2 Solve multiplication problems  3 1 2 Solve injude digit addition & subtraction problems  3 1 2 Solve injude digit addition & subtraction problems  3 1 2 Solve multiplication problems  3 1 2 Solve multiplication problems  3 1 2 Solve multiplication problems  4 1 1 5 Solve injude digit addition & subtraction problems  5 Solve injude digit addition & subtraction problems  6 Solve injude digit addition & subtraction problems  7 Total For Assessment Anchor A.3 Compute accurately and fluently and make easonable estimates | Focus  Student Scores Block (Core Penints)  Hunderstand relationships and representations of numbers and number systems  Understand that corresponds to drawing that the faction of bills & coins  Compare total values of combinations of coins  All 3 3 Compare total values of combinations of coins  Compare total values of combinations of coins  All 3 3 Alwake change up to \$5.00  Compares and number systems  Compares total values of combinations of coins  All 3 3 Alwake change up to \$5.00  Compares and number systems  Compares total values of coins  All 3 3 Compare total values of coins  All 3 Compares total values of coins  Compare total values o | Student Scores   Scores   Student Scor | Focus | Focus | Total Points   Focus | Points   Student   Equating   Total Points   Student   Equating   Student   Equating   Student   Equating   Student   Equating   E |

|                       |  |                            |                     |   |      |              |    | Point        | ts |              |       |     |      |       | Item | ns |                 |             |
|-----------------------|--|----------------------------|---------------------|---|------|--------------|----|--------------|----|--------------|-------|-----|------|-------|------|----|-----------------|-------------|
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   | Stud | dent<br>ores |    | ating<br>ock | То | tal P        | oints | Nur | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse<br>Ar   | Des<br>(Sub-               | E S                 |   | (Co  | ore<br>nts)  | (E | (B)          | (  | Core<br>(EB) |       | Co  | ore  | E     | B.   | (  | (Core<br>(EB)   |             |
|                       |  |                            |                     |   | MC   | OE           | MC | OE           | MC | OE           | Total | MC  | OE   | MC    | OE   | MC | OE              | Total       |
|                       | 1  |                            |                     | Understand measurable attributes<br>and units, systems, processes of<br>measurement |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
|                       | 1  | 1                          | 1                   | Tell/show analog time to the minute   | 4    |              | 1  |              | 5  |              | 5     | 4   |      | 1     |      | 5  |                 | 5           |
|                       | 1  | 1                          | 2                   | Find elapsed time   | 4    |              |    |              | 4  |              | 4     | 4   |      |       |      | 4  |                 | 4           |
|                       | 1  | 1                          | 3                   | Identify times as AM or PM  |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| <b>#</b>              | 1  | 2                          | 1                   | Select appropriate unit for<br>measurement  |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| B: Measurement        | measurement    1   |                            |                     |   |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| Ιğ                    | Total  | For Ass                    | sessme              | ent Anchor B.1  |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| ea                    | Under  | stand i                    | measu               | rable attributes and units, systems,  | 8    |              | 1  |              | 9  |              | 9     | 8   |      | 1     |      | 9  |                 | 9           |
| Σ                     | proces   | sses of                    | meası               | urement   |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| ä                     | 2  |                            |                     | Apply techniques, tools & formulas to determine measurements                        |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
|                       | 2  | 1                          | 1                   | Use a ruler to nearest 1/2 inch   | 2    |              |    |              | 2  |              | 2     | 2   |      |       |      | 2  |                 | 2           |
|                       | 2  | 2                          | 1                   | Match object with measurement   |      |              |    |              |    |              |       |     |      |       |      |    |                 |             |
|                       | Total For Assessment Anchor B.2 Apply appropriate techniques, tools and formulas to determine measurements |                            |                     |   |      |              |    |              | 2  |              | 2     | 2   |      |       |      | 2  |                 | 2           |
| Total                 | For Rep  | porting                    | Categ               | ory B   | 10   |              | 1  |              | 11 |              | 11    | 10  |      | 1     |      | 11 |                 | 11          |

|             |                             |                            |                     |   |            |              |    | Poin <sup>-</sup> | ts |             |       |     |      |       | Item | 1S |                  |            |
|-------------|-----------------------------|----------------------------|---------------------|---|------------|--------------|----|-------------------|----|-------------|-------|-----|------|-------|------|----|------------------|------------|
| Reporting   | Assessment<br>Anchor        | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   |            | dent<br>ores |    | ating<br>ock      | То | tal P       | oints | Nun | nber | of It | ems  |    | al Nu<br>of Iter | mber<br>ms |
| Rep         | Asse                        | Desc<br>(Sub-              | S Eli               |   | (Co<br>Poi | ore<br>nts)  | (E | (B)               | (  | Core<br>EB) |       | Co  | re   | Е     | В    | (  | Core<br>EB)      |            |
|             |                             |                            |                     |   | MC         | OE           | MC | OE                | MC | OE          | Total | MC  | OE   | MC    | OE   | MC | OE               | Total      |
|             | 1                           |                            |                     | Analyze characteristics & properties of 2-D & 3-D shapes      |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
|             | 1                           | 1                          | 1                   | Name/identify/describe 2-D shapes                             |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
|             | 1                           | 1                          | 2                   | Name/identify 3-D shapes                                      |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
| >           | Total                       | For Ass                    | sessme              | ent Anchor C.1  |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
| etr         |                             |                            |                     | tics and properties of two- and                               |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
| ΙĔ          | three-                      | dimens                     | sional              | geometric shapes  |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
| C: Geometry | 2                           |                            |                     | Identify and/or apply concepts of transformations or symmetry |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
|             | 2                           | 1                          | 1                   | Identify/draw line of symmetry                                |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
|             | 2                           | 1                          | 2                   | Identify symmetrical 2-D shapes                               |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
|             |                             | fy and                     |                     | ent Anchor C.2<br>oly concepts of transformations or          |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |
| Total       | al For Reporting Category C |                            |                     |   |            |              |    |                   |    |             |       |     |      |       |      |    |                  |            |

|                       |                      |                            |                     |   |     |              |    | Poin         | ts |             |       |     |      |       | Item |    |                 | atics      |
|-----------------------|----------------------|----------------------------|---------------------|---|-----|--------------|----|--------------|----|-------------|-------|-----|------|-------|------|----|-----------------|------------|
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   |     | dent<br>ores |    | ating<br>ock | To | tal P       | oints | Nur | nber | of It | ems  |    | al Nu<br>of Ite | mber<br>ms |
| Rep                   | Asse                 | Desc<br>(Sub-              | Eli                 |   | Poi | ore<br>nts)  |    | (B)          | Ì  | Core<br>EB) | )     | Сс  |      | E     | В    | (  | (Core<br>(EB)   |            |
|                       |                      |                            |                     |   | MC  | OE           | MC | OE           | MC | OE          | Total | MC  | OE   | MC    | OE   | MC | OE              | Total      |
|                       | 1                    |                            |                     | Understand patterns, relations and functions                                  |     |              |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 1                    | 1                          | 1                   | Extend or find a missing element in a pattern                                 | 1   |              | 1  |              | 2  |             | 2     | 1   |      | 1     |      | 2  |                 | 2          |
| ts                    | 1                    | 1                          | 2                   | Identify/describe rule for a pattern  | 1   |              | 1  |              | 2  |             | 2     | 1   |      | 1     |      | 2  |                 | 2          |
| Concepts              |                      |                            |                     |   |     |              | 2  |              | 4  |             | 4     | 2   |      | 2     |      | 4  |                 | 4          |
| Algebraic             | 2                    |                            |                     | Represent/analyze mathematical situations                                     |     | 4            |    |              |    | 4           | 4     |     | 1    |       |      |    | 1               | 1          |
| <u>g</u> e            | 2                    | 1                          | 1                   | Create or match a story   | 2   |              |    |              | 2  |             | 2     | 2   |      |       |      | 2  |                 | 2          |
| D: A                  | 2                    | 1                          | 2                   | Match number sentence to story  | 2   |              |    |              | 2  |             | 2     | 2   |      |       |      | 2  |                 | 2          |
|                       | 2                    | 2                          | 1                   | Find a missing number   | 1   |              |    |              | 1  |             | 1     | 1   |      |       |      | 1  |                 | 1          |
|                       | 2                    | 2                          | 2                   | Identify the missing symbol   |     |              | 1  |              | 1  |             | 1     |     |      | 1     |      | 1  |                 | 1          |
|                       | Repre                | sent/aı                    | nalyze              | nt Anchor D.2<br>mathematical situations using<br>words, tables and/or graphs | 5   | 4            | 1  |              | 6  | 4           | 10    | 5   | 1    | 1     |      | 6  | 1               | 7          |
| Total                 | For Re               | for Reporting Category D   |                     |   |     | 4            | 3  |              | 10 | 4           | 14    | 7   | 1    | 3     |      | 10 | 1               | 11         |

|   |                       |                      |                            |                     |  |    |              |    | Poin <sup>®</sup> | ts |       |       |     |      |       | Item | าร |                 |             |
|---|-----------------------|----------------------|----------------------------|---------------------|--|----|--------------|----|-------------------|----|-------|-------|-----|------|-------|------|----|-----------------|-------------|
|   | Keporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |    | dent<br>ores |    | ating<br>ock      | То | tal P | oints | Nur | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| ŀ | Kep<br>Cat            | Asse                 | Desi<br>(Sub-              | ij Ō                |  | `  | ore<br>nts)  | (E | (B)               | (  | (Core |       | Co  | ore  | Е     | В    | (  | (Core<br>EB)    |             |
|   |                       |                      |                            |                     |  | MC | OE           | MC | OE                | MC | OE    | Total | MC  | OE   | MC    | OE   | MC | OE              | Total       |
|   | and Probability       | 1                    |                            |                     | Formulate/answer questions; organize, display, interpret or analyze data     |    | 4            |    |                   |    | 4     | 4     |     | 1    |       |      |    | 1               | 1           |
|   | Prob                  | 1                    | 1                          | 1                   | Analyze data shown on tables, charts, or bar graphs                          | 1  |              |    |                   | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|   |                       | 1                    | 1                          | 2                   | Describe, interpret and/or answer questions based on data                    | 2  |              |    |                   | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|   | ڇ                     | 1                    | 2                          | 1                   | Graph data   | 2  |              |    |                   | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|   | a Analysis            | 1                    | 2                          | 2                   | Translate information from one type of display to another                    | 2  |              |    |                   | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|   | E: Data               | Formu                | ılate o                    | answ                | ent Anchor E.1<br>er questions about data and/or<br>nterpret or analyze data | 7  | 4            |    |                   | 7  | 4     | 11    | 7   | 1    |       |      | 7  | 1               | 8           |
| 7 | otal                  | For Re               | porting                    | Categ               | Jory E   | 7  | 4            |    |                   | 7  | 4     | 11    | 7   | 1    |       |      | 7  | 1               | 8           |

| Student Scores   Stud   | EB OE MC   | of Ite<br>(Core<br>EB) | ms<br>e &<br>) |
|--|--|------------------------|----------------|
| 1  | EB OE MC   | of Ite<br>(Core<br>EB) | ms<br>e &<br>) |
| 1  | OE MO  | EB)                    | )              |
| 1  |  | 1C OE                  | Total          |
| The proposed of the proposed o |  |                        |                |
| 1  |  |                        | ļ ļ            |
| 1  |  |                        |                |
| 1  |  |                        |                |
| 1  |  |                        |                |
| 1  | 4  | 4                      | 4              |
| 1  |  |                        |                |
| 1   3   1   Find/identify/list factors   4   1   5   5   4   1     1   3   2   Find/identify/list multiples   4   4   4   4   4   4     Total For Assessment Anchor A.1   Understand relationships among and representations of numbers and number systems   2   Understand meanings, uses and relations of operations   4   4   4   4   1     2   1   1   Solve problems involving all operations (whole numbers)   3   1   4   4   3   1     2   1   2   Solve problems with decimals   Total For Assessment Anchor A.2   Understand meanings, uses of operations and how they relate to each other   3   Compute accurately/fluently and make reasonable estimates   3   1   1   Round whole numbers   6   1   7   7   6   1     3   1   2   Round to nearest dollar   3   3   3   3   3   3   3   3   3  | 4  | 4                      | 4              |
| Total For Assessment Anchor A.1 Understand relationships among and representations of numbers and number systems  2  | 5  | 5                      | 5              |
| Total For Assessment Anchor A.1 Understand relationships among and representations of numbers and number systems  2  | 4  |                        | 4              |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  |  |                        |                |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  | 17   | 7                      | 17             |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  | ''   | <b>'</b>               | ''             |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  |  |                        |                |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  |  | 1                      | 1              |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  |  |                        |                |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  | 4  | 4                      | 4              |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  | <del>                                     </del> |                        | $\vdash$       |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  |  |                        |                |
| they relate to each other  Compute accurately/fluently and make reasonable estimates  3  |  | , ,                    |                |
| Compute accurately/fluently and make reasonable estimates  3   | 4  | 4   1                  | 5              |
| 3         1         1         Round whole numbers         6         1         7         7         6         1           3         1         2         Round to nearest dollar         3         1         3         1         3         1         3  |  |                        |                |
| make reasonable estimates  |  |                        |                |
| 3 1 2 Round to nearest dollar  3 1 3 Estimate answers with whole 3 3 3 3 3 3   |  |                        |                |
| 3 1 2 Round to nearest dollar  3 1 3 Estimate answers with whole 3 3 3 3 3 3   | 7  | 7                      | 7              |
| 3 1 3 Estimate answers with whole 3 3 3 3  | <del>                                     </del> | ,                      | /              |
| 1   3   1   3  | $\vdash$   |                        |                |
| numbers  | 3  | 3                      | 3              |
| 3 2 1 Solve addition/subtraction problems involving decimals   |  |                        |                |
| 3 2 2 Solve addition/subtraction groblems involving fractions 3 3 3 3  | 3  | 3                      | 3              |
| Total For Assessment Anchor A.3  |  |                        |                |
| Compute accurately and fluently and make 12 1 1 13 13 12 1   | 13   | 3                      | 13             |
| reasonable estimates   | 4  |                        |                |
| Total For Reporting Category A 31 4 3 34 4 38 31 1 3   |  | 34 1                   | 35             |

| Grad                  | C U4  |                                  |                                    |   |    |              |    |              |    |               |       |     |      |       | !    | viati | ICIII           | atics       |
|-----------------------|---|----------------------------------|------------------------------------|---|----|--------------|----|--------------|----|---------------|-------|-----|------|-------|------|-------|-----------------|-------------|
|                       |   |                                  |                                    |   |    |              |    | Poin         | ts |               |       |     |      |       | Item | าร    |                 |             |
| Reporting<br>Category | Assessment<br>Anchor                              | Descriptor<br>(Sub-anchor)       | Eligible<br>Content                | Focus   |    | dent<br>ores |    | ating<br>ock | То | tal P         | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse:<br>An                                       | Desc<br>(Sub-                    | Col                                |   | `  | ore<br>nts)  | (E | (B)          | (  | (Core<br>(EB) | )     | Co  | re   | E     | В    | (     | (Core<br>(EB)   |             |
|                       |   |                                  |                                    |   | MC | OE           | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total       |
|                       | 1   |                                  |                                    | Understand measurable attributes and units, systems, processes of measurement |    | 4            |    |              |    | 4             | 4     |     | 1    |       |      |       | 1               | 1           |
|                       | 1   | 1                                | 1                                  | Match analog time to digital time   |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
|                       | 1   | 1                                | 2                                  | Identify time   | 2  |              | 1  |              | 3  |               | 3     | 2   |      | 1     |      | 3     |                 | 3           |
|                       | 1 1 3 Calculate elapsed time                      |                                  |                                    |   | 2  |              |    |              | 2  |               | 2     | 2   |      |       |      | 2     |                 | 2           |
| ent                   | 1   | 1                                | Determine beginning or ending time | 2   |    |              |    | 2            |    | 2             | 2     |     |      |       | 2    |       | 2               |             |
| ĮĚ                    | Total I   | For Ass                          | sessme                             | ent Anchor B.1  |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
| l er                  | Under   | stand r                          | measu                              | rable attributes and units, systems,  | 6  | 4            | 1  |              | 7  | 4             | 11    | 6   | 1    | 1     |      | 7     | 1               | 8           |
| ası                   | proces  | sses of                          | measu                              | ırement   |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
| B: Measurement        | 2   |                                  |                                    | Apply techniques, tools & formulas to determine measurements                  |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
|                       | measurements  2 1 1 Use/read ruler to nearest 1/4 |                                  |                                    |   |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
|                       | 2 2 1 Make reasonable estimates of measurement    |                                  |                                    |   |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
|                       | Total I   | For Ass                          | ent Anchor B.2                     |   |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
|                       |   | echniques, tools and formulas to |                                    |   |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
|                       |   | nine m                           |                                    |   |    |              |    |              |    |               |       |     |      |       |      |       |                 |             |
| Total                 | For Rep   | porting                          | Categ                              | ory B   | 6  | 4            | 1  |              | 7  | 4             | 11    | 6   | 1    | 1     |      | 7     | 1               | 8           |

| Grau                  | <del></del>  |                            |                     |  |     |              |    |              |    |              |       | _   |      |       |      |    | iciii           | atics      |
|-----------------------|--|----------------------------|---------------------|--|-----|--------------|----|--------------|----|--------------|-------|-----|------|-------|------|----|-----------------|------------|
|                       |  |                            |                     |  |     |              |    | Point        | ts |              |       |     |      |       | Iten | าร |                 |            |
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores |    | ating<br>ock | То | tal Po       | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | mber<br>ms |
| Rep                   | Asse<br>Ar   | Des<br>(Sub-               | Eli<br>Co           |  | Poi | •            |    | (B)          |    | (Core<br>EB) | )     |     | re   |       | B    |    | (Core<br>(EB)   | ı          |
|                       |  |                            |                     |  | MC  | OE           | MC | OE           | MC | OE           | Total | MC  | OE   | MC    | OE   | MC | OE              | Total      |
|                       | 1  |                            |                     | Analyze characteristics & properties of 2-D & 3-D shapes       |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 1  | 1                          | 1                   | Identify/classify/compare 2-D figures                          |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 1  | 1                          | 2                   | Classify 3-D figures, identify characteristics                 |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 1 2 1 Identify points/lines/segments/rays 1 2 1 Identify parallel/perpendicular                          |                            |                     |  |     |              | 1  |              | 5  |              | 5     | 4   |      | 1     |      | 5  |                 | 5          |
|                       | lines  |                            |                     |  |     |              | 1  |              | 4  |              | 4     | 3   |      | 1     |      | 4  |                 | 4          |
| Ŋ                     | Total For Assessment Anchor C.1  Analyze characteristics and properties of two- and                      |                            |                     |  |     |              | 2  |              | 9  |              | 9     | 7   |      | 2     |      | 9  |                 | 9          |
| C: Geometry           | 2  | umens                      | sioriai Ç           | Identify and/or apply concepts of transformations and symmetry |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
| С                     | 2  | 1                          | 1                   | Identify/draw figures having one, two, or no lines of symmetry | 3   |              |    |              | 3  |              | 3     | 3   |      |       |      | 3  |                 | 3          |
|                       | Total For Assessment Anchor C.2 Identify and/or apply concepts of transformations a symmetry             |                            |                     |  |     |              |    |              | 3  |              | 3     | 3   |      |       |      | 3  |                 | 3          |
|                       | Locate points/describe 3 relationships using the coordina plane  |                            |                     |  |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 3 1 1 Match or plot ordered pair   |                            |                     |  |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | Total For Assessment Anchor C.3<br>Locate points or describe relationships using the<br>coordinate plane |                            |                     |  |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
| Total I               | Total For Reporting Category C   |                            |                     |  |     |              | 2  |              | 12 |              | 12    | 10  |      | 2     |      | 12 |                 | 12         |

| Grad                  | <del>C 04</del>   |                            |                     |  |     |              |    |              |    |       |       |     |      |       |      | viati | ICIII           | aucs        |
|-----------------------|---|----------------------------|---------------------|--|-----|--------------|----|--------------|----|-------|-------|-----|------|-------|------|-------|-----------------|-------------|
|                       |   |                            |                     |  |     |              |    | Point        | ts |       | ,     |     |      |       | Iten | าร    |                 |             |
| Reporting<br>Category | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores |    | ating<br>ock | То | tal P | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse  | Desc<br>(Sub-              | ill o               |  | (Co | ore<br>nts)  | (E | ΈB)          | (  | (Core |       | Cc  | re   | Ε     | В    | (     | (Core           |             |
|                       |   |                            |                     |  | MC  | OE           | MC | OE           | MC | OE    | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total       |
|                       | 1   |                            |                     | Understand patterns, relations and functions                         |     |              |    |              |    |       |       |     |      |       |      |       |                 |             |
|                       | 1   | 1                          | 1                   | Extend or find a missing element in a numerical or geometric pattern | 2   |              |    |              | 2  |       | 2     | 2   |      |       |      | 2     |                 | 2           |
|                       | 1 1 2 Identify/describe rule for numerical or geometric pattern   |                            |                     |  |     |              |    |              |    |       |       |     |      |       |      |       |                 |             |
| ts                    | 1 1 3 Create or replicate numerical o geometric pattern   |                            |                     |  | 2   |              | 1  |              | 3  |       | 3     | 2   |      | 1     |      | 3     |                 | 3           |
| ncep                  | 1 2 1 Determine missing elements in function table given the rule   |                            |                     |  | 2   |              | 1  |              | 3  |       | 3     | 2   |      | 1     |      | 3     |                 | 3           |
| ၓ                     | 1   | 2                          | 2                   | Determine rule given a table   | 2   |              |    |              | 2  |       | 2     | 2   |      |       |      | 2     |                 | 2           |
| D: Algebraic Concepts |   |                            |                     | ent Anchor D.1<br>as, relations and functions                        | 8   |              | 2  |              | 10 |       | 10    | 8   |      | 2     |      | 10    |                 | 10          |
| D: Al                 | 2   |                            |                     | Represent/analyze mathematical situations                            |     |              |    |              |    |       |       |     |      |       |      |       |                 |             |
|                       | 2   | 1                          | 1                   | Correlate story with expression or equation                          |     |              |    |              |    |       |       |     |      |       |      |       |                 |             |
|                       | 2   | 2                          | 1                   | Solve for missing number in equation                                 |     |              |    |              |    |       |       |     |      |       |      |       |                 |             |
|                       | 2 2 Identify the missing symbol   |                            |                     |  | 2   |              |    |              | 2  |       | 2     | 2   |      |       |      | 2     |                 | 2           |
|                       | Total For Assessment Anchor D.2<br>Represent/analyze mathematical situations using<br>numbers, symbols, words, tables and/or graphs |                            |                     |  |     |              |    |              | 2  |       | 2     | 2   |      |       |      | 2     |                 | 2           |
| Total                 | For Rep   |                            | 10                  |  | 2   |              | 12 |              | 12 | 10    |       | 2   |      | 12    |      | 12    |                 |             |

| Grad                  | e 04   |                            |                     |  |     |              |    |              |    |               |       |     |      |       | I    | viati | iem             | atics      |
|-----------------------|--|----------------------------|---------------------|--|-----|--------------|----|--------------|----|---------------|-------|-----|------|-------|------|-------|-----------------|------------|
|                       |  |                            |                     |  |     |              |    | Point        | ts |               |       |     |      |       | Item | าร    |                 |            |
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores |    | ating<br>ock | То | tal P         | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | mber<br>ms |
| Rep                   | Asse   | Desc<br>(Sub-              | Eli                 |  | Poi | ore<br>nts)  |    | (B)          |    | (Core<br>(EB) | )     | Co  |      | Е     |      |       | (Core<br>(EB)   |            |
|                       |  |                            |                     |  | MC  | OE           | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total      |
|                       | 1  |                            |                     | Formulate questions; organize,<br>display, interpret or analyze data |     | 4            |    |              |    | 4             | 4     |     | 1    |       |      |       | 1               | 1          |
| and Probability       | 1  | 1                          | 1                   | Describe/interpret/answer questions based on data shown              |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| -<br>Prob             | 1 2 1 Graph data or complete a gra   |                            |                     |  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | 1  | 2                          | 2                   | Translate data from one type of display to another                   | 3   |              |    |              | 3  |               | 3     | 3   |      |       |      | 3     |                 | 3          |
| sis                   | Total  | For Ass                    | sessme              | ent Anchor E.1   |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Analysis              |  |                            |                     | er questions about data and/or                                       | 3   | 4            |    |              | 3  | 4             | 7     | 3   | 1    |       |      | 3     | 1               | 4          |
| An                    | organ  | ize, dis                   | play, ir            | nterpret or analyze data   |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Data ,                | Understand and apply basic concepts of probability                                 |                            |                     |  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Ë                     | 3  | 1                          | 1                   | Make a prediction based on data<br>or chance                         |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | Total For Assessment Anchor E.3 Understand and apply basic concepts of probability |                            |                     |  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Total                 | tal For Reporting Category E   |                            |                     |  |     | 4            |    |              | 3  | 4             | 7     | 3   | 1    |       |      | 3     | 1               | 4          |

|                           |   |                            |                     |  |             |              |    | D            |    |              |       |     |      |       |      | viati |                 |             |
|---------------------------|---|----------------------------|---------------------|--|-------------|--------------|----|--------------|----|--------------|-------|-----|------|-------|------|-------|-----------------|-------------|
|                           |   |                            |                     |  |             |              |    | Point        | ts |              |       |     |      |       | Iten | าร    |                 |             |
| Reporting<br>Category     | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Stud<br>Sco | dent<br>ores | -  | ating<br>ock | То | tal P        | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | ımber<br>ms |
| Rep                       | Asse  | Des<br>(Sub-               | Co                  |  | (Co<br>Poir | ore<br>nts)  | (E | (B)          | (  | Core<br>(EB) |       | Co  | ore  | Е     | B    | (     | Core<br>(EB)    |             |
|                           |   |                            |                     |  | MC          | OE           | MC | OE           | MC | OE           | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total       |
|                           | 1   |                            |                     | Understand relationships and representations of numbers and number systems |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                           | 1   | 1                          | 1                   | Use expanded notation  | 5           |              |    |              | 5  |              | 5     | 5   |      |       |      | 5     |                 | 5           |
|                           | 1   | 2                          |                     | Read/write decimals  | 5           |              |    |              | 5  |              | 5     | 5   |      |       |      | 5     |                 | 5           |
|                           | 1   | 2                          |                     | Identify number with place value   |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                           | 1   | 3                          | 1                   | Compare whole numbers  |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                           | 1   | 3                          | 2                   | Compare and/or order decimals  | 5           |              |    |              | 5  |              | 5     | 5   |      |       |      | 5     |                 | 5           |
|                           | 1   | 3                          | 3                   | Compare proper fractions   |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                           | 1   | 4                          | 1                   | Identify negative numbers on number line                                   |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                           | 1   | 4                          | 2                   | Identify negative numbers on thermometer                                   |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| S                         | 1   | 5                          | 1                   | Model fractions/mixed numbers  |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| ations                    | 1   | 6                          | ļ                   | Name/identify prime and composite numbers                                  |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| e                         | composite numbers  1 6 2 List/identify factors, multiples                                     |                            |                     |  |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| Ö                         | 1 6 2 List/identify factors, multiples Total For Assessment Anchor A.1                        |                            |                     |  |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| 힏                         |   |                            |                     | ships among and representations  | 15          |              |    |              | 15 |              | 15    | 15  |      |       |      | 15    |                 | 15          |
| S a                       | of nun  | nbers a                    | ind nui             | mber systems   |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| nber                      | 2   |                            |                     | Understand meanings, uses and relations of operations                      |             | 4            |    |              |    | 4            | 4     |     | 1    |       |      |       | 1               | 1           |
| A: Numbers and Operations | 2   | 1                          | 1                   | Solve problems involving all operations (whole numbers & decimals)         | 4           |              |    |              | 4  |              | 4     | 4   |      |       |      | 4     |                 | 4           |
|                           | 2   | 1                          |                     | Solve problems involving addition/subtraction (fractions)                  | 4           |              |    |              | 4  |              | 4     | 4   |      |       |      | 4     |                 | 4           |
|                           | 2   | 1                          | 3                   | Choose correct operation   | 3           |              |    |              | 3  |              | 3     | 3   |      |       |      | 3     |                 | 3           |
|                           |   | stand r                    | neanin              | nt Anchor A.2<br>gs, uses of operations and how<br>other                   | 11          | 4            |    |              | 11 | 4            | 15    | 11  | 1    |       |      | 11    | 1               | 12          |
|                           | 3   |                            |                     | Compute accurately/fluently and make reasonable estimates                  |             |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                           | 3   | 1                          | 1                   | Round whole numbers & decimals   | 5           |              |    |              | 5  |              | 5     | 5   |      |       |      | 5     |                 | 5           |
|                           | 3   | 1                          | 2                   | Estimate to solve  | 2           |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                           | 3 2 1 Compute without calculator  |                            |                     |  |             |              |    |              | 2  |              | 2     | 2   |      |       |      | 2     |                 | 2           |
|                           | Total For Assessment Anchor A.3 Compute accurately and fluently and make reasonable estimates |                            |                     |  |             |              |    |              | 7  |              | 7     | 7   |      |       |      | 7     |                 | 7           |
| Total                     | reasonable estimates<br>al For Reporting Category A   |                            |                     |  |             |              |    |              | 33 | 4            | 37    | 33  | 1    |       |      | 33    | 1               | 34          |

| Grad                  | <del>e 03</del>      |                            |                            |   |    |              |    |              |    |             |       |     |      |       |      | viati | ICIII           | aucs       |
|-----------------------|----------------------|----------------------------|----------------------------|---|----|--------------|----|--------------|----|-------------|-------|-----|------|-------|------|-------|-----------------|------------|
|                       |                      |                            |                            |   |    |              |    | Point        | S  |             |       |     |      |       | Item | าร    |                 |            |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content        | Focus   |    | dent<br>ores |    | ating<br>ock | То | tal Po      | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | mber<br>ms |
| Rep<br>Cat            | Asse                 | Desc<br>(Sub-              | Eli                        |   | `  | ore<br>nts)  | (E | (B)          | (  | Core<br>EB) |       | Co  | ore  | E     | В    | (     | Core<br>EB)     |            |
|                       |                      |                            |                            |   | MC | OE           | MC | OE           | MC | OE          | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total      |
|                       |                      |                            |                            | Understand measurable attributes                        |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | 1                    |                            |                            | and units, systems, processes of                        |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       |                      |                            |                            | measurement   |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | 1                    | 1                          | 1                          | Select appropriate unit                                 |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | 1                    | 2                          | 1                          | Convert measurements                                    | 8  |              |    |              | 8  |             | 8     | 8   |      |       |      | 8     |                 | 8          |
|                       | 1                    | 2                          | 2                          | Add/subtract measurements                               | 1  |              |    |              | 1  |             | 1     | 1   |      |       |      | 1     |                 | 1          |
|                       | 1                    | 3                          | 1                          | Estimate polygon perimeter/area                         |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | 1                    | 3                          | 2                          | Estimate area of irregular figure                       |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
| eu                    | Total I              | For Ass                    | sessme                     | nt Anchor B.1   |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
| Ę                     | Under                | stand i                    | measui                     | rable attributes and units, systems,                    | 9  |              |    |              | 9  |             | 9     | 9   |      |       |      | 9     |                 | 9          |
| l E                   | proces               | sses of                    | measu                      | ırement   |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
| B: Measurement        | 2                    |                            |                            | Apply techniques, tools & formulas to determine         |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
| ä                     |                      |                            |                            | measurements Use a ruler to nearest 1/8 in. or          |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | 2                    | 1                          | 1                          | cm  |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | 2                    | 2                          | 1                          | Find perimeter of square or rectangle or labeled figure |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | 2                    | 2                          | 2                          | Find area of square or rectangle                        |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       |                      |                            | Solve measurement problems |   |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | Total I              | For Ass                    | sessme                     | nt Anchor B.2   |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | Apply                | approp                     | oriate t                   | echniques, tools and formulas to                        |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
|                       | deterr               | nine m                     | easure                     | ments   |    |              |    |              |    |             |       |     |      |       |      |       |                 |            |
| Total                 | For Rep              | porting                    | ory B                      | 9   |    |              |    | 9            |    | 9           | 9     |     |      |       | 9    |       | 9               |            |

| <del>U.u.u</del>      | 6 03  |                            |                     |  |     |              |    | Point | c  |             |       |     |      |       | Iten |      |                 | atics       |
|-----------------------|---|----------------------------|---------------------|--|-----|--------------|----|-------|----|-------------|-------|-----|------|-------|------|------|-----------------|-------------|
| Reporting<br>Category | Assessment<br>Anchor                        | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores |    | ating |    | tal P       | oints | Nun | nber | of It |      | Tota | al Nu<br>of Ite | ımber<br>ms |
| Repo                  | Asses<br>And                                | Desc<br>(Sub-a             | Eliç                | 1 0003   | Poi | ore<br>nts)  | (E | (B)   |    | Core<br>EB) | )     | Сс  |      | Е     |      | Ì    | Core<br>EB)     | )           |
|                       |   |                            |                     |  | MC  | OE           | MC | OE    | MC | OE          | Total | MC  | OE   | MC    | OE   | MC   | OE              | Total       |
|                       | 1   |                            |                     | Analyze characteristics & properties of 2-D & 3-D shapes               |     | 4            |    |       |    | 4           | 4     |     | 1    |       |      |      | 1               | 1           |
|                       | 1 1 1 Identify/classify/compare 3-D figures |                            |                     |  |     |              |    |       |    |             |       |     |      |       |      |      |                 |             |
|                       | 1   | 1                          | 2                   | Identify/classify/compare<br>quadrilaterals                            | 5   |              |    |       | 5  |             | 5     | 5   |      |       |      | 5    |                 | 5           |
| >                     | 1   | 2                          | 1                   | Identify/draw/label points, lines, segments, rays, planes              |     |              |    |       |    |             |       |     |      |       |      |      |                 |             |
| Geometry              | Analyz                                      | ze char                    | acteris             | ent Anchor C.1<br>etics and properties of two- and<br>geometric shapes | 5   | 4            |    |       | 5  | 4           | 9     | 5   | 1    |       |      | 5    | 1               | 6           |
| C: C                  | 2   |                            |                     | Identify and/or apply concepts of transformations or symmetry          |     |              |    |       |    |             |       |     |      |       |      |      |                 |             |
|                       | 2   | 1                          | 1                   | Draw or identify translation, reflection, rotation                     |     |              |    |       |    |             |       |     |      |       |      |      |                 |             |
|                       | 2   | 1                          | 2                   | Draw/identify lines of symmetry  |     |              |    |       |    |             |       |     |      |       |      |      |                 |             |
|                       |   | fy and                     |                     | ent Anchor C.2<br>oly concepts of transformations or                   |     |              |    |       |    |             |       |     |      |       |      |      |                 |             |
| Total                 | For Re                                      | porting                    | Categ               | jory C   | 5   | 4            |    |       | 5  | 4           | 9     | 5   | 1    |       |      | 5    | 1               | 6           |

|                       |  |                            |                     |  |     |              |    | Point        | ts |             |       |     |      |       | Iten | าร |                 |             |
|-----------------------|--|----------------------------|---------------------|--|-----|--------------|----|--------------|----|-------------|-------|-----|------|-------|------|----|-----------------|-------------|
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores |    | ating<br>ock | То | tal P       | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse<br>Ar   | Des<br>(Sub-               | E 8                 |  | Poi |              | ·  | EB)          | (  | Core<br>EB) | )     |     | re   | E     |      | (  | (Core           |             |
|                       |  |                            |                     |  | MC  | OE           | MC | OE           | MC | OE          | Total | MC  | OE   | MC    | OE   | MC | OE              | Total       |
|                       | 1  |                            |                     | Understand patterns, relations and functions                         |     | 4            |    |              |    | 4           | 4     |     | 1    |       |      |    | 1               | 1           |
|                       | 1  | 1                          | 1                   | Extend or find a missing element in a numerical or geometric pattern | 2   |              |    |              | 2  |             | 2     | 2   |      |       |      | 2  |                 | 2           |
| epts                  | 1  | 1                          | 2                   | Create numerical or geometric pattern                                | 5   |              |    |              | 5  |             | 5     | 5   |      |       |      | 5  |                 | 5           |
| 2                     | 1  | 2                          | 1                   | Form/illustrate pattern rule   | 1   |              |    |              | 1  |             | 1     | 1   |      |       |      | 1  |                 | 1           |
| Algebraic Concepts    |  |                            |                     | ent Anchor D.1<br>ns, relations and functions                        | 8   | 4            |    |              | 8  | 4           | 12    | 8   | 1    |       |      | 8  | 1               | 9           |
|                       | 2  |                            |                     | Represent/analyze mathematical situations                            |     |              |    |              |    |             |       |     |      |       |      |    |                 |             |
| Ö                     | 2  | 1                          | 1                   | Solve for missing number   |     |              |    |              |    |             |       |     |      |       |      |    |                 |             |
|                       | 2  | 1                          | 2                   | Match number sentence to story                                       |     |              |    |              |    |             |       |     |      |       |      |    |                 |             |
|                       | 2 1 2 Match number sentence to st<br>Total For Assessment Anchor D.2<br>Represent/analyze mathematical situations using<br>numbers, symbols, words, tables and/or graphs |                            |                     |  |     |              |    |              |    |             |       |     |      |       |      |    |                 |             |
| Total                 | For Reporting Category D   |                            |                     |  | 8   | 4            |    |              | 8  | 4           | 12    | 8   | 1    |       |      | 8  | 1               | 9           |

| Grad                          | Points) EB |                        |                     |   |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
|-------------------------------|--|------------------------|---------------------|---|-----|------|-----|-------|----|-----|-------|-----|------|-------|------|----|-------|-------|
|                               |  |                        |                     |   |     |      |     | Point | ts |     |       |     |      |       | Item | าร |       |       |
| Reporting<br>Category         | sessment<br>Anchor                             | sscriptor<br>b-anchor) | Eligible<br>Content | Focus   | Sco | res  | Blo | ock - |    |     |       | Nun | nber | of It | ems  | 0  | f Ite | ms    |
| % O                           | Ass  | De<br>Sul              | П                   |   | Poi | nts) |     | •     |    | EB) |       |     |      |       |      |    | EB)   | )     |
|                               |  |                        |                     |   | MC  | OE   | MC  | OE    | MC | OE  | Total | MC  | OE   | MC    | OE   | MC | OE    | Total |
|                               | 1  |                        |                     | organize, display, interpret or                                   |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
|                               | 1 1 1 Interpret/display data                   |                        |                     |   | 5   |      |     |       | 5  |     | 5     | 5   |      |       |      | 5  |       | 5     |
|                               | Formu  | ılate or               | answ                |   | 5   |      |     |       | 5  |     | 5     | 5   |      |       |      | 5  |       | 5     |
| oability                      | 2  |                        |                     | Select and/or use appropriate statistical methods to analyze data |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
| d Prol                        | 2  | 1                      | 1                   | Determine the mean, median, range                                 |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
| s and                         | 2  | 1                      | 2                   | Identify the mode in set of data                                  |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
| Data Analysis and Probability | Select   |                        | r use a             | ent Anchor E.2<br>appropriate statistical methods to              |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
| E: Data                       | 3  |                        |                     | Understand/apply basic concepts of probability or outcomes        |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
|                               | 3  | 1                      | 1                   | Predict/determine likelihood of outcomes                          |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
|                               | 3  | 1                      | 2                   | Determine probability of outcome                                  |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
|                               | Under  |                        |                     | ent Anchor E.3 apply basic concepts of probability                |     |      |     |       |    |     |       |     |      |       |      |    |       |       |
| Total I                       | For Re   | porting                | Categ               | ory E   | 5   |      |     |       | 5  |     | 5     | 5   |      |       |      | 5  |       | 5     |

| Grau                  | e 06                          |                            |                     |   | 1   |              |     |       |    |               | -     |     |      |       |      |    | iem          | atics |
|-----------------------|-------------------------------|----------------------------|---------------------|---|-----|--------------|-----|-------|----|---------------|-------|-----|------|-------|------|----|--------------|-------|
|                       |                               |                            |                     |   |     |              |     | Point | İS |               |       |     |      |       | Iten | าร |              |       |
| Reporting<br>Category | Assessment<br>Anchor          | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   | Sco | dent<br>ores | Blo | ating |    | tal Po        |       | Nun | nber | of It | ems  | C  | f Ite        |       |
| Re                    | Asse<br>A                     | Deg<br>dnS)                | CC                  |   | Poi | ore<br>nts)  | ,   | ΞB)   |    | (Core<br>(EB) |       |     | re   |       | В    |    | (Core<br>EB) |       |
|                       |                               |                            |                     |   | MC  | OE           | MC  | OE    | MC | OE            | Total | MC  | OE   | MC    | OE   | MC | OE           | Total |
|                       | 1                             |                            |                     | Understand relationships and<br>representations of numbers and<br>number systems              |     | 4            |     |       |    | 4             | 4     |     | 1    |       |      |    | 1            | 1     |
|                       | 1                             | 1                          | 1                   | Represent percents as fractions and/or decimals   | 5   |              |     |       | 5  |               | 5     | 5   |      |       |      | 5  |              | 5     |
|                       | 1                             | 1                          | 2                   | Convert between fractions and decimals/differentiate between terminating & repeating decimals |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
|                       | 1                             | 1                          | 3                   | Represent number in exponential form  | 4   |              | 2   |       | 6  |               | 6     | 4   |      | 2     |      | 6  |              | 6     |
|                       | 1                             | 1                          | 4                   | Represent mixed number as an improper fraction  |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
|                       | 1                             | 2                          | 1                   | Compare/order rational numbers except integers  |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
| Suc                   | 1                             | 3                          | 1                   | Find GCF of two numbers   | 6   |              | 2   |       | 8  |               | 8     | 6   |      | 2     |      | 8  |              | 8     |
| I ji                  | 1                             | 3                          | 2                   | Find LCM of two numbers   | 2   |              | 2   |       | 4  |               | 4     | 2   |      | 2     |      | 4  |              | 4     |
| Opera                 | 1                             | 3                          | 3                   | Use divisibility rules for 2, 3, 5 & 10 to solve problems                                     |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
| Ор                    | 1                             | 4                          | 1                   | Model percents  |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
|                       | Under                         | stand r                    | elation             | nt Anchor A.1<br>Iships among and representations<br>mber systems                             | 17  | 4            | 6   |       | 23 | 4             | 27    | 17  | 1    | 6     |      | 23 | 1            | 24    |
| Numk                  | 2                             |                            |                     | Understand meanings, uses and relations of operations   |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
| A:                    | 2                             | 1                          | 1                   | Complete equations by using properties: associative, commutative, distributive, Identity      | 3   |              | 1   |       | 4  |               | 4     | 3   |      | 1     |      | 4  |              | 4     |
|                       |                               |                            |                     | nt Anchor A.2<br>ons to solve problems  | 3   |              | 1   |       | 4  |               | 4     | 3   |      | 1     |      | 4  |              | 4     |
|                       | 3                             |                            |                     | Compute accurately/fluently and make reasonable estimates                                     |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
|                       | 3                             | 1                          | 1                   | Estimate to solve   |     |              |     |       |    |               |       |     |      |       |      |    |              |       |
|                       | 3                             | 2                          | 1                   | Solve problems involving operations   | 7   |              |     |       | 7  |               | 7     | 7   |      |       |      | 7  |              | 7     |
|                       |                               | ute acc                    |                     | nt Anchor A.3<br>and fluently and make reasonable   | 7   |              |     |       | 7  |               | 7     | 7   |      |       |      | 7  |              | 7     |
| Total                 | otal For Reporting Category A |                            |                     |   |     | 4            | 7   |       | 34 | 4             | 38    | 27  | 1    | 7     |      | 34 | 1            | 35    |

| Grac                  | le 06                |                            |                     |   |     |              |    |              |    |               |       |     |      |       |      | viati | <u>nem</u>      | atics      |
|-----------------------|----------------------|----------------------------|---------------------|---|-----|--------------|----|--------------|----|---------------|-------|-----|------|-------|------|-------|-----------------|------------|
|                       |                      |                            |                     |   |     |              |    | Point        | ts |               |       |     |      |       | Item | าร    |                 |            |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   |     | dent<br>ores | -  | ating<br>ock | То | tal P         | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | mber<br>ms |
| Rep                   | Asse:<br>An          | Desi<br>(Sub-              | i                   |   | Poi | ore<br>nts)  | ,  | EB)          |    | (Core<br>(EB) | )     | Сс  |      |       | В    |       | (Core<br>EB)    |            |
|                       |                      |                            |                     |   | MC  | OE           | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total      |
|                       | 1                    |                            |                     | Understand measurable attributes<br>and units, systems, processes of<br>measurement |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | 1                    | 1                          | 1                   | Determine/compare elapsed time  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| <u> </u>              | Under                | stand r                    | neasur              | nt Anchor B.1 Table attributes and units, systems, arement                          |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Measurement           | 2                    | <u> </u>                   |                     | Apply techniques, tools & formulas to determine measurements                        |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | 2                    | 1                          | 1                   | Use ruler to nearest 1/16 in. or mm   |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| ä                     | 2                    | 1                          | 2                   | Choose precise measurement  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | 2                    | 1                          | 3                   | Measure angles using protractor   |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | 2                    | 2                          | 1                   | Find perimeter of any polygon   |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | 2                    | 3                          | 1                   | Define/label/identify angles  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       |                      |                            |                     | nt Anchor B.2   |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                       | detern               |                            |                     | echniques, tools and formulas to ments  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Total                 | For Re               | porting                    | Categ               | jory B  |     |              |    |              |    |               |       |     |      |       |      |       |                 |            |

| Grad                  | 100                  |                                     |                      |   |            |      |    |              |    |               |       |     |      |       |      | viati | ICIII       | aucs  |
|-----------------------|----------------------|-------------------------------------|----------------------|---|------------|------|----|--------------|----|---------------|-------|-----|------|-------|------|-------|-------------|-------|
|                       |                      |                                     |                      |   |            |      |    | Point        | S  |               |       |     |      |       | Iten | าร    |             |       |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor)          | Eligible<br>Content  | Focus   | Stud       | res  | BI | ating<br>ock |    |               | oints | Nun | nber | of It | ems  | C     | f Ite       |       |
| Re                    | ASSE                 | Des<br>(Sub                         | E                    |   | (Co<br>Poi | nts) |    | B)           |    | (Core<br>(EB) | ı     |     | ore  |       | В    |       | Core<br>EB) | )     |
|                       |                      |                                     |                      |   | MC         | OE   | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC    | OE          | Total |
|                       | 1                    |                                     |                      | Analyze characteristics & properties of 2-D & 3-D shapes                  |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | 1                    | 1                                   | 1                    | Identify, classify, and compare types of polygons                         |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | 1                    | 1                                   | 2                    | Identify properties of all types of triangles                             |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | 1                    | 1                                   | 3                    | Solve radius/diameter problems  |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | 1                    | 1                                   | 4                    | Identify/use polygon/circle degrees                                       |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
| metry                 | 1                    | 2                                   | 1                    | Identify/describe/label parallel, perpendicular, and intersecting lines   |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
| C: Geometry           | 1                    | 2                                   | 2                    | Identify points, planes, lines, line segments, rays, angles, and vertices |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | Total I              | For Ass                             | essme                | nt Anchor C.1   |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | Analyz               | e char                              | acteris <sup>-</sup> | tics and properties of two- and   |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | three-               | dimens                              | ional g              | geometric shapes  |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | 3                    |                                     |                      | Locate points/describe relationships using the coordinate plane           |            | 4    |    |              |    | 4             | 4     |     | 1    |       |      |       | 1           | 1     |
|                       | 3                    | Plot points in Quadrant I & on axes | 7                    |   | 1          |      | 8  |              | 8  | 7             |       | 1   |      | 8     |      | 8     |             |       |
|                       | Total I              | For Ass                             | essme                | nt Anchor C.3   |            |      |    |              |    |               |       |     |      |       |      |       |             |       |
|                       | Locate               |                                     | or de                | scribe relationships using the  | 7          | 4    | 1  |              | 8  | 4             | 12    | 7   | 1    | 1     |      | 8     | 1           | 9     |
| Total                 | For Re               |                                     |                      | ory C   | 7          | 4    | 1  |              | 8  | 4             | 12    | 7   | 1    | 1     |      | 8     | 1           | 9     |

| Gra                | ue uo                |                            |                     |  |    |              |    |              |    |               |       |     |      |       |      | viati | ICIII           | atics      |
|--------------------|----------------------|----------------------------|---------------------|--|----|--------------|----|--------------|----|---------------|-------|-----|------|-------|------|-------|-----------------|------------|
|                    |                      |                            |                     |  |    |              |    | Point        | ts |               |       |     |      |       | Item | าร    |                 |            |
| Reporting          | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |    | dent<br>ores | -  | ating<br>ock | То | tal P         | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | mber<br>ms |
| Rep                | Asse                 | Desc<br>(Sub-              | Ē Ō                 |  | `  | ore<br>nts)  |    | EB)          |    | (Core<br>(EB) | )     | Cc  |      |       | В    | (     | (Core<br>(EB)   |            |
|                    |                      |                            |                     |  | MC | OE           | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total      |
|                    | 1                    |                            |                     | Understand patterns, relations and functions                                   |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                    | 1                    | 1                          | 1                   | Create/extend/complete pattern   |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| S                  | 1                    | 2                          | 1                   | Determine or illustrate pattern rule   |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Algebraic Concepts |                      |                            |                     | ent Anchor D.1<br>is, relations and functions                                  |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| raic (             | 2                    |                            |                     | Represent/analyze mathematical situations                                      |    | 4            |    |              |    | 4             | 4     |     | 1    |       |      |       | 1               | 1          |
| Algeb              | 2                    | 1                          | 1                   | Identify inverse operation to solve one step equation                          |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| D: /               | 2                    | 1                          | 2                   | Solve one-step equation  | 4  |              | 2  |              | 6  |               | 6     | 4   |      | 2     |      | 6     |                 | 6          |
|                    | 2                    | 2                          | 1                   | Match one variable, one-step equation/expression to situation                  | 7  |              | 4  |              | 11 |               | 11    | 7   |      | 4     |      | 11    |                 | 11         |
|                    | Repre                | sent/ar                    | nalyze              | ent Anchor D.2<br>mathematical situations using<br>words, tables and/or graphs | 11 | 4            | 6  |              | 17 | 4             | 21    | 11  | 1    | 6     |      | 17    | 1               | 18         |
| Total              | For Re               | porting                    | Cate                | gory D   | 11 | 4            | 6  |              | 17 | 4             | 21    | 11  | 1    | 6     |      | 17    | 1               | 18         |

| Grad                          | ie uo                |                            |                     |  |    |              |    |              |    |               |       |     |      |       |      | viati | IGIII           | atics      |
|-------------------------------|----------------------|----------------------------|---------------------|--|----|--------------|----|--------------|----|---------------|-------|-----|------|-------|------|-------|-----------------|------------|
|                               |                      |                            |                     |  |    |              |    | Point        | ts |               |       |     |      |       | Item | าร    |                 |            |
| Reporting<br>Category         | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |    | dent<br>ores |    | ating<br>ock | То | tal P         | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | mber<br>ms |
| Rep<br>Cat                    | Asse<br>Ar           | Des<br>(Sub-               | ⊞ S                 |  | `  | ore<br>nts)  | (E | EB)          | (  | (Core<br>(EB) |       | Co  | ore  | Ε     | В    | (     | Core)<br>(EB)   |            |
|                               |                      |                            |                     |  | MC | OE           | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total      |
|                               | 1                    |                            |                     | Formulate/answer questions;<br>organize, display, interpret or<br>analyze data |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                               | 1                    | 1                          | 1                   | Analyze data   | 2  |              |    |              | 2  |               | 2     | 2   |      |       |      | 2     |                 | 2          |
|                               | 1                    | 1                          | 2                   | Choose appropriate data representation   |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| _                             | 1                    | 1                          | 3                   | Display data in graphs, etc.   | 1  |              | 1  |              | 2  |               | 2     | 1   |      | 1     |      | 2     |                 | 2          |
| Data Analysis and Probability | Formu                | late or                    | answe               | nt Anchor E.1<br>er questions about data and/or<br>nterpret or analyze data    | 3  |              | 1  |              | 4  |               | 4     | 3   |      | 1     |      | 4     |                 | 4          |
| and Pr                        | 2                    |                            |                     | Select/use appropriate statistical methods to analyze data                     |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| alysis                        | 2                    | 1                          | 1                   | Determine/calculate mean,<br>median, mode, range                               | 12 |              | 3  |              | 15 |               | 15    | 12  |      | 3     |      | 15    |                 | 15         |
| Data Ana                      | Select               |                            |                     | nt Anchor E.2<br>ppropriate statistical methods to                             | 12 |              | 3  |              | 15 |               | 15    | 12  |      | 3     |      | 15    |                 | 15         |
| ü                             | 3                    |                            |                     | Understand/apply basic concepts of probability or outcomes                     |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                               | 3                    | 1                          | 1                   | Define/find probability  |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                               | 3                    | 1                          | 2                   | Determine/show combinations  |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
|                               |                      | stand a                    |                     | nt Anchor E.3<br>apply basic concepts of probability                           |    |              |    |              |    |               |       |     |      |       |      |       |                 |            |
| Total                         | For Re               | porting                    | Categ               | ory E  | 15 |              | 4  |              | 19 |               | 19    | 15  |      | 4     |      | 19    |                 | 19         |

| Grad                      | e 07  |                            |                               |   |     |                     |    |              |    |       |       |     |      |       |      |    | nem                      | atics |
|---------------------------|---|----------------------------|-------------------------------|---|-----|---------------------|----|--------------|----|-------|-------|-----|------|-------|------|----|--------------------------|-------|
|                           |   |                            |                               |   |     |                     |    | Poin         | ts |       |       |     |      |       | Iten | าร |                          |       |
| Reporting<br>Category     | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor) | Eligible<br>Content           | Focus   | Sco | dent<br>ores<br>ore | Bl | ating<br>ock |    | tal P | oints | Nur | nber | of It | ems  | C  | al Nu<br>of Ite<br>(Core |       |
| ညီပိ                      | Ass   | De<br>(Sut                 | Ш О                           |   | Poi | nts)                |    | EB)          |    | EB)   | )     |     | ore  |       | B    |    | EB)                      | )     |
|                           |   |                            |                               | Hadayatayal yalati ayabiya ayal   | MC  | OE                  | MC | OE           | MC | OE    | Total | MC  | OE   | MC    | OE   | MC | OE                       | Total |
|                           | _   |                            |                               | Understand relationships and  |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | 1   |                            |                               | representations of numbers and  |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           |   |                            |                               | number systems Convert between fractions,   |     |                     |    |              |    |       |       | l   |      |       |      |    |                          |       |
|                           | 1   | 1                          | 1                             | decimals, percents  | 7   |                     |    |              | 7  |       | 7     | 7   |      |       |      | 7  |                          | 7     |
|                           | 1   | 2                          | 1                             | Compare/order rational numbers  |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | '   |                            | '                             | Locate and identify rational  |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | 1   | 2                          | 2                             | numbers on a number line  |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | Total I   | For Ass                    | essme                         | nt Anchor A.1   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | Under   | stand r                    | elation                       | nships among and representations  | 7   |                     |    |              | 7  |       | 7     | 7   |      |       |      | 7  |                          | 7     |
|                           | of nun  | nbers a                    | mber systems                  |   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | Understand meanings, u                                      |                            | Understand meanings, uses and |   | 4   |                     |    |              | 4  | 4     |       | 1   |      |       |      | 1  | 1                        |       |
|                           | relations of operations                                     |                            |                               |   |     |                     |    | 7            |    |       | '     |     |      |       |      |    |                          |       |
|                           | 2   | 1                          | 1                             | Use order of operations   | 1   |                     | 2  |              | 3  |       | 3     | 1   |      | 2     |      | 3  |                          | 3     |
|                           | 2   | 2                          | 1                             | Write ratios to compare quantities  |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
| ns                        | 2   | 2                          | 2                             | Solve for a variable in proportions   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
| atio                      | 2   | 2                          | 3                             | Use proportions to test   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
| per                       |   |                            |                               | equivalency Calculate/apply unit rates or unit  |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
| 0 p                       | 2   | 2                          | 4                             | prices  | 1   |                     | 1  |              | 2  |       | 2     | 1   |      | 1     |      | 2  |                          | 2     |
| A: Numbers and Operations | 2   | 2                          | 5                             | Select and use ratios/proportions to solve problems                                     | 2   |                     | 1  |              | 3  |       | 3     | 2   |      | 1     |      | 3  |                          | 3     |
| Vumb                      | 2   | 2                          | 6                             | Use proportions to find missing lengths in similar figures                              |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
| <del> </del>              | Total I   | For Ass                    | essme                         | nt Anchor A.2   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | Under   | stand r                    | meanin                        | gs, uses of operations and how  | 4   | 4                   | 4  |              | 8  | 4     | 12    | 4   | 1    | 4     |      | 8  | 1                        | 9     |
|                           | they re   | elate to                   | each                          | other   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | 3   |                            |                               | Compute accurately/fluently and make reasonable estimates                               |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | 3   | 1                          | 1                             | Estimate answers involving operations with whole numbers, decimals, fractions and mixed | 2   |                     |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                          | 2     |
|                           |   |                            |                               | numbers<br>Solve problems involving   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | 3   | 2                          | 1                             | operations with whole numbers, decimals, fractions and mixed                            | 3   |                     |    |              | 3  |       | 3     | 3   |      |       |      | 3  |                          | 3     |
|                           |   |                            |                               | numbers   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | 3   | 2                          | 2                             | Solve problems involving addition/subtraction of integers                               | 2   |                     |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                          | 2     |
|                           |   |                            |                               | nt Anchor A.3   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |
|                           | Compute accurately and fluently and make reasonal estimates |                            |                               |   | 7   |                     |    |              | 7  |       | 7     | 7   |      |       |      | 7  |                          | 7     |
| Total I                   | tal For Reporting Category A                                |                            |                               |   |     | 4                   | 4  |              | 22 | 4     | 26    | 18  | 1    | 4     |      | 22 | 1                        | 23    |
|                           |   | •                          | 18                            |   |     |                     |    |              |    |       |       |     |      |       |      |    |                          |       |

| <u> </u>       | Je U7                              |                            |   |   |            |              |    | Point | S  |             |       |     |      |       | Item |      | ICII            | atics       |
|----------------|------------------------------------|----------------------------|---|---|------------|--------------|----|-------|----|-------------|-------|-----|------|-------|------|------|-----------------|-------------|
| Reporting      | Assessment<br>Anchor               | Descriptor<br>(Sub-anchor) | Eligible<br>Content                                       | Focus   | Stud       | dent<br>ores |    | ating |    | tal P       | oints | Nun | nber | of It |      | Tota | al Nu<br>of Ite | ımber<br>ms |
| Rep            | Asse                               | Desc<br>(Sub-              | E S   |   | (Co<br>Poi | ore<br>nts)  | (E | (B)   | (  | Core<br>EB) |       | Cc  | re   | Е     | B    | (    | (Core           |             |
|                |                                    |                            |   |   | MC         | OE           | MC | OE    | MC | OE          | Total | MC  | OE   | MC    | OE   | MC   | OE              | Total       |
|                | 1                                  |                            |   | Understand measurable attributes<br>and units, systems, processes of<br>measurement |            |              |    |       |    |             |       |     |      |       |      |      |                 |             |
|                | 1                                  | 1                          | 1   | Add/subtract/convert measurements   |            |              |    |       |    |             |       |     |      |       |      |      |                 |             |
|                | Under                              | stand r                    | neasur  | nt Anchor B.1<br>able attributes and units, systems,<br>prement                     |            |              |    |       |    |             |       |     |      |       |      |      |                 |             |
| B: Measurement | 2                                  |                            |   | Apply techniques, tools & formulas to determine measurements                        |            |              |    |       |    |             |       |     |      |       |      |      |                 |             |
| asure          | 2                                  | 1                          | 1   | Find perimeter and/or area of compound figures                                      | 3          |              | 1  |       | 4  |             | 4     | 3   |      | 1     |      | 4    |                 | 4           |
| : Me           | 2                                  | 1                          | 2   | Find circumference/area of circles  | 3          |              | 1  |       | 4  |             | 4     | 3   |      | 1     |      | 4    |                 | 4           |
|                | 2                                  | 1                          | 3   | Find area of triangles, parallelograms, trapezoids                                  |            |              |    |       |    |             |       |     |      |       |      |      |                 |             |
|                | 2                                  | 2                          | 1   | Interpret and apply scale drawings  | 3          |              | 1  |       | 4  |             | 4     | 3   |      | 1     |      | 4    |                 | 4           |
|                | 2 2 Determine appropriate scale fo |                            | Determine appropriate scale for reduction and enlargement | 3   |            | 1            |    | 4     |    | 4           | 3     |     | 1    |       | 4    |      | 4               |             |
|                | Apply                              |                            | riate t   | nt Anchor B.2 echniques, tools and formulas to                                      | 12         |              | 4  |       | 16 |             | 16    | 12  |      | 4     |      | 16   |                 | 16          |
| Total          | For Rep                            | porting                    | Categ   | ory B   | 12         |              | 4  |       | 16 |             | 16    | 12  |      | 4     |      | 16   |                 | 16          |

| Grad                  | <del>U</del> 07                                       |                            |                     |  |             |    |    |              |    |              |       |     |      |       |      | viati | ш               | atics      |
|-----------------------|---|----------------------------|---------------------|--|-------------|----|----|--------------|----|--------------|-------|-----|------|-------|------|-------|-----------------|------------|
|                       |   |                            |                     |  |             |    |    | Point        | ts |              |       |     |      |       | Item | าร    |                 |            |
| Reporting<br>Category | Assessment<br>Anchor                                  | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Stud<br>Sco |    |    | ating<br>ock | То | tal P        | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | mber<br>ms |
| Rep<br>Cat            | Asse<br>Ar  | Des<br>(Sub-               | EII<br>Co           |  | (Co<br>Poir |    | (E | (B)          | (  | Core<br>(EB) |       | Cc  | re   | E     | В    | (     | Core<br>(EB)    |            |
|                       |   |                            |                     |  | MC          | OE | MC | OE           | MC | OE           | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total      |
|                       | 1   |                            |                     | Analyze characteristics & properties of 2-D & 3-D shapes                         |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | 1   | 1                          | 1                   | Identify diameter, radius, chord, circumference in circles                       |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | 1   | 1                          | 2                   | Solve problems using radius/diameter relationship                                |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | 1   | 1                          | 3                   | Identify parallel, perpendicular,<br>and skew lines in a 3-dimensional<br>figure |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
| <u> </u>              | 1   | 2                          | 1                   | Identify similar/congruent polygons  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
| Geometry              | 1   | 2                          | 2                   | Identify corresponding sides/angles  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       |   |                            |                     | nt Anchor C.1  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
| ပ                     | _   |                            |                     | tics and properties of two- and  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | three-  | dimens                     | sional <u>c</u>     | leometric shapes Locate points/describe  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | 3   |                            |                     | relationships using the coordinate plane   |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | 3   | 1                          | 1                   | Plot/identify ordered pairs  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       |   |                            |                     | Identify Quadrants I, II, III, IV, x-  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | 3 1 2 and y- axes, and the origin or coordinate plane |                            |                     |  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | Total I   | For Ass                    |                     | nt Anchor C.3  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | Locate  | points                     | or de               | scribe relationships using the   |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
|                       | coordi  | nate pl                    | ane                 |  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |
| Total I               | or Re   | porting                    | Categ               | ory C  |             |    |    |              |    |              |       |     |      |       |      |       |                 |            |

| Grad                  | <del>e 07</del>   |                            |                     |   |      |              |    |              |    |              |       |     |      |       |      | viati | iem             | atics       |
|-----------------------|---|----------------------------|---------------------|---|------|--------------|----|--------------|----|--------------|-------|-----|------|-------|------|-------|-----------------|-------------|
|                       |   |                            |                     |   |      |              |    | Point        | ts |              |       |     |      |       | Item | าร    |                 |             |
| Reporting<br>Category | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   | Stud | dent<br>ores |    | ating<br>ock | То | tal P        | oints | Nun | nber | of It | ems  |       | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse<br>Ar  | Des<br>(Sub-               | ::: S               |   | (Co  | -            | (E | EB)          | (  | Core<br>(EB) |       | Co  | ore  | Е     | В    | (     | Core)<br>(EB)   |             |
|                       |   |                            |                     |   | MC   | OE           | MC | OE           | MC | OE           | Total | MC  | OE   | MC    | OE   | MC    | OE              | Total       |
|                       | 1   |                            |                     | Understand patterns, relations and functions              |      |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                       | 1   | 1                          | 1                   | Describe/extend/complete pattern                          |      |              |    |              |    |              |       |     |      |       |      |       |                 |             |
|                       |   | For Ass<br>stand p         |                     |   |      |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| ots                   | 2   |                            |                     | Represent/analyze mathematical situations                 |      |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| l je                  | 2   | 1                          | 1                   | Solve one-step equations                                  |      |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| Con                   | 2   | 1                          | 2                   | Use substitution of variables to simplify expression      |      |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| ္ဗ                    | 2   | 2                          | 1                   | Identify mathematical models                              | 8    |              | 2  |              | 10 |              | 10    | 8   |      | 2     |      | 10    |                 | 10          |
| þr                    | Total I   | For Ass                    | essme               | nt Anchor D.2   |      |              |    |              |    |              |       |     |      |       |      |       |                 |             |
| Algebraic Concepts    |   |                            |                     | mathematical situations using words, tables and/or graphs | 8    |              | 2  |              | 10 |              | 10    | 8   |      | 2     |      | 10    |                 | 10          |
| Ö                     | 3   |                            |                     | Analyze change in various contexts                        |      | 4            |    |              |    | 4            | 4     |     | 1    |       |      |       | 1               | 1           |
|                       | 3   | 1                          | 1                   | Solve problems w/ constant rate of change                 | 6    |              | 2  |              | 8  |              | 8     | 6   |      | 2     |      | 8     |                 | 8           |
|                       | 3 1 2 Describe or use a rate of chan shown on a graph                 |                            |                     |   | 6    |              | 2  |              | 8  |              | 8     | 6   |      | 2     |      | 8     |                 | 8           |
|                       | Total For Assessment Anchor D.3<br>Analyze change in various contexts |                            |                     |   |      | 4            | 4  |              | 16 | 4            | 20    | 12  | 1    | 4     |      | 16    | 1               | 17          |
| Total                 | otal For Reporting Category D   |                            |                     |   | 20   | 4            | 6  |              | 26 | 4            | 30    | 20  | 1    | 6     |      | 26    | 1               | 27          |

| Grau                          | c 0,  |                            |                     |  |     |              |       |       |    |               |       |     |      |       |     |    | ICIII         | atics |
|-------------------------------|---|----------------------------|---------------------|--|-----|--------------|-------|-------|----|---------------|-------|-----|------|-------|-----|----|---------------|-------|
|                               |   |                            |                     |  |     |              | Point | ts    |    |               |       |     |      | Iten  | าร  |    |               |       |
| Reporting<br>Category         | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Sco | dent<br>ores | Ble   | ating |    |               | oints | Nun | nber | of It | ems | C  | f Ite         |       |
| Re                            | Ass<br>A  | De<br>(Suk                 | C E                 |  | Poi | ore<br>nts)  |       | (B)   |    | (Core<br>(EB) | )     |     | ore  |       | В   |    | (Core<br>(EB) | )     |
|                               |   |                            |                     |  | MC  | OE           | MC    | OE    | MC | OE            | Total | MC  | OE   | MC    | OE  | MC | OE            | Total |
|                               | 1   |                            |                     | Formulate/answer questions;<br>organize, display, interpret or<br>analyze data |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
|                               | 1   | 1                          |                     | Analyze data   |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
|                               |   |                            |                     | nt Anchor E.1  |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
|                               |   |                            |                     | er questions about data and/or<br>hterpret or analyze data                     |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
|                               | 2   |                            |                     | Select and/or use appropriate statistical methods to analyze data              |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
| >                             | 2   | 1                          | 1                   | Identify/calculate mean, median, mode, range for a set of data                 |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
| babilit                       | 2   | 1                          | 2                   | Choose appropriate measure of central tendency for a situation                 |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
| P <sub>r</sub> C              | Total F   | or Ass                     | essme               | nt Anchor E.2  |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
| <u> </u>                      | Select  | and/or                     | use a               | ppropriate statistical methods to  |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
| a                             |   | e data                     |                     | •  |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
| Data Analysis and Probability | 3   |                            |                     | Understand/apply basic concepts of probability or outcomes                     |     | 4            |       |       |    | 4             | 4     |     | 1    |       |     |    | 1             | 1     |
| ata A                         | 3   | 1                          | 1                   | Find theoretical probability of event  | 2   |              | 1     |       | 3  |               | 3     | 2   |      | 1     |     | 3  |               | 3     |
| Ë                             | 3   | 1                          | 2                   | Find theoretical probability of event not occurring                            | 2   |              | 1     |       | 3  |               | 3     | 2   |      | 1     |     | 3  |               | 3     |
|                               | 3   | 1                          | 3                   | Find experimental probability  | 2   |              | 1     |       | 3  |               | 3     | 2   |      | 1     |     | 3  |               | 3     |
|                               |   | stand a                    |                     | nt Anchor E.3<br>apply basic concepts of probability                           | 6   | 4            | 3     |       | 9  | 4             | 13    | 6   | 1    | 3     |     | 9  | 1             | 10    |
|                               | 4   |                            |                     | Develop/evaluate inferences and predictions based on data displays             |     |              |       |       |    |               |       |     |      |       |     |    |               |       |
|                               | 4   | 1                          | I                   | Predict/draw conclusions from displays or probability                          | 4   |              | 1     |       | 5  |               | 5     | 4   |      | 1     |     | 5  |               | 5     |
|                               | Total For Assessment Anchor E.4 Develop/evaluate inferences and predictions based data displays |                            |                     |  | 4   |              | 1     |       | 5  |               | 5     | 4   |      | 1     |     | 5  |               | 5     |
| Total I                       | ital For Reporting Category E   |                            |                     |  | 10  | 4            | 4     |       | 14 | 4             | 18    | 10  | 1    | 4     |     | 14 | 1             | 15    |

| Grau                      | t  |                            |   | -  |            |     |    |              |    |               | _     |     |      | I     | viati | nem | atics  |       |
|---------------------------|--|----------------------------|---|--|------------|-----|----|--------------|----|---------------|-------|-----|------|-------|-------|-----|--------|-------|
|                           |  |                            |   |  |            |     |    | Point        | ts |               |       |     |      |       | Item  | าร  |        |       |
| Reporting<br>Category     | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content                                   | Focus  |            | res |    | ating<br>ock |    |               | oints | Nun | nber | of It | ems   | C   | of Ite |       |
| Rep                       | Asse   | Des<br>(Sub                | CC  |  | (Co<br>Poi | ,   | ,  | (B)          |    | (Core<br>(EB) | )     |     | re   |       | В     |     | (Core  | )     |
|                           |  |                            |   |  | MC         | OE  | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE    | MC  | OE     | Total |
|                           | 1  |                            |   | Understand relationships and representations of numbers and number systems |            | 4   |    |              |    | 4             | 4     |     | 1    |       |       |     | 1      | 1     |
|                           | 1  | 1                          | 1   | Use scientific notation or exponential forms                               | 5          |     | 1  |              | 6  |               | 6     | 5   |      | 1     |       | 6   |        | 6     |
|                           | 1  | 1                          | 2   | Find the square/cube/square root   | 2          |     |    |              | 2  |               | 2     | 2   |      |       |       | 2   |        | 2     |
|                           | Total For Assessment Anchor A.1 Understand relationships among and representation of numbers and number systems  Understand meanings, uses and |                            |   |  |            |     | 1  |              | 8  | 4             | 12    | 7   | 1    | 1     |       | 8   | 1      | 9     |
| suc                       | of numbers and number systems Understand meanings, use   |                            | Understand meanings, uses and relations of operations |  |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
| ratic                     | Understand meanings, relations of operations  2  |                            | Use order of operations to simplify                   | 2  |            |     |    | 2            |    | 2             | 2     |     |      |       | 2     |     | 2      |       |
| A: Numbers and Operations | 2  | 2                          | 1   | Use ratios, proportions, percents to solve problems                        |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
| rs an                     | 2  | 2                          |   | Represent or solve rate problems   |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
| þe                        | Total I  | For Ass                    | essme   | nt Anchor A.2  |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
| Num                       |  | stand r<br>elate to        |   | gs, uses of operations and how other                                       | 2          |     |    |              | 2  |               | 2     | 2   |      |       |       | 2   |        | 2     |
| A:                        | 3  |                            |   | Compute accurately/fluently and make reasonable estimates                  |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
|                           | 3  | 1                          | 1   | Explain when to round up or down   |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
|                           | 3  | 1                          | 2   | Explain when to estimate   |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
|                           | 3  | 2                          | 1   | Estimate percent problems  |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
|                           | 3  | 3                          | 1   | Compute with/without calculator  |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
|                           | Total For Assessment Anchor A.3 Compute accurately and fluently and make reasonable estimates  |                            |   |  |            |     |    |              |    |               |       |     |      |       |       |     |        |       |
| Total I                   | otal For Reporting Category A  |                            |   |  |            |     | 1  |              | 10 | 4             | 14    | 9   | 1    | 1     |       | 10  | 1      | 11    |

| Grad                  | <del>C</del> 00  |                            |                     |   |             |      |    |              |    |             |       |     |      |       |      |    | ш               | aucs       |
|-----------------------|--|----------------------------|---------------------|---|-------------|------|----|--------------|----|-------------|-------|-----|------|-------|------|----|-----------------|------------|
|                       |  |                            |                     |   |             |      |    | Point        | ts |             |       |     |      |       | Item | าร |                 |            |
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   | Stud<br>Sco |      |    | ating<br>ock | To | tal P       | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | mber<br>ms |
| Rep<br>Cat            | Asse:<br>An  | Desc<br>(Sub-              | Eli                 |   | (Co<br>Poir | nts) |    | (B)          |    | Core<br>EB) |       |     | re   | E     | В    | (  | (Core<br>(EB)   |            |
|                       |  |                            |                     |   | MC          | OE   | MC | OE           | MC | OE          | Total | MC  | OE   | MC    | OE   | MC | OE              | Total      |
|                       | 1  |                            |                     | Understand measurable attributes and units, systems, processes of measurement           |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 1  | 1                          | 1                   | Convert metric measurements   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 1  | 1                          | 2                   | Convert customary measurements  |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 1 1 3 Convert time   |                            | Convert time        |   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 1 1 3 Convert time<br>1 1 4 Convert temperature  |                            | Convert temperature |   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | Total I  | or Ass                     | essme               | nt Anchor B.1   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | Under  | stand r                    | neasur              | able attributes and units, systems,   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       |  |                            |                     | rement  |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
| ent                   | 2  |                            |                     | Apply techniques, tools & formulas to determine measurements                            |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
| B: Measurement        | 2  | 1                          | 1                   | Determine total degrees of interior angles  |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
| Meas                  | 2  | 1                          | 2                   | Determine the measurement of 1 interior angle of a polygon                              |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
| B:                    | 2  | 1                          | 3                   | Determine the number of sides of<br>a polygon given total degrees of<br>interior angles |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 2  | 2                          | 1                   | Calculate surface area of cubes and rectangular prisms                                  |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 2  | 2                          | 2                   | Calculate volume of cubes and rectangular prisms  |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | 2 2 3 Determine appropriate type of measurement for a given situat   |                            |                     |   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
|                       | Total For Assessment Anchor B.2 Apply appropriate techniques, tools and formulas to determine measurements |                            |                     |   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |
| Total I               | tal For Reporting Category B   |                            |                     |   |             |      |    |              |    |             |       |     |      |       |      |    |                 |            |

| Grad                  | <del>c 00</del>   |                                    |                     |   |             |              |    |              |    |              |       |     |      |       |      |    | ICIII           | atics       |
|-----------------------|---|------------------------------------|---------------------|---|-------------|--------------|----|--------------|----|--------------|-------|-----|------|-------|------|----|-----------------|-------------|
|                       |   |                                    |                     |   |             |              |    | Point        | s  |              |       |     |      |       | Item | าร |                 |             |
| Reporting<br>Category | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor)         | Eligible<br>Content | Focus   | Stud<br>Sco | dent<br>ores |    | ating<br>ock | То | tal P        | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse  | Desi<br>(Sub-                      | Eli                 |   | Poir        |              |    | EB)          |    | Core<br>(EB) |       |     | re   |       | В    |    | Core<br>(EB)    | )           |
|                       |   |                                    |                     |   | MC          | OE           | MC | OE           | MC | OE           | Total | MC  | OE   | MC    | OE   | MC | OE              | Total       |
|                       | 1   |                                    |                     | Analyze characteristics & properties of 2-D & 3-D shapes                    |             | 4            |    |              |    | 4            | 4     |     | 1    |       |      |    | 1               | 1           |
|                       | 1   | 1                                  | 1                   |   |             |              |    |              |    |              |       |     |      |       |      |    |                 |             |
|                       | 1   | 1                                  | 2                   | Define, identify, and use properties of angles formed by intersecting lines |             |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| C: Geometry           | Define, identify, and use   |                                    |                     |   |             |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| 60                    | 1   | 2                                  | 1                   | Use the Pythagorean Theorem   | 10          |              | 3  |              | 13 |              | 13    | 10  |      | 3     |      | 13 |                 | 13          |
|                       | Analyz  | e char                             | acteris             | nt Anchor C.1<br>tics and properties of two- and<br>geometric shapes        | 10          | 4            | 3  |              | 13 | 4            | 17    | 10  | 1    | 3     |      | 13 | 1               | 14          |
|                       | three-dimensional geometric shapes  Locate points/describe relationships using the coordinate plane |                                    |                     |   |             |              |    |              |    |              |       |     |      |       |      |    |                 |             |
|                       | 3   | Plot/locate/identify ordered pairs |                     |   |             |              |    |              |    |              |       |     |      |       |      |    |                 |             |
|                       | Total For Assessment Anchor C.3 Locate points or describe relationships using the coordinate plane  |                                    |                     |   |             |              |    |              |    |              |       |     |      |       |      |    |                 |             |
| Total                 | al For Reporting Category C   |                                    |                     |   |             |              | 3  |              | 13 | 4            | 17    | 10  | 1    | 3     |      | 13 | 1               | 14          |

| Grau                  |   |                            |                     |   | _          |              |     |              |    |               |       | _   |      |       |      |    | ICIII         | atics |
|-----------------------|---|----------------------------|---------------------|---|------------|--------------|-----|--------------|----|---------------|-------|-----|------|-------|------|----|---------------|-------|
|                       |   |                            |                     |   |            |              |     | Point        | ts |               |       |     |      |       | Iten | าร |               |       |
| Reporting<br>Category | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   | Scc        | dent<br>ores | Blo | ating<br>ock |    | tal P         |       | Nun | nber | of It | ems  | C  | of Ite        |       |
| Reg                   | Asse<br>Al  | Des<br>(Sub                | C                   |   | (Co<br>Poi | ore<br>nts)  | (E  | ΈB)          | (  | Core)<br>(EB) |       | Co  | ore  | E     | В    | (  | Core)<br>(EB) |       |
|                       |   |                            |                     |   | MC         | OE           | MC  | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC | OE            | Total |
|                       | 1   |                            |                     | Understand patterns, relations and functions                                  |            | 4            |     |              |    | 4             | 4     |     | 1    |       |      |    | 1             | 1     |
|                       | 1   | 1                          | 1                   | Continue numeric/algebraic pattern  |            |              |     |              |    |               |       |     |      |       |      |    |               |       |
|                       | 1   | 1                          | 2                   | Find missing element in pattern   |            |              |     |              |    |               |       |     |      |       |      |    |               |       |
|                       | 1   | 1                          | 3                   | Write/state rule of function  | 3          |              | 3   |              | 6  |               | 6     | 3   |      | 3     |      | 6  |               | 6     |
|                       |   |                            |                     | nt Anchor D.1<br>s, relations and functions                                   | 3          | 4            | 3   |              | 6  | 4             | 10    | 3   | 1    | 3     |      | 6  | 1             | 7     |
|                       | 2   |                            |                     | Represent/analyze mathematical situations                                     |            |              |     |              |    |               |       |     |      |       |      |    |               |       |
|                       | 2 1 1 Sol   |                            | 1                   | Solve equations/inequalities  | 4          |              |     |              | 4  |               | 4     | 4   |      |       |      | 4  |               | 4     |
| ots                   | 2   | 1                          | 2                   | Use substitution to check solution  |            |              |     |              |    |               |       |     |      |       |      |    |               |       |
| Jucep                 | 2 1 2   |                            | 3                   | Simplify/substitute for expression  |            |              |     |              |    |               |       |     |      |       |      |    |               |       |
| oraic Cc              | 2   | 2                          | 1                   | Match written situation to expression, equation, or inequality                | 3          |              |     |              | 3  |               | 3     | 3   |      |       |      | 3  |               | 3     |
| Algek                 | 2   | 2                          | 2                   | Write/solve equation for a situation  | 7          |              |     |              | 7  |               | 7     | 7   |      |       |      | 7  |               | 7     |
| ä                     | Repres  | sent/ar                    | alyze               | nt Anchor D.2<br>mathematical situations using<br>words, tables and/or graphs | 14         |              |     |              | 14 |               | 14    | 14  |      |       |      | 14 |               | 14    |
|                       | 4   |                            |                     | Describe/use models to represent quantitative relationships                   |            |              |     |              |    |               |       |     |      |       |      |    |               |       |
|                       | 4   | 1                          | 1                   | Graph linear function from x/y table  | 4          |              | 3   |              | 7  |               | 7     | 4   |      | 3     |      | 7  |               | 7     |
|                       | 4   | 1                          | 2                   | Match linear graph to x/y table   | 4          |              | 3   |              | 7  |               | 7     | 4   |      | 3     |      | 7  |               | 7     |
|                       | 4   | 1                          | 3                   | Match linear equation to x/y table  | 5          |              | 3   |              | 8  |               | 8     | 5   |      | 3     |      | 8  |               | 8     |
|                       | Total For Assessment Anchor D.4 Describe/use models to represent quantitative relationships |                            |                     |   |            |              | 9   |              | 22 |               | 22    | 13  |      | 9     |      | 22 |               | 22    |
| Total I               | tal For Reporting Category D  |                            |                     |   |            |              | 12  |              | 42 | 4             | 46    | 30  | 1    | 12    |      | 42 | 1             | 43    |

| Grad                          | e ua  |                            |                     |  |     |              |     |                     |    |       |       |    |      |    | I    | viati | nem                      | atics |
|-------------------------------|---|----------------------------|---------------------|--|-----|--------------|-----|---------------------|----|-------|-------|----|------|----|------|-------|--------------------------|-------|
|                               |   |                            |                     |  |     |              |     | Poin                | ts |       |       |    |      |    | Item | าร    |                          |       |
| Reporting<br>Category         | Assessment<br>Anchor  | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Scc | dent<br>ores | Blo | ating<br>ock<br>(B) |    | tal P |       |    | nber |    |      | C     | al Nu<br>of Ite<br>(Core |       |
| 20                            | As  | D (Su                      |                     |  | Poi | nts)         | Ì   | ,                   | Ì  | EB)   |       |    | re   |    | В    |       | EB)                      | )     |
|                               |   |                            |                     |  | MC  | OE           | MC  | OE                  | MC | OE    | Total | MC | OE   | MC | OE   | MC    | OE                       | Total |
|                               | 1   |                            |                     | Formulate/answer questions;<br>organize, display, interpret or<br>analyze data |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
|                               | 1   | 1                          | 1                   | Choose correct data representation   |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
|                               | 1 1 3 Inte  |                            | 2                   | Display and/or interpret data  |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
|                               | 1   | 1                          | 3                   | Interpret stem-and-leaf, box-and-<br>whisker plots                             |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| ₹                             |   |                            | essme               | nt Anchor E.1  |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| ≒                             | Total For Assessment Anchor E.1 Formulate or answer questions about data and/or |                            |                     |  |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| Sak                           |   |                            |                     |  |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| Data Analysis and Probability | 3   |                            |                     | Understand/apply basic concepts of probability or outcomes                     |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| S                             | 3   | 1                          | 1                   | Find probability   |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| nalysi                        | 3   | 2                          | 1                   | Calculate show number of permutations/combinations                             |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| Ā                             | Total I   | or Ass                     | essme               | nt Anchor E.3  |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| ata                           | Under   | stand a                    | and/or              | apply basic concepts of probability  |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| ă                             | or out  | comes                      |                     |  |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
| ш                             | 4   |                            |                     | Develop/evaluate inferences & predictions based on data                        |     |              |     |                     |    |       |       |    |      |    |      |       |                          |       |
|                               | 4   | 1                          | 1                   | Fit line to scatter plot; describe correlation                                 | 6   |              | 1   |                     | 7  |       | 7     | 6  |      | 1  |      | 7     |                          | 7     |
|                               | 4   | 1                          | 2                   | Make predictions based on data   | 5   |              | 1   |                     | 6  |       | 6     | 5  |      | 1  |      | 6     |                          | 6     |
|                               | Develo  | p/eval                     | luate ir            | nt Anchor E.4<br>nferences & predictions or draw<br>on data or data displays   | 11  |              | 2   |                     | 13 |       | 13    | 11 |      | 2  |      | 13    |                          | 13    |
| Total                         | tal For Reporting Category E  |                            |                     |  |     |              | 2   |                     | 13 |       | 13    | 11 |      | 2  |      | 13    |                          | 13    |

Grade 03 Reading
Points Items

|                       | e 03   |                            |                     |  |     |              |     | D - ' I      |    |             |       |     |      |       | 14   | _  | IXCC        | ading |
|-----------------------|--|----------------------------|---------------------|--|-----|--------------|-----|--------------|----|-------------|-------|-----|------|-------|------|----|-------------|-------|
|                       |  | iptor iptor ible tent      |                     |  |     |              |     | Point        | S  |             |       |     |      |       | Item | าร |             |       |
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores | Blo | ating<br>ock |    | tal Po      |       | Nun | nber | of It | ems  | 0  | f Ite       | -     |
| Rep                   | Asse<br>Ar   | Des<br>Sub-                | Co                  |  | Poi | ore<br>nts)  |     | ΈB)          |    | Core<br>EB) | &     |     | re   |       | В    | ,  | Core<br>EB) | )     |
|                       |  |                            |                     |  | MC  | OE           | MC  | OE           | MC | OE          | Total | MC  | OE   | MC    | OE   | MC | OE          | Total |
|                       | 1  | 1                          | 1                   | Identify meaning of multiple-<br>meaning words               | 3   |              |     |              | 3  |             | 3     | 3   |      |       |      | 3  |             | 3     |
|                       | 1  | 1                          | 2                   | Identify synonym/antonym                                     |     |              |     |              |    |             |       |     |      |       |      |    |             |       |
|                       | 1  | 2                          | 1                   | Identify meaning of word with an affix/how meaning changes   |     |              |     |              |    |             |       |     |      |       |      |    |             |       |
|                       | 1  | 2                          | 2                   | Define words from context clues                              | 1   |              |     |              | 1  |             | 1     | 1   |      |       |      | 1  |             | 1     |
|                       | 1  | 3                          | 1                   | Make inferences/draw conclusions                             | 6   |              |     |              | 6  |             | 6     | 6   |      |       |      | 6  |             | 6     |
|                       | 1  | 4                          | 1                   | Identify main ideas/relevant<br>details                      | 5   |              |     |              | 5  |             | 5     | 5   |      |       |      | 5  |             | 5     |
| kills                 | 1  | 5                          | 1                   | Summarize key details and events of a text as a whole        | 1   |              |     |              | 1  |             | 1     | 1   |      |       |      | 1  |             | 1     |
| ing SI                | 1  | 6                          | 1                   | Identify author's purpose for writing text                   | 1   |              |     |              | 1  |             | 1     | 1   |      |       |      | 1  |             | 1     |
| ad                    | Total For Assessme   |                            | essme               | nt Anchor A 1  |     |              |     |              |    |             |       |     |      |       |      |    |             |       |
| d Re                  | 1   5   1   1   6   1   1   6   1   1   6   1   1                                    |                            |                     | appropriate to grade level.                                  | 17  |              |     |              | 17 |             | 17    | 17  |      |       |      | 17 |             | 17    |
| on an                 | 2  | 1                          | 1                   | Identify meaning of multiple-<br>meaning words               |     |              |     |              |    |             |       |     |      |       |      |    |             |       |
| ensid                 | 2  | 1                          | 2                   | Identify meaning of content-<br>specific words               |     |              |     |              |    |             |       |     |      |       |      |    |             |       |
| npreh                 | 2  | 2                          | 1                   | Identify meaning of word with an affix/how meaning changes   | 1   |              |     |              | 1  |             | 1     | 1   |      |       |      | 1  |             | 1     |
| ı: Cor                | 2  | 2                          | 2                   | Define words from context clues                              | 1   |              |     |              | 1  |             | 1     | 1   |      |       |      | 1  |             | 1     |
|                       | 2  | 3                          | 1                   | Make inferences/draw conclusions                             | 1   |              |     |              | 1  |             | 1     | 1   |      |       |      | 1  |             | 1     |
|                       | 2  | 4                          | 1                   | Identify main ideas/relevant details                         | 10  |              |     |              | 10 |             | 10    | 10  |      |       |      | 10 |             | 10    |
|                       | 2  | 5                          | 1                   | Summarize major points/processes/events of a text as a whole |     |              |     |              |    |             |       |     |      |       |      |    |             |       |
|                       | 2 6 1 Identify author's purpose for writing text                                     |                            | 1                   |  |     |              | 1   |              | 1  | 1           |       |     |      | 1     |      | 1  |             |       |
|                       | Total For Assessment Anchor A.2<br>Understand nonfiction appropriate to grade level. |                            |                     |  | 14  |              |     |              | 14 |             | 14    | 14  |      |       |      | 14 |             | 14    |
| Total I               | otal For Reporting Category A  |                            |                     |  | 31  |              |     |              | 31 |             | 31    | 31  |      |       |      | 31 |             | 31    |

Grade 03ReadingPointsItems

|   | or the chor)   |                            |                     |  |           |              |      | Point        | :S |       |       |     |           |       | Item    | าร   |                    |    |
|---|--|----------------------------|---------------------|--|-----------|--------------|------|--------------|----|-------|-------|-----|-----------|-------|---------|------|--------------------|----|
| Reporting<br>Category   | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Sco       | dent<br>ores | Bl   | ating<br>ock | То |       | oints | Nun | nber      | of It |         | Tota | f Ite              |    |
| Re  | Asse<br>A  | Des<br>(Sub                |                     |  | Poi<br>MC |              | (E   | (B)<br>OE    | MC | (Core |       |     | ore<br>OE |       | B<br>OE | MC   | (Core<br>EB)<br>OE | )  |
| ext   | 1  | 1                          | 1                   | Identify in fiction and literary nonfiction character (narrator/ speaker/subject of a biography), setting, plot      | 5         | 6            | IVIC | ÜĖ           | 5  | 6     | 11    | 5   | 2         | IVIC  | OE      | 5    | 2                  | 7  |
|   | 1 2 1 Connections between texts  |                            |                     |  | 1         |              |      |              | 1  |       | 1     | 1   |           |       |         | 1    |                    | 1  |
| fictional   |  |                            |                     | nt Anchor B.1<br>nents within and between texts.   | 6         | 6            |      |              | 6  | 6     | 12    | 6   | 2         |       |         | 6    | 2                  | 8  |
| Non   | 2  | 1                          | 1                   | Identify examples of personification   |           |              |      |              |    |       |       |     |           |       |         |      |                    |    |
| onal and  |  |                            |                     | nt Anchor B.2<br>devices in fictional and nonfictional   |           |              |      |              |    |       |       |     |           |       |         |      |                    |    |
| Iặ  | 3  | 1                          | 1                   | Identify fact/opinion  |           |              |      |              |    |       |       |     |           |       |         |      |                    |    |
| ıĔ  | 3  | 2                          | 1                   | Identify exaggeration (bias)   |           |              |      |              |    |       |       |     |           |       |         |      |                    |    |
| B: Interpretation and Analysis of Fictional and Nonfictional Text | 3  | 3                          | 1                   | Identify text organization<br>(sequence, question/answer,<br>comparison/contrast, cause/effect,<br>problem/solution) | 1         |              |      |              | 1  |       | 1     | 1   |           |       |         | 1    |                    | 1  |
| ition and   | 3  | 3                          | 2                   | Use headings to locate information<br>or identify content that fits into a<br>specific section                       | 2         |              |      |              | 2  |       | 2     | 2   |           |       |         | 2    |                    | 2  |
| erpreta   | 3  | 3                          | 3                   | Interpret and make connections between graphics/charts/texts   |           |              |      |              |    |       |       |     |           |       |         |      |                    |    |
| B: Int  | 3  | 3                          | 4                   | Sequence of steps in a list of directions  |           |              |      |              |    |       |       |     |           |       |         |      |                    |    |
|   | Total For Assessment Anchor B.3 Understand concepts and organization of nonfiction text. |                            |                     |  |           |              |      |              | 3  |       | 3     | 3   |           |       |         | 3    |                    | 3  |
| Total I   | Total For Reporting Category B   |                            |                     |  |           | 6            |      |              | 9  | 6     | 15    | 9   | 2         |       |         | 9    | 2                  | 11 |

Grade 04 Reading

| Grade                 | <del>- 04</del>  |                            |                     |  |     |              |    |              |    |             |       |     |      |       |      |    | Kec           | ading |
|-----------------------|--|----------------------------|---------------------|--|-----|--------------|----|--------------|----|-------------|-------|-----|------|-------|------|----|---------------|-------|
|                       |  |                            |                     |  |     |              |    | Point        | S  |             |       |     |      |       | Item | าร |               |       |
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Scc | dent<br>ores | BI | ating<br>ock |    | tal P       |       | Nur | nber | of It | ems  | C  | f Ite         |       |
| Re                    | Ass  | Dei<br>(Sub                | Шζ                  |  | Poi | ore<br>nts)  |    | EB)          | ·  | Core<br>EB) | ١     |     | ore  |       | В    |    | (Core<br>(EB) | )     |
|                       |  |                            |                     |  | MC  | OE           | MC | OE           | MC | OE          | Total | MC  | OE   | MC    | OE   | MC | OE            | Total |
|                       | 1  | 1                          | 1                   | Identify meaning of multiple-<br>meaning words               | 1   |              |    |              | 1  |             | 1     | 1   |      |       |      | 1  |               | 1     |
|                       | 1  | 1                          | 2                   | Identify synonym/antonym                                     |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
|                       | 1  | 2                          | 1                   | Identify meaning of word with an affix/how meaning changes   | 2   |              |    |              | 2  |             | 2     | 2   |      |       |      | 2  |               | 2     |
|                       | 1  | 2                          | 2                   | Define words from context clues                              |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
|                       | 1  | 3                          | 1                   | Make inferences/draw conclusions                             | 9   |              |    |              | 9  |             | 9     | 9   |      |       |      | 9  |               | 9     |
|                       | 1 4 1 Identify main ideas/reledetails  Summarize key details a |                            |                     |  | 6   |              |    |              | 6  |             | 6     | 6   |      |       |      | 6  |               | 6     |
| kills                 | <b>OK</b>  |                            | 1                   | Summarize key details and events of a text as a whole        |     | 3            |    |              |    | 3           | 3     |     | 1    |       |      |    | 1             | 1     |
| ng Sl                 | 1  | 6                          | 1                   | Identify author's purpose for writing text                   |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
| adi                   | Total F  | or Acc                     | occmo               | nt Anchor A.1  |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
| d Rea                 |  |                            |                     | appropriate to grade level.                                  | 18  | 3            |    |              | 18 | 3           | 21    | 18  | 1    |       |      | 18 | 1             | 19    |
| on an                 | 2  | 1                          | 1                   | Identify meaning of multiple-<br>meaning words               |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
| ensid                 | 2  | 1                          | 2                   | Identify meaning of content-<br>specific words               |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
| npreh                 | 2  | 2                          | 1                   | Identify meaning of word with an affix/how meaning changes   | 2   |              |    |              | 2  |             | 2     | 2   |      |       |      | 2  |               | 2     |
| ı: Cor                | 2  | 2                          | 2                   | Define words from context clues                              | 1   |              |    |              | 1  |             | 1     | 1   |      |       |      | 1  |               | 1     |
| ٩                     | 2  | 3                          | 1                   | Make inferences/draw conclusions                             | 4   |              |    |              | 4  |             | 4     | 4   |      |       |      | 4  |               | 4     |
|                       | 2  | 4                          | 1                   | Identify main ideas/relevant details                         | 5   |              |    |              | 5  |             | 5     | 5   |      |       |      | 5  |               | 5     |
|                       | 2  | 5                          | 1                   | Summarize major points/processes/events of a text as a whole | 1   | 3            |    |              | 1  | 3           | 4     | 1   | 1    |       |      | 1  | 1             | 2     |
|                       | 2 6 1 Identify author's purpose for writing text               |                            |                     |  |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
|                       | Total For Assessment Anchor A.2                                |                            |                     |  |     |              |    |              |    |             |       |     |      |       |      |    |               |       |
|                       | Understand nonfiction appropriate to grade level.              |                            |                     |  | 13  | 3            |    |              | 13 | 3           | 16    | 13  | 1    |       |      | 13 | 1             | 14    |
| Total F               | Total For Reporting Category A                                 |                            |                     |  | 31  | 6            |    |              | 31 | 6           | 37    | 31  | 2    |       |      | 31 | 2             | 33    |

Grade 04 Reading

| Grad  | <del>U4</del>  |                            |                     |  |     |              |    |              |    |       |       |     |      |       |      |    | Rea                      | aaing |
|---|--|----------------------------|---------------------|--|-----|--------------|----|--------------|----|-------|-------|-----|------|-------|------|----|--------------------------|-------|
|   |  |                            |                     |  |     |              |    | Point        | s  |       |       |     |      |       | Iten | าร |                          |       |
| Reporting<br>Category   | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Sco | dent<br>ores | BI | ating<br>ock |    | tal P | oints | Nun | nber | of It | ems  | C  | al Nu<br>of Ite<br>(Core |       |
| § 3   | Ass  | De<br>(Suk                 | С                   |  | Poi | nts)         |    | EB)          |    | EB)   | )     |     | ore  |       | В    |    | EB)                      | )     |
|   |  |                            |                     |  | MC  | OE           | MC | OE           | MC | OE    | Total | MC  | OE   | MC    | OE   | MC | OE                       | Total |
| <b>-</b>  | 1  | 1                          | 1                   | Identify in fiction and literary<br>nonfiction character (narrator/<br>speaker/subject of a biography),<br>setting, plot | 5   | 6            |    |              | 5  | 6     | 11    | 5   | 2    |       |      | 5  | 2                        | 7     |
| ĕ   | 1  | Connections between texts  |                     |  |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| tional T  |  |                            |                     | nt Anchor B.1<br>nents within and between texts.   | 5   | 6            |    |              | 5  | 6     | 11    | 5   | 2    |       |      | 5  | 2                        | 7     |
| onfic   | 2  | 1                          | 1                   | Identify examples of personification   |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| Z   | 2 1 1 personification 2 1 2 Identify examples of similes                                 |                            |                     | Identify examples of similes   | 1   |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                          | 1     |
| 2   | 2  | 1                          | 3                   | Identify examples of alliteration  |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| ional a   | Under  |                            |                     | nt Anchor B.2<br>devices in fictional and nonfictional   | 1   |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                          | 1     |
| <u>:</u>  | text.  | -1                         | - 1                 | I de atte de ferat le constant   |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| f F   | 3  | 1                          | 1                   | Identify fact/opinion  |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| 0,0   | 3  | 2                          | 1                   | Identify exaggeration (bias)   |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| B: Interpretation and Analysis of Fictional and Nonfictional Text | 3  | 3                          | 1                   | Identify text organization<br>(sequence, question/answer,<br>comparison/contrast, cause/effect,<br>problem/solution)     |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| etation a   | 3  | 3                          | 2                   | Use headings to locate information or identify content that fits into a specific section                                 |     |              |    |              |    |       |       |     |      |       |      |    |                          |       |
| Interpre  | 3  | 3                          | 3                   | Interpret and make connections between graphics/charts/texts   | 2   |              |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                          | 2     |
| B:  | 3  | 3                          | 4                   | Sequence of steps in a list of directions  | 1   |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                          | 1     |
|   | Total For Assessment Anchor B.3 Understand concepts and organization of nonfiction text. |                            |                     |  |     |              |    |              | 3  |       | 3     | 3   |      |       |      | 3  |                          | 3     |
| Total I   | otal For Reporting Category B  |                            |                     |  |     |              |    |              | 9  | 6     | 15    | 9   | 2    |       |      | 9  | 2                        | 11    |

Grade 05 Reading **Points** Items Descriptor (Sub-anchor) Assessment Anchor Reporting Category Student **Total Number** Eligible Content Equating **Total Points** Number of Items Scores of Items **Block Focus** (Core (Core & (Core & (EB) Core EΒ Points) EB) EB) MC MC OE MC OE MC OE MC MC OE OE Total OE Total Identify meaning of multiple-meaning words Identify synonym/antonym Identify meaning of word with an affix/how meaning changes Define words from context clues Make inferences/draw conclusions Cite evidence from text to support generalizations Identify and/or interpret main ideas/relevant details Summarize key details and events of a text as a whole Identify author's purpose for Comprehension and Reading Skills writing text Identify text that supports the author's intended purpose Total For Assessment Anchor A.1 Understand fiction appropriate to grade level. Identify meaning of multiplemeaning words Identify meaning of content-specific words Identify meaning of word with an affix/how meaning changes Define words from context clues Make inferences/draw conclusions Cite evidence from text to support generalizations Identify and/or interpret main ideas/relevant details Summarize major points/processes/events of a text as a whole Identify author's purpose for writing text Identify text that supports the author's intended purpose Total For Assessment Anchor A.2 Understand nonfiction appropriate to grade level. Total For Reporting Category A 

Grade 05 Reading **Points** Items Descriptor (Sub-anchor) Reporting Category Student **Total Number** Assessment Eligible Content Number of Items Anchor Equating **Total Points** Scores of Items Focus **Block** (Core & (Core (EB) (Core & ΕB Core Points) EB) EB) MC OE MC MC OE MC OE MC OE MC OE Total OE Total Identify in fiction and literary nonfiction character (narrator/ 1 1 8 6 8 6 14 8 2 8 2 10 speaker/subject of a biography), setting, plot, theme Connections between texts 1 3 1 3 4 1 1 1 1 2 Total For Assessment Anchor B.1 9 9 9 9 9 9 18 3 3 12 Understand components within and between texts. Interpretation and Analysis of Fictional and Nonfictional Text Identify examples of 2 2 2 2 2 2 2 personification 2 2 Identify examples of similes 1 1 1 1 1 1 1 Identify/interpret examples of 3 2 1 alliteration Identify/interpret examples of 2 1 4 metaphors Identify point of view of the 2 2 1 narrator as first or third person Describe the effectiveness of the 2 2 2 point of view used by the author Total For Assessment Anchor B.2 Understand literary devices in fictional and nonfictional 3 3 3 3 3 text Identify fact/opinion 3 1 1 1 1 1 2 1 Identify exaggeration (bias) 3 Identify text organization (sequence, question/answer, 3 3 1 comparison/contrast, cause/effect, problem/solution) Use headings to locate information 3 3 2 or identify content that fits into a specific section Interpret and make connections 3 3 3 between graphics/charts/texts Sequence of steps in a list of 3 3 4 directions Total For Assessment Anchor B.3 Understand concepts and organization of nonfictional 1 1 Total For Reporting Category B 9 13 13 9 22 13 3 13 3 16

Grade 06 Reading **Points** Items Descriptor (Sub-anchor) Reporting Category Student **Total Number** Assessment Eligible Content Number of Items Anchor Equating **Total Points** Scores of Items Block **Focus** (Core & (Core (Core & (EB) Core EΒ Points) EB) EB) MC MC MC OE MC OE Total MC OE OE OE Total MC OE Apply meaning of multiple-meaning words in text Identify synonym/antonym Identify meaning of word with an affix/how meaning changes Define words from context clues Make inferences/draw conclusions Cite evidence from text to support generalizations Identify and/or interpret main ideas/relevant details Summarize key details and events of a text as a whole Identify author's purpose for Comprehension and Reading Skills writing text Identify text that supports the author's intended purpose Total For Assessment Anchor A.1 Understand fiction appropriate to grade level. Apply meaning of multiple-meaning words in text Identify meaning of content-specific words Identify meaning of word with an affix/how meaning changes Define words from context clues Make inferences/draw conclusions Cite evidence from text to support generalizations Identify and/or interpret main ideas/relevant details Summarize major points/processes/events of a text as a whole Identify author's purpose for writing text Identify text that supports the author's intended purpose Total For Assessment Anchor A.2 Understand nonfiction appropriate to grade level. Total For Reporting Category A 

Grade 06 Reading **Points** Items Descriptor (Sub-anchor) Reporting Category Student Total Number Assessment Eligible Content Number of Items Anchor Equating **Total Points** Scores of Items Block **Focus** (Core (Core & (Core & (EB) Core EΒ Points) EB) EB) MC MC OE MC OE MC OE Total MC OE OE Total MC OE Identify in fiction and literary nonfiction character (narrator/ speaker/subject of a biography), setting, plot, theme Connections between texts Total For Assessment Anchor B.1 Understand components within and between texts. Interpretation and Analysis of Fictional and Nonfictional Text Identify examples of personification Identify examples of similes Identify/interpret examples of alliteration Identify/interpret examples of metaphors Identify point of view of the narrator as first or third person Describe the effectiveness of the point of view used by the author Total For Assessment Anchor B.2 Understand literary devices in fictional and nonfictional text. Identify fact/opinion Identify exaggeration (bias) Identify text organization (sequence, question/answer, comparison/contrast, cause/effect, problem/solution) Use headings to locate information or identify content that fits into a specific section Interpret and make connections between graphics/charts/texts Sequence of steps in a list of directions Total For Assessment Anchor B.3 Understand concepts and organization of nonfictional Total For Reporting Category B 

Grade 07 Reading Points Items Descriptor (Sub-anchor) Student **Total Number** Reporting Category Assessment Eligible Content **Total Points** Number of Items Anchor Equating Scores of Items **Focus Block** (Core (Core & (Core & (EB) Core EΒ Points) EB) EB) MC OE MC OE MC OE Total MC OE MC OE MC OE Total Apply meaning of multiple-meaning words in text Identify synonym/antonym Identify meaning of word with an affix/how meaning changes Define words from context clues Make inferences/draw conclusions Cite evidence from text to support generalizations Identify and/or interpret main ideas/relevant details Summarize key details and events of a text as a whole Identify author's purpose for Comprehension and Reading Skills writing text Identify text that supports the author's intended purpose Total For Assessment Anchor A.1 Understand fiction appropriate to grade level. Apply meaning of multiple-meaning words in text Identify meaning of content-specific words Identify meaning of word with an affix/how meaning changes Define words from context clues Make inferences/draw conclusions Cite evidence from text to support generalizations Identify and/or interpret main ideas/relevant details Summarize major points/processes/events of a text as a whole Identify author's purpose for writing text Identify text that supports the author's intended purpose Total For Assessment Anchor A.2 Understand nonfiction appropriate to grade level. Total For Reporting Category A 

| Grad   | e <b>07</b>          |                            |                     |   |     |                     |    |                     |    |        |       |    |     |       |      |      | Rea                     | ding  |
|--|----------------------|----------------------------|---------------------|---|-----|---------------------|----|---------------------|----|--------|-------|----|-----|-------|------|------|-------------------------|-------|
|  |                      |                            |                     |   |     |                     |    | Poin                | ts |        |       |    |     |       | Item | ns . |                         |       |
| Reporting<br>Category  | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   |     | dent<br>ores<br>ore | Bl | ating<br>ock<br>EB) |    | tal Po |       |    |     | of It |      | C    | al Nu<br>of Ite<br>Core |       |
| Δ O  | As                   | D)<br>(Su                  | - )                 |   | Poi | nts)                |    |                     |    | EB)    |       |    | ore |       | В    |      | EB)                     | )     |
|  |                      |                            |                     |   | MC  | OE                  | MC | OE                  | MC | OE     | Total | MC | OE  | MC    | OE   | MC   | OE                      | Total |
|  | 1                    | 1                          | 1                   | Identify in fiction and literary<br>nonfiction character (narrator/<br>speaker/subject of a biography),<br>setting, plot, theme | 5   |                     |    |                     | 5  |        | 5     | 5  |     |       |      | 5    |                         | 5     |
|  | 1                    | 2                          | 1                   | Connections between texts   | 2   | 6                   |    |                     | 2  | 6      | 8     | 2  | 2   |       |      | 2    | 2                       | 4     |
|  |                      |                            |                     | nt Anchor B.1<br>nents within and between texts.  | 7   | 6                   |    |                     | 7  | 6      | 13    | 7  | 2   |       |      | 7    | 2                       | 9     |
| terpretation and Analysis of Fictional and Nonfictional Text | 2                    | 1                          | 1                   | Interpret/analyze examples of personification, simile, alliteration, metaphor, hyperbole, and imagery                           | 6   |                     |    |                     | 6  |        | 6     | 6  |     |       |      | 6    |                         | 6     |
| Nonficti   | 2                    | 1                          | 2                   | Identify author's purpose/effectiveness of figurative language  | 1   |                     |    |                     | 1  |        | 1     | 1  |     |       |      | 1    |                         | 1     |
| and  | 2                    | 2                          | 1                   | Identify point of view of the narrator as first or third person   |     |                     |    |                     |    |        |       |    |     |       |      |      |                         |       |
| ctiona   | 2                    | 2                          | 2                   | Describe the effectiveness of the point of view used by the author  |     |                     |    |                     |    |        |       |    |     |       |      |      |                         |       |
| sis of Fi  |                      |                            |                     | nt Anchor B.2<br>devices in fictional and nonfictional  | 7   |                     |    |                     | 7  |        | 7     | 7  |     |       |      | 7    |                         | 7     |
| ıd Analı   | 3                    | 1                          | 1                   | Use of facts and opinions to make a point/construct an argument   |     |                     |    |                     |    |        |       |    |     |       |      |      |                         |       |
| ion ar   | 3                    | 2                          | 1                   | Identify bias/propaganda techniques   |     |                     |    |                     |    |        |       |    |     |       |      |      |                         |       |
| B: Interpretat   | 3                    | 3                          | 1                   | Analyze text organization (sequence, question/answer, comparison/contrast, cause/effect, problem/solution)                      | 1   |                     |    |                     | 1  |        | 1     | 1  |     |       |      | 1    |                         | 1     |
| B:   | 3                    | 3                          | 2                   | Identify content that fits into a specific section  |     |                     |    |                     |    |        |       |    |     |       |      |      |                         |       |
|  | 3                    | 3                          | 3                   | Interpret and make connections between graphics/charts/texts  |     |                     |    |                     |    |        |       |    |     |       |      |      |                         |       |
|  | 3                    | 3                          | 4                   | Sequence of steps in a list of directions   | 1   |                     |    |                     | 1  |        | 1     | 1  |     |       |      | 1    |                         | 1     |
|  |                      |                            |                     | nt Anchor B.3<br>ts and organization of nonfictional  | 2   |                     |    |                     | 2  |        | 2     | 2  |     |       |      | 2    |                         | 2     |
|  |                      | orting                     | Categ               | ory B   | 16  | 6                   |    |                     | 16 | 6      | 22    | 16 | 2   |       |      | 16   | 2                       | 18    |

| Grade                               | e <b>08</b>                  |   |                     |  |      |      |      |                     |      |        |       |      |           |       |         |      | Rea                      | ding  |
|-------------------------------------|------------------------------|---|---------------------|--|------|------|------|---------------------|------|--------|-------|------|-----------|-------|---------|------|--------------------------|-------|
|                                     |                              |   |                     |  |      |      |      | Point               | ts   |        |       |      |           |       | Iten    | าร   |                          |       |
| Reporting<br>Category               | Assessment<br>Anchor         | Descriptor<br>(Sub-anchor)                      | Eligible<br>Content | Focus  | Stud |      | Bl   | ating<br>ock<br>EB) |      | tal Po |       | Nun  | nber      | of It | ems     | c    | al Nu<br>of Ite<br>(Core | -     |
| % O                                 | Ass                          | De<br>Su  | О                   |  | Poir | nts) | MC   | OE                  | MC   | EB)    |       | MC   | ore<br>OE | MC    | B<br>OE | MC   | EB)                      |       |
|                                     |                              |   |                     | Apply meaning of multiple-   | IVIC | UE   | IVIC | UE                  | IVIC | UE     | TOLAI | IVIC | UE        | IVIC  | UE      | IVIC | UE                       | TOLAI |
|                                     | 1                            | 1   | 1                   | meaning words in text  |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
|                                     | 1                            | 1   | 2                   | Identify synonym/antonym   | 1    |      |      |                     | 1    |        | 1     | 1    |           |       |         | 1    |                          | 1     |
|                                     | 1                            | 2   | 1                   | Identify meaning of word with an affix/how meaning changes         |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
|                                     | 1                            | 2   | 2                   | Define words from context clues                                    |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
|                                     | 1                            | 3   | 1                   | Make inferences/draw conclusions                                   | 4    | 3    |      |                     | 4    | 3      | 7     | 4    | 1         |       |         | 4    | 1                        | 5     |
|                                     | 1                            | 3   | 2                   | Cite evidence from text to support generalizations                 | 1    |      |      |                     | 1    |        | 1     | 1    |           |       |         | 1    |                          | 1     |
|                                     | 1                            | 4   | 1                   | Identify and/or interpret main ideas/relevant details              |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
|                                     | 1                            | 5   | 1                   | Summarize key details and events of a text as a whole              |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
| cills                               | 1                            | 6   | 1                   | Identify author's purpose for writing text                         |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
| ng Sk                               | 1                            | 6   | 2                   | Identify text that supports the author's intended purpose          |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
| A: Comprehension and Reading Skills |                              |   |                     | nt Anchor A.1<br>appropriate to grade level.                       | 6    | 3    |      |                     | 6    | 3      | 9     | 6    | 1         |       |         | 6    | 1                        | 7     |
| on an                               | 2                            | 1   | 1                   | Apply meaning of multiple-<br>meaning words in text                | 1    |      |      |                     | 1    |        | 1     | 1    |           |       |         | 1    |                          | 1     |
| ensi                                | 2                            | 1   | 2                   | Identify meaning of content-<br>specific words                     | 1    |      |      |                     | 1    |        | 1     | 1    |           |       |         | 1    |                          | 1     |
| npreł                               | 2                            | 2   | 1                   | Identify meaning of word with an affix/how meaning changes         | 2    |      |      |                     | 2    |        | 2     | 2    |           |       |         | 2    |                          | 2     |
| : Con                               | 2                            | 2   | 2                   | Define words from context clues                                    |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
| 4                                   | 2                            | 3   | 1                   | Make inferences/draw conclusions                                   | 4    |      |      |                     | 4    |        | 4     | 4    |           |       |         | 4    |                          | 4     |
|                                     | 2                            | 3   | 2                   | Cite evidence from text to support generalizations                 |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
|                                     | 2                            | 4   | 1                   | Identify and/or interpret main ideas/relevant details              | 4    | 3    |      |                     | 4    | 3      | 7     | 4    | 1         |       |         | 4    | 1                        | 5     |
|                                     | 2                            | 5   | 1                   | Summarize major<br>points/processes/events of a text<br>as a whole |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
|                                     | 2                            | 6   | 1                   | Identify author's purpose for writing text                         |      | 3    |      |                     |      | 3      | 3     |      | 1         |       |         |      | 1                        | 1     |
|                                     | 2                            | 6   | 2                   | Identify text that supports the author's intended purpose          |      |      |      |                     |      |        |       |      |           |       |         |      |                          |       |
|                                     |                              | nt Anchor A.2<br>on appropriate to grade level. | 12                  | 6  |      |      | 12   | 6                   | 18   | 12     | 2     |      |           | 12    | 2       | 14   |                          |       |
| Total F                             | tal For Reporting Category A |   |                     |  |      |      |      |                     | 18   | 9      | 27    | 18   | 3         |       |         | 18   | 3                        | 21    |

Grade 08 Reading **Points** Items Descriptor (Sub-anchor) Reporting Category Student Total Number Assessment Eligible Content Equating Number of Items **Total Points** Anchor Scores of Items Focus Block (Core (Core & (Core & (EB) Core ΕB Points) EB) EB) MC MC OE Total MC OE MC OE MC OE Total MC OE OE Identify in fiction and literary nonfiction character (narrator/ 1 1 11 11 11 11 11 11 1 speaker/subject of a biography), setting, plot, theme Connections between texts 3 3 2 1 1 4 1 1 1 2 Total For Assessment Anchor B.1 12 3 12 3 15 12 12 13 Understand components within and between texts. B: Interpretation and Analysis of Fictional and Nonfictional Text Interpret/analyze examples of 2 1 1 personification, simile, metaphor, 3 3 3 3 3 3 hyperbole, and imagery Identify author's purpose/effectiveness of figurative 2 2 2 2 2 2 1 2 language Identify point of view of the 2 2 narrator as first or third person Analyze the effectiveness of the 2 1 1 1 1 1 1 point of view used by the author Total For Assessment Anchor B.2 Understand literary devices in fictional and nonfictional 6 6 6 6 6 6 text Use of facts and opinions to make 3 1 1 1 1 1 1 a point/construct an argument Identify bias/propaganda 3 2 1 1 1 1 1 1 1 techniques Analyze text organization (sequence, question/answer, 3 3 1 comparison/contrast, cause/effect, problem/solution) Identify content that fits into a 3 3 2 1 1 1 1 1 1 specific section Interpret and make connections 3 3 3 1 1 1 1 1 between graphics/charts/texts Sequence of steps in a list of directions Total For Assessment Anchor B.3 Understand concepts and organization of nonfictional 4 4 4 4 4 Total For Reporting Category B 22 3 22 3 22 22 23 25

| Grad                  | <del></del>          |                            |                     |  |     |             |    | Point        | S              |              |            |     |      |       | Iten | าร  |       | CIICC      |
|-----------------------|----------------------|----------------------------|---------------------|--|-----|-------------|----|--------------|----------------|--------------|------------|-----|------|-------|------|-----|-------|------------|
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  | Scc | dent        | Bl | ating<br>ock | То             |              | oints      | Nun | nber | of It |      | Tot | f Ite |            |
| Re                    | ASSE                 | Des<br>(Sub                | Ξ 3                 |  | Poi | ore<br>nts) |    | EB)          |                | (Core<br>EB) | )          |     | ore  |       | В    |     | (Core | )          |
|                       | 1                    | 1                          | 1                   | Distinguish between a scientific fact and an opinion, providing clear explanations that connect observations and results (e.g., a scientific fact can be supported by making observations).  | 1   | OE          | 1  | OE           | <u>MC</u><br>2 | OE           | Total<br>2 | 1   | OE   | MC 1  | OE   | 2   | OE    | Total<br>2 |
|                       | 1                    | 1                          | 2                   | Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment. | 2   |             | 1  |              | 3              |              | 3          | 2   |      | 1     |      | 3   |       | 3          |
|                       | 1                    | 3                          | 1                   | Observe and record change by using time and measurement.   | 2   |             | 1  |              | 3              |              | 3          | 2   |      | 1     |      | 3   |       | 3          |
|                       | 1                    | 3                          | 2                   | Describe relative size, distance, or motion.   | 1   |             |    |              | 1              |              | 1          | 1   |      |       |      | 1   |       | 1          |
|                       | 1                    | 3                          | 3                   | Observe and describe the change to objects caused by temperature change or light.  | 1   | 2           | 1  |              | 2              | 2            | 4          | 1   | 1    | 1     |      | 2   | 1     | 3          |
|                       | 1                    | 3                          | 4                   | Explain what happens to a living organism when its food supply, access to water, shelter, or space is changed (e.g., it might die, migrate, change behavior, eat something else).  | 2   |             | 1  |              | 3              |              | 3          | 2   |      | 1     |      | 3   |       | 3          |
|                       | 1                    | 3                          | 5                   | Provide examples, predict, or describe how everyday human activities (e.g., solid waste production, food production and consumption, transportation, water consumption, energy production and use) may change the environment.   | 1   |             | 1  |              | 2              |              | 2          | 1   |      | 1     |      | 2   |       | 2          |
|                       |                      | For Ass                    |                     | nt Anchor A.1<br>lysis   | 10  | 2           | 6  |              | 16             | 2            | 18         | 10  | 1    | 6     |      | 16  | 1     | 17         |

#### Appendix B: Tally Sheets

|                      | 2 | 1        | 1      | Generate questions about objects, organisms, or events that can be answered through scientific investigations.   | 1 | 1 | 2  | 2  | 1 | 1 | 2  | 2  |
|----------------------|---|----------|--------|--|---|---|----|----|---|---|----|----|
|                      | 2 | 1        | 2      | Design and describe an investigation (a fair test) to test one variable.   | 2 |   | 2  | 2  | 2 |   | 2  | 2  |
|                      | 2 | 1        | 3      | Observe a natural phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.   | 1 |   | 1  | 1  | 1 |   | 1  | 1  |
| cience               | 2 | 1        | 4      | State a conclusion that is consistent with the information/data.   | 1 | 1 | 2  | 2  | 1 | 1 | 2  | 2  |
| A: Nature of Science | 2 | 2        | 1      | Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g., measuring: length - ruler, mass - balance scale, volume - beaker, temperature - thermometer; making observations: hand lens, binoculars, telescope). | 2 | 1 | 3  | 3  | 2 | 1 | 3  | 3  |
|                      |   | sses, Pi | rocedu | nt Anchor A.2<br>res, and Tools of Scientific  | 7 | 3 | 10 | 10 | 7 | 3 | 10 | 10 |

#### Appendix B: Tally Sheets

| Categorize systems as either natural of human-made (e.g., ballpoint pens, simple electrical of circuits, plant anatomy, water cycle).   Separate (e.g., ballpoint pens, simple electrical of circuits, plant anatomy, water cycle).   Separate (e.g., cowd web, lerrardum).   Separate (e.g., maps show physical features, directions, distances; globes represent Earth; electrons, |         | <del>                                     </del> |        |       | <del>la</del>  |    | - | _  | <br>_ | - |    | _  |   |    | <br>_ |   |    |
|---|---------|--|--------|-------|--|----|---|----|-------|---|----|----|---|----|-------|---|----|
| Explain a relationship between the living and nonliving components in a system (e.g., food web, terrarium).   |         | 3  | 1      | 1     | ballpoint pens, simple electrical circuits, plant anatomy, water   | 3  |   | 1  | 4     |   | 4  | 3  |   | 1  | 4     |   | 4  |
| 3   |         | 3  | 1      | 2     | Explain a relationship between the living and nonliving components in a system (e.g., food web, terrarium).  | 1  |   |    | 1     |   | 1  | 1  |   |    | 1     |   | 1  |
| 3   |         | 3  | 1      | 3     | ecosystem as either living or nonliving and describe their roles   | 1  | 2 |    | 1     | 2 | 3  | 1  | 1 |    | 1     | 1 | 2  |
| represent (e.g., maps show physical features, directions, distances; globes represent Earth; drawings of watersheds depict terrain; dioramas show ecosystems; concept maps show relationships of ideas). Identify what different models represent  3 2 2 Use models to make observations to explain how systems work (e.g., water cycle, Sun-Earth-Moon system).  3 2 3 Use appropriate, simple modeling tools and techniques to describe or illustrate a system (e.g., two cans and string to model a communications system, terrarium to model an ecosystem).  3 3 1 Identify and describe observable patterns (e.g., growth patterns in plants, weather, water cycle).  3 3 2 Predict future conditions/events based on observable patterns (e.g., day/night, seasons, sunrise/sunset, lunar phases).  Total For Assessment Anchor A.3 Systems, Models, and Patterns  1 4 3 15 4 19 12 2 3 15 2 17   |         | 3  | 1      | 4     | fiber systems as they relate to agricultural products from the   | 1  | 2 |    | 1     | 2 | 3  | 1  | 1 |    | 1     | 1 | 2  |
| 3 2 2 to explain how systems work (e.g., water cycle, Sun-Earth-Moon system).  Use appropriate, simple modeling tools and techniques to describe or illustrate a system (e.g., two cans and string to model a communications system).  Identify and describe observable patterns (e.g., growth patterns in plants, weather, water cycle).  Predict future conditions/events based on observable patterns (e.g., day/night, seasons, sunrise/sunset, lunar phases).  Total For Assessment Anchor A.3 Systems, Models, and Patterns  1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2  |         | 3  | 2      | 1     | represent (e.g., maps show<br>physical features, directions,<br>distances; globes represent Earth;<br>drawings of watersheds depict<br>terrain; dioramas show<br>ecosystems; concept maps show<br>relationships of ideas).Identify | 2  |   |    | 2     |   | 2  | 2  |   |    | 2     |   | 2  |
| tools and techniques to describe or illustrate a system (e.g., two cans and string to model a communications system, terrarium to model an ecosystem).  2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2   |         | 3  | 2      | 2     | to explain how systems work (e.g., water cycle, Sun-Earth-Moon   |    |   | 2  | 2     |   | 2  |    |   | 2  | 2     |   | 2  |
| 3 3 1 patterns (e.g., growth patterns in plants, weather, water cycle).  Predict future conditions/events based on observable patterns (e.g., day/night, seasons, sunrise/sunset, lunar phases).  Total For Assessment Anchor A.3 Systems, Models, and Patterns  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |         | 3  | 2      | 3     | tools and techniques to describe<br>or illustrate a system (e.g., two<br>cans and string to model a<br>communications system, terrarium  | 2  |   |    | 2     |   | 2  | 2  |   |    | 2     |   | 2  |
| 3 3 2 based on observable patterns (e.g., day/night, seasons, sunrise/sunset, lunar phases).  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |         | 3  | 3      | 1     | patterns (e.g., growth patterns in   | 1  |   |    | 1     |   | 1  | 1  |   |    | 1     |   | 1  |
| Systems, Models, and Patterns   |         | 3  | 3      | 2     | based on observable patterns (e.g., day/night, seasons,  | 1  |   |    | 1     |   | 1  | 1  |   |    | 1     |   | 1  |
| Total For Reporting Category A 29 6 12 41 6 47 29 3 12 41 3 44  |         |  |        |       |  | 12 | 4 | 3  | 15    | 4 | 19 | 12 | 2 | 3  | 15    | 2 | 17 |
|   | Total I | For Rep  | orting | Categ | ory A  | 29 | 6 | 12 | 41    | 6 | 47 | 29 | 3 | 12 | 41    | 3 | 44 |

|          | 9 04                 |                            |                     |   |            |              |     | Point               | ts |       |        |   |      |   | Iten | าร | 00.             | ence         |
|----------|----------------------|----------------------------|---------------------|---|------------|--------------|-----|---------------------|----|-------|--------|---|------|---|------|----|-----------------|--------------|
| Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   | Scc<br>(Co | dent<br>ores | Blo | ating<br>ock<br>EB) |    | (Core |        |   | nber |   | ems  | c  | of Ite<br>(Core | <b>&amp;</b> |
|          | ٩                    | (S)                        |                     |   | Poi:       | nts)<br>OE   | MC  | OE                  | MC | EB)   |        |   |      |   |      | MC | EB)             |              |
|          | 1                    | 1                          | 1                   | Identify life processes of living things (e.g., growth, digestion, respiration).  |            | 02           |     | 01                  |    | 02    | · otal |   | 02   |   | 0_   |    | 01              |              |
|          | 1                    | 1                          | 2                   | Compare similar functions of external characteristics of organisms (e.g., anatomical characteristics: appendages, type of covering, body segments).                                 |            |              |     |                     |    |       |        |   |      |   |      |    |                 |              |
|          | 1                    | 1                          | 3                   | Describe basic needs of plants and animals (e.g., air, water, food).  | 1          |              | 1   |                     | 2  |       | 2      | 1 |      | 1 |      | 2  |                 | 2            |
|          | 1                    | 1                          | 4                   | Describe how different parts of a living thing work together to provide what the organism needs (e.g., parts of plants: roots, stems, leaves).                                      |            |              |     |                     |    |       |        |   |      |   |      |    |                 |              |
|          | 1                    | 1                          | 5                   | Describe the life cycles of different organisms (e.g., moth, grasshopper, frog, seed-producing plant).  | 1          |              |     |                     | 1  |       | 1      | 1 |      |   |      | 1  |                 | 1            |
|          |                      |                            |                     | nt Anchor B.1<br>ctions of Organisms  | 2          |              | 1   |                     | 3  |       | 3      | 2 |      | 1 |      | 3  |                 | 3            |
|          | 2                    | 1                          | 1                   | Identify characteristics for plant<br>and animal survival in different<br>environments (e.g., wetland,<br>tundra, desert, prairie, deep<br>ocean, forest).                          |            |              |     |                     |    |       |        |   |      |   |      |    |                 |              |
|          | 2                    | 1                          | 2                   | Explain how specific adaptations can help a living organism survive (e.g., protective coloration, mimicry, leaf sizes and shapes, ability to catch or retain water).                |            |              | 1   |                     | 1  |       | 1      |   |      | 1 |      | 1  |                 | 1            |
|          | 2                    | 2                          | 1                   | Identify physical characteristics (e.g., height, hair color, eye color, attached earlobes, ability to roll tongue) that appear in both parents and could be passed on to offspring. | 1          |              |     |                     | 1  |       | 1      | 1 |      |   |      | 1  |                 | 1            |
| - 11     |                      | For Ass<br>uity of         |                     | nt Anchor B.2   | 1          |              | 1   |                     | 2  |       | 2      | 1 |      | 1 |      | 2  |                 | 2            |

|                        |       | 1       | 1     | _   |    | - | _ | - | _  | - |    | _  |   |   | <br> | - |    |
|------------------------|-------|---------|-------|---|----|---|---|---|----|---|----|----|---|---|------|---|----|
| B: Biological Sciences | 3     | 1       | 1     | Describe the living and nonliving components of a local ecosystem (e.g., lentic and lotic systems, forest, cornfield, grasslands, city park, playground).   | 1  |   |   |   | 1  |   | 1  | 1  |   |   | 1    |   | 1  |
| B: Biologi             | 3     | 1       | 2     | Describe interactions between living and nonliving components (e.g. plants – water, soil, sunlight, carbon dioxide, temperature; animals – food, water, shelter, oxygen, temperature) of a local ecosystem.     |    |   | 1 |   | 1  |   | 1  |    |   | 1 | 1    |   | 1  |
|                        | 3     | 2       | 1     | Describe what happens to a living thing when its habitat is changed.  | 1  |   |   |   | 1  |   | 1  | 1  |   |   | 1    |   | 1  |
|                        | 3     | 2       | 2     | Describe and predict how changes in the environment (e.g., fire, pollution, flood, building dams) can affect systems.   |    | 2 | 1 |   | 1  | 2 | 3  |    | 1 | 1 | 1    | 1 | 2  |
|                        | 3     | 2       | 3     | Explain and predict how changes in seasons affect plants, animals, or daily human life (e.g., food availability, shelter, mobility).  | 1  |   |   |   | 1  |   | 1  | 1  |   |   | 1    |   | 1  |
|                        | 3     | 3       | 1     | Identify everyday human activities (e.g., driving, washing, eating, manufacturing, farming) within a community that depend on the natural environment.  |    |   |   |   |    |   |    |    |   |   |      |   |    |
|                        | 3     | 3       | 2     | Describe the human dependence<br>on the food and fiber systems<br>from production to consumption<br>(e.g., food, clothing, shelter,<br>products).   | 1  |   |   |   | 1  |   | 1  | 1  |   |   | 1    |   | 1  |
|                        | 3     | 3       | 3     | Identify biological pests (e.g., fungi – molds, plants – foxtail, purple loosestrife, Eurasian water milfoil; animals – aphides, ticks, zebra mussels, starlings, mice) that compete with humans for resources. | 1  |   |   |   | 1  |   | 1  | 1  |   |   | 1    |   | 1  |
|                        | 3     | 3       | 4     | Identify major land uses in the urban, suburban and rural communities (e.g., housing, commercial, recreation).  | 1  |   |   |   | 1  |   | 1  | 1  |   |   | 1    |   | 1  |
|                        | 3     | 3       | 5     | Describe the effects of pollution (e.g., litter) in the community.  | 1  |   |   |   | 1  |   | 1  | 1  |   |   | 1    |   | 1  |
|                        |       |         |       | ent Anchor B.3<br>and Systems   | 7  | 2 | 2 |   | 9  | 2 | 11 | 7  | 1 | 2 | 9    | 1 | 10 |
| Total F                | or Re | oorting | Categ | ory B   | 10 | 2 | 4 |   | 14 | 2 | 16 | 10 | 1 | 4 | 14   | 1 | 15 |

| Grad                  | C 0 <del> 7</del>  | 1                          |                     |  |    |              |    | <b>D</b>     |      |       |       |     |      |       |      |    | 361             | ence        |
|-----------------------|--|----------------------------|---------------------|--|----|--------------|----|--------------|------|-------|-------|-----|------|-------|------|----|-----------------|-------------|
|                       |  |                            |                     |  |    |              |    | Point        | is . |       |       |     |      |       | Item | าร |                 |             |
| Reporting<br>Category | Assessment<br>Anchor   | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |    | dent<br>ores |    | ating<br>ock | То   | tal P | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| Rep<br>Cat            | Asse:<br>An  | Desc<br>(Sub-              | Sor                 |  |    | ore<br>nts)  |    | (B)          | (    | (Core |       | Co  | ore  | Е     | B    | (  | (Core<br>(EB)   |             |
|                       |  |                            |                     |  | MC | OE           | MC | OE           | MC   | OE    | Total | МС  | OE   | MC    | OE   | MC | OE              | Total       |
|                       |  |                            |                     | Use physical properties [e.g.,   |    |              |    |              |      |       |       |     |      |       |      |    |                 |             |
|                       | 1  | 1                          | 1                   | mass, shape, size, volume, color, texture, magnetism, state to describe matter.  | 2  |              |    |              | 2    |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|                       | 1  | 1                          | 2                   | Categorize/group objects using   | 1  |              | 1  |              | 2    |       | 2     | 1   |      | 1     |      | 2  |                 | 2           |
|                       |  | - · ·                      |                     | physical characteristics.  |    |              |    |              |      |       |       |     |      | -     |      |    |                 |             |
|                       |  |                            |                     | nt Anchor C.1  | 2  |              | 1  |              | 4    |       | 4     | 2   |      | 1     |      | 4  |                 | 4           |
|                       |  |                            | roperti             | es, and Interaction of Matter and  | 3  |              | 1  |              | 4    |       | 4     | 3   |      | 1     |      | 4  |                 | 4           |
|                       | Energy   |                            |                     |  |    |              |    |              |      |       |       |     |      |       |      |    |                 |             |
|                       | 2  | 1                          | 1                   | Identify energy forms, energy transfer, and energy examples (e.g., light, heat, electrical).   | 1  |              |    |              | 1    |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 2  | 1                          |                     | Describe the flow of energy through an object or system (e.g., feeling radiant heat from a light bulb, eating food to get energy, using a battery to light a bulb or run a fan). | 1  | 2            |    |              | 1    | 2     | 3     | 1   | 1    |       |      | 1  | 1               | 2           |
| C: Physical Sciences  | 2  | 1                          | 3                   | Recognize or illustrate simple direct current series and parallel circuits composed of batteries, light bulbs (or other common loads), wire, and on/off switches.                |    |              |    |              |      |       |       |     |      |       |      |    |                 |             |
| Physica               | 2  | 1                          | 4                   | Identify characteristics of sound (e.g., pitch, loudness, reflection).   | 1  |              | 1  |              | 2    |       | 2     | 1   |      | 1     |      | 2  |                 | 2           |
| ö                     |  |                            |                     | nt Anchor C.2<br>nversions, and Transer of Energy  | 3  | 2            | 1  |              | 4    | 2     | 6     | 3   | 1    | 1     |      | 4  | 1               | 5           |
|                       | 3  | 1                          | 1                   | Describe changes in motion caused by forces (e.g., magnetic, pushes or pulls, gravity, friction).  | 1  |              | 1  |              | 2    |       | 2     | 1   |      | 1     |      | 2  |                 | 2           |
|                       | 3  | 1                          | 2                   | Compare the relative movement of objects or describe types of motion that are evident (e.g., bouncing ball, moving in a straight line, back and forth, merry-goround).           | 1  |              |    |              | 1    |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 3  | 1                          |                     | Describe the position of an object<br>by locating it relative to another<br>object or a stationary background<br>(e.g., geographic direction, left,<br>up).                      | 1  |              | 1  |              | 2    |       | 2     | 1   |      | 1     |      | 2  |                 | 2           |
|                       | Total For Assessment Anchor C.3 Principles of Motion and Force |                            |                     |  | 3  |              | 2  |              | 5    |       | 5     | 3   |      | 2     |      | 5  |                 | 5           |
| Total I               | otal For Reporting Category C                                  |                            |                     |  |    |              | 4  |              | 13   | 2     | 15    | 9   | 1    | 4     |      | 13 | 1               | 14          |
|                       |  | 9                          | •                   | 9  | 2  |              |    |              |      |       |       |     |      |       |      |    |                 |             |

| Grau                        |                      |                            |                     |  |     |              |    | Doint                 | ŀo |               |       |     |      |       | Itom        |     | <del> </del>    | ence        |
|-----------------------------|----------------------|----------------------------|---------------------|--|-----|--------------|----|-----------------------|----|---------------|-------|-----|------|-------|-------------|-----|-----------------|-------------|
| Reporting<br>Category       | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores |    | Point<br>ating<br>ock |    | tal P         | oints | Nun | nber | of It | Item<br>ems | Tot | al Nu<br>of Ite | ımber<br>ms |
| Rep<br>Cat                  | Asse:<br>An          | Desc<br>(Sub-              | Elig                |  | Poi | ore<br>nts)  | (E | EB)                   |    | (Core<br>(EB) | )     |     | ore  |       | В           |     | (Core<br>(EB)   | )           |
|                             |                      |                            |                     |  | MC  | OE           | MC | OE                    | MC | OE            | Total | MC  | OE   | MC    | OE          | MC  | OE              | Total       |
|                             | 1                    | 1                          | 1                   | Describe how prominent Earth features in Pennsylvania (e.g., mountains, valleys, caves, sinkholes, lakes, rivers) were formed.   | 1   |              |    |                       | 1  |               | 1     | 1   |      |       |             | 1   |                 | 1           |
|                             | 1                    | 1                          | 2                   | Identify various Earth structures (e.g., mountains, watersheds, peninsulas, lakes, rivers, valleys) through the use of models.   |     |              |    |                       |    |               |       |     |      |       |             |     |                 |             |
|                             | 1                    | 1                          | 3                   | Describe the composition of soil as weathered rock and decomposed organic remains.   | 1   |              | 1  |                       | 2  |               | 2     | 1   |      | 1     |             | 2   |                 | 2           |
|                             | 1                    | 2                          | 1                   | Identify products and by-products of plants and animals for human use (e.g., food, clothing, building materials, paper products).  |     |              |    |                       |    |               |       |     |      |       |             |     |                 |             |
|                             | 1                    | 2                          | 2                   | Identify the types and uses of Earth materials for renewable, nonrenewable, and reusable products (e.g., human-made products: concrete, paper, plastics, fabrics).       | 1   |              |    |                       | 1  |               | 1     | 1   |      |       |             | 1   |                 | 1           |
|                             | 1                    | 2                          | 3                   | Recognize ways that humans benefit from the use of water resources (e.g., agriculture, energy, recreation).  | 1   |              |    |                       | 1  |               | 1     | 1   |      |       |             | 1   |                 | 1           |
|                             | 1                    | 3                          | 1                   | Describe types of freshwater and saltwater bodies (e.g., lakes, rivers, wetlands, oceans).   |     |              | 1  |                       | 1  |               | 1     |     |      | 1     |             | 1   |                 | 1           |
|                             | 1                    | 3                          | 2                   | Explain how water goes through phase changes (i.e., evaporation, condensation, freezing, and melting).   | 1   |              |    |                       | 1  |               | 1     | 1   |      |       |             | 1   |                 | 1           |
| e Sciences                  | 1                    | 3                          | 3                   | Describe or compare lentic<br>systems (i.e., ponds, lakes, and<br>bays) and lotic systems (i.e.,<br>streams, creeks, and rivers).  | 1   |              |    |                       | 1  |               | 1     | 1   |      |       |             | 1   |                 | 1           |
| D: Earth and Space Sciences | 1                    | 3                          | 4                   | Explain the role and relationship of a watershed or a wetland on water sources (e.g., water storage, groundwater recharge, water filtration, water source, water cycle). | 2   |              |    |                       | 2  |               | 2     | 2   |      |       |             | 2   |                 | 2           |
|                             | Earth                |                            | es and              | nt Anchor D.1<br>Processes that Change Earth and   | 8   |              | 2  |                       | 10 |               | 10    | 8   |      | 2     |             | 10  |                 | 10          |

#### Appendix B: Tally Sheets

| 2       | 1           | 1             | Identify basic cloud types (i.e., cirrus, cumulus, stratus, and cumulonimbus) and make connections to basic elements of weather (e.g., changes in  |   |   |   |   |   |   |   |   |
|---------|-------------|---------------|--|---|---|---|---|---|---|---|---|
| 2       | 1           | 2             | temperature, precipitation). Identify weather patterns from data charts or graphs of the data (e.g., temperature, wind direction, wind speed, cloud types, precipitation).   | 1 |   | 1 | 1 | 1 |   | 1 | 1 |
| 2       | 1           | 3             | Identify appropriate instruments (i.e., thermometer, rain gauge, weather vane, anemometer, and barometer) to study weather and what they measure.  |   | 1 | 1 | 1 |   | 1 | 1 | 1 |
|         |             |               | ent Anchor D.2   | 1 | 1 | 2 | 2 | 1 |   |   |   |
|         |             | mate, a       | and Atmospheric Processes  | ' | ' | _ | 2 | • | 1 | 2 | 2 |
| 3       | 1           | mate, a       | Describe motions of the Sun -<br>Earth - Moon system.  | 1 | _ | 1 | 1 | 1 | 1 | 1 | 1 |
| 3       | 1           | l             | Describe motions of the Sun -  |   | 1 |   |   |   | 1 |   |   |
|         |             | 1             | Describe motions of the Sun - Earth - Moon system.  Explain how the motion of the Sun - Earth - Moon system relates to   |   |   | 1 | 1 |   |   | 1 | 1 |
| 3 Total | 1 1 For Ass | 1 2 3 seessme | Describe motions of the Sun - Earth - Moon system.  Explain how the motion of the Sun - Earth - Moon system relates to time (e.g., days, months, years).  Describe the causes of seasonal change as they relate to the revolution of Earth and the tilt of |   |   | 1 | 1 |   |   | 1 | 1 |

| Grad                  | e 08                 |                            |                     |  |    |              |    |              |    |       |       |     |      |       |      |    | Sci             | ience       |
|-----------------------|----------------------|----------------------------|---------------------|--|----|--------------|----|--------------|----|-------|-------|-----|------|-------|------|----|-----------------|-------------|
|                       |                      |                            |                     |  |    |              |    | Point        | S  |       |       |     |      |       | Iten | าร |                 |             |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |    | dent<br>ores |    | ating<br>ock | То | tal P | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse                 | Desc<br>(Sub-              | S                   |  |    | ore<br>nts)  |    | EB)          |    | (Core | ı     |     | ore  |       | В    | (  | (Core<br>(EB)   |             |
|                       |                      |                            |                     |  | MC | OE           | MC | OE           | MC | OE    | Total | MC  | OE   | MC    | OE   | MC | OE              | Total       |
|                       | 1                    | 1                          | 1                   | Distinguish between a scientific<br>theory and an opinion, explaining<br>how a theory is supported with<br>evidence, or how new<br>data/information may change<br>existing theories and practices  | 2  |              |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|                       | 1                    | 1                          | 2                   | Explain how certain questions can<br>be answered through scientific<br>inquiry and/or technological<br>design.   | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 1                    | 1                          | 3                   | Use evidence, such as observations or experimental results, to support inferences about a relationship.  | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 1                    | 1                          | 4                   | Develop descriptions,<br>explanations, predictions, and<br>models using evidence.  | 2  |              |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|                       | 1                    | 2                          | 1                   | Describe the positive and negative, intended and unintended, effects of specific scientific results or technological developments (e.g., air/space travel, genetic engineering, nuclear fission/fusion, artificial intelligence, lasers, organ transplants). | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 1                    | 2                          | 2                   | Identify environmental issues and explain their potential long-term health effects (e.g., pollution, pest controls, vaccinations).   | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 1                    | 2                          | 3                   | Describe fundamental scientific or<br>technological concepts that could<br>solve practical problems (e.g.,<br>Newton's laws of motion,<br>Mendelian genetics).   | 1  |              | 2  |              | 3  |       | 3     | 1   |      | 2     |      | 3  |                 | 3           |
|                       | 1                    | 2                          | 4                   | Explain society's standard of living in terms of technological advancements and how these advancements impact on agriculture (e.g., transportation, processing, production, storage).  | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 1                    | 3                          | 1                   | Use ratio to describe change (e.g., percents, parts per million, grams per cubic centimeter, mechanical advantage).  | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |

|                      | 1                | 3      | 2      | Use evidence, observations, or explanations to make inferences about change in systems over time (e.g., carrying capacity, succession, population dynamics, loss of mass in chemical reactions, indicator fossils in geologic time scale) and the variables affecting these changes. | 1  |   | 1 | 2  |   | 2  | 1  |   | 1 | 2  |   | 2  |
|----------------------|------------------|--------|--------|--|----|---|---|----|---|----|----|---|---|----|---|----|
|                      | 1                | 3      | 3      | Examine systems changing over time, identifying the possible variables causing this change, and drawing inferences about how these variables affect this change.   |    | 2 | 1 | 1  | 2 | 3  |    | 1 | 1 | 1  | 1 | 2  |
|                      | 1                | 3      | 4      | Given a scenario, explain how a<br>dynamically changing<br>environment provides for the<br>sustainability of living systems.   |    |   |   |    |   |    |    |   |   |    |   |    |
|                      | Total I<br>Reaso |        |        | ent Anchor A.1<br>alysis   | 12 | 2 | 4 | 16 | 2 | 18 | 12 | 1 | 4 | 16 | 1 | 17 |
|                      | 2                | 1      | 1      | Use evidence, observations, or a variety of scales (e.g., mass, distance, volume, temperature) to describe relationships.  | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|                      | 2                | 1      | 2      | Use space/time relationships, define concepts operationally, raise testable questions, or formulate hypotheses.  |    |   | 1 | 1  |   | 1  |    |   | 1 | 1  |   | 1  |
|                      | 2                | 1      | 3      | Design a controlled experiment by specifying how the independent variables will be manipulated, how the dependent variable will be measured, and which variables will be held constant.  |    |   |   |    |   |    |    |   |   |    |   |    |
| A: Nature of Science | 2                | 1      | 4      | Interpret data/observations;<br>develop relationships among<br>variables based on<br>data/observations to design<br>models as solutions.   | 1  |   | 1 | 2  |   | 2  | 1  |   | 1 | 2  |   | 2  |
| A: Natu              | 2                | 1      | 5      | Use evidence from investigations to clearly communicate and support conclusions.   | 2  |   |   | 2  |   | 2  | 2  |   |   | 2  |   | 2  |
|                      | 2                | 1      | 6      | Identify a design flaw in a simple technological system and devise possible working solutions.   |    |   | 1 | 1  |   | 1  |    |   | 1 | 1  |   | 1  |
|                      | 2                | 2      | 1      | Describe the appropriate use of instruments and scales to accurately and safely measure time, mass, distance, volume, or temperature under a variety of conditions.  |    | 2 |   |    | 2 | 2  |    | 1 |   |    | 1 | 1  |
|                      | 2                | 2      | 2      | Apply appropriate measurement systems (e.g., time, mass, distance, volume, temperature) to record and interpret observations under varying conditions.   | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|                      | 2                | 2      | 3      | Describe ways technology (e.g., microscope, telescope, micrometer, hydraulics, barometer) extends and enhances human abilities for specific nurposes.  | 2  |   |   | 2  |   | 2  | 2  |   |   | 2  |   | 2  |
|                      |                  | ses, P | rocedu | ent Anchor A.2<br>ures, and Tools of Scientific  | 7  | 2 | 3 | 10 | 2 | 12 | 7  | 1 | 3 | 10 | 1 | 11 |

| 3            | 1       | 1     | Describe a system (e.g., watershed, circulatory system, heating system, agricultural system) as a group of related parts with specific roles that work together to achieve an observed result.                               | 1  |   |    | 1  |   | 1  | 1  |   |    | 1  |   | 1  |
|--------------|---------|-------|--|----|---|----|----|---|----|----|---|----|----|---|----|
| 3            | 1       | 2     | Explain the concept of order in a system [e.g., (first to last: manufacturing steps, trophic levels); (simple to complex: cell, tissue, organ, organ system)].   | 1  |   | 1  | 2  |   | 2  | 1  |   | 1  | 2  |   | 2  |
| 3            | 1       | 3     | Distinguish between system inputs, system processes, system outputs, and feedback (e.g., physical, ecological, biological, informational).   |    |   | 1  | 1  |   | 1  |    |   | 1  | 1  |   | 1  |
| 3            | 1       | 4     | Distinguish between open loop (e.g., energy flow, food web) and closed loop (e.g., materials in the nitrogen and carbon cycles, closed switch) systems.  | 1  |   |    | 1  |   | 1  | 1  |   |    | 1  |   | 1  |
| 3            | 1       | 5     | Explain how components of natural and human-made systems play different roles in a working system.   | 2  |   | 1  | 3  |   | 3  | 2  |   | 1  | 3  |   | 3  |
| 3            | 2       | 1     | Describe how scientists use models to explore relationships in natural systems (e.g., an ecosystem, river system, the solar system).   | 1  |   |    | 1  |   | 1  | 1  |   |    | 1  |   | 1  |
| 3            | 2       | 2     | Describe how engineers use models to develop new and improved technologies to solve problems.  | 2  | 2 |    | 2  | 2 | 4  | 2  | 1 |    | 2  | 1 | 3  |
| 3            | 2       | 3     | Given a model showing simple cause- and-effect relationships in a natural system, predict results that can be used to test the assumptions in the model (e.g., photosynthesis, water cycle, diffusion, infiltration).        |    |   | 1  | 1  |   | 1  |    |   | 1  | 1  |   | 1  |
| 3            | 3       | 1     | Identify and describe patterns as repeated processes or recurring elements in human-made systems (e.g., trusses, hub-and-spoke system in communications and transportation systems, feedback controls in regulated systems). |    |   |    |    |   |    |    |   |    |    |   |    |
| 3            | 3       | 2     | Describe repeating structure patterns in nature(e.g., veins in a leaf, tree rings, crystals, water waves) or periodic patterns (e.g., daily, monthly, annually).   | 1  |   | 1  | 2  |   | 2  | 1  |   | 1  | 2  |   | 2  |
|              |         |       | ent Anchor A.3<br>and Patterns   | 9  | 2 | 5  | 14 | 2 | 16 | 9  | 1 | 5  | 14 | 1 | 15 |
| otal For Rep | porting | Categ | ory A  | 28 | 6 | 12 | 40 | 6 | 46 | 28 | 3 | 12 | 40 | 3 | 43 |

| Grad                  | e 08                 |                            |                     |  |     |              |    |              |    |              |       |     |      |       |      |    | Sci             | ence       |
|-----------------------|----------------------|----------------------------|---------------------|--|-----|--------------|----|--------------|----|--------------|-------|-----|------|-------|------|----|-----------------|------------|
|                       |                      |                            |                     |  |     |              |    | Point        | :S |              |       |     |      |       | Iten |    |                 |            |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |     | dent<br>ores |    | ating<br>ock | То | tal P        | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | mber<br>ms |
| Rep                   | Asse                 | Des<br>(Sub-               | <b>≣</b> S          |  | Poi | ore<br>nts)  | ,  | EB)          |    | (Core<br>EB) |       |     | ore  |       | В    |    | (Core<br>EB)    |            |
|                       |                      |                            |                     |  | MC  | OE           | MC | OE           | MC | OE           | Total | MC  | OE   | MC    | OE   | MC | OE              | Total      |
|                       | 1                    | 1                          | 1                   | Describe the structures of living things that help them function effectively in specific ways (e.g., adaptations, characteristics).  | 1   |              |    |              | 1  |              | 1     | 1   |      |       |      | 1  |                 | 1          |
|                       | 1                    | 1                          | 2                   | Compare similarities and differences in internal structures of organisms (e.g., invertebrate/vertebrate, vascular/nonvascular, single-celled/multi-celled) and external structures (e.g., appendages, body segments, type of covering, size_shape) |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 1                    | 1                          | 3                   | Apply knowledge of characteristic structures to identify or categorize organisms (i.e., plants, animals, fungi, bacteria, and protista).   |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 1                    | 1                          | 4                   | Identify the levels of organization from cell to organism and describe how specific structures (parts), which underlie larger systems, enable the system to function as a whole.   |     |              | 1  |              | 1  |              | 1     |     |      | 1     |      | 1  |                 | 1          |
|                       |                      |                            |                     | ent Anchor B.1<br>ctions of Organisms  | 1   |              | 1  |              | 2  |              | 2     | 1   |      | 1     |      | 2  |                 | 2          |
|                       | 2                    | 1                          | 1                   | Explain how inherited structures or behaviors help organisms survive and reproduce in different environments.  | 1   |              |    |              | 1  |              | 1     | 1   |      |       |      | 1  |                 | 1          |
|                       | 2                    | 1                          | 2                   | Explain how different adaptations in individuals of the same species may affect survivability or reproduction success.   |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 2                    | 1                          | 3                   | Explain that mutations can alter a gene and are the original source of new variations.   |     |              |    |              |    |              |       |     |      |       |      |    |                 |            |
|                       | 2                    | 1                          | 4                   | Describe how selective breeding or biotechnology can change the genetic makeup of organisms.   | 1   |              |    |              | 1  |              | 1     | 1   |      |       |      | 1  |                 | 1          |
|                       | 2                    | 1                          | 5                   | Explain that adaptations are<br>developed over long periods of<br>time and are passed from one<br>generation to another  | 1   |              |    |              | 1  |              | 1     | 1   |      |       |      | 1  |                 | 1          |

| ences               | 2       | 2       | 1     | Identify and explain differences between inherited and acquired traits.   |    |   |   |    |   |    |    |   |   |    |   |    |
|---------------------|---------|---------|-------|---|----|---|---|----|---|----|----|---|---|----|---|----|
| Biological Sciences | 2       | 2       | 2     | Recognize that the gene is the basic unit of inheritance, that there are dominant and recessive genes, and that traits are inherited.                             | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
| ä                   |         | or Ass  |       | ent Anchor B.2  | 4  |   |   | 4  |   | 4  | 4  |   |   | 4  |   | 4  |
|                     | 3       | 1       | 1     | Explain the flow of energy through an ecosystem (e.g., food chains, food webs).   | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|                     | 3       | 1       | 2     | Identify major biomes and describe abiotic and biotic components (e.g., abiotic: different soil types, air, water sunlight; biotic: soil microbes, decomposers).  | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|                     | 3       | 1       | 3     | Explain relationships among organisms (e.g., producers/consumers, predator/prey) in an ecosystem.   | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|                     | 3       | 2       | 1     | Use evidence to explain factors that affect changes in populations (e.g., deforestation, disease, land use, natural disaster, invasive species).                  | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|                     | 3       | 2       | 2     | Use evidence to explain how diversity affects the ecological integrity of natural systems   |    |   |   |    |   |    |    |   |   |    |   |    |
|                     | 3       | 2       | 3     | Describe the response of organisms to environmental changes (e.g., changes in climate, hibernation, migration, coloration) and how those changes affect survival. |    | 2 | 1 | 1  | 2 | 3  |    | 1 | 1 | 1  | 1 | 2  |
|                     | 3       | 3       | 1     | Explain how human activities may affect local, regional, and global environments.   |    |   | 1 | 1  |   | 1  |    |   | 1 | 1  |   | 1  |
|                     | 3       | 3       | 2     | Explain how renewable and<br>nonrenewable resources provide<br>for human needs (i.e., energy,<br>food, water, clothing, and<br>shelter).                          |    |   |   |    |   |    |    |   |   |    |   |    |
|                     | 3       | 3       | 3     | Describe how waste management affects the environment (e.g., recycling, composting, landfills, incineration, sewage treatment).                                   | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|                     | 3       | 3       | 4     | Explain the long-term effects of using integrated pest management (e.g., herbicides, natural predators, biogenetics) on the environment.                          |    |   | 1 | 1  |   | 1  |    |   | 1 | 1  |   | 1  |
|                     |         |         |       | ent Anchor B.3<br>and Systems   | 5  | 2 | 3 | 8  | 2 | 10 | 5  | 1 | 3 | 8  | 1 | 9  |
| Total               | For Rep | oorting | Categ | ory B   | 10 | 2 | 4 | 14 | 2 | 16 | 10 | 1 | 4 | 14 | 1 | 15 |

| Grad                  | e 08                 |                            |                     |  |    |              |    |              |    |       |       |     |      |       |      |    | Sci             | ence        |
|-----------------------|----------------------|----------------------------|---------------------|--|----|--------------|----|--------------|----|-------|-------|-----|------|-------|------|----|-----------------|-------------|
|                       |                      | -C                         |                     |  |    |              |    | Point        | :S |       |       |     |      |       | Iten |    |                 |             |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus  |    | dent<br>ores |    | ating<br>ock | То | tal P | oints | Nur | nber | of It | ems  |    | al Nu<br>of Ite | imber<br>ms |
| Rep                   | Asse<br>Ar           | Des<br>Sub-                | Co                  |  | `  | ore<br>nts)  | (E | EB)          |    | (Core |       | Co  | ore  | Е     | В    | (  | (Core<br>(EB)   |             |
|                       |                      |                            |                     |  | MC |              | MC | OE           | MC | OE.   | Total | MC  | OE   | MC    | OE   | MC | OE.             |             |
|                       |                      |                            | _                   | Explain the differences among  |    |              |    |              |    |       |       |     |      |       |      |    |                 |             |
|                       | 1                    | 1                          | 1                   | elements, compounds, and<br>mixtures.<br>Use characteristic physical or  | 2  |              |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|                       | 1                    | 1                          | 2                   | chemical properties to distinguish<br>one substance from another (e.g.,<br>density, thermal<br>expansion/contraction,<br>freezing/melting points, streak<br>test).                                   | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 1                    | 1                          | 3                   | Identify and describe reactants and products of simple chemical reactions.   | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       |                      |                            |                     | nt Anchor C.1  |    |              |    |              |    |       |       |     |      |       |      |    |                 |             |
|                       | Struct<br>Energ      |                            | roperti             | ies, and Interaction of Matter and   | 4  |              |    |              | 4  |       | 4     | 4   |      |       |      | 4  |                 | 4           |
|                       | 2                    | 1                          | 1                   | Distinguish among forms of energy (e.g., electrical, mechanical, chemical, light, sound, nuclear) and sources of energy (i.e., renewable and nonrenewable energy)  Explain how energy is transferred | 2  |              |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|                       | 2                    | 1                          | 2                   | from one place to another through convection, conduction, or radiation.  | 1  |              | 1  |              | 2  |       | 2     | 1   |      | 1     |      | 2  |                 | 2           |
| Physical Sciences     | 2                    | 1                          | 3                   | Describe how one form of energy (e.g., electrical, mechanical, chemical, light, sound, nuclear) can be converted into a different form of energy.  | 1  |              |    |              | 1  |       | 1     | 1   |      |       |      | 1  |                 | 1           |
|                       | 2                    | 2                          | 1                   | Describe the Sun as the major source of energy that impacts the environment.   |    |              | 1  |              | 1  |       | 1     |     |      | 1     |      | 1  |                 | 1           |
| ö                     | 2                    | 2                          | 2                   | Compare the time span of renewability for fossil fuels and the time span of renewability for alternative fuels.  |    |              | 1  |              | 1  |       | 1     |     |      | 1     |      | 1  |                 | 1           |
|                       | 2                    | 2                          | 3                   | Describe the waste (i.e., kind and quantity) derived from the use of renewable and nonrenewable resources and their potential impact on the environment.   |    |              |    |              |    |       |       |     |      |       |      |    |                 |             |
|                       |                      |                            |                     | nt Anchor C.2<br>nversions, and Transer of Energy  | 4  |              | 3  |              | 7  |       | 7     | 4   |      | 3     |      | 7  |                 | 7           |
|                       | 3                    | 1                          | 1                   | Describe forces acting on objects (e.g., friction, gravity, balanced versus unbalanced).   | 2  |              |    |              | 2  |       | 2     | 2   |      |       |      | 2  |                 | 2           |
|                       | 3                    | 1                          | 2                   | Distinguish between kinetic and potential energy.  |    |              | 1  |              | 1  |       | 1     |     |      | 1     |      | 1  |                 | 1           |
|                       | 3                    | 1                          | 3                   | Explain that mechanical advantage helps to do work (physics) by either changing a force or changing the direction of the applied force (e.g., simple machines, hydraulic systems).                   |    |              |    |              |    |       |       |     |      |       |      |    |                 |             |
|                       |                      |                            |                     | nt Anchor C.3<br>and Force   | 2  |              | 1  |              | 3  |       | 3     | 2   |      | 1     |      | 3  |                 | 3           |
| Total                 | For Re               | porting                    | Categ               | ory C  | 10 |              | 4  |              | 14 |       | 14    | 10  |      | 4     |      | 14 |                 | 14          |

| Grad                    | e 08                 | 1                          |                     |   |     |             |    | De!: '       |    |               | -     |     |      |       | 14   |    | Sci           | ence  |
|-------------------------|----------------------|----------------------------|---------------------|---|-----|-------------|----|--------------|----|---------------|-------|-----|------|-------|------|----|---------------|-------|
|                         | ±.                   | . ~                        |                     |   | CT. | ا جرما      |    | Point        | S  |               |       |     |      |       | Iten |    | al Ni         | la    |
| Reporting<br>Category   | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus   |     | res         | BI | ating<br>ock |    |               | oints | Nur | nber | of It | ems  | C  | f Ite         |       |
| Re                      | Asse                 | Des<br>(Sub                | ШÖ                  |   | ,   | ore<br>nts) | (1 | EB)          | (  | Core)<br>(EB) |       | Co  | ore  | Ε     | В    | (  | Core)<br>(EB) |       |
|                         |                      |                            |                     |   | MC  |             | MC | OE           | MC |               | Total | MC  | OE   | MC    | OE   | MC |               | Total |
|                         | 1                    | 1                          | 1                   | Explain the rock cycle as changes in the solid earth and rock types found in Pennsylvania (igneous – granite, basalt, pumice; sedimentary – limestone, sandstone, shale, coal; and metamorphic – slate, quartzite, marble, gneiss).                         |     |             | 1  |              | 1  |               | 1     |     |      | 1     |      | 1  |               | 1     |
|                         | 1                    | 1                          | 2                   | Describe natural processes that change Earth's surface (e.g., landslides, volcanic eruptions, earthquakes, mountain building, new land being formed, weathering, erosion, sedimentation, soil formation).   |     |             | 1  |              | 1  |               | 1     |     |      | 1     |      | 1  |               | 1     |
|                         | 1                    | 1                          | 3                   | Identify soil types (i.e., humus, topsoil, subsoil, loam, loess, and parent material) and their characteristics (i.e., particle size, porosity, and permeability) found in different biomes and in Pennsylvania, and explain how they formed                |     |             |    |              |    |               |       |     |      |       |      |    |               |       |
|                         | 1                    | 1                          | 4                   | Explain how fossils provide evidence about plants and animals that once lived throughout Pennsylvania's history (e.g., fossils provide evidence of different environments).   | 2   |             | 2  |              | 4  |               | 4     | 2   |      | 2     |      | 4  |               | 4     |
|                         | 1                    | 2                          | 1                   | Describe a product's transformation process from production to consumption (e.g., prospecting, propagating, growing, maintaining, adapting, treating, converting, distributing, disposing) and explain the process's potential impact on Earth's resources. |     | 2           |    |              |    | 2             | 2     |     | 1    |       |      |    | 1             | 1     |
|                         | 1                    | 2                          | 2                   | Describe potential impacts of<br>human-made processes (e.g.,<br>manufacturing, agriculture,<br>transportation, mining) on Earth's<br>resources, both nonliving (i.e., air,<br>water, or earth materials) and<br>living (i.e., plants and animals).          | 3   |             |    |              | 3  |               | 3     | 3   |      |       |      | 3  |               | 3     |
| ences                   | 1                    | 3                          | 1                   | Describe the water cycle and the physical processes on which it depends (i.e., evaporation, condensation, precipitation, transpiration, runoff, infiltration, energy inputs, and phase changes).  | 1   |             |    |              | 1  |               | 1     | 1   |      |       |      | 1  |               | 1     |
| arth and Space Sciences | 1                    | 3                          | 2                   | Compare and contrast characteristics of freshwater and saltwater systems on the basis of their physical characteristics (i.e., composition, density, and electrical conductivity) and their use as natural resources.                                       |     |             |    |              |    |               |       |     |      |       |      |    |               |       |

|       |        |                   |       | ·   |    |   |   |    |   |    |    |   |   |    |   |    |
|-------|--------|-------------------|-------|---|----|---|---|----|---|----|----|---|---|----|---|----|
| D: E  | 1      | 3                 | 3     | Distinguish among different water systems (e.g., wetland systems, ocean systems, river systems, watersheds) and describe their relationships to each other as well as to landforms.   |    |   |   |    |   |    |    |   |   |    |   |    |
|       | 1      | 3                 | 4     | Identify the physical characteristics of a stream and how these characteristics determine the types of organisms found within the stream environment (e.g., biological diversity, water quality, flow rate, tributaries, surrounding watershed) |    |   |   |    |   |    |    |   |   |    |   |    |
|       |        |                   |       | ent Anchor D.1  |    |   |   |    |   |    |    |   |   |    |   |    |
|       |        | Featur<br>source: |       | Processes that Change Earth and   | 6  | 2 | 4 | 10 | 2 | 12 | 6  | 1 | 4 | 10 | 1 | 11 |
|       | 2      | 1                 | 1     | Explain the impact of water systems on the local weather or the climate of a region (e.g., lake effect snow, land/ocean breezes).   | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|       | 2      | 1                 | 2     | Identify how global patterns of atmospheric movement influence regional weather and climate.  |    |   |   |    |   |    |    |   |   |    |   |    |
|       | 2      | 1                 | 3     | Identify how cloud types, wind directions, and barometric pressure changes are associated with weather patterns in different regions of the country.  |    |   |   |    |   |    |    |   |   |    |   |    |
|       |        |                   |       | ent Anchor D.2<br>and Atmospheric Processes   | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|       | 3      | 1                 | 1     | Describe patterns of Earth's movements (i.e., rotation and revolution) and the Moon's movements (i.e., phases, eclipses, and tides) in relation to the Sun.   |    |   |   |    |   |    |    |   |   |    |   |    |
|       | 3      | 1                 | 2     | Describe the role of gravity as the force that governs the movement of the solar system and universe.   | 1  |   |   | 1  |   | 1  | 1  |   |   | 1  |   | 1  |
|       | 3      | 1                 | 3     | Compare and contrast<br>characteristics of celestial bodies<br>found in the solar system (e.g.,<br>moons, asteroids, comets,<br>meteors, inner and outer planets).  | 2  |   |   | 2  |   | 2  | 2  |   |   | 2  |   | 2  |
|       |        |                   |       | ent Anchor D.3<br>tructure of the Universe  | 3  |   |   | 3  |   | 3  | 3  |   |   | 3  |   | 3  |
| tal I | For Re | porting           | Catec | gory D  | 10 | 2 | 4 | 14 | 2 | 16 | 10 | 1 | 4 | 14 | 1 | 15 |

| Gra         | ide 0    | 5      |                            |                     |                             |    |              |     |              |    |               |       |     |      |       |      |    | Wr              | riting      |
|-------------|----------|--------|----------------------------|---------------------|-----------------------------|----|--------------|-----|--------------|----|---------------|-------|-----|------|-------|------|----|-----------------|-------------|
|             |          |        |                            |                     |                             |    |              |     | Point        | S  |               |       |     |      |       | Iten | าร |                 |             |
| Reporting   | Category | Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus                       |    | dent<br>ores | Equ | ating<br>ock | То | tal P         | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| Rep         | Asse     | Ar     | Des<br>(Sub-               | <b>≣</b> S          |                             | ١, | ore<br>nts)  | (E  | EB)          | (  | (Core<br>(EB) |       | Co  | re   | E     | ΪB   | (  | (Core<br>(EB)   |             |
|             |          |        |                            |                     |                             | MC | OE           | MC  | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC | OE              | Total       |
|             | 1        |        |                            |                     | Narrative                   |    |              |     |              |    |               |       |     |      |       |      |    |                 |             |
|             | Λς       |        |                            |                     | ent Anchor A.1<br>f Writing |    |              |     |              |    |               |       |     |      |       |      |    |                 |             |
| 1 🗒         | 2        | 2      |                            |                     | Informational               |    | 4            |     |              |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
| Composition |          |        |                            |                     | ent Anchor A.2<br>f Writing |    | 4            |     |              |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
| ¥           | 3        | 3      |                            |                     | Persuasive                  |    | 4            |     |              |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
|             |          |        |                            |                     | ent Anchor A.3<br>f Writing |    | 4            |     |              |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
| Tota        | al For I | Rep    | orting                     | Categ               | ory A                       |    | 8            |     |              |    | 8             | 8     |     | 2    |       |      |    | 2               | 2           |

| Grad                  | e 05                 |                           |                     |                             |             |    |    |              |    |               |       |     |      |       |      |    | Wr             | iting       |
|-----------------------|----------------------|---------------------------|---------------------|-----------------------------|-------------|----|----|--------------|----|---------------|-------|-----|------|-------|------|----|----------------|-------------|
|                       |                      |                           |                     |                             |             |    |    | Point        | S  |               |       |     |      |       | Item | IS |                |             |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>Sub-anchor) | Eligible<br>Content | Focus                       | Stuc<br>Sco |    | •  | ating<br>ock | То | tal P         | oints | Nun | nber | of It | ems  |    | al Nu<br>f Ite | ımber<br>ms |
| Rep                   | Asse                 | Desi<br>(Sub-             | Co                  |                             | (Co         |    | (E | EB)          | (  | (Core<br>(EB) |       | Co  | re   | Е     | В    | (  | Core<br>EB)    |             |
|                       |                      |                           |                     |                             | MC          | OE | MC | OE           | MC | OE            | Total | MC  | OE   | MC    | OE   | MC | OE             | Total       |
| Edit                  | 5                    |                           |                     | Editing                     | 7           |    |    |              | 7  |               | 7     | 7   |      |       |      | 7  |                | 7           |
| and                   |                      |                           |                     | nt Anchor B.5<br>of Writing | 7           |    |    |              | 7  |               | 7     | 7   |      |       |      | 7  |                | 7           |
| sin                   | 6                    |                           |                     | Revising                    | 5           |    |    |              | 5  |               | 5     | 5   |      |       |      | 5  |                | 5           |
| B: Revising           |                      |                           |                     | nt Anchor B.6<br>of Writing | 5           |    |    |              | 5  |               | 5     | 5   |      |       |      | 5  |                | 5           |
| Total                 | For Rep              | porting                   | Categ               | ory B                       | 12          |    |    |              | 12 |               | 12    | 12  |      |       |      | 12 |                | 12          |

| Grad                  | e 08                 |                            |                     |                            |    |              |      |        |    |               |       |     |      |       |      |    | Wr              | riting      |
|-----------------------|----------------------|----------------------------|---------------------|----------------------------|----|--------------|------|--------|----|---------------|-------|-----|------|-------|------|----|-----------------|-------------|
|                       |                      |                            |                     |                            |    |              |      | Point  | S  |               |       |     |      |       | Iten | าร |                 |             |
| Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus                      |    | dent<br>ores | -    | iating | То | tal P         | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | ımber<br>ms |
| Rep                   | Asse<br>Ar           | Des<br>(Sub-               | i≣ 8                |                            |    | ore<br>nts)  | DIUC | k (EB) | (  | (Core<br>(EB) |       | Co  | re   | E     | В    | (  | (Core<br>(EB)   |             |
|                       |                      |                            |                     |                            | MC | OE           | MC   | OE     | MC | OE            | Total | MC  | OE   | MC    | OE   | MC | OE              | Total       |
|                       | 1                    |                            |                     | Narrative                  |    |              |      |        |    |               |       |     |      |       |      |    |                 | i           |
| on                    |                      |                            |                     | ent Anchor A.1<br>FWriting |    |              |      |        |    |               |       |     |      |       |      |    |                 |             |
| ∺                     | 2                    |                            |                     | Informational              |    | 4            |      |        |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
| Composition           |                      |                            |                     | nt Anchor A.2<br>f Writing |    | 4            |      |        |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
| Ä                     | 3                    |                            |                     | Persuasive                 |    | 4            |      |        |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
|                       |                      |                            |                     | nt Anchor A.3<br>f Writing |    | 4            |      |        |    | 4             | 4     |     | 1    |       |      |    | 1               | 1           |
| Total I               | or Rep               | oorting                    | Categ               | ory A                      |    | 8            |      |        |    | 8             | 8     |     | 2    |       |      |    | 2               | 2           |

|   | <u>Grad</u>           | <u>e 08</u>          |                            |                     |                             |    |              |      |        |    |               |       |     |      |       |      |    | <u> Wr</u>      | <u>iting</u> |
|---|-----------------------|----------------------|----------------------------|---------------------|-----------------------------|----|--------------|------|--------|----|---------------|-------|-----|------|-------|------|----|-----------------|--------------|
| I |                       |                      |                            |                     |                             |    |              |      | Point  | S  |               |       |     |      |       | Item | ıs |                 |              |
|   | Reporting<br>Category | Assessment<br>Anchor | Descriptor<br>(Sub-anchor) | Eligible<br>Content | Focus                       |    | dent<br>ores |      | uating |    | tal P         | oints | Nun | nber | of It | ems  |    | al Nu<br>of Ite | mber<br>ms   |
|   | Rep<br>Cat            | Asse:<br>An          | Desc<br>(Sub-              | Eliç                |                             | ,  | ore<br>ints) | Bloc | k (EB) | (  | (Core<br>(EB) |       | Co  | ore  | Е     | В    | (  | (Core<br>EB)    |              |
| L |                       |                      |                            |                     |                             | MC | OE           | MC   | OE     | MC | OE            | Total | MC  | OE   | MC    | OE   | MC | OE              | Total        |
|   | Edit                  | 5                    |                            |                     | Editing                     | 6  |              |      |        | 6  |               | 6     | 6   |      |       |      | 6  |                 | 6            |
|   | and                   |                      |                            |                     | nt Anchor B.5<br>of Writing | 6  |              |      |        | 6  |               | 6     | 6   |      |       |      | 6  |                 | 6            |
|   | sir                   | 6                    |                            |                     | Revising                    | 6  |              |      |        | 6  |               | 6     | 6   |      |       |      | 6  |                 | 6            |
|   | B: Revising           |                      |                            |                     | nt Anchor B.6<br>of Writing | 6  |              |      |        | 6  |               | 6     | 6   |      |       |      | 6  |                 | 6            |
| I | Total I               | or Re                | oorting                    | Categ               | ory B                       | 12 |              |      |        | 12 |               | 12    | 12  |      |       |      | 12 |                 | 12           |

# Appendix C:

Item and Test Development Process

|    | Step  | Description  |
|----|---|--|
| 1. | Review Guiding<br>Documentation   | Each year item and test development specialists meet internally to review all guiding documentation related to the PSSA. Documentation reviewed includes the test design blueprints, the Pennsylvania Assessment Anchors and Eligible Content, the test item specifications, the test style specifications (style guide), and all test content descriptions.   |
| 2. | Meet with PDE to Confirm<br>Understanding of Program                    | The goal of the meeting each year is to ensure that item and test development teams have a clear understanding of PDE's vision for test development. A successful development cycle requires a clear understanding of Pennsylvania's content-area test specifications and of any unique interpretations of the Pennsylvania Assessment Anchors (if any).   |
| 3. | Create Preliminary Test Item<br>Development Plan                        | Item and test development specialists generate a preliminary development plan which includes an overview of the program, the internal and external (PDE) review and approval processes, a projected schedule for development of test items—including the number of test items to be developed for review by PDE and subsequent review by the committees of Pennsylvania educators. Item and test development specialists also generate strategies for securing passages and developing writing prompts, science scenarios, and passage-based items, etc. |
| 4. | Meet with PDE to Finalize<br>Test Item Development Plan                 | Over the course of the meeting, item and test development specialists verify all steps in the development process including timelines and schedules for test item/test development.  |
| 5. | Analyze Item Bank   | Existing test items in the current PSSA Item Bank are reviewed for technical psychometric quality as well as for their match to the Assessment Anchors. During this phase, test development specialists also make a tally of the test items by Assessment Anchor—including test development specialists' best thinking regarding the number of usable test items in the existing item bank. A tally is also made of the number of usable passages, as well as other stimulus prompts in the bank, including science scenarios.                           |
| 6. | Refine Test Item Development Plan to Include Writers and Subcontractors | Item and test development specialists identify the writers who will write the test items (test development specialists or other professional item writers, subcontractors, etc.), the estimated number of writers needed, the qualifications of writers, and the approximate number of test items to be submitted by each source.  |
| 7. | Train Item Writers  | Item and test development specialists train item writers, as needed. Item writers who have written for the PSSA in the past receive updated information, as needed.  |

| Step   | Description  |  |  |  |  |
|--|--|--|--|--|--|
| 8. Write and Review Items  | Test items are written by item writers after training is complete, and feedback is provided by the item and test development specialists to item writers on a regular basis. As test items are written, they are reviewed and edited in a series of internal reviews. Item and test development specialists review and edit items to include, but not limited to, the following: match to Assessment Anchor/Eligible Content, relevance to purpose, accuracy of content, item difficulty, interest level, grade appropriateness, depth of knowledge and cognitive complexity, adherence to the principles of Universal Design, and freedom from issues of bias/fairness/sensitivity. At the same time, the process of procuring permissions also begins, including securing permissions for passages, art, prompts, etc. |  |  |  |  |
| 9. Enter Test Items into Database  | Upon acceptance from item writers, test items are entered into the item management system, IDEAS ( <i>Item Development and Educational Assessment System</i> ). Item data stored in the system database includes, but is not limited to, the following: readability, cognitive level, estimated level of difficulty, alignment to assessment anchors, and correlation to stimulus prompts and passages.  |  |  |  |  |
| 10. Prepare Item Set for Sample<br>Item Review by PDE  | Item and test development specialists prepare a subset of the items for review by PDE.   |  |  |  |  |
| 11. PDE Conducts Sample Item<br>Review   | After a subset of the items is submitted to PDE for review, PDE reviews the items and provides feedback to item and test development teams via a conference call. Items are revised per PDE feedback.  |  |  |  |  |
| 12. Continue to Write and Review Items   | The remaining items are written, and feedback is provided by the item and test development specialists to item writers on a regular basis. Items are entered into the item management system, IDEAS ( <i>Item Development and Educational Assessment System</i> ) (See step 8 and step 9).   |  |  |  |  |
| 13. Review Items Prior to Test Item Review and Validation Sessions   | Prior to New Item Content Review, all items are submitted to PDE for review. Item and test development specialists incorporate all PDE feedback, and PDE-requested edits to items are made.  |  |  |  |  |
| 14. Prepare for Test Item Review<br>Sessions (the New Item<br>Content Review and the Bias,<br>Fairness, and Sensitivity<br>Review) | Item and test development specialists prepare all items and stimulus passages for review by the New Item Content Review Committee (consisting of Pennsylvania educators) and by the separate Bias, Fairness, and Sensitivity Committee (consisting of a panel of experts including Pennsylvania educators). Item and test development specialists also prepare training materials needed for training committee members to review items for content or for bias, fairness, and sensitivity issues. All training materials and other ancillary materials (e.g., agendas, presentations, etc.) are also developed and then submitted to PDE for review and approval. Invitations are sent to Pennsylvania educators and national experts from PDE-approved committee lists.  |  |  |  |  |

| Step   | Description   |  |  |  |
|--|---|--|--|--|
| 15. Conduct Test Item Review Sessions (the New Item Content Review and the Bias, Fairness, and Sensitivity Review) | Committees of Pennsylvania educators and national experts review items in two meetings: one addressing item content and quality, the other addressing bias, fairness, and sensitivity. PDE, with support from item and test development specialists, presents training on how to review new test items for content considerations or bias/fairness/sensitivity issues. At the New Item Content Review, suggested edits to test items are made and/or replacement test items are written during the actual item review so that both the committee and the PDE are able to observe changes to the test items and approve the test items during the committee review process. At the Bias, Fairness, and Sensitivity Review, experts in bias, fairness, and sensitivity review all test items and passages and come to a consensus about any issues that are noted. At both meetings the results are carefully documented. |  |  |  |
| 16. Conduct Item Review Resolution and Cleanup   | Following the conclusion of the New Item Content Review Committee meetings, PDE re-examines the consensus changes suggested by the committee members during the New Item Content Review Committee meetings. DRC item and test development specialists then record all of PDE's follow-up decisions and changes. During this cleanup process, PDE either accepts the changes as requested by the committee or rejects the decision of the committee. If a committee decision is rejected, PDE provides an alternate decision for DRC to implement. During this cleanup process, PDE also interprets the report from the Bias, Fairness, and Sensitivity Committee meetings and subsequently identifies changes to test items and passages. DRC item and test development specialists then apply the changes to the test items and passages per PDE's decisions.  |  |  |  |
| 17. Submit Field Test Items for Final Sign-Off   | PDE-approved changes are applied to the items, scenarios, non-permissioned passages, prompts, etc. (Changes reflect PDE's arbitration of the committee decisions.) Once all revisions to the items, non-permissioned passage text, and/or the art used by test items and passages are completed, the test items are submitted to PDE for final review and sign-off. (Changes requested to permissioned passages are sought from the publisher of record, and, if approved by the copyright holders, changes are implemented.) [PDE's approval process for field test items generally occurs simultaneously with PDE's approval of the core test forms. See step 25.]  |  |  |  |
| To follow the path for new field test items, skip to step 22.  |   |  |  |  |
| OR   |   |  |  |  |
| To follow the chronological test development path, continue with step 18.  |   |  |  |  |

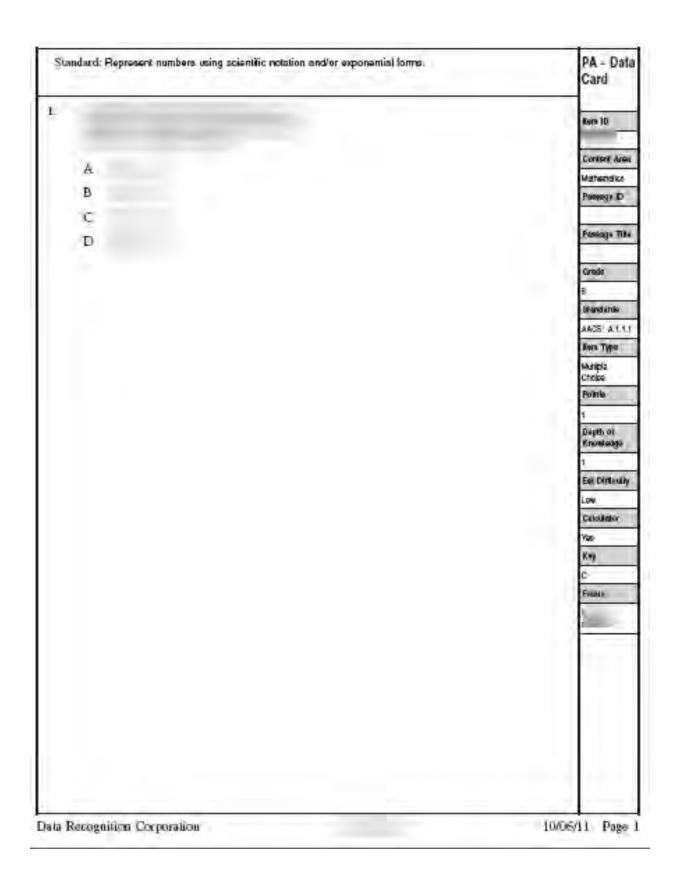
| Step   | Description  |  |  |  |  |
|--|--|--|--|--|--|
| 18. Review Results of the Field Test   | Following the administration of a field test form and the subsequent rangefinding and field test scoring processes for field test items, performance data for all field test items are analyzed by DRC psychometricians and test development specialists. Test item performance data that meet certain triggering criteria are flagged for additional reviews by test development specialists. Flagged field-test items with extreme performance data are considered psychometrically unusable and are removed from future operational consideration. Field-test items with marginal performance data are prepared for the Field Test Item Data Review meeting.  |  |  |  |  |
| 19. Prepare for Field Test Item<br>Data Review   | Test development specialists prepare the items and stimulus passages for review by the Field Test Item Data Review Committee (which consists of Pennsylvania educators). Psychometricians also prepare training materials needed for training committee members to review items for their performance. All training materials and other ancillary materials (e.g., agendas, presentations, etc.) are submitted to PDE for review and approval. Invitations are also sent to Pennsylvania educators from PDE-approved committee lists.  |  |  |  |  |
| 20. Conduct Field Test Item Data<br>Review   | Committees of Pennsylvania educators review the performance data of flagged field-test items. Psychometricians present training on how to review field-test items based on their performance data. At the Item Data Review, committee members examine the performance of the items and determine whether each field-test item is technically sound and appropriate for use on an operational PSSA test. Since test items cannot be modified at the Field Test Item Data Review, the committee can either accept an item as is, or the committee can reject the item.   |  |  |  |  |
| 21. Conduct Field Test Item Data<br>Review Reconciliation  | Following the conclusion of the Field Test Item Data Review Committee meetings, PDE re-examines the consensus decisions (accept or reject) suggested by the committee members during the Field Test Item Data Review Committee meetings. Test development specialists record all of PDE's follow-up decisions and changes. During this cleanup process, PDE either accepts the decisions of the data review committee, or PDE rejects the decisions of the data review committee. If a committee decision is not accepted, PDE provides an alternate decision for test development specialists to implement. All PDE-approved changes to the test items status (accepted or rejected) are incorporated into the <i>Item Development and Educational Assessment System</i> , IDEAS. |  |  |  |  |
| 22. Select Items to Fill Core, Field Test, and Equating Block Positions in Core and Field Test Forms | After the PDE-approved changes to the new field-test items is completed AND the results of the prior field test have been finalized following data review, test development specialists collaborate with psychometricians to follow the Test Design Blueprints and build requirements to make the initial selection of items for core, field-test, and equating block positions for all test forms.  |  |  |  |  |

| Step  | Description  |  |  |  |  |
|---|--|--|--|--|--|
| 23. Review Core and Equating<br>Block Selections                | After test content and psychometric requirements have been achieved for core and equating block positions, the core and equating block items are provided to PDE for review and approval. Any changes to the content of the core or equating block requested by PDE are balanced with psychometric requirements until all core and equating block positions are approved by PDE, test development specialists, and psychometricians. Test development specialists work with psychometricians and PDE staff create scrambled versions of the core items that will appear across forms |  |  |  |  |
| 24. Construct Test Forms  | Items, passages, and test components are assembled into forms using the form construction and typesetting function of DRC's <i>Item Development and Educational Assessment System</i> , IDEAS. Forms are reviewed internally for style and formatting requirements.  |  |  |  |  |
| 25. Review Typeset Forms  | After forms are constructed in IDEAS, draft hard copies of the forms are produced and presented to PDE for review and approval. Any changes to the content of the core or equating block requested by PDE are balanced with psychometric requirements until all core and equating block positions are approved by PDE, test development specialists, and psychometricians. PDE also re-reviews all field-test items appearing in the test forms. DRC applies changes to the field-test items as required.  |  |  |  |  |
| 26. Print Test Forms  | Following PDE's approval of the test forms, DRC completes a series of final proofing of all test forms. Final forms (along with ancillary materials) are then approved for printing.   |  |  |  |  |
| 27. Assemble Documentation of Test Materials                    | Metadata for each test item and form is documented and proofed, including: grade, form, session/section, item sequence, reporting category, Assessment Anchor, descriptor (sub-anchor), Eligible Content, number of points, item type, number of answer options, item usage, stimulus ID, etc.   |  |  |  |  |
| 28. Prepare Online Forms  | Following approval of the print forms, all online forms are prepared. Forms are rendered in form sets, and items and forms are compared for continuity with the print forms as well as to ensure that all tools and features are functioning as expected.  |  |  |  |  |
| To follow the path for new field test items, return to step 18. |  |  |  |  |  |

Appendix D:

Item Review Cards

| num | bers, and number systems.   | Card                  |
|-----|---|-----------------------|
| 1.  | Some Street control regulars on a garage period. Note that the dome of all the period.  | Item ID               |
|     | Basic familians of the proper, and Baltimo for state (1) it for proper.                 | and the               |
|     |   | Content Area          |
| A.  | When the there is the residence is track them all a surprised. (The this research       | Mathematics           |
| A.  | simplest form.  | Passage ID            |
|     |   | Passage Titi          |
|     |   | Grade                 |
|     |   | 6.                    |
|     |   | AACS<br>Standards     |
|     |   | A.1                   |
|     |   | Item Type             |
|     |   | Open Ended            |
|     |   | Points                |
|     |   | 4                     |
|     |   | Depth of<br>Knowledge |
| B.  | Tricky decimals, statistic forest paralle of the periods in will and done. Howevill man |                       |
| υ.  | mode.   | Est Difficulty        |
|     |   | Calculator            |
|     |   | С                     |
|     |   | Focus                 |
|     |   |                       |
|     |   |                       |
|     |   |                       |



#### PA - Data Card continued

#### Administration

| Name | Use Function | Rptg Flag | Seq | Period | Year | Day | Session | Calc | Model/Ext | Grade |
|------|--------------|-----------|-----|--------|------|-----|---------|------|-----------|-------|
| 08   | FT           |           |     | 100    | ı    |     |         | No   |           | R     |

#### **Traditional Statistics**

| # In group | P-Value | Item Mean | Item/Tot Corr |  |  |
|------------|---------|-----------|---------------|--|--|
| 14185      | 0.68    |           | 0.31          |  |  |

#### Fit Statistics

| Outfit t | Infit t | Deg Free | Chl-sq/df | FIt |
|----------|---------|----------|-----------|-----|
| 7.3      | 9.7     |          |           |     |

#### **IRT Statistics**

| Label Final |      | Final S.E. | Preliminary | Preliminary S.E. |  |
|-------------|------|------------|-------------|------------------|--|
| Location    | 0.08 | 0.02       |             |                  |  |

#### Distractor/Step Specific

| Label | Proportion | Correlation | Avg Meas | Step Logit |
|-------|------------|-------------|----------|------------|
| A     | 0.16       | -0.26       |          |            |
| В     | 0.13       | -0.22       |          |            |
| C*    | 0.68       | 0.31        |          |            |
| D     | 0.03       | -0.28       |          |            |
| OMITS | 0.00       |             |          |            |

## **DIF Analysis**

| Category   | Blas Code | Num Value | N - Ref | N - Focal |  |
|------------|-----------|-----------|---------|-----------|--|
| MALEFEMALE | A+        | 0.05      | 7231    | 6948      |  |
| WHITEBLACK | A-        | -0.70     | 10419   | 2145      |  |

Data Recognition Corporation

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## Appendix E:

Item Rating Sheet and Criteria Guidelines

|                  | Reviewer Signature: |   |        |
|------------------|---------------------|---|--------|
| tem Rating Sheet |                     |   |        |
|                  | Content Area:       | G | Grade: |

|                  | Content<br>Alignment       | Rigor Level Alignment   |                           |   | Te                  | echnical Des      | ign         | Universal   | Design             | STATUS      |  |
|------------------|----------------------------|-------------------------|---------------------------|---|---------------------|-------------------|-------------|-------------|--------------------|-------------|--|
|                  | Standards                  | Grade                   | Difficulty                | Depth of<br>Knowledge                             | Source of Challenge | Correct<br>Answer | Distractors | Graphics    | Language<br>Demand | Bias        | Acceptance Status  |
| Unique ID number | —Higher<br>—Lower<br>—None | —Above<br>—At<br>—Below | —Hard<br>—Medium<br>—Easy | —Recall<br>—Application<br>—Strategic<br>Thinking | —Yes<br>—No         | —Yes<br>—No       | —Yes<br>—No | —Yes<br>—No | —Yes<br>—No        | —Yes<br>—No | Approved as is     Accepted with     suggested revisions     Dissenting View |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |
|                  |                            |                         |                           |   |                     |                   |             |             |                    |             |  |

2014 PSSA Technical Report E-1

## **Item Review Criteria Guidelines**

The purpose of this form is to provide guidelines to the item review process in terms of item characteristics that are essential in building a fair and balanced assessment. Use these guidelines in conjunction with the Item Rating Sheet when recording your feedback on individual items.

|            | Content Alignment   |                                   |  |  |  |  |
|------------|---|-----------------------------------|--|--|--|--|
| Standards, | Does the content of the item align with the Standard/Anchor/Eligible Content? Each item was written to assess             | <b>HIGHER</b> —Aligns to the      |  |  |  |  |
| Anchors,   | a particular Standard/Anchor/ Eligible Content statement which is indicated on the individual Item Card.                  | higher level of the EC            |  |  |  |  |
| Eligible   | Consider the degree to which the item is, in fact, aligned with the indicated eligible content. In making this            | <b>LOWER</b> —Aligns to the lower |  |  |  |  |
| Content    | judgment, it is important to consider whether the <b>content</b> is aligned (e.g., do the eligible content and the item   | level of the EC                   |  |  |  |  |
|            | both deal with fractions) and whether the required <b>performance</b> is aligned (e.g., if the eligible content calls for | <b>NONE</b> —No alignment with EC |  |  |  |  |
|            | a comparison to be made, is this reflected in the item).  |                                   |  |  |  |  |

|            | Rigor Level Alignment   | Options                      |
|------------|---|------------------------------|
| Grade      | Is the item grade-level appropriate? Is the content consistent with the experiences of a student at the grade level                     | ABOVE Grade Level            |
|            | assessed? Is the challenge level appropriate for the grade?   | AT Grade Level               |
|            |   | BELOW Grade Level            |
| Difficulty | Do you agree with the item's difficulty rating? Item Difficulty is indicated as Easy, Medium, and Hard? Is your                         | HARD                         |
|            | rating in agreement with the difficulty rating on the Item Form?  | MEDIUM                       |
|            |   | EASY                         |
| Depth of   | Depth of Knowledge is based on the alignment work of Norman Webb. Rate each item based on the cognitive                                 | <b>4</b> = Extended Thinking |
| Knowledge  | demand, using the following levels:   | 3 = Strategic Thinking       |
|            | 1. Recall – <i>Recall</i> of a fact, information, or procedure.   | 2 = Basic Application        |
|            | 2. Basic Application of Skill or Concept – <i>Use</i> of information, conceptual knowledge, procedures, two or more steps, etc.         | 1 = Recall                   |
|            | 3. Strategic Thinking – Requires reasoning, developing a plan or sequence of steps; has some complexity; more than one possible answer. |                              |
|            | 4. Extended Thinking – Requires an investigation, time to think and process multiple conditions of the                                  |                              |
|            | problem or task, and more than 10 minutes to do non-routine manipulations. (This level is generally not                                 |                              |
|            | assessed in on-demand assessments.)   |                              |

| Source of | Is the source of challenge appropriately targeted to the content?   | Y = Yes |
|-----------|---|---------|
| Challenge | The hardest part of the item (i.e., source of challenge) should be the content that is targeted. For example, in  | N = No  |
|           | mathematics, the mathematics should be the major source of challenge rather than the wording or graphic.          |         |
|           | Students should not give an incorrect answer to a mathematics item because the reading level is too high or a     |         |
|           | graphic is flawed. Conversely, students should not give correct answers for reasons such as prior knowledge       |         |
|           | that make the answer to the question obvious (e.g., if the question asks which country has the largest population |         |
|           | and students are to read a graph that includes China, there is no need to read the graph to answer the question). |         |

|             | Technical Design  |                             |  |  |  |  |  |  |  |  |  |
|-------------|---|-----------------------------|--|--|--|--|--|--|--|--|--|
| Correct     | Is there one clear, correct answer? There should be no other answer that "could" be correct. CAUTION: This        | Y = Yes                     |  |  |  |  |  |  |  |  |  |
| Answer      | does not mean that "good" distractors are unfair.   | N = No                      |  |  |  |  |  |  |  |  |  |
| Distractors | Are distractors fair and appropriate? Distractors that are appropriate offer students reasonable choices that can | $\mathbf{Y} = \mathbf{Yes}$ |  |  |  |  |  |  |  |  |  |
|             | be arrived at by making common errors. There should be no distractors that make no sense at all. It should be     | N = No                      |  |  |  |  |  |  |  |  |  |
|             | possible to examine each option and to reason how a student with some deficiency in knowledge or skill could      |                             |  |  |  |  |  |  |  |  |  |
|             | choose it. The distractors should be formatted according to acceptable standards of test construction (e.g., a    |                             |  |  |  |  |  |  |  |  |  |
|             | phrase that is common to each distractor should be placed in the stem).   |                             |  |  |  |  |  |  |  |  |  |
| Graphics    | Are the graphics clear and accurate?  | Y = Yes                     |  |  |  |  |  |  |  |  |  |
|             |   | N = No                      |  |  |  |  |  |  |  |  |  |

|          | Universal Design  |                                 |  |  |  |  |  |  |  |  |
|----------|---|---------------------------------|--|--|--|--|--|--|--|--|
| Language | Is language clear, well-formatted, and precise? Does the item use correct terminology for the content area? In  | $\mathbf{Y} = \mathbf{Yes}$     |  |  |  |  |  |  |  |  |
| Demand   | order for all students to enter into the questions of the assessment, they must be able to understand them. If the items are formatted poorly, use unnecessarily complex words or phrases, or use figures or layouts that are difficult to understand, some students will give incorrect answers due to these factors rather than the content that is being assessed. | N = No                          |  |  |  |  |  |  |  |  |
| Bias     | Is the item free of bias? All students will not be able to enter into the assessment if bias considerations are not resolved. Does the item contain clear bias problems? <i>A thorough, independent bias review</i> (separate from this meeting) <i>will be completed for all items</i> .   | <b>Y</b> = Yes<br><b>N</b> = No |  |  |  |  |  |  |  |  |

|            | Status   | Options                  |
|------------|--|--------------------------|
| Acceptance | This is an overall judgment about the item. Based on the consensus of the committee, indicate whether the item | —Approved as is          |
| Status     | was approved without revision to the content of the item or whether the item was accepted by the committee     | —Accepted with suggested |
|            | after revision of the content of the item. If there is a dissenting view (opposed to the committee consensus), | revisions                |
|            | record a brief explanation of the dissenting view on the back of the Item Rating Sheet.                        | —Dissenting View         |

## NOTES:

| ☐ If you leave a box blank on the Item Rating Sheet, it will be recorded to indicate that you did not have any specific feedback for    |
|---|
| that item or issue.   |
| ☐ If you object to the consensus of the committee, please note this on the item rating sheet and then record a brief explanation of the |
| dissenting view on the back of the Item Rating Sheet.   |
| □ <u>Do NOT remove any items from the item binder at any time.</u>  |
| ☐ You must sign your Item Rating Sheet.   |

# Appendix F:

## **Item Statistics**

| Column<br>Heading | Definition                                    |
|-------------------|---|
| PubID             | Public ID                                     |
| Form              | Form  |
| Std               | Standard                                      |
| DOK               | Depth of knowledge                            |
| N                 | N   |
| PVal              | P-Value                                       |
| P()               | Proportion selecting given response (-=blank) |
| PtBis             | Point biserial                                |
| PT( )             | Point biserial of repsonse                    |
| Meas              | Rasch item measure                            |
| MeasSE            | Rasch item measure standard error             |
| t                 | t fit statistic                               |
| MS                | Mean square fit statistic                     |
| M/F               | Male/female DIF statistic                     |
| W/B               | White/black DIF statistic                     |

Appendix F: Item Statistics Multiple Choice

|      | Item Info   | rmation | 1       |     |        |      |       |      |      | Cl   | assica | al           |       |       |       |       | R       | asch   | In   | fit | Οι           | tfit |     | DIF           | $\overline{}$                                    |
|------|-------------|---------|---------|-----|--------|------|-------|------|------|------|--------|--------------|-------|-------|-------|-------|---------|--------|------|-----|--------------|------|-----|---------------|--|
| Cont | Grade PubID | Form    | Std     | DOK | N      | PVal | P(A)  | P(B) | P(C) | P(D) | P(-)   | <b>PtBis</b> | PT(A) | PT(B) | PT(C) | PT(D) | Meas    | MeasSE | t    | MS  | t            | MS   | M/F | W/B           | W/H  |
| MATH | 3 674745    | 0       | E.1.2.1 | 2   |        | 0.84 | 0.84  | 0.02 | 0.05 | 0.07 | 0.00   | 0.50         | 0.50  | -0.15 | -0.30 | -0.33 | 0.4040  | 0.0088 | -9.9 | 0.9 | -9.9         | 0.8  |     |               |  |
| MATH | 3 532063    | 0       | A.3.1.2 | 2   |        | 0.86 | 0.10  | 0.86 | 0.02 | 0.01 | 0.01   | 0.56         | -0.49 | 0.56  | -0.15 | -0.21 | 0.1826  | 0.0093 | -9.9 | 0.9 | -9.9         | 0.7  |     |               |  |
| MATH | 3 960234    | 0       | A.1.3.2 |     |        | 0.79 | 0.06  | 0.09 | 0.79 | 0.06 | 0.01   | 0.55         | -0.27 | -0.34 | 0.55  | -0.25 | 0.8224  | 0.0081 | -9.9 | 0.9 | -9.9         |      |     |               |  |
| MATH | 3 991299    | 0       | B.1.1.1 | 1   | 124538 | 0.52 | 0.52  | 0.04 | 0.34 | 0.09 | 0.00   | 0.46         | 0.46  | -0.29 | -0.17 | -0.31 | 2.4741  | 0.0067 | 9.9  | 1.1 | 9.9          |      |     | =             | 1  |
| MATH | 3 452193    | 0       | A.1.3.3 | 1   | 124538 | 0.61 | 0.04  | 0.61 | 0.08 | 0.26 | 0.01   | 0.55         | -0.20 | 0.55  | -0.25 | -0.36 | 2.0571  | 0.0069 | -9.9 | 0.9 | -9.9         |      |     |               |  |
| MATH | 3 851847    | 0       | A.1.3.2 |     | 124538 | 0.78 | 0.02  | 0.78 | 0.07 |      |        | 0.47         | -0.13 | 0.47  | -0.42 | -0.20 | 0.9024  | 0.0080 | 1.7  | 1.0 | 9.9          |      |     |               |  |
| MATH | 3 874933    | 0       | A.1.3.2 |     |        | 0.67 | 0.12  | 0.10 | 0.09 | 0.67 | 0.01   | 0.43         | -0.29 | -0.23 | -0.11 | 0.43  | 1.6728  | 0.0071 | 9.9  | 1.1 | 9.9          |      |     |               |  |
| MATH | 3 279968    | 0       | A.1.3.3 |     |        | 0.58 | 0.12  | 0.17 | 0.13 | 0.58 | 0.01   | 0.54         | -0.14 | -0.27 | -0.35 | 0.54  | 2.3290  | 0.0068 | -9.9 | 0.9 | -9.2         | 1.0  |     |               |  |
| MATH | 3 620705    | 0       | A.2.1.3 |     | 124538 | 0.61 | 0.07  | 0.61 | 0.24 | 0.06 | 0.02   | 0.50         | -0.28 | 0.50  | -0.27 | -0.20 | 2.0587  | 0.0069 | -2.2 | 1.0 | -4.4         | 1.0  |     |               |  |
| MATH | 3 887926    | 0       | B.2.1.1 | 1   | 124538 | 0.82 | 0.00  | 0.01 | 0.82 |      |        | 0.33         | -0.12 | -0.17 | 0.33  | -0.27 | 0.5381  | 0.0085 | 9.9  | 1.2 | 9.9          | 1.2  |     |               |  |
| MATH | 3 947296    | 0       | A.1.2.1 | 1   | 124538 | 0.79 | 0.10  | 0.05 | 0.79 | 0.06 |        | 0.47         | -0.21 | -0.26 | 0.47  | -0.30 | 0.9411  | 0.0079 | -2.9 | 1.0 | -9.9         | 0.9  |     | $\dashv$      | $\overline{}$                                    |
| MATH | 3 485860    | 0       | A.1.2.2 | 1   | 124538 | 0.63 | 0.14  | 0.63 | 0.04 | 0.18 | 0.00   | 0.42         | -0.32 | 0.42  | -0.07 | -0.20 | 1.9479  | 0.0069 | 9.9  | 1.1 | 9.9          | 1.1  |     |               |  |
| MATH | 3 979847    | 0       | A.1.3.3 |     |        | 0.51 | 0.09  | 0.51 | 0.06 | 0.33 | 0.00   | 0.56         | -0.11 | 0.56  | -0.15 | -0.45 | 2.6419  | 0.0067 | -9.9 | 0.9 | -9.9         |      |     | $\dashv$      |  |
| MATH | 3 357813    | 0       | A.2.1.3 |     | 124538 | 0.82 | 0.04  | 0.05 | 0.08 | 0.82 | 0.00   | 0.52         | -0.33 | -0.32 | -0.13 | 0.52  | 0.5335  | 0.0085 | -9.9 | 0.9 | 2.6          |      |     | $\overline{}$ | $\Box$   |
| MATH | 3 769967    | 0       | A.2.1.3 |     | 124538 | 0.32 | 0.04  | 0.05 | 0.03 | 0.82 | 0.01   | 0.57         | -0.33 | -0.32 | 0.57  | -0.36 | 1.5227  | 0.0033 | -9.9 | 0.9 | -9.9         | _    |     | $\overline{}$ | $\Box$   |
| MATH | 3 635227    | 0       | A.2.1.3 |     | 124538 | 0.71 | 0.08  | 0.43 | 0.71 | 0.14 | 0.01   | 0.37         | -0.30 | 0.41  | -0.15 | -0.05 | 3.1413  | 0.0072 | 9.9  | 1.1 | 9.9          |      |     | $\overline{}$ | $\Box$   |
| MATH | 3 991954    | 0       | A.3.1.2 |     |        | 0.86 | 0.06  | 0.04 | 0.86 | 0.03 | 0.01   | 0.55         | -0.38 | -0.26 | 0.55  | -0.26 | 0.2106  | 0.0092 | -9.9 | 0.8 | -9.9         |      |     | $\dashv$      |  |
| MATH | 3 699453    | 0       | A.3.1.3 |     | 124538 | 0.94 | 0.03  | 0.01 | 0.01 | 0.94 | 0.01   | 0.29         | -0.14 | -0.19 | -0.19 | 0.29  | -1.1289 | 0.0138 | 9.9  | 1.2 | 9.9          | 2.2  |     |               |  |
| MATH | 3 464825    | 0       | B.1.1.1 | 1   | 124538 | 0.91 | 0.91  | 0.04 | 0.02 | 0.03 | 0.00   | 0.45         | 0.45  | -0.32 | -0.21 | -0.21 | -0.4281 | 0.0109 | -8.7 | 0.9 | -9.9         | 0.8  |     |               |  |
| MATH | 3 153378    | 0       | B.1.1.2 | 2   | 124538 | 0.58 | 0.04  | 0.58 | 0.24 | 0.00 | 0.01   | 0.46         | -0.21 | 0.46  | -0.22 | -0.26 | 2.2821  | 0.0068 | 9.9  | 1.0 | 9.9          | 1.1  |     |               |  |
| MATH | 3 250576    | 0       | E.1.1.2 |     |        | 0.88 | 0.04  | 0.02 | 0.88 | 0.06 | 0.00   | 0.46         | -0.36 | -0.18 | 0.46  | -0.23 | -0.0795 | 0.0099 | -9.9 | 0.9 | -2.2         | 1.0  |     |               |  |
| MATH | 3 950639    | 0       | E.1.2.2 |     |        | 0.91 | 0.91  | 0.01 | 0.05 | 0.03 | 0.00   | 0.37         | 0.37  | -0.19 | -0.16 | -0.28 | -0.4428 | 0.0110 | 5.9  | 1.0 | 9.9          |      |     | =             | 1  |
| MATH | 3 182671    | 0       | D.1.1.1 | 2   |        | 0.95 | 0.01  | 0.02 | 0.95 | 0.02 | 0.01   | 0.35         | -0.16 | -0.24 | 0.35  | -0.20 | -1.1171 | 0.0137 | -9.9 | 0.9 | -5.8         |      |     |               |  |
| MATH | 3 462213    | 0       | A.2.1.3 |     |        | 0.77 | 0.10  | 0.06 | 0.07 | 0.77 | 0.00   | 0.55         | -0.37 | -0.24 | -0.25 | 0.55  | 0.8816  | 0.0080 | -9.9 | 0.9 | -9.9         | 0.9  |     |               |  |
| MATH | 3 345945    | 0       | B.2.1.1 | 1   | 124538 | 0.61 | 0.07  | 0.16 | 0.15 | 0.61 | 0.01   | 0.46         | -0.29 | -0.19 | -0.22 | 0.46  | 1.9922  | 0.0069 | 9.9  | 1.1 | 9.9          | 1.1  |     |               |  |
| MATH | 3 117858    | 0       | D.2.2.1 | 1   | 124538 | 0.89 | 0.04  | 0.89 | 0.04 | 0.03 | 0.01   | 0.49         | -0.28 | 0.49  | -0.25 | -0.28 | -0.1279 | 0.0100 | -9.9 | 0.9 | -9.9         | 0.7  |     |               | i  |
| MATH | 3 143244    | 0       | A.1.2.1 | 1   | 124538 | 0.76 | 0.14  | 0.07 | 0.76 | 0.03 | 0.01   | 0.48         | -0.26 | -0.36 | 0.48  | -0.13 | 1.1707  | 0.0076 | -1.7 | 1.0 | -5.5         | 1.0  |     |               |  |
| MATH | 3 896948    | 0       | A.3.2.1 | . 2 | 124538 | 0.71 | 0.16  | 0.71 | 0.09 | 0.03 | 0.01   | 0.57         | -0.36 | 0.57  | -0.24 | -0.29 | 1.4059  | 0.0074 | -9.9 | 0.9 | -9.9         | 0.9  |     |               | i I  |
| MATH | 3 119573    | 0       | B.1.1.1 | 1   | 124538 | 0.85 | 0.07  | 0.03 | 0.85 | 0.05 | 0.01   | 0.50         | -0.22 | -0.28 | 0.50  | -0.33 | 0.3245  | 0.0089 | -9.9 | 0.9 | -9.9         | 0.9  |     |               |  |
| MATH | 3 452818    | 0       | B.1.1.1 | 1   | 124538 | 0.84 | 0.84  | 0.04 | 0.05 | 0.06 | 0.01   | 0.53         | 0.53  | -0.26 | -0.38 | -0.23 | 0.2827  | 0.0090 | -9.9 | 0.9 | -9.9         | 0.8  |     |               |  |
| MATH | 3 538307    | 0       | A.3.1.2 | 1   | 124538 | 0.89 | 0.04  | 0.03 | 0.89 | 0.04 | 0.01   | 0.46         | -0.32 | -0.21 | 0.46  | -0.23 | -0.0734 | 0.0099 | -9.9 | 0.9 | -9.9         | 0.8  |     |               | 1  |
| MATH | 3 661873    | 0       | E.1.2.1 | 2   | 124538 | 0.92 | 0.03  | 0.02 | 0.03 | 0.92 | 0.00   | 0.42         | -0.27 | -0.25 | -0.21 | 0.42  | -0.6902 | 0.0119 | -2.2 | 1.0 | -2.6         | 0.9  |     |               | <u>.                                    </u>     |
| MATH | 3 675036    | 0       | E.1.2.2 |     |        | 0.87 | 0.05  | 0.87 | 0.05 | 0.03 | 0.00   | 0.46         | -0.34 | 0.46  | -0.22 | -0.19 | 0.1379  | 0.0094 | -9.9 | 0.9 | 4.4          | 1.1  |     |               | 1  |
| MATH | 3 301655    | 0       | D.2.1.1 | 2   |        | 0.50 | 0.22  | 0.07 | 0.50 | 0.20 | 0.01   | 0.40         | -0.24 | -0.23 | 0.40  | -0.09 | 2.7027  | 0.0067 | 9.9  | 1.1 | 9.9          |      |     |               | igcup  |
| MATH | 3 649628    | 0       | A.1.3.3 |     | 124538 | 0.57 | 0.06  | 0.57 | 0.14 | 0.22 | 0.00   | 0.61         | -0.11 | 0.61  | -0.33 | -0.38 | 2.3093  | 0.0068 | -9.9 | 0.8 | -9.9         |      |     |               | <b>⊢</b>   |
| MATH | 3 471760    | 0       | A.3.2.1 | 2   |        | 0.72 | 0.05  | 0.13 | 0.72 | 0.09 |        | 0.48         | -0.27 | -0.30 | 0.48  | -0.18 | 1.3444  | 0.0074 | 8.4  | 1.0 | 9.9          |      |     |               | $\vdash \vdash$                                  |
| MATH | 3 513343    | 0       | A.1.3.2 |     | 124538 | 0.78 | 0.11  | 0.06 | 0.05 | 0.78 | 0.01   | 0.60         | -0.44 | -0.30 | -0.18 | 0.60  | 0.9206  | 0.0079 | -9.9 | 0.8 | -9.9         | 0.7  |     |               | <del></del>                                      |
| MATH | 3 707643    | 0       | A.1.3.2 |     | 124538 | 0.66 | 0.20  | 0.05 | 0.09 | 0.66 |        | 0.57         | -0.43 | -0.21 | -0.16 | 0.57  | 1.6717  | 0.0071 | -9.9 | 0.9 | -9.9         |      |     |               | <del></del>                                      |
| MATH | 3 519917    | 0       | B.1.1.2 |     |        | 0.65 | 0.04  | 0.65 | 0.05 | 0.26 | 0.00   | 0.47         | -0.22 | 0.47  | -0.23 | -0.30 | 1.9135  | 0.0070 | 8.7  | 1.0 | -0.6         |      |     |               | <del></del>                                      |
| MATH | 3 444671    | 0       | B.1.1.2 |     |        | 0.58 | 0.06  | 0.58 | 0.26 | 0.08 | 0.01   | 0.47         | -0.27 | 0.47  | -0.22 | -0.22 | 2.2371  | 0.0068 | 9.9  | 1.0 | 9.9          |      |     |               | <del></del>                                      |
| MATH | 3 873735    | 0       | E.1.1.1 | 2   |        | 0.92 | 0.06  | 0.92 | 0.01 |      | 0.01   | 0.40         | -0.36 | 0.40  | -0.12 | -0.12 | -0.5382 | 0.0113 | -9.9 | 0.9 | 1.3          |      |     |               | $\vdash$   |
| MATH | 3 523309    | 0       | A.1.3.3 |     | 124538 | 0.66 | 0.20  | 0.08 | 0.06 | 0.66 | 0.00   | 0.51         | -0.28 | -0.26 | -0.25 | 0.51  | 1.8615  | 0.0070 | -9.9 | 1.0 | -9.9         | 0.9  |     |               | $\vdash$   |
| MATH | 3 895162    | 0       | A.1.3.3 |     | 124538 | 0.64 | 0.08  | 0.64 | 0.12 | 0.15 | 0.01   | 0.53         | -0.22 | 0.53  | -0.32 | -0.24 | 1.9189  | 0.0070 | -9.9 | 0.9 | -9.9         | 0.9  |     |               |  |
| MATH | 3 819093    | 0       | E.1.1.2 |     | 124538 | 0.86 | 0.86  | 0.02 | 0.06 | 0.05 |        | 0.44         | 0.44  | -0.15 | -0.33 | -0.22 | 0.0839  | 0.0095 | 5.1  | 1.0 | 3.8          | 1.1  |     |               | $\vdash$   |
| MATH | 3 425411    | 0       | A.2.1.3 |     |        | 0.78 | 0.07  | 0.09 | 0.06 | 0.78 | 0.01   | 0.52         | -0.33 | -0.20 | -0.31 | 0.52  | 0.9350  | 0.0079 | -9.9 | 0.9 | 2.2          | 1.0  |     |               | $\vdash$   |
| MATH | 3 663403    | 0       | A.3.1.2 |     |        | 0.82 | 0.02  | 0.13 | 0.03 | 0.82 | 0.01   | 0.55         | -0.20 | -0.46 | -0.18 | 0.55  | 0.5298  | 0.0086 | -9.9 | 0.9 | -9.9<br>-9.9 |      |     |               | $\vdash\vdash$                                   |
| MATH | 3 488771    | 0       | A.1.1.4 | _   | 124538 | 0.92 | 017 = | 0.02 | 0.02 | 0.03 | 0.01   | 0.45         | 0.45  | -0.21 | -0.23 | -0.31 | -0.5275 | 0.0113 | -9.9 | 0.8 |              |      |     |               | <del>                                     </del> |
| MATH | 3 360274    | 0       | A.1.1.4 |     | 124538 | 0.88 | 0.02  | 0.04 | 0.05 | 0.88 | 0.00   | 0.47         | -0.25 | -0.25 | -0.29 | 0.47  | -0.0295 | 0.0098 | -9.9 | 0.9 | -9.9<br>-9.9 | 0.8  |     |               |  |
| MATH | 3 418980    | U       | A.3.1.3 | 1 2 | 124538 | 0.84 | 0.84  | 0.06 | 0.05 | 0.04 | 0.01   | 0.51         | 0.51  | -0.23 | -0.31 | -0.30 | 0.3838  | 0.0088 | -9.9 | 0.9 | -9.9         | 0.8  |     |               |  |

| MATH                  | 3 327638  | 0 A.2.1.3    | 2 124538 | 0.57 0.06 | 0.57 0.21                  | 0.15 0.01 | 0.39 | -0.18 | 0.39 -0.3   | -0.05 2.2939                            | 0.0068 9.9 1.2 9.9 1.2  |
|-----------------------|-----------|--------------|----------|-----------|----------------------------|-----------|------|-------|-------------|---|---|
| MATH                  | 3 175998  | 0 A.3.1.3    | 2 124538 | 0.87 0.03 | 0.05 0.05                  | 0.87 0.00 | 0.40 | -0.23 | -0.19 -0.25 | 0.40 0.1373                             | 0.0094 2.7 1.0 4.7 1.1  |
| MATH                  | 3 582469  | 0 A.3.1.3    | 2 124538 | 0.93 0.02 | 0.93 0.02                  | 0.02 0.01 | 0.38 | -0.22 | 0.38 -0.20  | 0 -0.23 -0.8260                         | 0.0124 -4.9 1.0 -5.6 0.9  |
| MATH                  | 3 966698  | 0 A.3.2.1    | 2 124538 | 0.58 0.09 | 0.28 0.58                  | 0.04 0.01 | 0.48 | -0.22 | -0.28 0.48  | 3 -0.20 2.2859                          | 0.0068 3.7 1.0 9.9 1.1  |
| MATH                  | 3 421102  | 0 A.3.2.1    | 2 124538 | 0.46 0.46 | 0.10 0.14                  | 0.29 0.01 | 0.49 | 0.49  | -0.18 -0.17 | 7 -0.29 2.9897                          | 0.0067 -9.9 0.9 9.9 1.1   |
| MATH                  | 3 254800  | 0 D.2.1.1    | 2 124538 | 0.91 0.03 | 0.91 0.03                  | 0.02 0.00 | 0.47 | -0.30 | 0.47 -0.20  | 6 -0.24 -0.4796                         | 0.0111 -6.5 1.0 -9.9 0.8  |
| MATH                  | 3 980303  | 0 A.1.3.2    | 1 124538 | 0.61 0.25 | 0.61 0.04                  | 0.08 0.01 | 0.49 | -0.17 | 0.49 -0.28  | 3 -0.38 1.9291                          | 0.0070 9.9 1.0 9.9 1.1  |
| MATH                  | 3 325865  | 0 B.1.1.2    | 2 124538 | 0.56 0.56 | 0.13 0.18                  | 0.13 0.01 | 0.49 | 0.49  | -0.19 -0.29 | 0 -0.19 2.4865                          | 0.0067 -6.3 1.0 9.1 1.1   |
| MATH                  |           | 0 D.2.1.2    | 2 124538 | 0.84 0.04 | 0.84 0.05                  | 0.06 0.01 | 0.52 | -0.23 | 0.52 -0.29  | 0.32 0.3084                             | 0.0090 -8.3 1.0 -9.9 0.8  |
| MATH                  | 3 286690  | 0 D.2.1.2    | 2 124538 | 0.92 0.01 | 0.05 0.92                  | 0.02 0.00 | 0.31 | -0.15 | -0.22 0.3   | -0.16 -0.6329                           | 0.0116 9.9 1.1 9.9 1.5  |
| MATH                  | 3 469752  | 0 D.1.1.2    | 2 124538 | 0.85 0.85 | 0.04 0.05                  | 0.06 0.01 | 0.50 | 0.50  | -0.32 -0.20 | 5 -0.25 0.3147                          | 0.0090 -9.9 0.9 -9.9 0.8  |
| MATH                  | 3 333805  | 1 D.1.1.1    | 2 14148  | 0.92 0.02 | 0.92 0.04                  | 0.02 0.01 | 0.38 | -0.20 | 0.38 -0.24  | 4 -0.21 -0.6659                         | 0.0336 -0.7 1.0 -1.9 0.9 A+ B- A-                               |
| MATH                  | 3 590013  | 1 D-M.2.1.2  | 2 14148  |           | 0.13 0.55                  |           | 0.52 | -0.21 | -0.22 0.52  |   | 0.0202 -0.8 1.0 1.9 1.0 A+ A- A-                                |
| MATH                  | 3 166302  | 1 A-T.1.1.3  | 2 14148  | 0.52 0.12 | 0.21 0.52                  | 0.14 0.01 | 0.52 | -0.25 | -0.17 0.52  | 2 -0.32 2.4579                          | 0.0201 -5.5 1.0 0.8 1.0 A- A- A-                                |
| MATH                  | 3 167575  | 1 D-M.1.1.2  | 1 14148  |           | 0.52 0.16                  |           | 0.42 | -0.30 | 0.42 -0.08  |   | 0.0201 9.9 1.1 9.9 1.2 A- A+ A+                                 |
| MATH                  | 3 486180  | 1 C-G.1.1.1  | 2 14148  | 0.62 0.62 | 0.02 0.11                  | 0.24 0.01 | 0.16 | 0.16  | -0.21 -0.15 |   | 0.0207 9.9 1.6 9.9 1.9 A- A+ A+                                 |
| MATH                  | 3 612550  | 1 A-T.1.1.2  | 2 14148  |           | 0.61 0.15                  | 0.12 0.00 | 0.52 | -0.28 | 0.52 -0.22  |   | 0.0206 -1.7 1.0 -1.5 1.0 A+ A- A-                               |
| MATH                  | 3 989019  | 1 B-O.3.1.6  | 2 14148  |           | 0.12 0.07                  | 0.23 0.01 | 0.36 | 0.36  | -0.28 -0.27 |   | 0.0203 9.9 1.2 9.9 1.3 A- A- A-                                 |
| MATH                  | 3 425331  | 1 D-M.3.1    | 2 14148  | 0.27 0.31 | 0.26 0.27                  | 0.15 0.01 | 0.19 | 0.01  | -0.14 0.19  |   | 0.0220 9.9 1.3 9.9 2.3 A- A- A+                                 |
| MATH                  | 3 996803  | 1 D-M.2.1.4  | 2 14148  |           | 0.18 0.44                  |           | 0.49 | -0.15 | -0.34 0.49  | + | 0.0202 -0.9 1.0 3.0 1.1 A+ A- A-                                |
| MATH                  | 3 347605  | 1 B-O.1.2.2  | 1 14148  |           | 0.05 0.02                  | 0.02 0.01 | 0.47 | 0.47  | -0.34 -0.23 | + + +                                   | 0.0307 -6.9 0.9 -4.5 0.8 A+ A- A-                               |
| MATH                  | 3 698320  | 1 A-F.1.1.3  | 2 14148  |           | 0.15 0.28                  |           | 0.33 | -0.08 | 0.33 -0.09  |   | 0.0265 -5.3 0.9 9.9 1.6 A- A- B-                                |
| MATH                  | 3 900691  | 1 B-O.2.2.1  | 2 14148  |           | 0.17 0.46                  |           | 0.37 | -0.42 | -0.18 0.3   |   | 0.0201 9.9 1.2 9.9 1.4 A+ A+ A-                                 |
| MATH                  | 3 631893  | 2 D-M.2.1.1  | 2 13840  |           | 0.03 0.04                  | 1 1 1     | 0.50 | 0.50  | -0.25 -0.2  |   | 0.0298 -6.2 0.9 -6.0 0.7 A+ A- A-                               |
| MATH                  | 3 271756  | 2 A-T.1.1.1  | 1 13840  |           | 0.06 0.69                  |           | 0.57 | -0.24 | -0.22 0.5   | + | 0.0215 -9.5 0.9 -9.5 0.8 A- A- A-                               |
| MATH                  | 3 100501  | 2 A-T.1.1.2  | 2 13840  |           | 0.30 0.33                  |           | 0.36 | -0.04 | -0.06 0.30  |   | 0.0210 4.8 1.1 9.9 1.5 A- A- A-                                 |
| MATH                  | 3 139531  | 2 D-M.4.1.1  | 2 13840  |           | 0.11 0.32                  |           | 0.33 | -0.13 | -0.17 0.33  |   | 0.0212 9.9 1.1 9.9 1.5 A- A- A-                                 |
| MATH                  | 3 703181  | 2 B-O.1.2.2  | 1 13840  |           | 0.06 0.08                  |           | 0.53 | 0.53  | -0.23 -0.30 |   | 0.0233 -6.1 0.9 -6.6 0.8 A+ A- A-                               |
| MATH                  | 3 895134  | 2 B-O.3.1.6  | 2 13840  |           | 0.60 0.10                  |           | 0.48 | -0.21 | 0.48 -0.23  |   | 0.0206 1.9 1.0 1.8 1.0 A- A- A-                                 |
| MATH                  | 3 964272  | 2 C-G.1.1.1  | 2 13840  |           | 0.66 0.07                  |           | 0.22 | -0.10 | 0.22 -0.13  |   | 0.0211 9.9 1.4 9.9 1.7 A+ A- A-                                 |
| MATH                  | 3 218979  | 2 D-M.1.1.1  | 2 13840  |           | 0.68 0.07                  |           | 0.42 | -0.25 | 0.42 -0.24  |   | 0.0215 9.9 1.1 8.3 1.2 A- A- A-                                 |
| MATH                  | 3 609153  | 2 A-F.1.1.1  | 2 13840  |           | 0.16 0.09                  | 0.00 0.00 | 0.31 | 0.31  | -0.12 -0.2  |   | 0.0216 9.9 1.3 9.9 1.4 A+ A- A-                                 |
| MATH                  | 3 773620  | 2 A-F.1.1.4  | 1 13840  |           | 0.65 0.03                  |           | 0.06 | -0.21 | 0.20 -0.08  |   | 0.0429 1.0 1.0 9.9 6.9 B- A+ A-                                 |
| MATH                  | 3 491875  | 2 D-M.3.1.1  | 1 13840  |           | 0.03 0.85                  |           | 0.28 | -0.19 | -0.15 0.28  |   | 0.0270 9.9 1.2 9.9 1.6 A+ A- A-                                 |
| MATH                  | 3 113445  | 2 B-O.3.1    | 2 13840  |           | 0.18 0.29                  |           | 0.14 | 0.03  | -0.09 0.14  | + | 0.0217 9.9 1.4 9.9 2.3 A- A+ A-                                 |
| MATH                  | 3 799742  | 3 A-T.1.1.1  | 1 13835  |           | 0.07 0.81                  | 0.03 0.02 | 0.54 | -0.33 | -0.31 0.54  |   | 0.0247 -8.5 0.9 -4.4 0.9 A- A- A-                               |
| MATH                  | 3 287845  | 3 D-M.1.3.1  | 2 13835  |           | 0.60 0.12                  |           | 0.46 | -0.22 | 0.46 -0.32  | + | 0.0205 6.5 1.1 7.1 1.1 A- A- A-                                 |
| MATH                  | 3 426653  | 3 C-G.1.1.2  | 1 13835  |           | 0.10 0.04                  |           | 0.28 | 0.28  | -0.13 -0.09 |   | 0.0206 9.9 1.3 9.9 1.5 A+ A- A-                                 |
| MATH                  | 3 180670  | 3 B-O.3.1.6  | 1 13835  |           | 0.19 0.12                  | 0.43 0.01 | 0.41 | -0.27 | -0.13 -0.1  | 0.41 3.0361                             | 0.0202 3.8 1.0 9.9 1.3 A- A- A-                                 |
| MATH                  | 3 126510  | 3 B-O.1.2.2  | 1 13835  |           | 0.14 0.55                  | 0.22 0.01 | 0.47 | -0.25 | -0.09 0.4   |   | 0.0202 3.5 1.0 4.0 1.1 A- A+ A-                                 |
| MATH                  | 3 761654  | 3 A-T.1.1.2  | 2 13835  |           | 0.36 0.24                  |           | 0.28 | 0.28  | -0.28 0.08  |   | 0.0219 9.9 1.1 9.9 1.9 A- A- A-                                 |
| MATH                  | 3 860885  | 3 B-O.3.1.1  | 2 13835  |           | 0.21 0.45                  |           | 0.33 | -0.13 | 0.08 0.33   |   | 0.0202 9.9 1.2 9.9 1.4 A+ A- A-                                 |
| MATH                  | 3 759717  | 3 D-M.2.1.3  | 2 13835  |           | 0.16 0.56                  |           | 0.37 | -0.20 | -0.18 0.3   |   | 0.0203 9.9 1.2 9.9 1.3 A+ A- A-                                 |
| MATH                  | 3 278431  | 3 D-M.1.1.2  | 1 13835  |           | 0.10 0.54                  |           | 0.36 | -0.23 | -0.17 0.30  |   | 0.0202 9.9 1.2 9.9 1.3 A- A- A+                                 |
| MATH                  | 3 485863  | 3 D-M.4.1.1  | 2 13835  |           | 0.10 0.11                  | 0.25 0.02 | 0.24 | 0.24  | -0.27 -0.1  |   | 0.0202 9.9 1.4 9.9 1.6 A- B- A-                                 |
| MATH                  | 3 322958  | 3 A-F.1.1.4  | 1 13835  |           | 0.06 0.16                  | 1 1 1     | 0.24 | 0.24  | -0.03 0.00  | + | 0.0234 9.1 1.1 9.9 1.9 A- A+ A-                                 |
| MATH                  |           | 3 A-F.1.1.3  | 1 13835  |           | 0.25 0.22                  | 0.18 0.01 | 0.20 | -0.24 | -0.14 0.2   | + | 0.0234 7.3 1.1 9.9 1.9 A- A- A-                                 |
| MATH                  | 3 725903  | 4 D.2.2.2    | 1 13799  |           | $0.23  0.22 \\ 0.02  0.86$ |           | 0.40 | -0.24 | -0.14 0.2   |   | 0.0234 7.3 1.1 9.9 1.9 A- A- A- 0.0281 2.2 1.0 1.5 1.1 A- A- A- |
| MATH                  |           | 4 D-M.1.1.2  | 2 13799  |           | 0.02 0.80                  | 0.02 0.01 | 0.40 | -0.28 | -0.19 0.40  |   | 0.0220 6.9 1.1 2.6 1.1 A- A- A-                                 |
| MATH                  |           | 4 A-T.1.1.1  | 1 13799  |           | $0.03  0.71 \\ 0.73  0.06$ | 0.10 0.01 | 0.43 | -0.28 | 0.37 -0.28  |   | 0.0224 9.9 1.2 9.9 1.3 A- A- A-                                 |
| MATH                  | 3 578998  | 4 D-M.3.1.2  | 2 13799  |           | 0.73 0.00                  | 0.06 0.01 | 0.37 | -0.11 | 0.08 0.24   |   | 0.0255 4.5 1.1 9.9 2.1 A- A- A-                                 |
| 141\( <b>1</b> \) I U | 3 3 10770 | T D-W1.3.1.2 | 4 13/99  | 0.17 0.49 | 0.2/1 0.1/                 | 0.00 0.01 | 0.24 | -0.13 | 0.00 0.2    | 1 -0.21 4.0133                          | 0.0233 4.3 1.1 3.7 2.1 A- A- A-                                 |

| MATH         | 3 678385             | 4 | C-G.1.1.1 | 1      | 13799          | 0.53 0.16              | 0.53 | 0.15 | 0.15 0.01              | 0.32 | -0.24          | 0.32           | -0.09 | -0.10 2.5030                 | 0.0202 9.9 1.3 9.9 1.4 A+ A- A-                                      |
|--------------|----------------------|---|-----------|--------|----------------|------------------------|------|------|------------------------|------|----------------|----------------|-------|------------------------------|--|
| MATH         | 3 787335             | 4 | B-O.1.1   | 2      | 13799          | 0.79 0.09              | 0.79 | 0.02 | 0.09 0.01              | 0.44 | -0.33          | 0.44           | -0.16 | -0.20 0.8432                 | 0.0242 3.0 1.0 0.3 1.0 A- A- A-                                      |
| MATH         | 3 935427             | 4 | B-O.2.1.1 | 1      | 13799          | 0.55 0.20              | 0.20 | 0.55 | 0.04 0.00              | 0.27 | -0.22          | -0.05          | 0.27  | -0.11 2.4002                 | 0.0203 9.9 1.3 9.9 1.5 A- A- A+                                      |
| MATH         | 3 975355             | 4 | B-O.3.1.1 | 2      | 13799          | 0.39 0.39              | 0.16 | 0.08 | 0.37 0.00              | 0.38 | 0.38           | -0.18          | -0.14 | -0.17 3.3241                 | 0.0205 6.3 1.1 9.9 1.3 A- B- A-                                      |
| MATH         | 3 902495             | 4 | C-G.1.1.3 | 2      | 13799          | 0.54 0.33              | 0.54 | 0.02 | 0.10 0.01              | 0.44 | -0.31          | 0.44           | -0.15 | -0.17 2.4650                 | 0.0202 7.1 1.1 6.6 1.1 A+ B- A-                                      |
| MATH         | 3 161203             | 4 | D-M.2.1.1 | 2      | 13799          | 0.32 0.32              | 0.19 | 0.31 | 0.17 0.00              | 0.13 | 0.13           | -0.18          | 0.02  | 0.01 3.7235                  | 0.0212 9.9 1.3 9.9 2.6 A- A- A-                                      |
| MATH         | 3 765601             | 4 | A-F.1.1.2 | 1      | 13799          | 0.30 0.15              | 0.30 | 0.19 | 0.35 0.01              | 0.15 | -0.15          | 0.15           | -0.08 | 0.04 3.8547                  | 0.0215 9.9 1.3 9.9 2.4 A- A- A-                                      |
| MATH         | 3 817478             | 4 | D-M.1.2.2 | 2      | 13799          | 0.38 0.14              | 0.28 | 0.38 | 0.20 0.01              | 0.36 | -0.02          | -0.23          | 0.36  | -0.16 3.3650                 | 0.0206 9.9 1.1 9.9 1.4 A- A- A-                                      |
| MATH         | 3 942580             | 5 | D.1.1.2   | 2      | 13789          | 0.88 0.06              | 0.88 | 0.02 | 0.03 0.01              | 0.54 | -0.35          | 0.54           | -0.26 | -0.29 0.0128                 | 0.0292 -9.1 0.8 -6.2 0.7 A+ A- A-                                    |
| MATH         | 3 894935             | 5 | D-M.1.3.2 | 2      | 13789          | 0.55 0.55              | 0.08 | 0.09 | 0.28 0.00              | 0.55 | 0.55           | -0.17          | -0.18 | -0.39 2.4410                 | 0.0203 -9.9 0.9 -4.5 0.9 A+ A+ A+                                    |
| MATH         | 3 242171             | 5 | A-T.1.1.4 | 1      | 13789          | 0.88 0.05              | 0.03 | 0.88 | 0.04 0.00              | 0.47 | -0.33          | -0.24          | 0.47  | -0.20 0.0355                 | 0.0290 -5.5 0.9 -1.5 0.9 A+ A- A-                                    |
| MATH         | 3 873999             | 5 | D-M.2.1.2 | 2      | 13789          | 0.27 0.56              | 0.27 | 0.12 | 0.05 0.01              | 0.15 | 0.03           | 0.15           | -0.17 | -0.12 4.0973                 | 0.0222 9.9 1.2 9.9 3.0 A- A+ A-                                      |
| MATH         | 3 616664             | 5 | D-M.3.1.2 | 1      | 13789          | 0.18 0.37              | 0.40 | 0.04 | 0.18 0.01              | 0.23 | -0.31          | 0.21           | -0.18 | 0.23 4.7428                  | 0.0250 5.7 1.1 9.9 2.8 A+ A+ A-                                      |
| MATH         | 3 636919             | 5 | B-O.3.1.5 | 2      | 13789          | 0.32 0.32              | 0.16 | 0.21 | 0.30 0.01              | 0.22 | 0.22           | -0.18          | -0.09 | 0.01 3.7509                  | 0.0213   9.9   1.2   9.9   2.1   A-   A-   A-                        |
| MATH         | 3 607757             | 5 | A-T.1.1.1 | 2      | 13789          | 0.40 0.40              | 0.12 | 0.14 | 0.32 0.01              | 0.44 | 0.44           | -0.12          | -0.09 | -0.29 3.3021                 | 0.0205 -4.4 1.0 9.9 1.3 A- A- A-                                     |
| MATH         | 3 764799             | 5 | A-F.1.1.1 | 1      | 13789          | 0.88 0.88              | 0.03 | 0.01 | 0.09 0.00              | 0.42 | 0.42           | -0.17          | -0.12 | -0.36 0.0671                 | 0.0288 -0.5 1.0 -2.9 0.9 A+ A- A-                                    |
| MATH         | 3 742096             | 5 |           | 1      | 13789          | 0.71 0.18              | 0.04 | 0.05 | 0.71 0.01              | 0.23 | -0.09          | -0.17          | -0.13 | 0.23 1.4211                  | 0.0221 9.9 1.4 9.9 1.7 A+ A+ A+                                      |
| MATH         | 3 874416             | 5 | C-G.1.1.2 | 1      | 13789          | 0.69 0.16              | 0.07 | 0.09 | 0.69 0.00              | 0.34 | -0.16          | -0.15          | -0.22 | 0.34 1.6021                  | 0.0216 9.9 1.2 9.9 1.4 A+ A- A-                                      |
| MATH         | 3 681267             | 5 |           | 1      | 13789          | 0.42 0.09              | 0.42 | 0.35 | 0.13 0.01              | 0.32 | -0.22          | 0.32           | -0.20 | 0.02 3.1655                  | 0.0204 9.9 1.2 9.9 1.5 A- B- A-                                      |
| MATH         | 3 552329             | 5 | B-O.2.1.2 | 1      | 13789          | 0.61 0.14              | 0.14 | 0.10 | 0.61 0.01              | 0.51 | -0.35          | -0.22          | -0.15 | 0.51 2.1061                  | 0.0207 -1.4 1.0 -1.1 1.0 A+ A- A-                                    |
| MATH         | 3 767071             | 6 |           | 2      | 13800          | 0.47 0.47              | 0.13 | 0.13 | 0.25 0.02              | 0.41 | 0.41           | -0.10          | -0.07 | -0.32 2.9502                 | 0.0202 7.3 1.1 9.9 1.3 A- A+ A+                                      |
| MATH         | 3 189995             | 6 |           | 1      | 13800          | 0.77 0.10              | 0.06 | 0.06 | 0.77 0.01              | 0.49 | -0.33          | -0.25          | -0.20 | 0.49 0.9994                  | 0.0236 -0.9 1.0 1.2 1.0 A- A- A-                                     |
| MATH         | 3 366627             |   | D-M.1.3.2 | 2      | 13800          | 0.45 0.08              | 0.45 | 0.13 | 0.34 0.00              | 0.55 | -0.08          | 0.55           | -0.10 | -0.46 3.0052                 | 0.0202 -9.9 0.9 -6.4 0.9 A+ A+ A+                                    |
| MATH         | 3 660515             | 6 |           |        | 13800          | 0.60 0.06              | 0.60 | 0.20 | 0.13 0.01              | 0.51 | -0.15          | 0.51           | -0.27 | -0.30 2.1644                 | 0.0206 -2.4 1.0 -0.9 1.0 A+ A- A-                                    |
| MATH<br>MATH | 3 417574<br>3 997467 | 6 |           | 1<br>1 | 13800<br>13800 | 0.74 0.11<br>0.76 0.16 | 0.09 | 0.74 | 0.06 0.01<br>0.03 0.01 | 0.40 | -0.24<br>-0.53 | -0.20<br>-0.14 | 0.40  | -0.19 1.2765<br>-0.19 1.0828 | 0.0226 9.9 1.1 5.8 1.2 A- A- A-<br>0.0233 -9.9 0.8 -9.9 0.7 A- A- A- |
| MATH         | 3 475729             | 6 |           | 2      | 13800          | 0.76 0.16              | 0.69 | 0.76 | 0.03 0.01              | 0.01 | 0.06           | -0.14          | 0.81  | 0.03 4.9730                  | 0.0262 -6.0 0.9 1.9 1.1 A- B- B-                                     |
| MATH         | 3 379603             | 6 |           | 2      | 13800          | 0.10 0.04              | 0.09 | 0.19 | 0.26 0.00              | 0.09 | -0.08          | 0.09           | -0.02 | 0.03 4.9730                  | 0.0217 9.9 1.4 9.9 2.7 A- A- A-                                      |
| MATH         | 3 355027             | 6 |           | 2      | 13800          | 0.29 0.20              | 0.29 | 0.19 | 0.24 0.01              | 0.09 | -0.03          | 0.09           | -0.02 | -0.09 2.9415                 | 0.0202 9.9 1.3 9.9 1.6 A+ A- A-                                      |
| MATH         | 3 356330             | 6 |           | 1      | 13800          | 0.75 0.14              | 0.75 | 0.20 | 0.01 0.01              | 0.29 | -0.21          | 0.29           | -0.10 | -0.21 1.1450                 | 0.0231 9.9 1.2 5.8 1.2 A- A- A-                                      |
| MATH         | 3 332116             | 6 |           | 2      | 13800          | 0.40 0.09              | 0.34 | 0.40 | 0.16 0.00              | 0.13 | -0.17          | 0.14           | 0.13  | -0.22 3.2739                 | 0.0204 9.9 1.5 9.9 2.1 A+ A+ A-                                      |
| MATH         | 3 929177             | 6 |           | 1      | 13800          | 0.82 0.08              | 0.82 | 0.04 | 0.04 0.01              | 0.38 | -0.23          | 0.38           | -0.20 | -0.18 0.6159                 | 0.0254 7.0 1.1 6.2 1.3 A+ A- A-                                      |
| MATH         | 3 511474             | 7 | B.1.1.1   | 1      | 13753          | 0.77 0.17              | 0.01 | 0.77 | 0.04 0.00              | 0.43 | -0.24          | -0.11          | 0.43  | -0.38 1.0511                 | 0.0236 5.1 1.1 6.7 1.2 A- A- A-                                      |
| MATH         | 3 727270             | 7 | D-M.2.1.2 | 2      | 13753          | 0.70 0.07              | 0.06 | 0.15 | 0.70 0.01              | 0.42 | -0.20          | -0.21          | -0.23 | 0.42 1.5687                  | 0.0218 9.3 1.1 4.3 1.1 A- A- A-                                      |
| MATH         | 3 944569             | 7 | A-T.1.1.1 | 1      | 13753          | 0.80 0.06              | 0.09 | 0.80 | 0.04 0.01              | 0.55 | -0.26          | -0.32          | 0.55  | -0.31 0.8346                 | 0.0245 -9.0 0.9 -8.7 0.7 A- A- B-                                    |
| MATH         | 3 680285             | 7 | A-T.1.1.3 | 2      | 13753          | 0.52 0.20              | 0.06 | 0.21 | 0.52 0.02              | 0.34 | -0.23          | -0.20          | -0.06 | 0.34 2.6565                  | 0.0202 9.9 1.2 9.9 1.4 A+ A- A-                                      |
| MATH         | 3 102877             | 7 | D-M.1.3.2 | 1      | 13753          | 0.58 0.58              | 0.12 | 0.07 | 0.22 0.01              | 0.51 | 0.51           | -0.24          | -0.17 | -0.30 2.3175                 | 0.0205 -4.9 1.0 -2.0 1.0 A- A+ A+                                    |
| MATH         | 3 683824             | 7 | B-O.3.1.7 | 2      | 13753          | 0.65 0.20              | 0.09 | 0.65 | 0.04 0.02              | 0.39 | -0.18          | -0.25          | 0.39  | -0.15 1.8977                 | 0.0211 9.9 1.2 7.6 1.2 A- A- A+                                      |
| MATH         | 3 470228             | 7 | B-O.3.1.1 | 2      | 13753          | 0.51 0.20              | 0.19 | 0.08 | 0.51 0.03              | 0.55 | -0.47          | -0.11          | -0.09 | 0.55 2.7159                  | 0.0202 -9.9 0.9 -6.8 0.9 A+ A- A-                                    |
| MATH         | 3 320600             | 7 | C-G.1.1.2 | 1      | 13753          | 0.61 0.04              | 0.25 | 0.61 | 0.07 0.02              | 0.41 | -0.12          | -0.30          | 0.41  | -0.12 2.1137                 | 0.0207   9.9   1.1   9.9   1.2   A+   A-   A-                        |
| MATH         | 3 444396             | 7 | D-M.4.1.1 | 1      | 13753          | 0.58 0.36              | 0.58 | 0.02 | 0.04 0.00              | 0.29 | -0.14          | 0.29           | -0.18 | -0.26 2.3155                 | 0.0205 9.9 1.3 9.9 1.5 A- A- A-                                      |
| MATH         | 3 535161             | 7 | A-F.1.1.2 | 2      | 13753          | 0.24 0.09              | 0.24 | 0.35 | 0.32 0.01              | 0.06 | -0.19          | 0.06           | 0.08  | -0.01 4.3529                 | 0.0230 9.9 1.4 9.9 3.2 A- A- A-                                      |
| MATH         | 3 472426             | 7 | C-G.1.1.3 | 2      | 13753          | 0.92 0.92              | 0.03 | 0.02 | 0.02 0.01              | 0.26 | 0.26           | -0.17          | -0.15 | -0.12 -0.5252                | 0.0347 2.3 1.1 9.9 2.1 B+ B- A-                                      |
| MATH         | 3 619500             | 7 | B-O.1.2.2 | 1      | 13753          | 0.68 0.68              | 0.17 | 0.10 | 0.05 0.00              | 0.41 | 0.41           | -0.16          | -0.23 | -0.26 1.7043                 | 0.0215 9.9 1.1 6.4 1.1 A+ A+ A-                                      |
| MATH         | 3 155635             | 8 |           | 1      | 13825          | 0.49 0.39              | 0.49 | 0.05 | 0.07 0.00              | 0.45 | -0.26          | 0.45           | -0.25 | -0.16 2.7939                 | 0.0202 7.9 1.1 8.7 1.1 A- A- A-                                      |
| MATH         | 3 430175             | 8 |           | 2      | 13825          | 0.63 0.11              | 0.13 | 0.12 | 0.63 0.01              | 0.43 | -0.20          | -0.25          | -0.18 | 0.43 1.9593                  | 0.0209 9.4 1.1 6.6 1.1 A+ A+ A+                                      |
| MATH         | 3 698482             | 8 |           | 1      | 13825          | 0.66 0.66              | 0.07 | 0.16 | 0.11 0.01              | 0.49 | 0.49           | -0.30          | -0.22 | -0.23 1.7966                 | 0.0212 2.3 1.0 2.9 1.1 A- A- A-                                      |
| MATH         | 3 330474             | 8 |           | 1      | 13825          | 0.79 0.79              | 0.13 | 0.04 | 0.03 0.02              | 0.38 | 0.38           | -0.23          | -0.21 | -0.17 0.9033                 | 0.0240 9.9 1.1 7.0 1.3 A+ A- A-                                      |
| MATH         | 3 340134             | 8 |           | 1      | 13825          | 0.95 0.95              | 0.01 | 0.02 | 0.02 0.00              | 0.25 | 0.25           | -0.08          | -0.15 | -0.18 -1.0315                | 0.0404 1.3 1.0 3.0 1.3 B+ A- A-                                      |
| MATH         | 3 128805             | 8 |           | 2      | 13825          | 0.21 0.21              | 0.19 | 0.28 | 0.31 0.01              | 0.24 | 0.24           | 0.01           | 0.02  | -0.23 4.5480                 | 0.0239 4.4 1.1 9.9 2.7 A- A- A-                                      |
| MATH         | 3 548116             | 8 | B-O.2.1.2 | 2      | 13825          | 0.47 0.22              | 0.47 | 0.16 | 0.14 0.01              | 0.34 | -0.25          | 0.34           | -0.09 | -0.08 2.9135                 | 0.0202   9.9   1.2   9.9   1.4   A+   A+   A+                        |

| MATH | 3 586008 | 8 | A-F.1.1.3 | 1 1382  | 5 0.14 | 0.27 | 0.26 | 0.14 | 0.32 | 0.01 | 0.03 | -0.08 | -0.09 | 0.03  | 0.15  | 5.1194  | 0.0271 | 9.9  | 1 3 | 9.9  | 4.9 | Δ_ | A+ | A-       |
|------|----------|---|-----------|---------|--------|------|------|------|------|------|------|-------|-------|-------|-------|---------|--------|------|-----|------|-----|----|----|----------|
| MATH | 3 973187 | 8 |           | 1 1382  |        | 0.06 | 0.10 | 0.66 | 0.16 |      | 0.54 | -0.23 | -0.31 | 0.54  | -0.27 | 1.7889  | 0.0211 | -5.2 | 1.0 |      | 0.9 |    | A- | A-       |
| MATH | 3 392263 | 8 | D-M.2.1.1 | 2 1382  |        | 0.23 | 0.20 | 0.26 | 0.30 |      | 0.32 | -0.30 | -0.08 | 0.04  | 0.32  | 3.8940  | 0.0212 | 7.3  | 1.1 | 9.9  | 1.7 |    | A- | A-       |
| MATH | 3 404273 | 8 | A-T.1.1.2 | 2 1382  |        | 0.04 | 0.04 | 0.09 |      | 0.01 | 0.45 | -0.27 | -0.23 | -0.24 | 0.45  | 0.6249  | 0.0210 | 1.0  | 1.0 |      | 0.9 |    | A- | A-       |
| MATH | 3 281028 | 8 | B-O.3.1.5 | 2 1382  |        | 0.22 | 0.42 | 0.22 |      | 0.01 | 0.25 | -0.10 | 0.25  | -0.07 | -0.14 | 3.1545  | 0.0204 | 9.9  | 1.3 |      |     | A+ | A- | A+       |
| MATH | 3 238455 | 9 | A.3.2.1   | 2 1373  |        | 0.04 | 0.12 | 0.80 |      | 0.00 | 0.57 | -0.28 | -0.36 | 0.57  | -0.27 | 0.7965  | 0.0244 | -9.2 | 0.9 |      |     |    | A- | A-       |
| MATH | 3 998880 | 9 | A.1.3.2   | 2 1373  |        | 0.10 | 0.12 | 0.12 |      | 0.01 | 0.45 | -0.21 | -0.35 | -0.10 | 0.45  | 1.9324  | 0.0209 | 6.5  | 1.1 | 7.4  | 1.1 | A- | A- | A+       |
| MATH | 3 297732 | 9 | A-F.1.1.5 | 1 1373  |        | 0.09 | 0.06 | 0.12 |      | 0.01 | 0.31 | -0.18 | -0.16 | -0.15 | 0.43  | 1.0067  | 0.0235 | 9.9  | 1.2 | 9.9  | 1.5 |    | A- | A-       |
| MATH | 3 129013 | 9 |           | 2 1373  |        | 0.11 | 0.07 | 0.74 |      | 0.01 | 0.56 | -0.35 | -0.24 | 0.56  | -0.28 | 1.2369  | 0.0233 | -9.1 | 0.9 |      | 0.8 |    | A- | A-       |
| MATH | 3 393976 | 9 | B-O.1     | 2 1373  |        | 0.38 | 0.25 | 0.26 |      | 0.01 | 0.25 | 0.25  | 0.01  | -0.11 | -0.24 | 3.3509  | 0.0205 | 9.9  | 1.2 |      | 1.8 |    | A- | A-       |
| MATH | 3 890440 | 9 | D-M.1.2.1 | 1 1373  |        | 0.06 | 0.10 | 0.79 |      | 0.01 | 0.27 | -0.20 | -0.08 | 0.27  | -0.17 | 0.8702  | 0.0241 | 9.9  | 1.3 |      | 1.8 |    | B- | A-       |
| MATH | 3 912265 | 9 | B-O.3.1.5 | 2 1373  |        | 0.09 | 0.13 | 0.11 |      | 0.00 | 0.51 | -0.29 | -0.24 | -0.25 | 0.51  | 1.7576  | 0.0212 | -2.4 | 1.0 |      | 0.9 |    | A- | A-       |
| MATH | 3 438412 | 9 | A-T.1.1.4 | 1 1373  |        | 0.92 | 0.02 | 0.01 |      | 0.01 | 0.42 | 0.42  | -0.20 | -0.18 | -0.31 | -0.5581 | 0.0345 | -4.9 | 0.9 |      | 0.9 |    | C- | B-       |
| MATH | 3 538271 | 9 | C-G.1.1.2 | 1 1373  |        | 0.02 | 0.92 | 0.01 |      | 0.01 | 0.34 | -0.21 | 0.34  | -0.15 | -0.21 | -0.4752 | 0.0336 | 0.2  | 1.0 |      | 1.0 |    | B- | B-       |
| MATH | 3 274218 | 9 | D-M.2.1.2 | 2 1373  |        | 0.27 | 0.09 | 0.52 |      | 0.00 | 0.30 | -0.11 | -0.15 | 0.30  | -0.18 | 2.5711  | 0.0202 | 9.9  | 1.2 | 9.9  | 1.5 |    | A- | A-       |
| MATH | 3 605161 | 9 | A-F.1.1.2 | 2 1373  |        | 0.10 | 0.15 | 0.18 |      | 0.01 | 0.30 | -0.21 | -0.14 | -0.09 | 0.30  | 2.3070  | 0.0204 | 9.9  | 1.3 |      | 1.5 |    | A- | A-       |
| MATH | 3 110156 | 9 | D-M.4.1   | 2 1373  |        | 0.34 | 0.33 | 0.25 |      | 0.01 | 0.01 | -0.08 | 0.01  | 0.11  | -0.04 | 3.6713  | 0.0211 | 9.9  | 1.6 | -    | 2.7 | A+ | A+ | A-       |
| MATH | 4 647544 | 0 |           | 1 12661 |        | 0.12 | 0.85 | 0.02 |      | 0.00 | 0.43 | -0.36 | 0.43  | -0.16 | -0.13 | -1.0358 | 0.0087 | -4.1 | 1.0 |      | 0.9 |    |    | 1        |
| MATH | 4 898396 | 0 | A.1.3.2   | 2 12661 |        | 0.12 | 0.09 | 0.06 |      | 0.00 | 0.46 | -0.31 | -0.20 | -0.18 | 0.46  | 0.0563  | 0.0070 | -9.9 | 1.0 | -9.9 | 0.9 |    |    |          |
| MATH | 4 367329 | 0 | A.1.2.2   | 1 12661 | 6 0.88 | 0.03 | 0.03 | 0.06 | 0.88 | 0.00 | 0.43 | -0.23 | -0.26 | -0.23 | 0.43  | -1.3110 | 0.0094 | -9.9 | 0.9 | -4.1 | 0.9 |    |    |          |
| MATH | 4 546630 | 0 | A.3.1.3   | 2 12661 | 6 0.71 | 0.07 | 0.16 | 0.71 |      | 0.00 | 0.50 | -0.27 | -0.34 | 0.50  | -0.13 | -0.0465 | 0.0071 | -7.2 | 1.0 | -2.0 | 1.0 |    |    |          |
| MATH | 4 399252 | 0 | B.1.1.2   | 1 12661 | 6 0.88 | 0.04 | 0.04 | 0.88 | 0.04 | 0.00 | 0.48 | -0.31 | -0.25 | 0.48  | -0.23 | -1.2342 | 0.0092 | -9.9 | 0.9 | -9.9 | 0.6 |    |    |          |
| MATH | 4 666215 | 0 | D.1.1.3   | 2 12661 | 6 0.87 | 0.05 | 0.03 | 0.04 | 0.87 | 0.01 | 0.41 | -0.26 | -0.19 | -0.21 | 0.41  | -1.1122 | 0.0089 | -9.9 | 0.9 | -9.9 | 0.8 |    |    |          |
| MATH | 4 431075 | 0 | A.1.3.1   | 2 12661 | 6 0.76 | 0.04 | 0.03 | 0.76 | 0.17 | 0.00 | 0.54 | -0.25 | -0.22 | 0.54  | -0.38 | -0.2421 | 0.0073 | -9.9 | 0.9 | -9.9 | 0.8 |    |    |          |
| MATH | 4 809640 | 0 | A.3.1.1   | 1 12661 | 6 0.67 | 0.14 | 0.08 | 0.11 | 0.67 | 0.00 | 0.48 | -0.19 | -0.21 | -0.32 | 0.48  | 0.3312  | 0.0068 | -9.9 | 1.0 | -9.9 | 0.9 |    |    |          |
| MATH | 4 703068 | 0 | C.1.2.1   | 1 12661 | 6 0.55 | 0.21 | 0.55 | 0.07 | 0.17 | 0.01 | 0.26 | -0.23 | 0.26  | -0.12 | -0.01 | 0.9997  | 0.0065 | 9.9  | 1.2 | 9.9  | 1.3 |    |    |          |
| MATH | 4 984999 | 0 | D.2.2.2   | 1 12661 | 6 0.80 | 0.13 | 0.04 | 0.80 | 0.03 | 0.00 | 0.29 | -0.13 | -0.19 | 0.29  | -0.21 | -0.4354 | 0.0076 | 9.9  | 1.1 | 9.9  | 1.2 |    |    |          |
| MATH | 4 660497 | 0 | A.1.1.4   | 1 12661 | 0.67   | 0.07 | 0.67 | 0.08 | 0.18 | 0.00 | 0.52 | -0.25 | 0.52  | -0.22 | -0.31 | 0.2658  | 0.0068 | -9.9 | 0.9 | -9.9 | 0.9 |    |    |          |
| MATH | 4 389957 | 0 | A.1.3.1   | 12661   | 0.60   | 0.06 | 0.60 | 0.28 | 0.06 | 0.00 | 0.41 | -0.23 | 0.41  | -0.24 | -0.17 | 0.6533  | 0.0066 | 9.9  | 1.1 | 9.9  | 1.1 |    |    |          |
| MATH | 4 568689 | 0 | A.2.1.1   | 1 12661 | 0.86   | 0.86 | 0.04 | 0.04 | 0.06 | 0.00 | 0.48 | 0.48  | -0.21 | -0.22 | -0.34 | -1.0807 | 0.0089 | -9.9 | 0.9 | -9.9 | 0.7 |    |    |          |
| MATH | 4 552533 | 0 | A.3.1.3   | 2 12661 | 6 0.72 | 0.08 | 0.13 | 0.72 | 0.06 | 0.00 | 0.51 | -0.34 | -0.24 | 0.51  | -0.23 | -0.0461 | 0.0071 | -9.9 | 0.9 | -9.9 | 0.9 |    |    |          |
| MATH | 4 195255 | 0 |           | 12661   | _      | 0.26 | 0.46 | 0.12 | 0.15 | _    | 0.45 | -0.32 | 0.45  | -0.12 | -0.10 | 1.4231  | 0.0065 | -9.9 | 1.0 |      | 1.0 |    |    |          |
| MATH | 4 581385 | 0 | A.1.3.2   | 2 12661 | 6 0.74 | 0.74 | 0.12 | 0.08 | 0.06 | 0.00 | 0.45 | 0.45  | -0.29 | -0.19 | -0.21 | -0.0719 | 0.0071 | -5.3 | 1.0 | -9.9 | 0.9 |    |    |          |
| MATH | 4 423999 | 0 | A.3.1.1   | 1 12661 | 0.61   | 0.61 | 0.10 | 0.11 | 0.18 | 0.00 | 0.40 | 0.40  | -0.12 | -0.28 | -0.18 | 0.6382  | 0.0066 | 9.9  | 1.1 | 9.9  | 1.1 |    |    |          |
| MATH | 4 313496 | 0 | C.1.2.1   | 1 12661 | 6 0.72 | 0.20 | 0.72 | 0.01 | 0.07 | 0.00 | 0.36 | -0.26 | 0.36  | -0.09 | -0.17 | 0.0023  | 0.0071 | 9.9  | 1.1 | 8.7  | 1.1 |    |    |          |
| MATH | 4 247756 | 0 | C.2.1.1   | 2 12661 | _      | 0.09 | 0.65 | 0.18 |      | 0.00 | 0.45 | -0.25 | 0.45  | -0.22 | -0.21 | 0.4210  | 0.0067 | -0.1 | 1.0 |      | 1.0 |    |    | <u> </u> |
| MATH | 4 429674 | 0 | D.1.2.2   | 2 12661 |        | 0.10 | 0.06 | 0.77 |      | 0.01 | 0.45 | -0.22 | -0.30 | 0.45  | -0.20 | -0.3513 | 0.0075 | -5.7 | 1.0 |      | 1.0 |    |    |          |
| MATH | 4 416139 | 0 | D.1.2.2   | 12661   |        | 0.07 | 0.04 | 0.28 |      | 0.00 | 0.33 | -0.27 | -0.24 | -0.10 | 0.33  | 0.7494  | 0.0065 | 9.9  | 1.2 | /./  | 1.2 |    |    |          |
| MATH | 4 583983 | 0 | B.1.1.2   | 1 12661 |        | 0.08 | 0.19 | 0.04 |      | 0.00 | 0.45 | -0.23 | -0.30 | -0.13 | 0.45  | 0.2606  | 0.0068 | -3.6 | 1.0 |      | 0.9 |    |    | 1        |
| MATH | 4 323547 | 0 |           | 1 12661 |        | 0.08 | 0.71 | 0.12 |      | 0.00 | 0.55 | -0.21 | 0.55  | -0.34 | -0.29 | 0.0867  | 0.0070 | -9.9 | 0.9 |      | 0.8 |    |    | 1        |
| MATH | 4 556430 | 0 |           | 1 12661 |        | 0.04 | 0.07 | 0.14 |      | 0.00 | 0.44 | -0.10 | -0.26 | -0.29 | 0.44  | -0.1400 | 0.0072 | -3.1 | 1.0 |      | 1.0 |    |    | 1        |
| MATH | 4 694791 | 0 |           | 1 12661 |        | 0.05 | 0.10 | 0.72 |      | 0.00 | 0.47 | -0.26 | -0.28 | 0.47  | -0.20 | -0.0255 | 0.0071 | -8.1 | 1.0 |      | 1.0 |    |    | 1        |
| MATH | 4 313878 | 0 | A.1.1.4   | 1 12661 |        | 0.07 | 0.03 | 0.85 | 0.04 |      | 0.42 | -0.29 | -0.15 | 0.42  | -0.23 | -0.9950 | 0.0087 | -9.9 | 0.9 |      | 0.9 |    |    | <u> </u> |
| MATH | 4 914465 | 0 | A.3.1.1   | 1 12661 |        | 0.05 | 0.60 | 0.24 |      | 0.00 | 0.50 | -0.18 | 0.50  | -0.25 | -0.31 | 0.7001  | 0.0066 | -9.9 | 0.9 |      | 0.9 |    |    | 4        |
| MATH | 4 780118 | 0 | A.1.1.4   | 1 12661 |        | 0.02 | 0.04 | 0.82 |      | 0.00 | 0.29 | -0.22 | -0.25 | 0.29  | -0.10 | -0.7091 | 0.0081 | 9.9  | 1.1 | 9.9  | 1.4 |    |    | 4——      |
| MATH | 4 350743 | 0 | D.1.2.1   | 1 12661 |        | 0.04 | 0.85 | 0.08 |      | 0.00 | 0.43 | -0.27 | 0.43  | -0.24 | -0.21 | -0.8969 | 0.0084 | -9.9 | 0.9 |      | 0.9 |    |    | +        |
| MATH | 4 637737 | 0 | A.1.3.2   | 1 12661 |        | 0.24 | 0.68 | 0.05 |      | 0.00 | 0.56 | -0.42 | 0.56  | -0.18 | -0.22 | 0.2232  | 0.0069 | -9.9 | 0.9 |      | 0.8 |    |    | +        |
| MATH | 4 928189 | 0 |           | 1 12661 |        | 0.03 | 0.08 | 0.03 |      | 0.01 | 0.34 | -0.20 | -0.17 | -0.22 | 0.34  | -0.8613 | 0.0084 | -9.9 | 0.9 |      | 0.9 |    |    | +        |
| MATH | 4 205161 | 0 |           | 1 12661 |        | 0.24 | 0.11 | 0.08 |      | 0.00 | 0.34 | -0.29 | -0.07 | -0.08 | 0.34  | 0.8779  | 0.0065 | 9.9  | 1.1 | 9.9  | 1.2 |    |    | 4——      |
| MATH | 4 993438 | 0 | C.1.2.2   | 1 12661 |        | 0.64 | 0.11 | 0.16 |      | 0.00 | 0.43 | 0.43  | -0.30 | -0.18 | -0.15 | 0.5513  | 0.0066 | 3.1  | 1.0 |      | 1.0 |    |    | 4——      |
| MATH | 4 449305 | 0 | D.2.2.2   | 1 12661 | 6 0.86 | 0.05 | 0.86 | 0.02 | 0.07 | 0.00 | 0.33 | -0.20 | 0.33  | -0.16 | -0.18 | -1.1854 | 0.0091 | 9.9  | 1.1 | 9.9  | 1.3 |    |    |          |

| MATH | 4 143307 | 0 C.1.2.1    | 1 126616 | 0.61 0.14 0.1 |                  | 0.40 -0.16 | -0.23 -0.19 | 0.40 0.6687   | 0.0066 9.9 1.1 9.9 1.1   |
|------|----------|--------------|----------|---------------|------------------|------------|-------------|---------------|--|
| MATH | 4 661519 | 0 C.1.2.1    | 1 126616 | 0.80 0.07 0.0 |                  | 0.42 -0.25 | -0.23 0.42  | -0.18 -0.5334 | 0.0078 -0.7 1.0 -7.0 0.9   |
| MATH | 4 458381 | 0 A.2.1.1    | 2 126616 | 0.55 0.29 0.0 | 8 0.55 0.08 0.00 | 0.55 -0.46 | -0.12 0.55  | -0.13 0.9069  | 0.0065 -9.9 0.9 -9.9 0.8   |
| MATH | 4 864558 | 0 D.1.1.1    | 2 126616 | 0.67 0.11 0.0 | 7 0.67 0.15 0.00 | 0.51 -0.25 | -0.24 0.51  | -0.28 0.3115  | 0.0068 -9.9   0.9 -9.9   0.8   |
| MATH | 4 850394 | 0 E.1.2.2    | 2 126616 | 0.84 0.13 0.8 | 4 0.01 0.02 0.00 | 0.48 -0.43 | 0.48 -0.12  | -0.14 -0.9306 | 0.0085 -9.9   0.9 -9.9   0.8   |
| MATH | 4 970082 | 0 E.1.2.2    | 2 126616 | 0.76 0.21 0.0 | 2 0.76 0.02 0.00 | 0.59 -0.54 | -0.15 0.59  | -0.10 -0.2881 | 0.0074 -9.9 0.8 -9.9 0.7   |
| MATH | 4 700531 | 0 B.1.1.4    | 2 126616 | 0.82 0.82 0.0 | 7 0.05 0.05 0.00 | 0.45 0.45  | -0.30 -0.24 | -0.17 -0.6407 | 0.0080 -9.9   0.9 -5.8   0.9   |
| MATH | 4 872174 | 0 A.3.1.1    | 1 126616 | 0.63 0.12 0.6 | 3 0.07 0.18 0.00 | 0.61 -0.26 | 0.61 -0.25  | -0.37 0.5106  | 0.0066 -9.9   0.8 -9.9   0.7   |
| MATH | 4 838889 | 0 D.1.1.3    | 2 126616 | 0.75 0.04 0.0 | 8 0.75 0.13 0.00 | 0.50 -0.15 | -0.27 0.50  | -0.34 -0.1376 | 0.0072 -9.9 0.9 -9.9 0.8   |
| MATH | 4 337018 | 0 A.3.1.3    | 2 126616 | 0.69 0.21 0.6 | 9 0.06 0.05 0.00 | 0.53 -0.38 | 0.53 -0.23  | -0.19 0.2500  | 0.0068 -9.9 0.9 -9.9 0.8   |
| MATH | 4 503028 | 0 A.1.1.4    | 1 126616 | 0.86 0.02 0.0 | 8 0.03 0.86 0.00 | 0.46 -0.22 | -0.30 -0.24 | 0.46 -1.0521  | 0.0088 -9.9 0.9 -9.9 0.7   |
| MATH | 4 898218 | 0 A.1.2.2    | 1 126616 | 0.90 0.04 0.9 | 0 0.02 0.04 0.00 | 0.40 -0.28 | 0.40 -0.16  | -0.22 -1.5807 | 0.0103 -9.0 0.9 -6.6 0.9   |
| MATH | 4 608761 | 0 A.1.3.1    | 1 126616 | 0.87 0.03 0.0 | 4 0.87 0.06 0.00 | 0.46 -0.18 | -0.16 0.46  | -0.38 -1.2817 | 0.0094 -9.9 0.9 -9.9 0.8   |
| MATH | 4 367428 | 0 D.1.2.1    | 2 126616 | 0.68 0.14 0.6 | 8 0.09 0.08 0.00 | 0.47 -0.22 | 0.47 -0.22  | -0.28 0.2676  | 0.0068 -9.9 1.0 -4.5 1.0   |
| MATH | 4 103280 | 0 A.1.2.2    | 1 126616 | 0.85 0.07 0.0 | 5 0.03 0.85 0.00 | 0.40 -0.21 | -0.20 -0.26 | 0.40 -1.0668  | 0.0088 5.1 1.0 9.9 1.3   |
| MATH | 4 845991 | 0 A.1.2.2    | 1 126616 | 0.86 0.08 0.0 | 2 0.86 0.04 0.00 | 0.39 -0.18 | -0.21 0.39  | -0.29 -1.1082 | 0.0089 -5.7 1.0 9.9 1.1  |
| MATH | 4 413467 | 0 A.3.2.2    | 1 126616 | 0.72 0.02 0.1 |                  | 0.33 -0.16 | -0.14 -0.23 | 0.33 0.0195   | 0.0070 9.9 1.1 9.9 1.3   |
| MATH | 4 379825 | 0 C.2.1.1    | 2 126616 | 0.53 0.53 0.0 |                  | 0.45 0.45  | -0.11 -0.20 | -0.29 1.0827  | 0.0064 0.4 1.0 0.2 1.0   |
| MATH | 4 595254 | 0 E.1.2.2    | 2 126616 | 0.87 0.07 0.0 |                  | 0.46 -0.29 | -0.27 -0.20 | 0.46 -1.2531  | 0.0093 -8.7 1.0 -6.7 0.9   |
| MATH |          | 0 B.1.1.3    | 2 126616 | 0.58 0.14 0.5 |                  | 0.40 -0.35 | 0.40 -0.10  | -0.16 0.8063  | 0.0065 9.9 1.1 9.9 1.1   |
| MATH |          | 0 B.1.1.3    | 2 126616 | 0.62 0.10 0.0 |                  | 0.49 -0.24 | -0.23 0.49  | -0.26 0.6030  | 0.0066 -9.9 1.0 -9.9 0.9   |
| MATH | 4 269498 | 0 D.1.1.1    | 2 126616 | 0.82 0.05 0.0 |                  | 0.43 -0.27 | -0.25 0.43  | -0.17 -0.7057 | 0.0081 -7.3 1.0 -9.9 0.9   |
| MATH |          | 0 A.1.3.2    | 1 126616 | 0.70 0.05 0.1 |                  | 0.52 -0.18 | -0.39 0.52  | -0.20 0.1202  | 0.0069 -9.9 0.9 -9.9 0.8   |
| MATH | 4 632516 | 0 C.2.1.1    | 2 126616 | 0.74 0.03 0.1 |                  | 0.38 -0.19 | -0.13 0.38  | -0.29 -0.0857 | 0.0072 9.9 1.0 9.9 1.1   |
| MATH | 4 621243 | 0 A.2.1.1    | 2 126616 | 0.86 0.86 0.0 |                  | 0.47 0.47  | -0.15 -0.27 | -0.34 -1.0661 | 0.0088 -9.9 0.9 -9.9 0.8   |
| MATH | 4 853667 | 0 C.1.2.2    | 1 126616 | 0.47 0.47 0.1 |                  | 0.33 0.33  | -0.05 -0.24 | -0.13 1.3895  | 0.0064 9.9 1.1 9.9 1.2   |
| MATH | 4 583093 | 1 A-T.1.1.2  | 2 14431  | 0.50 0.17 0.5 |                  | 0.35 -0.21 | 0.35 -0.08  | -0.23 1.1742  | 0.0191 9.9 1.1 9.9 1.2 A+ A- A+                                      |
| MATH | 4 724331 | 1 C-G.1.1.3  | 2 14431  | 0.69 0.08 0.0 |                  | 0.38 -0.15 | -0.22 0.38  | -0.21 0.0797  | 0.0204 9.2 1.1 7.3 1.2 A+ A- A-                                      |
| MATH | 4 237291 | 1 A-F.2.1.7  | 2 14431  | 0.35 0.35 0.1 |                  | 0.18 0.18  | -0.17 0.08  | -0.12 1.9516  | 0.0199 9.9 1.3 9.9 1.7 A+ A- A-                                      |
| MATH | 4 342929 | 1 B-O.3.1.2  | 2 14431  | 0.55 0.20 0.0 |                  | 0.27 -0.09 | -0.18 -0.12 | 0.27 0.8528   | 0.0192 9.9 1.2 9.9 1.4 A- A+ A+                                      |
| MATH | 4 588801 | 1 A-F.1.1.2  | 2 14431  | 0.41 0.28 0.2 |                  | 0.37 -0.14 | -0.17 0.37  | -0.18 1.6369  | 0.0194 2.2 1.0 9.9 1.2 A- A- A-                                      |
| MATH | 4 656916 | 1 D-M.2.1.2  | 2 14431  | 0.43 0.12 0.2 |                  | 0.31 -0.13 | -0.24 -0.02 | 0.31 1.5140   | 0.0193 9.9 1.1 9.9 1.3 A- A- A-                                      |
| MATH | 4 873992 | 1 B-O.1.1.2  | 2 14431  | 0.57 0.18 0.0 |                  | 0.57 -0.41 | -0.23 -0.17 | 0.57 0.7674   | 0.0193 -9.9 0.9 -9.9 0.8 A- A- A-                                    |
| MATH | 4 659127 | 1 D-M.1.1.1  | 2 14431  | 0.41 0.12 0.2 |                  | 0.35 -0.28 | -0.15 -0.04 | 0.35 1.6188   | 0.0194 9.9 1.1 9.9 1.2 A+ A- A-                                      |
| MATH | 4 482187 | 1 B-O.1.1.4  | 1 14431  | 0.79 0.13 0.0 |                  | 0.42 -0.27 | -0.21 0.42  | -0.18 -0.6011 | 0.0229 -0.3 1.0 -3.3 0.9 A+ A+ A+                                    |
| MATH | 4 238043 | 1 A-T.2.1.1  | 2 14431  | 0.30 0.59 0.0 |                  | 0.26 0.03  | -0.26 0.26  | -0.30 2.2504  | 0.0206 9.9 1.1 9.9 1.5 A- A- A+                                      |
| MATH | 4 338353 | 1 A-T.1.1.1  | 2 14431  | 0.29 0.42 0.1 |                  | 0.27 -0.03 | -0.22 0.27  | -0.07 2.3099  | 0.0208 6.8 1.1 9.9 1.5 A- A- A-                                      |
| MATH | 4 650939 | 1 C-G.1.1.2  | 2 14431  | 0.34 0.31 0.2 |                  | 0.30 -0.07 | -0.15 -0.14 | 0.30 1.9905   | 0.0200 9.9 1.1 9.9 1.4 A+ A- A-                                      |
| MATH | 4 165433 | 2 A-T.1.1.2  | 1 14024  | 0.91 0.91 0.0 |                  | 0.34 0.34  | -0.19 -0.19 | -0.19 -1.6630 | 0.0312 -0.7 1.0 -0.7 1.0 A+ A- A-                                    |
| MATH | 4 374368 | 2 D-M.2.1.3  | 2 14024  | 0.63 0.27 0.0 |                  | 0.54 -0.51 | -0.16 0.54  | -0.03 0.5219  | 0.0199 -9.9 0.9 -6.6 0.9 A- A- A-                                    |
| MATH | 4 801378 | 2 A-T.2.1.3  | 2 14024  | 0.38 0.11 0.3 |                  | 0.29 -0.19 | 0.29 0.02   | -0.24 1.8410  | 0.0199 9.9 1.2 9.9 1.4 A- A+ A-                                      |
| MATH | 4 710013 | 2 B-O.3.1.2  | 2 14024  | 0.72 0.10 0.7 |                  | 0.43 -0.33 | 0.43 -0.20  | -0.12 -0.0192 | 0.0212 1.8 1.0 0.9 1.0 A- A- A-                                      |
| MATH | 4 319766 | 2 D-M.1.1.2  | 2 14024  | 0.56 0.16 0.1 |                  | 0.43 -0.33 | -0.32 0.50  | -0.12 0.8584  |  |
| MATH | 4 822726 | 2 D-M.3.1.2  | 2 14024  | 0.42 0.24 0.1 |                  | 0.35 -0.07 | -0.32 0.30  | 0.35 1.5969   | 0.0195 -8.3 0.9 -5.4 0.9 A- A- A-<br>0.0196 9.9 1.1 9.9 1.2 A+ A+ A- |
| MATH | 4 910269 | 2 A-F.3.1.3  | 2 14024  | 0.42 0.24 0.1 |                  | 0.32 -0.07 | -0.26 -0.14 | 0.32 2.2696   | 0.0196 9.9 1.1 9.9 1.2 A+ A+ A-<br>0.0208 3.7 1.0 9.9 1.4 A- A- A-   |
|      |          |              |          |               |                  |            |             |               |  |
| MATH | 4 406527 | 2 2 0.11.11. | 1 14024  | 0.86 0.03 0.0 |                  | 0.38 -0.23 | -0.25 -0.18 | 0.38 -1.1616  | 0.0269 -1.9 1.0 -0.3 1.0 A+ A- A-                                    |
| MATH | 4 156928 | 2 C G.1.1.2  | 2 14024  | 0.63 0.16 0.1 |                  | 0.12 -0.08 | -0.02 0.12  | -0.08 0.4880  | 0.0200 9.9 1.4 9.9 1.7 A+ A- A-                                      |
| MATH | 4 675726 | 2 B-O.2.1.1  | 2 14024  | 0.66 0.10 0.6 |                  | 0.54 -0.31 | 0.54 -0.29  | -0.22 0.3175  | 0.0203 -9.9 0.9 -9.9 0.8 A+ A+ A+ A+                                 |
| MATH | 4 953494 | 2 A-T.1.1.1  | 2 14024  | 0.19 0.12 0.1 |                  | 0.16 -0.14 | -0.14 0.16  | 0.08 3.0637   | 0.0240 9.6 1.1 9.9 2.2 A+ A- A+                                      |
| MATH | 4 353127 | 2 B-O.1.1.3  | 2 14024  | 0.30 0.48 0.3 |                  | 0.27 -0.13 | 0.27 -0.04  | -0.14 2.3278  | 0.0210 9.6 1.1 9.9 1.5 A+ A- A-                                      |
| MATH | 4 265611 | 3 D.1.1.3    | 2 14070  | 0.77 0.05 0.0 | 6 0.77 0.12 0.00 | 0.59 -0.23 | -0.25 0.59  | -0.42 -0.2960 | 0.0223 -9.9   0.8 -9.9   0.7 A-   A-   A-                            |

| MATH | 4 1962  | 5  | 3 | A-T.2.1.4 | 2 | 14070 | 0.54 | 0.26 | 0.16 | 0.54 | 0.04 | 0.00 | 0.49 | -0.41 | -0.10 | 0.49  | -0.16 | 1.0448  | 0.0194 | -6.7 | 1.0 -4.5 | 0.9 A- | A- | A- |
|------|---------|----|---|-----------|---|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|---------|--------|------|----------|--------|----|----|
| MATH | 4 1741  | 9  | 3 | A-F.1.1.1 | 2 | 14070 | 0.41 | 0.27 | 0.41 | 0.09 | 0.23 | 0.00 | 0.34 | -0.19 | 0.34  | -0.08 | -0.13 | 1.7403  | 0.0197 | 6.2  | 1.1 9.9  | 1.3 A- | A- | A- |
| MATH | 4 36704 | .3 | 3 | A-T.1.1.4 | 1 | 14070 | 0.65 | 0.13 | 0.65 | 0.09 | 0.13 | 0.00 | 0.43 | -0.27 | 0.43  | -0.26 | -0.12 | 0.4108  | 0.0202 | 3.8  | 1.0 3.5  | 1.1 A- | A- | A+ |
| MATH | 4 64445 | 1  | 3 | C-G.1.1.3 | 2 | 14070 | 0.85 | 0.02 | 0.01 | 0.85 | 0.11 | 0.01 | 0.29 | -0.13 | -0.12 | 0.29  | -0.22 | -1.0056 | 0.0261 | 5.4  | 1.1 6.7  | 1.3 A+ | A- | A+ |
| MATH | 4 50517 | 3  | 3 | D-M.3.1.1 | 1 | 14070 | 0.39 | 0.26 | 0.21 | 0.39 | 0.14 | 0.00 | 0.23 | -0.05 | -0.17 | 0.23  | -0.06 | 1.8371  | 0.0198 | 9.9  | 1.2 9.9  | 1.5 A- | A- | A- |
| MATH | 4 41165 | 9  | 3 | A-F.3.1.3 | 2 | 14070 | 0.44 | 0.28 | 0.44 | 0.19 | 0.08 | 0.00 | 0.33 | -0.20 | 0.33  | -0.11 | -0.11 | 1.5620  | 0.0195 | 9.9  | 1.1 9.9  | 1.2 A- | A- | A- |
| MATH | 4 10917 | 3  | 3 | C-G.1.1.1 | 2 | 14070 | 0.50 | 0.16 | 0.11 | 0.50 | 0.22 | 0.00 | 0.36 | -0.20 | -0.16 | 0.36  | -0.13 | 1.2528  | 0.0194 | 9.9  | 1.1 9.9  | 1.2 A- | A- | A- |
| MATH | 4 94834 | 2  | 3 | B-O.1     | 2 | 14070 | 0.41 | 0.22 | 0.41 | 0.23 | 0.14 | 0.00 | 0.39 | -0.08 | 0.39  | -0.17 | -0.25 | 1.7298  | 0.0196 | 2.1  | 1.0 8.9  | 1.1 A- | A- | A- |
| MATH | 4 40815 | 4  | 3 | D-M.1.1.4 | 2 | 14070 | 0.56 | 0.56 | 0.22 | 0.14 | 0.08 | 0.00 | 0.44 | 0.44  | -0.20 | -0.23 | -0.21 | 0.9294  | 0.0195 | -0.4 | 1.0 1.6  | 1.0 A- | B- | A- |
| MATH | 4 5833  | 0  | 3 | B-O.2.1.1 | 2 | 14070 | 0.40 | 0.16 | 0.26 | 0.40 | 0.18 | 0.00 | 0.32 | -0.10 | -0.12 | 0.32  | -0.17 | 1.8008  | 0.0197 | 9.9  | 1.1 9.9  | 1.3 A- | A- | A- |
| MATH | 4 77070 | 5  | 3 | A-F.2.1.4 | 2 | 14070 | 0.86 | 0.09 | 0.03 | 0.86 | 0.03 | 0.00 | 0.40 | -0.28 | -0.23 | 0.40  | -0.15 | -1.0325 | 0.0263 | -2.2 | 1.0 -2.2 | 0.9 A+ | A- | A+ |
| MATH | 4 49190 | 3  | 4 | A.1.3.1   | 1 | 14050 | 0.76 | 0.76 | 0.09 | 0.09 | 0.06 | 0.00 | 0.51 | 0.51  | -0.23 | -0.26 | -0.32 | -0.2394 | 0.0221 | -9.2 | 0.9 -6.9 | 0.8 A+ | A- | A- |
| MATH | 4 21583 | 8  | 4 | D-M.2.1.3 | 2 | 14050 | 0.91 | 0.02 | 0.02 | 0.04 | 0.91 | 0.00 | 0.42 | -0.24 | -0.23 | -0.25 | 0.42  | -1.6012 | 0.0311 | -5.0 | 0.9 -5.4 | 0.7 A+ | A- | A+ |
| MATH | 4 47440 | 8  | 4 | A-T.1.1.2 | 2 | 14050 | 0.46 | 0.19 | 0.17 | 0.18 | 0.46 | 0.00 | 0.32 | -0.12 | -0.16 | -0.13 | 0.32  | 1.4392  | 0.0194 | 9.9  | 1.1 9.9  | 1.3 A- | A- | A- |
| MATH | 4 77889 | 5  | 4 | C-G.1.1.3 | 2 | 14050 | 0.41 | 0.06 | 0.05 | 0.47 | 0.41 | 0.01 | 0.26 | -0.22 | -0.24 | -0.03 | 0.26  | 1.7421  | 0.0196 | 9.9  | 1.2 9.9  | 1.4 A+ | A- | A- |
| MATH | 4 43732 | .7 | 4 | A-T.1.1.4 | 1 | 14050 | 0.56 | 0.10 | 0.56 | 0.07 | 0.26 | 0.00 | 0.49 | -0.22 | 0.49  | -0.26 | -0.24 | 0.9240  | 0.0194 | -7.0 | 0.9 -4.6 | 0.9 A- | A- | A+ |
| MATH | 4 95535 | 8  | 4 | D-M.3     | 1 | 14050 | 0.36 | 0.30 | 0.23 | 0.11 | 0.36 | 0.00 | 0.37 | -0.29 | -0.04 | -0.08 | 0.37  | 1.9786  | 0.0200 | 0.4  | 1.0 9.9  | 1.2 A- | A- | A- |
| MATH | 4 72065 | 8  | 4 | B-O.3     | 2 | 14050 | 0.59 | 0.59 | 0.11 | 0.19 | 0.11 | 0.00 | 0.15 | 0.15  | -0.08 | -0.01 | -0.14 | 0.7736  | 0.0196 | 9.9  | 1.4 9.9  | 1.6 A+ | A+ | A+ |
| MATH | 4 23808 | 4  | 4 | A-F.2.1.3 | 2 | 14050 | 0.60 | 0.60 | 0.11 | 0.06 | 0.23 | 0.00 | 0.46 | 0.46  | -0.19 | -0.23 | -0.27 | 0.7251  | 0.0196 | -2.9 | 1.0 -2.4 | 1.0 A+ | A- | A- |
| MATH | 4 98803 | 8  | 4 | B-O.1.1.2 | 2 | 14050 | 0.77 | 0.04 | 0.04 | 0.15 | 0.77 | 0.00 | 0.56 | -0.18 | -0.22 | -0.44 | 0.56  | -0.3053 | 0.0224 | -9.9 | 0.8 -9.9 | 0.7 A- | B- | A- |
| MATH | 4 84968 | 6  | 4 | A-F.1     | 2 | 14050 | 0.56 | 0.21 | 0.56 | 0.15 | 0.08 | 0.00 | 0.45 | -0.29 | 0.45  | -0.18 | -0.14 | 0.9225  | 0.0194 | -0.7 | 1.0 0.7  | 1.0 A- | A- | A- |
| MATH | 4 48164 | 5  | 4 | A-F.3.1.2 | 1 | 14050 | 0.45 | 0.24 | 0.15 | 0.45 | 0.16 | 0.00 | 0.31 | -0.25 | -0.08 | 0.31  | -0.06 | 1.4985  | 0.0194 | 9.9  | 1.1 9.9  | 1.3 A- | A+ | A+ |
| MATH | 4 46623 | 0  | 4 | D-M.3.1   | 2 | 14050 | 0.24 | 0.09 | 0.24 | 0.45 | 0.21 | 0.00 | 0.17 | -0.17 | 0.17  | 0.06  | -0.13 | 2.7035  | 0.0221 | 9.9  | 1.2 9.9  | 1.9 A- | A+ | A- |
| MATH | 4 64022 | .7 | 5 | C.1.2.2   | 1 | 14038 | 0.77 | 0.03 | 0.16 | 0.77 | 0.03 | 0.00 | 0.45 | -0.26 | -0.28 | 0.45  | -0.22 | -0.3218 | 0.0226 | -2.3 | 1.0 -5.4 | 0.9 A+ | A- | A- |
| MATH | 4 18372 | 5  | 5 | A-T.1.1.3 | 1 | 14038 | 0.80 | 0.10 | 0.07 | 0.80 | 0.04 | 0.00 | 0.45 | -0.26 | -0.23 | 0.45  | -0.23 | -0.4804 | 0.0233 | -3.6 | 1.0 -2.3 | 0.9 A+ | A- | A- |
| MATH | 4 22344 | 4  | 5 | A-F.2.1.1 | 2 | 14038 | 0.85 | 0.07 | 0.04 | 0.85 | 0.04 | 0.00 | 0.42 | -0.21 | -0.27 | 0.42  | -0.23 | -0.9649 | 0.0261 | -3.8 | 0.9 -3.8 | 0.9 A+ | A- | A- |
| MATH | 4 81478 | 8  | 5 | A-T.2.1.1 | 1 | 14038 | 0.78 | 0.14 | 0.04 | 0.04 | 0.78 | 0.00 | 0.30 | -0.12 | -0.21 | -0.21 | 0.30  | -0.3681 | 0.0228 | 9.4  | 1.1 9.9  | 1.4 A+ | A- | A- |
| MATH | 4 97609 | 0  | 5 | C-G.1.1.3 | 2 | 14038 | 0.86 | 0.86 | 0.05 | 0.06 | 0.03 | 0.00 | 0.32 | 0.32  | -0.22 | -0.17 | -0.12 | -1.0160 | 0.0265 | 3.2  | 1.1 2.8  | 1.1 A+ | A- | A- |
| MATH | 4 31513 | 0  | 5 | D-M.1.1.3 | 2 | 14038 | 0.21 | 0.08 | 0.21 | 0.22 | 0.50 | 0.00 | 0.21 | -0.04 | 0.21  | -0.04 | -0.11 | 2.9930  | 0.0231 | 7.0  | 1.1 9.9  | 1.8 A- | A- | A- |
| MATH | 4 4001  | 7  | 5 | B-O.1.1.2 | 2 | 14038 | 0.19 | 0.08 | 0.07 | 0.65 | 0.19 | 0.00 | 0.24 | -0.35 | -0.17 | 0.10  | 0.24  | 3.1059  | 0.0237 | 3.2  | 1.0 9.9  | 1.7 A- | A- | A- |
| MATH | 4 3703  | 3  | 5 | A-F.2.1.5 | 2 | 14038 | 0.35 | 0.07 | 0.26 | 0.35 | 0.31 | 0.01 | 0.25 | -0.10 | 0.15  | 0.25  | -0.33 | 2.0603  | 0.0200 | 9.9  | 1.2 9.9  | 1.4 A+ | A- | A- |
| MATH | 4 64138 | 0  | 5 | A-F.2.1.7 | 1 | 14038 | 0.31 | 0.09 | 0.25 | 0.31 | 0.34 | 0.00 | 0.27 | -0.16 | 0.15  | 0.27  | -0.30 | 2.2983  | 0.0205 | 9.9  | 1.1 9.9  | 1.3 A+ | A- | A- |
| MATH | 4 61925 | 1  | 5 | B-O.3.1.3 | 2 | 14038 | 0.33 | 0.51 | 0.11 | 0.33 | 0.00 | 0.00 | 0.21 | 0.05  | -0.28 | 0.21  | -0.17 | 2.1781  | 0.0202 | 9.9  | 1.2 9.9  | 1.6 A- | A- | A- |
| MATH | 4 44653 |    | 5 | A-T.1.1.2 | 2 | 14038 | 0.80 | 0.08 | 0.80 | 0.06 | 0.00 | 0.00 | 0.43 | -0.21 | 0.43  | -0.21 | -0.28 | -0.5103 | 0.0235 | -2.5 | 1.0 -1.6 | 1.0 A+ | A- | A+ |
| MATH | 4 3010  |    | 5 | D-M.2.1.1 | 2 |       | 0.39 | 0.17 | 0.26 | 0.39 |      | 0.00 | 0.18 | 0.01  | 0.03  | 0.18  | -0.27 | 1.8514  | 0.0197 | 9.9  | 1.3 9.9  | 1.6 A- | A- | A- |
| MATH | 4 70826 |    | 6 | C.1.2.1   | 1 | 14041 | 0.66 | 0.08 | 0.18 | 0.08 |      | 0.00 | 0.42 | -0.21 | -0.23 | -0.20 | 0.42  | 0.4079  | 0.0201 | 3.1  | 1.0 -1.2 | 1.0 A- | A- | A- |
| MATH | 4 6210  | -  | 6 | B-O.1.1.4 | 1 | 14041 | 0.26 | 0.03 | 0.26 | 0.68 |      | 0.00 | 0.32 | -0.21 | 0.32  | -0.16 | -0.17 | 2.6643  | 0.0219 | 5.6  | 1.1 9.9  | 1.3 A+ | A- | A- |
| MATH | 4 88558 | _  | 6 | B-O.1.1.1 | 2 |       | 0.66 | 0.66 | 0.22 | 0.09 |      | 0.00 | 0.47 | 0.47  | -0.18 | -0.37 | -0.23 | 0.3926  | 0.0201 | -3.9 | 1.0 -5.4 | 0.9 A- | B- | B- |
| MATH | 4 51317 |    | _ | D-M.2.1.1 | 2 |       | 0.42 | 0.36 | 0.42 | 0.12 |      | 0.00 | 0.32 | -0.04 | 0.32  | -0.14 | -0.32 | 1.6541  | 0.0194 | 9.9  | 1.1 9.9  |        | A- | A- |
| MATH | 4 24178 |    | 6 | C-G.1.1.2 | 2 | 14041 | 0.61 | 0.12 | 0.15 | 0.61 |      | 0.00 | 0.33 | -0.29 | -0.02 | 0.33  | -0.18 | 0.6617  | 0.0197 | 9.9  | 1.2 9.9  | 1.2 A+ | A- | A- |
| MATH | 4 82510 |    | 6 | A-F.2.1.6 | 2 | 14041 | 0.63 | 0.16 | 0.63 | 0.08 |      | 0.00 | 0.36 | -0.23 | 0.36  | -0.21 | -0.10 | 0.5713  | 0.0198 | 9.9  | 1.1 7.9  | 1.1 A+ | A+ | A+ |
| MATH | 4 84832 | _  |   | B-O.3.1.2 | 2 | 14041 | 0.80 | 0.08 | 0.80 | 0.05 | 0.06 | 0.00 | 0.45 | -0.32 | 0.45  | -0.25 | -0.14 | -0.5376 | 0.0234 | -3.9 | 1.0 -2.6 | 0.9 A- | A+ | A+ |
| MATH | 4 35562 | _  | _ | D-M.1.1.3 | 1 | 14041 | 0.63 | 0.14 | 0.21 | 0.63 |      | 0.00 | 0.30 | -0.31 | -0.03 | 0.30  | -0.16 | 0.5498  | 0.0198 | 9.9  | 1.2 9.9  | 1.2 A+ | A+ | A+ |
| MATH | 4 20802 |    | 6 | A-T.2.1.1 | 1 | 14041 | 0.60 | 0.21 | 0.60 | 0.08 | 0.10 |      | 0.44 | -0.22 | 0.44  | -0.16 | -0.27 | 0.6979  | 0.0196 | 0.5  | 1.0 0.6  | 1.0 A- | A- | A- |
| MATH | 4 87876 |    | 6 | A-T.1.1.3 | 1 | 14041 | 0.82 | 0.06 | 0.04 | 0.08 | 0.00 | 0.00 | 0.42 | -0.24 | -0.21 | -0.23 | 0.42  | -0.6595 | 0.0240 | -2.6 | 1.0 -1.2 | 1.0 A- | A- | A- |
| MATH | 4 67163 |    | 6 | A-F.2.1.7 | 2 | 14041 | 0.38 | 0.10 | 0.27 | 0.38 |      | 0.00 | 0.29 | -0.22 | 0.07  | 0.29  | -0.24 | 1.8946  | 0.0198 | 9.9  | 1.1 9.9  |        | A- | A- |
| MATH | 4 87453 | _  | 6 | B-O.2     | 2 |       | 0.32 | 0.10 | 0.32 | 0.15 |      | 0.00 | 0.07 | -0.17 | 0.07  | -0.19 | 0.17  | 2.1905  | 0.0204 | 9.9  | 1.4 9.9  |        | A- | A- |
| MATH | 4 92355 | _  | 7 | A.3.1.1   | 1 | 14004 | 0.78 | 0.78 | 0.15 | 0.03 |      | 0.00 | 0.46 | 0.46  | -0.29 | -0.21 | -0.26 | -0.4194 | 0.0228 | -4.5 | 1.0 -5.4 | 0.9 A- | A- | A- |
| MATH | 4 2922  | _  | 7 | B-O.2.1.1 | 1 | 14004 | 0.71 | 0.13 | 0.08 | 0.07 |      | 0.01 | 0.49 | -0.29 | -0.22 | -0.25 | 0.49  | 0.0629  | 0.0210 | -6.5 | 0.9 -8.1 | 0.8 A+ | A+ | A- |
| MATH | 4 95978 | -  | 7 | B-O.1.1.1 | 2 | 14004 | 0.40 | 0.06 | 0.05 | 0.49 | 0.40 | 0.00 | 0.26 | -0.28 | -0.27 | -0.01 | 0.26  | 1.7610  | 0.0197 | 9.9  | 1.2 9.9  | 1.4 A- | A+ | A+ |
| MATH | 4 10898 | 3  | / | A-F.1.1.2 | 2 | 14004 | 0.36 | 0.18 | 0.25 | 0.36 | 0.20 | 0.00 | 0.29 | -0.11 | -0.11 | 0.29  | -0.12 | 1.9963  | 0.0201 | 9.9  | 1.1 9.9  | 1.4 A- | A- | A- |

| MATH | 4 234794 | 7 | A-F.2.1.2 | 2 | 14004  | 0.65 | 0.21 | 0.08 | 0.65 | 0.06 | 0.00 | 0.41 | -0.24 | -0.23 | 0.41  | -0.15 | 0.4570  | 0.0201 | 3.8   | 1.0    | ).6 | 1.0 | A+ | A- | A+      |
|------|----------|---|-----------|---|--------|------|------|------|------|------|------|------|-------|-------|-------|-------|---------|--------|-------|--------|-----|-----|----|----|---------|
| MATH | 4 751838 | 7 | C-G.1.1.2 | 2 | 14004  | 0.45 | 0.16 | 0.21 | 0.18 | 0.45 |      | 0.36 | -0.19 | -0.14 | -0.14 | 0.36  | 1.4879  | 0.0194 |       | 1.1    | 9.9 |     | A- | A- | A+      |
| MATH | 4 506029 | 7 | A-T.2.1.3 | 1 | 14004  | 0.71 | 0.07 | 0.08 | 0.71 | 0.14 | 0.00 | 0.46 | -0.17 | -0.20 | 0.46  | -0.32 | 0.1002  | 0.0209 | -3.4  | 1.0 -  | 2.9 | 0.9 | Α- | A+ | A+      |
| MATH | 4 899817 | 7 | B-O.3.1.1 | 2 | 14004  | 0.71 | 0.08 | 0.07 | 0.13 | 0.71 | 0.00 | 0.25 | -0.17 | -0.20 | -0.04 | 0.25  | 0.0571  | 0.0210 | 9.9   | 1.2    | 9.9 | 1.5 | A+ | A+ | Α-      |
| MATH | 4 326514 | 7 | D-M.1.1.1 | 1 | 14004  | 0.67 | 0.07 | 0.19 | 0.06 | 0.67 |      | 0.62 | -0.36 | -0.41 | -0.15 | 0.62  | 0.2905  | 0.0204 | -9.9  | 0.8 -  | 9.9 | 0.7 | Α- | B- | B-      |
| MATH | 4 335326 | 7 | A-T.1.1.1 | 2 | 14004  | 0.65 | 0.17 | 0.65 | 0.06 | 0.11 | 0.00 | 0.32 | -0.07 | 0.32  | -0.23 | -0.23 | 0.4174  | 0.0201 | 9.9   | 1.1    | 9.9 | 1.2 |    | A- | A-      |
| MATH | 4 648480 | 7 | C-G.1.1   | 2 | 14004  | 0.26 | 0.12 | 0.26 | 0.36 | 0.26 |      | 0.11 | -0.02 | 0.11  | -0.03 | -0.06 | 2.5828  | 0.0217 | + + + | 1.3    | 9.9 | 2.0 | Α- | Α- | Α-      |
| MATH | 4 246439 | 7 | B-O.1.1   | 2 | 14004  | 0.31 | 0.17 | 0.31 | 0.24 | 0.28 |      | 0.18 | -0.27 | 0.18  | -0.03 | 0.07  | 2.3008  | 0.0208 | 9.9   | 1.2    | 9.9 | 1.7 |    | A+ | Α-      |
| MATH | 4 124410 | 8 | D.1.2.1   | 2 | 13965  | 0.84 | 0.03 | 0.08 | 0.84 | 0.04 | 0.00 | 0.42 | -0.25 | -0.22 | 0.42  | -0.24 | -0.8975 | 0.0256 | -2.8  | 1.0 -  | 4.8 | 0.8 | A+ | Α- | Α-      |
| MATH | 4 596572 | 8 | D-M.1.1.2 | 1 | 13965  | 0.60 | 0.14 | 0.15 | 0.60 | 0.09 |      | 0.50 | -0.17 | -0.36 | 0.50  | -0.18 | 0.7156  | 0.0197 |       | _      | 5.0 | 0.9 |    | A- | A-      |
| MATH | 4 385951 | 8 | A-F.2.1.4 | 2 | 13965  | 0.75 | 0.04 | 0.75 | 0.05 | 0.15 |      | 0.47 | -0.21 | 0.47  | -0.21 | -0.31 | -0.1732 | 0.0219 |       | 1.0 -  | 0.3 | 1.0 | A+ | A- | A-      |
| MATH | 4 733823 | 8 | C-G.1.1.3 | 2 | 13965  | 0.96 | 0.01 | 0.96 | 0.02 | 0.01 | 0.00 | 0.19 | -0.11 | 0.19  | -0.13 | -0.07 | -2.7144 | 0.0473 | 0.1   | 1.0    | 1.7 | 1.2 | A+ | B- | B-      |
| MATH | 4 712165 | 8 | A-F.3.1.2 | 1 | 13965  | 0.38 | 0.32 | 0.22 | 0.08 | 0.38 | 0.00 | 0.38 | -0.13 | -0.18 | -0.17 | 0.38  | 1.8954  | 0.0198 | 0.9   | 1.0    | 3.3 | _   | A- | A- | A-      |
| MATH | 4 314655 | 8 | D-M.3.1.2 | 2 | 13965  | 0.55 | 0.55 | 0.12 | 0.26 | 0.07 | 0.00 | 0.17 | 0.17  | -0.10 | 0.00  | -0.19 | 1.0033  | 0.0194 | 9.9   | 1.3    | 9.9 | 1.5 | Α- | A+ | A-      |
| MATH | 4 518316 | 8 | A-T.2.1.2 | 1 | 13965  | 0.74 | 0.17 | 0.04 | 0.06 | 0.74 | 0.00 | 0.56 | -0.50 | -0.18 | -0.11 | 0.56  | -0.0847 | 0.0216 | -9.9  | ).9 -  | 9.9 | 0.8 | Α- | A- | A-      |
| MATH | 4 678826 | 8 | B-O.1.1.4 | 1 | 13965  | 0.31 | 0.08 | 0.07 | 0.53 | 0.31 | 0.00 | 0.29 | -0.37 | -0.25 | 0.06  | 0.29  | 2.2581  | 0.0206 | 8.8   | 1.1    | 9.9 | 1.3 | Α- | A- | A-      |
| MATH | 4 239431 | 8 | B-O.2.1.1 | 1 | 13965  | 0.40 | 0.17 | 0.40 | 0.28 | 0.15 |      | 0.32 | -0.14 | 0.32  | -0.12 | -0.13 | 1.7707  | 0.0197 | 9.9   |        | 9.9 | 1.3 |    | A- | A-      |
| MATH | 4 969513 | 8 | A-T.2.1   | 2 | 13965  | 0.17 | 0.18 | 0.61 | 0.17 | 0.03 | 0.00 | 0.23 | -0.47 | 0.25  | 0.23  | -0.17 | 3.2314  | 0.0247 | 3.0   | 1.0    | 9.9 | 1.6 | A+ | A- | A-      |
| MATH | 4 975211 | 8 | C-G.1     | 1 | 13965  | 0.56 | 0.56 | 0.13 | 0.15 | 0.16 | 0.00 | 0.31 | 0.31  | -0.16 | -0.13 | -0.15 | 0.9131  | 0.0195 | 9.9   | 1.2    | 9.9 | 1.2 | A- | A- | A-      |
| MATH | 4 315535 | 8 | D-M.2.1   | 2 | 13965  | 0.34 | 0.29 | 0.15 | 0.34 | 0.21 | 0.00 | 0.10 | 0.02  | -0.04 | 0.10  | -0.11 | 2.0794  | 0.0202 | 9.9   | 1.3    | 9.9 | 1.9 | A+ | A- | A+      |
| MATH | 4 241848 | 9 | B.1.1.2   | 1 | 13965  | 0.61 | 0.06 | 0.08 | 0.61 | 0.25 | 0.00 | 0.40 | -0.16 | -0.23 | 0.40  | -0.22 | 0.6569  | 0.0199 | 5.8   | 1.1    | 2.5 | 1.0 | A- | A- | B-      |
| MATH | 4 353941 | 9 | A.2.1.1   | 2 | 13965  | 0.78 | 0.78 | 0.14 | 0.06 | 0.02 | 0.00 | 0.55 | 0.55  | -0.37 | -0.31 | -0.18 | -0.3859 | 0.0228 | -9.9  | ).9 -  | 9.9 | 0.7 | A- | A- | A-      |
| MATH | 4 345622 | 9 | B-O.1.1.1 | 2 | 13965  | 0.75 | 0.11 | 0.75 | 0.08 | 0.05 | 0.00 | 0.43 | -0.28 | 0.43  | -0.20 | -0.18 | -0.1932 | 0.0221 | 0.1   | 1.0 -  | 1.3 | 1.0 | A+ | A- | A-      |
| MATH | 4 655450 | 9 | A-T.1.1.2 | 1 | 13965  | 0.89 | 0.05 | 0.89 | 0.04 | 0.02 | 0.00 | 0.41 | -0.26 | 0.41  | -0.25 | -0.14 | -1.3739 | 0.0292 | -4.5  | ).9 -: | 3.3 | 0.9 | A- | A- | A-      |
| MATH | 4 605197 | 9 | B-O.2.1   | 2 | 13965  | 0.56 | 0.11 | 0.12 | 0.56 | 0.20 | 0.01 | 0.42 | -0.20 | -0.25 | 0.42  | -0.14 | 0.9420  | 0.0196 | 5.0   | 1.0    | 4.3 | 1.1 | A+ | A- | A-      |
| MATH | 4 969013 | 9 | A-T.2.1.1 | 2 | 13965  | 0.53 | 0.12 | 0.17 | 0.53 | 0.18 | 0.00 | 0.41 | -0.18 | -0.30 | 0.41  | -0.09 | 1.1233  | 0.0195 | 5.8   | 1.1    | 7.4 | 1.1 | A+ | A- | A-      |
| MATH | 4 252798 | 9 | A-F.2.1.3 | 2 | 13965  | 0.79 | 0.11 | 0.04 | 0.05 | 0.79 | 0.00 | 0.48 | -0.28 | -0.25 | -0.24 | 0.48  | -0.4687 | 0.0232 | -6.0  | ).9 -  | 7.1 | 0.8 | A+ | A- | A+      |
| MATH | 4 216808 | 9 | D-M.2.1   | 2 | 13965  | 0.48 | 0.14 | 0.12 | 0.25 | 0.48 | 0.00 | 0.37 | -0.18 | -0.17 | -0.15 | 0.37  | 1.3400  | 0.0194 | 9.6   | 1.1    | 9.9 | 1.2 | A+ | A+ | A+      |
| MATH | 4 324068 | 9 | C-G.1.1.1 | 1 | 13965  | 0.67 | 0.22 | 0.67 | 0.07 | 0.04 | 0.00 | 0.33 | -0.15 | 0.33  | -0.24 | -0.15 | 0.3568  | 0.0204 | 9.9   | 1.2    | 9.9 | 1.2 | A+ | A- | A-      |
| MATH | 4 646056 | 9 | B-O.3.1.3 | 2 | 13965  | 0.55 | 0.13 | 0.14 | 0.18 | 0.55 | 0.00 | 0.44 | -0.20 | -0.21 | -0.19 | 0.44  | 0.9923  | 0.0195 | 2.4   | 1.0    | 1.9 | 1.0 | A+ | A+ | A+      |
| MATH | 4 614489 | 9 | A-F.3.1.1 | 2 | 13965  | 0.40 | 0.05 | 0.47 | 0.08 | 0.40 | 0.00 | 0.22 | -0.21 | -0.01 | -0.19 | 0.22  | 1.8117  | 0.0198 | 9.9   | 1.2    | 9.9 | 1.5 | A- | A- | A+      |
| MATH | 4 284642 | 9 | C-G.1.1.3 | 2 | 13965  | 0.79 | 0.08 | 0.06 | 0.07 | 0.79 | 0.00 | 0.43 | -0.27 | -0.26 | -0.15 | 0.43  | -0.4865 | 0.0233 | -1.4  | 1.0 -  | 2.8 | 0.9 | A+ | A- | A-      |
| MATH | 5 384712 | 0 | A.1.1.1   | 1 | 126268 | 0.79 | 0.79 | 0.07 | 0.06 | 0.07 | 0.00 | 0.49 | 0.49  | -0.25 | -0.29 | -0.23 | -0.0410 | 0.0076 | -9.9  | ).9 -  | 9.9 | 0.8 |    |    |         |
| MATH | 5 377418 | 0 | A.1.2.1   | 1 | 126268 | 0.84 | 0.09 | 0.84 | 0.06 | 0.02 | 0.00 | 0.47 | -0.27 | 0.47  | -0.31 | -0.19 | -0.5177 | 0.0084 | -9.9  | ).9 -  | 9.9 | 0.7 |    |    |         |
| MATH | 5 895449 | 0 | A.1.2.1   | 1 | 126268 | 0.79 | 0.04 | 0.15 | 0.79 | 0.03 | 0.00 | 0.49 | -0.30 | -0.32 | 0.49  | -0.20 | -0.0993 | 0.0077 | -9.9  | ).9 -  | 9.9 | 0.9 |    |    |         |
| MATH | 5 610298 | 0 | A.2.1.2   | 2 | 126268 | 0.65 | 0.65 | 0.07 | 0.08 | 0.20 | 0.00 | 0.54 | 0.54  | -0.23 | -0.21 | -0.35 | 0.7961  | 0.0067 | -9.9  | ).9 -  | 9.9 | 0.8 |    |    |         |
| MATH | 5 367532 | 0 | E.1.1.1   | 1 | 126268 | 0.62 | 0.13 | 0.16 | 0.62 | 0.09 | 0.00 | 0.50 | -0.30 | -0.24 | 0.50  | -0.18 | 1.0771  | 0.0066 | -9.9  | 1.0 -  | 9.9 | 0.9 |    |    |         |
| MATH | 5 973348 | 0 | D.1.1.2   | 2 | 126268 | 0.36 | 0.57 | 0.04 | 0.36 | 0.02 |      | 0.35 | -0.18 | -0.24 | 0.35  | -0.20 | 2.3919  | 0.0068 | 9.9   |        | 9.9 | 1.3 |    |    |         |
| MATH | 5 122875 | 0 | A.3.2.1   | 1 | 126268 | 0.68 | 0.68 | 0.13 | 0.15 | 0.03 |      | 0.46 | 0.46  | -0.22 | -0.29 | -0.20 | 0.4880  | 0.0070 | 0.7   |        | 0.7 | 1.0 |    |    |         |
| MATH | 5 918309 | 0 | A.3.2.1   | 1 | 126268 | 0.58 | 0.07 | 0.14 | 0.21 | 0.58 |      | 0.41 | -0.21 | -0.16 | -0.23 | 0.41  | 1.1772  | 0.0066 |       |        | 9.9 | 1.1 |    |    |         |
| MATH | 5 250063 | 0 | B.1.2.1   | 1 | 126268 | 0.71 | 0.03 | 0.71 | 0.18 | 0.08 |      | 0.51 | -0.12 | 0.51  | -0.33 | -0.31 | 0.4093  | 0.0070 |       | ).9 -  | 9.9 | 0.9 |    |    |         |
| MATH | 5 510174 | 0 | A.1.1.1   | 2 | 126268 | 0.68 | 0.26 | 0.68 | 0.03 | 0.03 |      | 0.48 | -0.38 | 0.48  | -0.20 | -0.13 | 0.6612  | 0.0068 | 7.7   |        | 7.1 | 1.0 |    |    |         |
| MATH | 5 513370 | 0 |           |   | 126268 | 0.62 | 0.62 | 0.24 | 0.13 | 0.01 | 0.00 | 0.51 | 0.51  | -0.28 | -0.34 | -0.12 | 0.9487  | 0.0067 |       |        | 9.9 | 0.9 |    |    |         |
| MATH | 5 594088 | 0 |           |   | 126268 | 0.92 | 0.03 | 0.02 | 0.02 | 0.92 |      | 0.28 | -0.21 | -0.11 | -0.15 | 0.28  | -1.5328 | 0.0114 |       |        | 5.0 | 1.1 |    |    | $\perp$ |
| MATH | 5 192808 | 0 | A.2.1.3   |   | 126268 | 0.82 | 0.09 | 0.06 | 0.02 |      | 0.00 | 0.49 | -0.25 | -0.34 | -0.21 | 0.49  | -0.3696 | 0.0081 |       |        | 9.9 | 0.7 |    |    |         |
| MATH | 5 127241 | 0 | A.3.1.1   |   | 126268 | 0.65 | 0.17 | 0.12 | 0.65 | 0.06 |      | 0.44 | -0.17 | -0.30 | 0.44  | -0.20 | 0.7918  | 0.0067 | 0.0   |        | 0.0 | 1.0 |    |    |         |
| MATH | 5 217611 | 0 | A.2.1.1   | 2 | 126268 | 0.87 | 0.06 | 0.87 | 0.04 | 0.02 |      | 0.40 | -0.31 | 0.40  | -0.16 | -0.18 | -0.8217 | 0.0091 |       |        | 2.1 | 1.0 |    |    |         |
| MATH | 5 754663 | 0 | C.1.1.2   | 1 | 126268 | 0.85 | 0.85 | 0.06 | 0.06 | 0.03 |      | 0.34 | 0.34  | -0.16 | -0.21 | -0.20 | -0.5487 | 0.0085 |       |        | 0.9 | 1.0 |    |    | $\perp$ |
| MATH | 5 539810 | 0 | A.1.3.2   | 2 | 126268 | 0.50 | 0.27 | 0.09 | 0.14 | 0.50 |      | 0.55 | -0.17 | -0.30 | -0.33 | 0.55  | 1.6254  | 0.0065 |       | ,,,    | 9.9 | 0.9 |    |    | $\perp$ |
| MATH | 5 404863 | 0 | A.2.1.2   | 2 | 126268 | 0.65 | 0.08 | 0.14 | 0.13 | 0.65 | 0.00 | 0.51 | -0.25 | -0.34 | -0.17 | 0.51  | 0.8001  | 0.0067 |       |        | 9.9 | 0.9 |    |    |         |
| MATH | 5 200289 | 0 | A.3.1.1   | 2 | 126268 | 0.65 | 0.06 | 0.65 | 0.18 | 0.11 | 0.00 | 0.58 | -0.17 | 0.58  | -0.39 | -0.27 | 0.8092  | 0.0067 | -9.9  | ).9 -  | 9.9 | 0.8 |    |    |         |

| MATH | 5 308028 0 | B.1.2.1   | 2 126268 | 0.55  | 0.21 | 0.20 | 0.04 | 0.55 0.00 | 0.47 | 0.06  | -0.52 | -0.23 | 0.47 1.3381   | 0.0065 | 5.2 1.0  | -0.9 | 1.0    | Π        | $\top$  |
|------|------------|-----------|----------|-------|------|------|------|-----------|------|-------|-------|-------|---------------|--------|----------|------|--------|----------|---------|
| MATH | 5 931348 0 |           | 1 126268 |       |      |      | 0.59 | 0.15 0.00 |      | -0.24 | -0.21 | 0.34  | -0.07 1.0808  | 0.0066 | 9.9 1.2  | 9.9  | 1.3    |          |         |
| MATH | 5 371693 0 | D.1.1.2   | 2 126268 | 0.77  | 0.08 | ).77 | 0.09 | 0.06 0.00 | 0.49 | -0.27 | 0.49  | -0.24 | -0.28 0.0313  | 0.0075 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 815145 0 | D.1.1.2   | 2 126268 | 0.53  | 0.28 | ).13 | 0.53 | 0.05 0.00 | 0.60 | -0.43 | -0.23 | 0.60  | -0.12 1.4527  | 0.0065 | -9.9 0.8 | -9.9 | 0.8    |          |         |
| MATH | 5 840387 0 | E.1.1.1   | 2 126268 | 0.78  | 0.03 | 0.05 | 0.14 | 0.78 0.00 | 0.47 | -0.22 | -0.23 | -0.30 | 0.47 0.0680   | 0.0074 | -9.9 0.9 | -9.9 | 0.8    |          |         |
| MATH | 5 527417 0 | E.1.1.1   | 2 126268 | 0.85  | 0.01 | 0.02 | 0.85 | 0.11 0.00 | 0.53 | -0.10 | -0.17 | 0.53  | -0.48 -0.6760 | 0.0087 | -9.9 0.8 | -9.9 | 0.6    |          |         |
| MATH | 5 893918 0 | A.2.1.3   | 2 126268 | 0.63  | 0.17 | 0.10 | 0.11 | 0.63 0.00 | 0.53 | -0.28 | -0.27 | -0.23 | 0.53 0.9815   | 0.0066 | -9.9 0.9 | -9.9 | 0.8    |          |         |
| MATH | 5 397546 0 | A.2.1.2   | 2 126268 | 0.66  | 0.66 | 0.09 | 0.06 | 0.18 0.00 | 0.40 | 0.40  | -0.22 | -0.23 | -0.18 0.7669  | 0.0068 | 9.9 1.1  | 9.9  | 1.1    |          |         |
| MATH | 5 917794 0 | B.1.2.1   | 2 126268 | 0.59  | 0.59 | 0.06 | 0.20 | 0.14 0.00 | 0.56 | 0.56  | -0.20 | -0.50 | -0.07 1.1849  | 0.0066 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 715702 0 | B.1.2.1   | 2 126268 | 0.82  | 0.07 | 0.08 | 0.82 | 0.03 0.00 | 0.46 | -0.34 | -0.21 | 0.46  | -0.19 -0.4017 | 0.0082 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 283581 0 | A.2.1.3   | 2 126268 | 0.67  | 0.67 | ).13 | 0.10 | 0.09 0.00 | 0.52 | 0.52  | -0.31 | -0.25 | -0.21 0.6843  | 0.0068 | -9.9 0.9 | -9.9 | 0.8    |          |         |
| MATH | 5 435411 0 | A.3.1.1   | 1 126268 | 0.68  | 0.11 | 0.09 | 0.11 | 0.68 0.00 | 0.54 | -0.17 | -0.22 | -0.41 | 0.54 0.5897   | 0.0069 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 871900 0 | A.3.1.1   | 2 126268 | 0.66  | 0.19 | ).66 | 0.06 | 0.09 0.00 | 0.52 | -0.30 | 0.52  | -0.23 | -0.26 0.7219  | 0.0068 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 747711 0 | A.1.2.1   | 1 126268 | 0.70  | 0.07 | ).17 | 0.07 | 0.70 0.00 | 0.52 | -0.36 | -0.35 | -0.06 | 0.52 0.4786   | 0.0070 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 424351 0 | A.1.1.1   | 1 126268 | 0.82  | 0.82 | 0.04 | 0.10 | 0.04 0.00 | 0.45 | 0.45  | -0.21 | -0.28 | -0.25 -0.3974 | 0.0082 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 973852 0 | A.1.2.1   | 1 126268 | 0.78  | 0.15 | 0.03 | 0.04 | 0.78 0.00 | 0.51 | -0.37 | -0.20 | -0.25 | 0.51 -0.1413  | 0.0077 | -9.9 0.9 | -9.9 | 0.8    |          |         |
| MATH | 5 844327 0 | E.1.1.1   | 2 126268 | 0.73  | 0.07 | ).06 | 0.73 | 0.14 0.00 | 0.50 | -0.25 | -0.31 | 0.50  | -0.25 0.2737  | 0.0072 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 232238 0 | C.1.1.2   | 1 126268 | 0.60  | 0.60 | ).11 | 0.10 | 0.18 0.00 | 0.49 | 0.49  | -0.22 | -0.22 | -0.27 1.0564  | 0.0066 | -9.9 1.0 | -9.9 | 0.9    |          |         |
| MATH | 5 775594 0 | D.1.1.2   | 2 126268 | 0.82  | 0.82 | ).04 | 0.05 | 0.10 0.00 | 0.35 | 0.35  | -0.20 | -0.31 | -0.10 -0.3107 | 0.0080 | 1.1 1.0  | 9.9  | 1.4    |          |         |
| MATH | 5 795251 0 | D.1.1.2   | 2 126268 | 0.69  | 0.07 | ).69 | 0.16 | 0.08 0.00 | 0.54 | -0.25 | 0.54  | -0.33 | -0.23 0.4960  | 0.0070 | -9.9 0.9 | -9.9 | 0.8    |          |         |
| MATH | 5 895721 0 | C.1.1.2   | 1 126268 | 0.78  | 0.04 | 0.04 | 0.78 | 0.15 0.00 | 0.41 | -0.23 | -0.26 | 0.41  | -0.21 -0.0218 | 0.0075 | 1.4 1.0  | 1.2  | 1.0    |          |         |
| MATH | 5 228514 0 | C.1.1.2   | 1 126268 | 0.69  | 0.69 | ).12 | 0.11 | 0.09 0.00 | 0.44 | 0.44  | -0.19 | -0.23 | -0.25 0.5806  | 0.0069 | 5.2 1.0  | -4.0 | 1.0    |          |         |
| MATH | 5 628043 0 | B.1.2.1   | 2 126268 | 0.63  | 0.19 | 0.12 | 0.06 | 0.63 0.00 | 0.43 | 0.01  | -0.45 | -0.26 | 0.43 0.8544   | 0.0067 | 9.9 1.1  | 9.9  | 1.1    |          |         |
| MATH | 5 200037 0 | A.2.1.1   | 2 126268 | 0.66  | 0.07 | ).66 | 0.23 | 0.04 0.00 | 0.56 | -0.20 | 0.56  | -0.39 | -0.25 0.6583  | 0.0068 | -9.9 0.9 | -9.9 | 0.8    |          |         |
| MATH | 5 418653 0 | A.2.1.2   | 1 126268 | 0.75  | 0.07 | 0.07 | 0.75 | 0.11 0.00 | 0.40 | -0.21 | -0.14 | 0.40  | -0.26 0.1644  | 0.0073 | 9.9 1.1  | 2.2  | 1.0    |          |         |
| MATH | 5 971657 0 | A.3.1.1   | 1 126268 | 0.65  | 0.04 | ).65 | 0.22 | 0.10 0.00 | 0.35 | -0.23 | 0.35  | -0.19 | -0.15 0.7826  | 0.0068 | 9.9 1.2  | 9.9  | 1.2    |          |         |
| MATH | 5 680498 0 | A.2.1.1   | 2 126268 | 0.64  | 0.64 | 0.07 | 0.13 | 0.16 0.00 | 0.51 | 0.51  | -0.26 | -0.24 | -0.26 0.7140  | 0.0068 | -9.9 1.0 | 1.2  | 1.0    |          |         |
| MATH | 5 576731 0 | A.1.2.1   | 1 126268 | 0.84  | 0.02 | 0.03 | 0.84 | 0.12 0.00 | 0.43 | -0.19 | -0.18 | 0.43  | -0.32 -0.5272 | 0.0084 | -7.9 1.0 | -9.9 | 0.9    |          |         |
| MATH | 5 725423 0 | A.1.3.2   | 2 126268 | 0.66  | 0.13 | ).66 | 0.13 | 0.07 0.00 | 0.50 | -0.22 | 0.50  | -0.28 | -0.25 0.6904  | 0.0068 | -9.9 1.0 | -9.9 | 0.9    |          |         |
| MATH | 5 853933 0 | A.1.1.1   | 1 126268 | 0.75  | 0.13 | 0.06 | 0.06 | 0.75 0.00 | 0.52 | -0.40 | -0.15 | -0.22 | 0.52 0.1892   | 0.0073 | -9.9 0.9 | -9.9 | 0.8    |          |         |
| MATH | 5 169730 0 | A.1.3.2   | 1 126268 | 0.83  | 0.83 | 0.09 | 0.06 | 0.03 0.00 | 0.33 | 0.33  | -0.22 | -0.15 | -0.17 -0.4452 | 0.0082 | 9.9 1.1  | 9.9  | 1.1    |          |         |
| MATH | 5 317675 0 | E.1.1.1   | 2 126268 | 0.55  | 0.55 | ).18 | 0.06 | 0.20 0.00 | 0.42 | 0.42  | -0.31 | -0.10 | -0.16 1.4308  | 0.0065 | 9.9 1.1  | 9.9  | 1.1    |          |         |
| MATH | 5 216359 0 | A.1.1.1   | 1 126268 | 0.85  | 0.85 | 0.07 | 0.04 | 0.03 0.00 | 0.45 | 0.45  | -0.32 | -0.21 | -0.19 -0.6534 | 0.0087 | -9.9 0.9 | -9.9 | 0.7    |          |         |
| MATH | 5 189745 0 | B.1.2.1   | 2 126268 | 0.69  | 0.07 | 0.16 | 0.08 | 0.69 0.00 | 0.50 | -0.30 | -0.24 | -0.24 | 0.50 0.5915   | 0.0069 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 443198 0 | A.2.1.1   | 2 126268 | 0.47  | 0.02 | ).47 | 0.30 | 0.21 0.00 | 0.52 | -0.15 | 0.52  | -0.32 | -0.22 1.7276  | 0.0065 | -9.9 0.9 | -9.9 | 0.9    |          |         |
| MATH | 5 299593 0 | B.1.2.2   | 2 126268 | 0.44  | 0.28 |      | 0.20 | 0.07 0.00 |      | 0.08  | 0.26  | -0.30 | -0.17 1.9675  | 0.0066 | 9.9 1.3  | 9.9  | 1.4    |          |         |
| MATH | 5 402845 0 |           | 2 126268 |       |      | _    | 0.07 | 0.64 0.00 |      | -0.26 | -0.27 | -0.23 | 0.51 0.8514   | 0.0067 | -9.9 0.9 | -9.9 | 0.9    | <u> </u> | $\perp$ |
| MATH | 5 208441 0 |           | 2 126268 |       |      |      | 0.63 | 0.15 0.00 |      | -0.11 | -0.25 | 0.32  | -0.14 0.8924  | 0.0067 | 9.9 1.2  | 9.9  | 1.3    | <u> </u> | $\perp$ |
| MATH | 5 811767 0 |           | 2 126268 |       |      |      | 0.50 | 0.05 0.00 |      | -0.27 | -0.20 | 0.45  | -0.12 1.6583  | 0.0065 | 7.2 1.0  | 9.9  | 1.1    | <b>↓</b> | $\perp$ |
| MATH | 5 543140 0 |           | 2 126268 |       |      |      | 0.42 | 0.12 0.00 |      | -0.36 | -0.21 | 0.51  | -0.05 2.1493  | 0.0066 | -9.9 0.9 | -9.9 | 1.0    | <u> </u> | $\perp$ |
| MATH | 5 516108 0 | D.1.1.1   | 1 126268 |       |      |      | 0.08 | 0.68 0.00 |      | -0.29 | -0.20 | -0.22 | 0.47 0.5822   | 0.0069 | -5.3 1.0 | -4.1 | 1.0    | ↓        |         |
| MATH | 5 371751 1 | A-F.1.1.1 | 2 14390  |       |      |      | 0.65 | 0.05 0.0  | 0.41 | -0.24 | -0.21 | 0.41  | -0.17 0.7312  | 0.0199 | 6.6 1.1  |      | 1.0 A+ | A+       | A+      |
| MATH | 5 917077 1 | B-O.1.1.2 | 2 14390  |       |      |      | 0.56 | 0.13 0.00 |      | -0.24 | -0.15 | 0.31  | -0.05 1.2217  | 0.0193 | 9.9 1.2  |      | 1.3 A+ | A+       | A-      |
| MATH | 5 893160 1 | C-G.2.1.1 | 1 14390  |       |      |      | 0.38 | 0.11 0.00 |      | 0.05  | -0.14 | 0.15  | -0.22 2.1749  | 0.0197 | 9.9 1.4  | 9.9  | 1.7 A- | A+       | A-      |
| MATH | 5 977525 1 | A-T.2.1.1 | 2 14390  |       |      |      | 0.11 | 0.11 0.00 |      | -0.28 | 0.51  | -0.21 | -0.23 1.1931  | 0.0193 | -7.5 0.9 | -7.3 | 0.9 A- | A+       | A+      |
| MATH | 5 908988 1 | A-T.1.1   | 2 14390  |       |      | _    | 0.30 | 0.22 0.00 |      | 0.05  | -0.05 | -0.08 | 0.09 2.8042   | 0.0211 | 9.9 1.4  | 9.9  | 2.2 A- | A+       | A+      |
| MATH | 5 885941 1 | A-F.2.1.3 | 2 14390  |       |      |      | 0.35 | 0.17 0.00 |      | -0.15 | -0.07 | 0.12  | 0.10 3.5557   | 0.0244 | 9.9 1.3  | 9.9  | 2.2 A- | A+       | A+      |
| MATH | 5 450441 1 | D-M.1.1.1 | 2 14390  |       |      |      | 0.14 | 0.06 0.00 |      | 0.31  | -0.13 | -0.13 | -0.21 1.4626  | 0.0192 | 9.9 1.2  | 9.9  | 1.2 A- | A-       | A-      |
| MATH | 5 261464 1 | D-M.2.1.2 | 2 14390  | 0.47  |      |      | 0.12 | 0.10 0.00 |      | 0.03  | 0.24  | -0.24 | -0.18 1.6945  | 0.0192 | 9.9 1.3  | 9.9  | 1.4 A+ | A-       | A-      |
| MATH | 5 779991 1 | A-T.2     | 2 14390  | 0.1_0 |      |      | 0.31 | 0.25 0.00 | 0.19 | -0.04 | -0.08 | -0.07 | 0.19 2.9624   | 0.0217 | 9.9 1.2  | 9.9  | 1.8 A- | A-       | A-      |
| MATH | 5 520789 1 | A-F.1     | 2 14390  | 0.35  | 0.24 | ).19 | 0.22 | 0.35 0.00 | 0.34 | -0.09 | -0.21 | -0.09 | 0.34 2.3527   | 0.0200 | 8.4 1.1  | 9.9  | 1.3 A+ | A+       | A+      |

| MATH         | 5 452226             | 1 C-G.1                    | 2 14390            | 0.43 0.            | 22 0.12 | 0.23 | 0.43 0.00              | 0.19  | -0.02          | -0.17          | -0.07          | 0.19 1.905                 | 7 0.0194 | 1 9.9 | .4 9.               | 3 1 4 | 5 A+         | A-       | A-       |
|--------------|----------------------|----------------------------|--------------------|--------------------|---------|------|------------------------|-------|----------------|----------------|----------------|----------------------------|----------|-------|---------------------|-------|--------------|----------|----------|
| MATH         | 5 347871             | 1 B-O.2.1                  | 2 14390            | 0.43 0.            |         |      | 0.43 0.00              | 0.19  | -0.02          | -0.17          | -0.07          | 0.19 1.903                 |          |       | .1 9.               |       | 2 A+         | A-       | A+       |
| MATH         | 5 672459             | 2 C-G.2.1.1                | 2 14012            | 0.57 0.            |         | 0.08 | 0.36 0.00              | 0.37  | -0.34          | 0.31           | -0.18          | -0.10 1.213                |          |       | .2 9.               |       | 3 A-         | A-       | A+       |
| MATH         | 5 799232             | 2 A-F.1.1.1                | 2 14012            | 0.57 0.            | _       | 0.13 | 0.13 0.01              | 0.31  | -0.16          | -0.20          | 0.37           | -0.16 1.561                |          |       | .1 9.               | _     | _            | +        |          |
| MATH         | 5 972102             | 2 A-F.1.1.1<br>2 A-T.1.1.2 | 2 14012            | 0.31 0.            |         | 0.31 | 0.13 0.01              | 0.37  | -0.14          | 0.29           | -0.14          | -0.16 1.361                |          |       | .2 9.               |       | 2 A+<br>4 A- | A-<br>A- | A-       |
|              |                      |                            |                    |                    |         |      |                        |       |                |                |                |                            |          |       | .2 9.               |       | 4 A-         | _        | A+       |
| MATH         |                      | 2 A-F.1                    | 2 14012            | 0.37 0.            | _       | 0.37 | 0.10                   | 0.27  | -0.16          | -0.12          | 0.27           | -0.04 2.300<br>0.47 1.579  |          |       | .0 -0.              |       | ) A-         | A+       | A+       |
| MATH         | 3 107707             | 2 A-T.2.1.1                | 2 14012            | 0.50 0.            | _       | 0.15 | 0.50 0.00<br>0.54 0.00 | 0.47  | -0.10          | -0.24          | -0.31          | 0117 -1017                 |          |       | .0 -0.              |       |              | A-       | A-       |
| MATH         | 5 342935             | 2 A-F.2.1.2                | 1 14012            | 0.27 0.            |         | 0.11 | 0.0 . 0.00             | 0.20  | -0.13          | 0.20           | -0.13          | -0.03 2.911                |          | 9.9   |                     |       | 8 A-         | A-       | A-       |
| MATH         | 5 892071             | 2 A-F.2.1.4                | 2 14012            | 0.43 0.            |         | 0.29 | 0.43 0.00              | 0.38  | -0.14          | -0.21          | -0.15          | 0.38 1.995                 |          |       | .1 9.               |       | 2 A-         | A+       | A+       |
| MATH         | 5 751543             | 2 B-O.1.1.1                | 1 14012            | 0.26 0.            |         | 0.26 | 0.15 0.00              | 0.03  | 0.11           | -0.05          | 0.03           | -0.13 3.002                |          |       |                     |       | 4 A-         | A+       | A-       |
| MATH         | 5 155551             | 2 C-G.1.1.2<br>2 B-O.2.1.1 | 2 14012            | 0.64 0.            |         | 0.10 | 0.13 0.00              | 0.36  | 0.36           | -0.22          | -0.15          | -0.15 0.837                |          |       | .1 9.               |       | 2 A+         | A-       | A+       |
| MATH         | 0 12/000             |                            | 2 14012<br>2 14012 | 0.40 0.<br>0.44 0. |         | 0.22 | 0.40 0.00<br>0.14 0.00 | 0.38  | -0.13<br>-0.28 | -0.22          | -0.11          | 0.38 2.122                 | _        |       | .1 9.               |       |              | A-       | A-       |
| MATH         |                      | 2 D-M.1.1.1                |                    |                    |         | 0.44 |                        |       |                | -0.07          | 0.41           | -0.16 1.931                |          |       |                     |       | _            | A-       | A-       |
| MATH         | 5 132987             | 2 D-M.2.1.1                | 2 14012            | 0.55 0.            |         | 0.12 | 0.55 0.00              | 0.38  | -0.23          | -0.15          | -0.17          | 0.38 1.328                 |          |       | .1 9.               |       | 2 A+         | A-       | Α-       |
| MATH         | 5 425225             | 3 A-F.1.1.1                | 2 14019            | 0.74 0.            |         | 0.74 | 0.14 0.00              | 0.45  | -0.23          | -0.24          | 0.45           | -0.25 0.260                |          |       | .0 -5.              |       | 9 A+         | A+       | A+       |
| MATH         | 5 685276             | 3 C-G.2.1.1                | 2 14019            | 0.64 0.            |         | 0.13 | 0.09 0.00              | 0.28  | 0.28           | -0.12          | -0.13          | -0.18 0.860                |          |       | 1.2 9.              |       | 4 A+         | A-       | A-       |
| MATH         | 5 910289             | 3 A-F.2.1.2                | 2 14019            | 0.16 0.            |         | 0.21 | 0.27 0.00              | 0.04  | 0.04           | 0.02           | -0.08          | 0.02 3.716                 |          | 9.9   | 1.3 9.              |       |              | A-       | A-       |
| MATH         |                      | 3 A-T.1.1.1                | 1 14019            | 0.43 0.            |         |      | 0.15 0.01              | 0.35  | -0.13          | -0.25          | 0.35           | -0.04 2.021                |          |       | 1.1 9.              |       | 2 A-         | A-       | A-       |
| MATH         | 5 844920             | 3 A-T.2.1.2                | 1 14019            | 0.77 0.            |         | 0.08 | 0.11 0.00              | 0.58  | -0.18          | 0.58           | -0.31          | -0.40 0.048                |          |       | ).8 -9.             | _     | 5 A+         | A-       | A-       |
| MATH         | 5 911604             | 3 A-F.2                    | 2 14019            | 0.10 0.            |         | 0.59 | 0.18 0.00              | 0.00  | -0.12          | 0.00           | 0.24           | -0.20 4.371                | _        | 9.9   | 1.2 9.              | _     | 5 B-         | A-       | A-       |
| MATH         | 5 372878             | 3 B-O.2.1                  | 2 14019            | 0.41 0.            |         | 0.36 | 0.12 0.00              | 0.35  | -0.18          | 0.35           | 0.02           | -0.37 2.099                |          |       | .2 9.               |       | 2 A+         | A-       | A-       |
| MATH         | 5 667797             | 3 D-M.2.1.1                | 2 14019            | 0.28 0.            |         | 0.46 | 0.11 0.00              | 0.25  | 0.25           | -0.12          | -0.05          | -0.14 2.839                |          | 9.9   | 1.2 9.              | 7     | 5 A-         | A-       | A-       |
| MATH         | 5 411707             | 3 D-M.3                    | 2 14019            | 0.28 0.            |         |      | 0.20 0.00              | 0.09  | 0.09           | 0.03           | -0.12          | -0.02 2.883                |          |       | 1.4 9.              |       | ) A-         | A-       | A-       |
| MATH         | 0 2107.0             | 3 A-T.1.1.5                | 2 14019            | 0.55 0.            |         | 0.08 | 0.55 0.00              | 0.54  | -0.10          | -0.40          | -0.24          | 0.54 1.364                 | _        |       | ).9 -9.             |       | 9 A+         | A-       | A-       |
| MATH         | 5 775728<br>5 351458 | 3 C-G.2                    | 1 14019            | 0.50 0.            |         |      | 0.50 0.00              | 0.41  | -0.33          | -0.15          | -0.05          | 0.41 1.614                 |          |       | .1 8.               |       |              | A-       | A-       |
| MATH         | 0 001.00             | 3 C-G.1                    | 2 14019            | 0.26 0.            |         |      | 0.29 0.00              | 0.19  | -0.10          | 0.19           | -0.09          | -0.01 2.986                |          |       | 1.2 9.              |       | 9 A-         | A-       | A-       |
| MATH         | 5 309375             | 4 B-O.1.1.2<br>4 C-G.2.1.1 | 2 14028            | 0.74 0.            |         | 0.10 | 0.07 0.00              | 0.48  | 0.48           | -0.25          | -0.27          | -0.22 0.212                |          |       | .0 -8.              |       | 8 A+         | A-       | A-       |
| MATH         | 5 886968             |                            | 2 14028            | 0.36 0.            |         | 0.30 | 0.36 0.00              | 0.32  | -0.15          | -0.25          | 0.01           | 0.32 2.425                 |          |       | 1.1 9.1<br>1.9 -9.1 |       | 4 A+         | A+       | A-       |
| MATH         | 5 986478             | 4 B-O.2.1.1                | 2 14028            | 0.70 0.            |         | 0.70 | 0.05 0.00              | 0.56  | -0.40          | -0.25          | 0.56           | -0.18 0.477                |          |       |                     |       |              | A-       | A-       |
| MATH         | 5 926676             | 4 A-T.1.1.2                | 1 14028            | 0.47 0.            |         | 0.47 | 0.08 0.00              | 0.19  | -0.17          | 0.04           | 0.19           | -0.17 1.761                |          |       | .4 9.               | _     | 5 A-         | A-       | A-       |
| MATH         | 5 181373             | 4 A-T.2.1                  | 2 14028            | 0.51 0.            |         | 0.14 | 0.11 0.00              | 0.33  | 0.33           | -0.09          | -0.18          | -0.19 1.553                |          |       | 1.2 9.              |       |              | A-       | A-       |
| MATH         | 0 000.000            | 4 A-F.1.1.1                | 1 14028            | 0.38 0.            | _       | 0.12 | 0.38 0.00              | 0.35  | -0.17          | -0.11          | -0.13          | 0.35 2.268                 | _        |       | .1 9.               | _     | 2 A+         | A+       | A+       |
| MATH         | 0 00.000             | 4 A-F.2.1.2                | 2 14028            | 0.20 0.            |         | 0.18 | 0.20 0.00              | 0.04  | 0.06           | -0.05          | -0.05          | 0.04 3.420                 |          |       | 1.3 9.              | _     | 5 A-         | A+       | A-       |
| MATH         | 3 220021             | 4 C-G.2.1.1                | 2 14028            | 0.35 0.            | _       | 0.18 | 0.35 0.00              | 0.19  | -0.04          | -0.06          | -0.13          | 0.19 2.428                 |          |       | 1.3 9.              |       | 5 A+         | A-       | A-       |
| MATH         | 5 474894             | 4 D-M.3.1                  | 2 14028            |                    | 25 0.22 | 0.15 | 0.38 0.00              | -0.08 | -0.25          | -0.08          | -0.13          | 0.38 3.259                 |          |       | 1.6 9.              |       | 8 A-         | A-       | A-       |
| MATH         | 5 786299<br>5 706967 | 4 D-M.1.1.1<br>4 A-F.2.1.4 | 2 14028            | 0.40 0.            |         | 0.40 | 0.31 0.00              | 0.27  | -0.17<br>0.14  | -0.12          | 0.27           | -0.08 2.115<br>-0.09 2.389 |          |       | .2 9.               |       |              | A-       | A-       |
| MATH         | 5 136361             | 4 A-F.2.1.4<br>4 B-O.1.1   | 2 14028<br>1 14028 | 0.35 0.<br>0.50 0. | _       | 0.41 | 0.11 0.00<br>0.16 0.01 | 0.14  | 0.14           | -0.09<br>-0.01 | -0.02<br>-0.19 | -0.09 2.389<br>-0.10 1.601 |          |       | .3 9.               |       | 8 A-<br>5 A+ | A+       | A+<br>A- |
| MATH<br>MATH |                      | 5 A-F.1.1.1                | 2 13972            | 0.50 0.            |         |      | 0.16 0.01              | 0.22  | 0.22           | -0.01          | -0.19          | -0.10 1.601<br>-0.03 1.551 |          |       | .1 9.               |       | 2 A+         | A-       | A-<br>A+ |
| MATH         |                      | 5 A-F.1.1.1<br>5 A-T.1.1.3 | 1 13972            | 0.52 0.            |         | 0.11 | 0.23 0.00              | 0.54  | -0.21          | -0.26          | -0.26          | 0.54 1.538                 |          |       | ).9 -8.             |       |              | A-       | A+<br>A- |
| MATH         | 2 200,57             |                            | 1 13972            | 0.52 0.            |         | 0.33 | 0.32 0.00              | 0.54  | -0.21          | 0.54           | -0.37          | -0.37 1.070                | 0.027    |       | ).9 -8.<br>).9 -9.  |       | 9 A-         | A-       | A-       |
|              |                      |                            |                    |                    |         |      |                        |       |                | -0.21          | -0.18          |                            |          |       | .0 9.               |       |              |          |          |
| MATH         | 5 779291<br>5 919218 | 5 A-T.1.1.1                | 2 13972<br>2 13972 | 0.25 0.<br>0.57 0. |         | 0.50 |                        | 0.31  | -0.15<br>-0.23 |                |                | 0.31 3.104<br>-0.18 1.259  |          |       |                     |       | 5 A-<br>2 A+ | A-       | Α-       |
| MATH         | 5 405130             | 5 A-F.2<br>5 C-G.1.1.1     | 1 13972            | 0.57 0.<br>0.48 0. |         | 0.57 | 0.18 0.00<br>0.19 0.00 | 0.36  | -0.23          | -0.12<br>0.41  | -0.25          | -0.18 1.259<br>-0.09 1.757 |          |       |                     |       | _            | A-<br>A- | A-<br>A- |
| MATH         | 5 271053             | 5 B-O.1.1.2                | 2 13972            |                    |         | 0.15 |                        |       |                |                |                |                            |          |       |                     |       | 1 A-<br>2 A+ |          | -        |
| MATH         |                      |                            |                    |                    |         |      |                        | 0.38  | -0.24          | -0.17          | -0.07          |                            |          |       |                     |       |              | A+       | A+       |
| MATH         |                      | 5 C-G.2.1.1                | 1 13972            | 0.61 0.            |         |      | 0.12 0.00              | 0.35  | -0.21          | -0.11          | 0.35           | -0.20 1.026                |          |       | .2 9.               |       | 3 A+         | A-       | A-       |
| MATH         | 5 250905             | 5 D-M.2.1.2                | 2 13972            | 0.47 0.            |         | 0.30 | 0.47 0.00              | 0.49  | -0.11          | -0.23          | -0.29          | 0.49 1.766                 |          |       | 1.0 -1.             |       | O A-         | A-       | A-       |
| MATH         | 0 000,00             | 5 D-M.3.1.2                | 2 13972            | 0.39 0.            |         | _    | 0.14 0.01              | 0.13  | 0.13           | -0.05          | -0.03          | -0.08 2.203                |          |       | .4 9.               |       | 7 A+         | A+       | A+       |
| MATH         |                      | 5 A-T.2.1.1                | 2 13972            | 0.32 0.            |         | 0.18 | 0.32 0.00              | 0.25  | -0.01          | -0.18          | -0.10          | 0.25 2.610                 |          |       | 1.2 9.              |       |              | A-       | A-       |
| MATH         |                      | 5 A-F.2.1.2                | 2 13972            | 0.14 0.            |         | 0.28 | 0.17 0.00              | -0.10 | -0.10          | 0.26           | -0.08          | -0.16 4.006                |          |       | .4 9.               | _     | 9 A-         | A+       | A-       |
| MATH         | 5 676151             | 6 B-O.1.1.1                | 2 13947            | 0.55 0.            | 55 0.12 | 0.22 | 0.11 0.00              | 0.32  | 0.32           | -0.17          | -0.04          | -0.27 1.380                | 2 0.0197 | 9.9   | .2 9.               | 9 1   | 3 A+         | A+       | A+       |

| MATH | 5 272867 | 6  | C-G.2.1.1  | 1 | 13947  | 0.64 0.17 | 0.64 | 0.07 | 0.11 0.00 | 0.33 | -0.07 | 0.33          | -0.25          | -0.22 0.8473  | 0.0203 9.9 1.2 9.9 1.3 A+ A- A-   |
|------|----------|----|------------|---|--------|-----------|------|------|-----------|------|-------|---------------|----------------|---------------|-----------------------------------|
| MATH | 5 259159 | 6  |            | 2 | 13947  | 0.53 0.13 | 0.53 | 0.07 | 0.11 0.00 |      | -0.07 | 0.33          | -0.23          | -0.22 0.8473  | 0.0197 -3.9 1.0 -3.5 1.0 A- A- A- |
| MATH | 5 729985 | 6  |            | 2 | 13947  | 0.33 0.13 | 0.33 | 0.19 | 0.15 0.00 |      | 0.01  | -0.11         | 0.18           | -0.23 1.4374  | 0.0253 9.9 1.4 9.9 3.1 A- A- A-   |
|      | 5 410152 |    |            | 2 | 13947  | 0.17 0.17 | 0.17 | 0.42 | 0.23 0.00 |      |       |               |                |               |                                   |
| MATH |          | 6  |            |   |        |           |      |      |           |      | 0.45  | -0.16<br>0.06 | -0.31<br>-0.08 |               |                                   |
| MATH | 5 351821 |    |            | 1 | 13947  | 0.22 0.37 | 0.22 | 0.16 |           |      |       |               |                |               |                                   |
| MATH | 5 568227 | 6  |            | 1 | 13947  | 01.0 0.== | 0,   |      | 0.46 0.00 | _    | -0.25 | -0.18         | -0.14          | 01.10 -1.00-1 | 0.0000                            |
| MATH | 5 958194 | 6  |            | 2 | 13947  | 0.58 0.58 | 0.09 | 0.05 | 0.28 0.00 | _    | 0.46  | -0.26         | -0.24          | -0.22 1.2011  | 0.0130 2.2 1.0 0.2 1.0 1.1 1.1    |
| MATH | 5 488762 | 6  |            | 2 | 13947  | 0.44 0.25 | 0.17 | 0.44 | 0.13 0.00 |      | -0.14 | -0.28         | 0.37           | -0.06 1.9609  | 0.0198 9.9 1.1 9.9 1.2 A- A- A-   |
| MATH | 5 132229 | 6  | 0 0        | 2 | 13947  | 0.46 0.12 | 0.28 | 0.14 | 0.46 0.00 |      | -0.24 | 0.10          | -0.31          | 0.29 1.8459   | 0.0197 9.9 1.3 9.9 1.4 A+ A- A-   |
| MATH | 5 740845 | 6  |            | 2 | 13947  | 0.33 0.42 | 0.13 | 0.33 | 0.12 0.00 |      | -0.19 | -0.22         | 0.37           | -0.02 2.6006  | 0.0208 2.6 1.0 9.9 1.3 A+ A- A-   |
| MATH | 5 530757 | 6  |            | 2 | 13947  | 0.28 0.48 | 0.17 | 0.07 | 0.28 0.0  |      | -0.29 | 0.00          | -0.09          | 0.37 2.9035   | 0.0216 1.4 1.0 9.9 1.3 A+ A- A+   |
| MATH | 5 746127 | 7  | 0.2.1.1    | 2 | 13977  | 0.46 0.23 | 0.15 | 0.16 | 0.46 0.00 |      | -0.16 | -0.22         | -0.19          | 0.43 1.8778   | 0.0196 3.3 1.0 4.8 1.1 A+ A- A+   |
| MATH | 5 712211 |    | A-T.2.1.3  | 1 | 13977  | 0.70 0.09 | 0.70 | 0.10 | 0.11 0.00 | 0.00 | -0.22 | 0.52          | -0.16          | -0.41 0.5066  | 0.0210 -9.7 0.9 -5.4 0.9 A+ A- A- |
| MATH | 5 199445 | 7  | 11 1111110 | 1 | 13977  | 0.50 0.50 | 0.14 | 0.19 | 0.17 0.00 |      | 0.36  | -0.16         | -0.11          | -0.22 1.6406  | 0.0195 9.9 1.1 9.9 1.2 A+ A- A-   |
| MATH | 5 588917 | -7 | A-T.2.1.2  | 2 | 13977  | 0.34 0.14 | 0.38 | 0.34 | 0.14 0.00 |      | -0.02 | 0.02          | 0.14           | -0.20 2.5319  | 0.0205 9.9 1.3 9.9 1.8 A- A- A-   |
| MATH | 5 598093 | 7  | A-F.2.1.2  | 1 | 13977  | 0.60 0.60 | 0.14 | 0.15 | 0.11 0.00 |      | 0.24  | -0.15         | -0.12          | -0.08 1.0839  | 0.0198 9.9 1.3 9.9 1.4 A+ A- A-   |
| MATH | 5 723716 | 7  | A-F.1.1.1  | 2 | 13977  | 0.29 0.51 | 0.29 | 0.13 | 0.07 0.00 |      | -0.19 | 0.23          | -0.07          | 0.05 2.8231   | 0.0212 9.9 1.2 9.9 1.7 A- A- A-   |
| MATH | 5 399834 | 7  | A-F.2.1.4  | 1 | 13977  | 0.50 0.50 | 0.10 | 0.32 | 0.08 0.00 |      | 0.46  | -0.21         | -0.28          | -0.14 1.6598  | 0.0195 -1.8 1.0 -0.6 1.0 A- A- A- |
| MATH | 5 110971 | 7  | B-O.1.1.2  | 2 | 13977  | 0.39 0.18 | 0.28 | 0.39 | 0.14 0.00 |      | -0.18 | -0.04         | 0.22           | -0.06 2.2185  | 0.0199 9.9 1.3 9.9 1.5 A- A- A-   |
| MATH | 5 473301 | 7  | B-O.2.1.2  | 2 | 13977  | 0.62 0.08 | 0.62 | 0.16 | 0.14 0.00 |      | -0.20 | 0.38          | -0.17          | -0.19 1.0009  | 0.0200 9.9 1.1 6.5 1.1 A- A+ A-   |
| MATH | 5 137783 | 7  | D-M.3.1    | 2 | 13977  | 0.37 0.16 | 0.37 | 0.23 | 0.24 0.00 | _    | -0.05 | 0.23          | -0.03          | -0.19 2.3531  | 0.0202 9.9 1.3 9.9 1.5 A- A- A-   |
| MATH | 5 158667 | 7  | C-G.2.1.1  | 2 | 13977  | 0.44 0.14 | 0.15 | 0.44 | 0.27 0.00 | _    | -0.09 | -0.14         | 0.26           | -0.11 1.9701  | 0.0197 9.9 1.3 9.9 1.4 A+ A- A-   |
| MATH | 5 609467 | 7  | C-G.1.1    | 2 | 13977  | 0.54 0.54 | 0.09 | 0.11 | 0.26 0.0  | 0.07 | 0.39  | -0.24         | -0.23          | -0.12 1.4307  | 0.0196 9.9 1.1 9.9 1.1 A+ A- A-   |
| MATH | 5 894633 | 8  |            | 2 | 13903  | 0.61 0.10 | 0.61 | 0.22 | 0.07 0.0  |      | -0.24 | 0.51          | -0.26          | -0.28 1.0066  | 0.0201 -6.1 1.0 -6.0 0.9 A- A- A- |
| MATH | 5 323536 | 8  |            | 2 | 13903  | 0.35 0.17 | 0.24 | 0.24 | 0.35 0.00 |      | -0.15 | -0.05         | -0.19          | 0.33 2.4688   | 0.0206 9.9 1.1 9.9 1.4 A+ A+ A-   |
| MATH | 5 282489 | 8  |            | 2 | 13903  | 0.61 0.19 | 0.61 | 0.06 | 0.14 0.00 |      | -0.25 | 0.48          | -0.26          | -0.21 1.0010  | 0.0201 -0.8 1.0 -2.4 1.0 A+ A- A- |
| MATH | 5 658345 | 8  | A-T.2.1.2  | 2 | 13903  | 0.41 0.23 | 0.41 | 0.14 | 0.21 0.0  |      | -0.06 | 0.33          | -0.25          | -0.12 2.0999  | 0.0200 9.9 1.1 9.9 1.3 A+ A- A-   |
| MATH | 5 442542 | 8  |            | 1 | 13903  | 0.65 0.16 | 0.65 | 0.13 | 0.06 0.00 |      | -0.23 | 0.46          | -0.27          | -0.19 0.7856  | 0.0204                            |
| MATH | 5 328692 | 8  | B-O.1.1.1  | 1 | 13903  | 0.50 0.13 | 0.08 | 0.50 | 0.29 0.00 |      | -0.26 | -0.24         | 0.17           | 0.15 1.6144   | 0.0197 9.9 1.4 9.9 1.6 A+ A+ A+   |
| MATH | 5 336025 | 8  |            | 2 | 13903  | 0.64 0.15 | 0.14 | 0.64 | 0.08 0.00 |      | -0.30 | -0.21         | 0.47           | -0.18 0.8605  | 0.0203 0.1 1.0 -1.0 1.0 A+ A- A-  |
| MATH | 5 932292 | 8  |            | 1 | 13903  | 0.73 0.06 | 0.03 | 0.73 | 0.17 0.00 |      | -0.23 | -0.20         | 0.47           | -0.31 0.2878  | 0.0216 -3.1 1.0 -5.4 0.9 A+ A- A- |
| MATH | 5 283189 | 8  |            | 2 | 13903  | 0.40 0.40 | 0.27 | 0.15 | 0.18 0.00 |      | 0.14  | 0.00          | -0.11          | -0.07 2.1768  | 0.0201 9.9 1.5 9.9 1.7 A+ A- A-   |
| MATH | 5 304385 | 8  |            | 2 | 13903  | 0.39 0.19 | 0.26 | 0.16 | 0.39 0.00 |      | -0.17 | -0.05         | -0.08          | 0.24 2.2079   | 0.0201 9.9 1.3 9.9 1.5 A+ A- A+   |
| MATH | 5 125638 | 8  |            | 2 | 13903  | 0.34 0.34 | 0.34 | 0.14 | 0.18 0.00 | _    | -0.11 | 0.23          | 0.01           | -0.15 2.5051  | 0.0206 9.9 1.3 9.9 1.6 A+ A- A-   |
| MATH | 5 572385 | 8  | A-F.2.1.4  | 2 | 13903  | 0.32 0.30 | 0.20 | 0.18 | 0.32 0.00 |      | 0.07  | -0.11         | -0.22          | 0.21 2.5979   | 0.0208 9.9 1.2 9.9 1.8 A+ A- A-   |
| MATH | 5 957672 | 9  | 11 1121112 | 1 | 13994  | 0.52 0.07 | 0.52 | 0.24 | 0.17 0.00 |      | -0.17 | 0.46          | -0.13          | -0.34 1.5694  | 0.0196 1.1 1.0 1.6 1.0 A- A- A-   |
| MATH | 5 704106 | 9  | B 0.11.1.1 | 2 | 13994  | 0.65 0.10 | 0.13 | 0.12 | 0.65 0.00 | 0.00 | -0.16 | -0.11         | -0.21          | 0.32 0.8151   | 0.0203 9.9 1.2 9.9 1.3 A+ A- A+   |
| MATH | 5 860285 | 9  |            | 2 | 13994  | 0.37 0.19 | 0.22 | 0.22 | 0.37 0.00 |      | -0.24 | -0.15         | -0.17          | 0.47 2.3659   | 0.0202 -7.8 0.9 -1.0 1.0 A+ A- A- |
| MATH | 5 553508 | 9  | D-M.1.1    | 2 | 13994  | 0.08 0.06 | 0.61 | 0.25 | 0.08 0.00 |      | -0.16 | -0.12         | 0.20           | 0.05 4.7146   | 0.0333 6.3 1.2 9.9 3.6 A- A+ A+   |
| MATH | 5 155587 | 9  | D 0.11.1.2 | 1 | 13994  | 0.59 0.59 | 0.09 | 0.16 | 0.16 0.00 |      | 0.29  | -0.19         | -0.13          | -0.11 1.1492  | 0.0198 9.9 1.2 9.9 1.3 A+ A+ A-   |
| MATH | 5 832567 | 9  |            | 2 | 13994  | 0.27 0.34 | 0.14 | 0.26 | 0.27 0.00 | -    | -0.04 | -0.14         | -0.13          | 0.28 2.9716   | 0.0217 7.5 1.1 9.9 1.6 A- A+ A+   |
| MATH | 5 854789 | 9  |            | 2 | 13994  | 0.71 0.10 | 0.09 | 0.10 | 0.71 0.00 |      | -0.31 | -0.27         | -0.25          | 0.54 0.4424   | 0.0212 -9.9 0.9 -9.8 0.8 A+ A+ A- |
| MATH | 5 923877 | 9  | A-F.2.1.3  | 1 | 13994  | 0.62 0.14 | 0.62 | 0.19 | 0.05 0.00 |      | -0.22 | 0.44          | -0.29          | -0.13 0.9569  | 0.0201 3.5 1.0 -0.9 1.0 A+ A- A+  |
| MATH | 5 928140 | 9  |            | 2 | 13994  | 0.16 0.18 | 0.37 | 0.28 | 0.16 0.0  |      | -0.11 | 0.16          | -0.08          | 0.02 3.7842   | 0.0255 9.9 1.3 9.9 3.1 A- A+ A+   |
| MATH | 5 124830 | 9  | D 0.2.1.2  | 2 | 13994  | 0.16 0.55 | 0.17 | 0.12 | 0.16 0.00 | _    | 0.06  | -0.08         | -0.06          | 0.06 3.7972   | 0.0255 9.9 1.2 9.9 3.0 A- A+ A+   |
| MATH | 5 972289 | 9  | 0 0        | 2 | 13994  | 0.25 0.25 | 0.21 | 0.23 | 0.31 0.00 |      | 0.04  | -0.10         | -0.05          | 0.10 3.0778   | 0.0221 9.9 1.5 9.9 2.3 A- A- A+   |
| MATH | 5 618917 | 9  |            | 2 | 13994  | 0.41 0.41 | 0.19 | 0.29 | 0.11 0.00 |      | 0.41  | -0.12         | -0.21          | -0.17 2.1476  | 0.0199 3.3 1.0 9.9 1.2 A- A+ A-   |
| MATH | 6 839284 | 0  |            | 1 | 124870 | 0.67 0.27 | 0.01 | 0.05 | 0.67 0.00 | _    | -0.55 | -0.13         | -0.15          | 0.62 0.4864   | 0.0068 -9.9 0.8 -9.9 0.7          |
| MATH | 6 597296 | 0  | 11111011   | 2 | 12.070 | 0.54 0.12 | 0.54 | 0.12 | 0.21 0.00 |      | -0.20 | 0.41          | -0.20          | -0.18 1.1991  | 0.0065 9.9 1.1 9.9 1.1            |
| MATH | 6 416987 | 0  |            | 2 | 12.070 | 0.72 0.16 | 0.08 | 0.72 | 0.04 0.00 |      | -0.28 | -0.19         | 0.46           | -0.24 0.0635  | 0.0071 -3.2 1.0 -3.0 1.0          |
| MATH | 6 980667 | 0  | D.2.2.1    | 2 | 124870 | 0.78 0.78 | 0.13 | 0.06 | 0.03 0.00 | 0.49 | 0.49  | -0.28         | -0.32          | -0.20 -0.2629 | 0.0075   -9.9   0.9   -9.9   0.8  |

| MATH         | 6 880407 0               | A.1.3.2            | 2 124870 0.6                 | 9 0.22 | 0.05 | 0.03 | 0.69 0.00              | 0.35 | -0.18         | -0.24         | -0.17          | 0.35 0.0553                  | 0.0071 9.9 1.2 9.9 1.3  |
|--------------|--------------------------|--------------------|------------------------------|--------|------|------|------------------------|------|---------------|---------------|----------------|------------------------------|---|
| MATH         | 6 200581 0               | C.3.1.1            | 2 124870 0.8                 |        | 0.87 | 0.01 | 0.01 0.00              | 0.44 | -0.41         | 0.44          | -0.11          | -0.10 -1.1242                | 0.0092 -9.9 0.9 -9.9 0.7                                      |
| MATH         | 6 211343 0               | A.1.1.3            | 1 124870 0.8                 | 1 0.08 | 0.06 | 0.81 | 0.06 0.00              | 0.44 | -0.24         | -0.22         | 0.44           | -0.25 -0.5833                | 0.0081 -7.1 1.0 -9.9 0.9                                      |
| MATH         | 6 894568 0               | C.3.1.1            | 1 124870 0.8                 | 9 0.89 | 0.01 | 0.01 | 0.10 0.00              | 0.42 | 0.42          | -0.14         | -0.14          | -0.37 -1.2788                | 0.0097 -9.8 0.9 -9.9 0.7                                      |
| MATH         | 6 840065 0               | E.2.1.1            | 2 124870 0.7                 | 5 0.06 | 0.75 | 0.05 | 0.13 0.00              | 0.37 | -0.13         | 0.37          | -0.17          | -0.26 -0.1228                | 0.0074 9.9 1.1 9.9 1.1  |
| MATH         | 6 900690 0               | D.2.2.1            | 1 124870 0.8                 | 0.05   | 0.80 | 0.08 | 0.07 0.00              | 0.47 | -0.22         | 0.47          | -0.22          | -0.32 -0.3690                | 0.0077 -9.9 0.9 -9.9 0.8                                      |
| MATH         | 6 647268 0               | E.2.1.1            | 2 124870 0.7                 | 5 0.16 | 0.06 | 0.75 | 0.02 0.00              | 0.41 | -0.29         | -0.16         | 0.41           | -0.20 -0.1613                | 0.0074 7.0 1.0 9.9 1.1  |
| MATH         | 6 719709 0               | E.2.1.1            | 1 124870 0.7                 | 2 0.72 | 0.12 | 0.07 | 0.09 0.00              | 0.56 | 0.56          | -0.35         | -0.27          | -0.22 0.0730                 | 0.0071 -9.9 0.9 -9.9 0.8                                      |
| MATH         | 6 839487 0               | E.2.1.1            | 2 124870 0.6                 | 2 0.07 | 0.23 | 0.08 | 0.62 0.00              | 0.55 | -0.19         | -0.43         | -0.13          | 0.55 0.6328                  | 0.0067 -9.9 0.9 -9.9 0.8                                      |
| MATH         | 6 964620 0               | A.2.1.1            | 1 124870 0.5                 | 6 0.56 | 0.15 | 0.18 | 0.11 0.00              | 0.43 | 0.43          | -0.14         | -0.24          | -0.21 1.1203                 | 0.0065 9.9 1.0 6.5 1.0  |
| MATH         | 6 686081 0               | A.1.3.1            | 1 124870 0.7                 | 1 0.07 | 0.16 | 0.71 | 0.05 0.00              | 0.40 | -0.21         | -0.19         | 0.40           | -0.24 0.2070                 | 0.0070 9.9 1.0 8.6 1.1  |
| MATH         | 6 111714 0               | A.1.3.2            | 1 124870 0.5                 | 9 0.31 | 0.59 | 0.04 | 0.05 0.00              | 0.39 | -0.25         | 0.39          | -0.16          | -0.18 0.9192                 | 0.0066 9.9 1.1 9.9 1.1  |
| MATH         | 6 824223 0               | A.1.3.1            | 1 124870 0.5                 | 6 0.07 | 0.15 | 0.56 | 0.22 0.00              | 0.43 | -0.14         | -0.26         | 0.43           | -0.20 1.1503                 | 0.0065   9.9   1.0   9.9   1.1                                |
| MATH         | 6 822711 0               | A.2.1.1            | 2 124870 0.5                 | 5 0.25 | 0.15 | 0.05 | 0.55 0.00              | 0.47 | -0.33         | -0.12         | -0.20          | 0.47 1.1638                  | 0.0065   -4.8   1.0   -5.3   1.0                              |
| MATH         | 6 649248 0               | C.3.1.1            | 1 124870 0.6                 | 9 0.27 | 0.02 | 0.02 | 0.69 0.00              | 0.37 | -0.27         | -0.13         | -0.25          | 0.37 0.3022                  | 0.0069 9.9 1.1 9.9 1.3  |
| MATH         | 6 678641 0               | A.1.1.1            | 1 124870 0.5                 | 7 0.11 | 0.57 | 0.04 | 0.28 0.00              | 0.39 | -0.22         | 0.39          | -0.21          | -0.19 0.9649                 | 0.0066 9.9 1.1 9.9 1.1  |
| MATH         | 6 731435 0               | A.1.3.1            | 2 124870 0.6                 |        | 0.12 | 0.16 | 0.11 0.00              | 0.47 | 0.47          | -0.19         | -0.21          | -0.28 0.8185                 | 0.0066 -1.6 1.0 8.5 1.0                                       |
| MATH         | 6 432635 0               | C.3.1.1            | 1 124870 0.8                 | 5 0.12 | 0.01 | 0.02 | 0.85 0.00              | 0.45 | -0.37         | -0.16         | -0.15          | 0.45 -0.9148                 | 0.0087 -9.9 0.9 -9.9 0.8                                      |
| MATH         | 6 670133 0               | D.2.1.2            | 1 124870 0.8                 |        | 0.08 | 0.04 | 0.04 0.00              | 0.50 | 0.50          | -0.32         | -0.29          | -0.21 -0.7725                | 0.0084 -9.9 0.9 -9.9 0.7                                      |
| MATH         | 6 210808 0               | D.2.2.1            | 1 124870 0.7                 |        | 0.18 | 0.06 | 0.05 0.00              | 0.36 | 0.36          | -0.16         | -0.22          | -0.22 0.2076                 | 0.0070 9.9 1.1 8.7 1.1  |
| MATH         | 6 828147 0               | A.3.2.1            | 2 124870 0.5                 |        | 0.09 | 0.12 | 0.56 0.00              | 0.50 | -0.17         | -0.29         | -0.30          | 0.50 1.0158                  | 0.0065 -9.9 0.9 -9.9 0.9                                      |
| MATH         | 6 710745 0               | D.2.2.1            | 2 124870 0.8                 |        | 0.80 | 0.05 | 0.06 0.00              | 0.43 | -0.24         | 0.43          | -0.24          | -0.22 -0.4024                | 0.0077 -9.9 1.0 -9.9 0.9                                      |
| MATH         | 6 440657 0               | E.2.1.1            | 2 124870 0.8                 |        | 0.06 | 0.07 | 0.82 0.00              | 0.38 | -0.18         | -0.27         | -0.17          | 0.38 -0.5852                 | 0.0081 -1.9 1.0 -3.5 1.0                                      |
| MATH         | 6 524263 0               | D.2.1.2            | 1 124870 0.8                 |        | 0.04 | 0.02 | 0.07 0.00              | 0.45 | 0.45          | -0.24         | -0.22          | -0.29 -1.1478                | 0.0093 -9.9 0.9 -9.9 0.7                                      |
| MATH         | 6 888950 0               | E.2.1.1            | 2 124870 0.7                 |        | 0.15 | 0.07 | 0.06 0.00              | 0.52 | 0.52          | -0.37         | -0.22          | -0.19 0.0212                 | 0.0072 -9.9 0.9 -9.9 0.8                                      |
| MATH         | 6 282166 0               | E.2.1.1            | 2 124870 0.5                 |        | 0.15 | 0.53 | 0.08 0.00              | 0.51 | -0.30         | -0.15         | 0.51           | -0.26 1.1127                 | 0.0065 -9.9 0.9 -9.9 0.9                                      |
| MATH         | 6 387053 0               | E.2.1.1            | 2 124870 0.6                 |        | 0.60 | 0.07 | 0.21 0.00              | 0.49 | -0.38         | 0.49          | -0.08          | -0.23 0.8296                 | 0.0066 -9.9 1.0 -9.9 0.9                                      |
| MATH         | 6 152587 0               | E.2.1.1            | 1 124870 0.5                 |        | 0.53 | 0.31 | 0.07 0.00              | 0.47 | -0.31         | 0.47          | -0.21          | -0.20 1.2284                 | 0.0065 -4.5 1.0 0.6 1.0                                       |
| MATH         | 6 976535 0               | E.2.1.1            | 1 124870 0.8                 |        | 0.02 | 0.85 | 0.06 0.00              | 0.28 | -0.16         | -0.12         | 0.28           | -0.17 -0.8102                | 0.0085 9.9 1.1 9.9 1.4  |
| MATH         | 6 584434 0               | D.2.2.1            | 2 124870 0.6                 |        | 0.08 | 0.11 | 0.66 0.00              | 0.55 | -0.36         | -0.19         | -0.26          | 0.55 0.4297                  | 0.0068 -9.9 0.9 -9.9 0.8                                      |
| MATH         | 6 362990 0               | C.3.1.1            | 1 124870 0.8                 |        | 0.01 | 0.11 | 0.88 0.00              | 0.41 | -0.12         | -0.12         | -0.37          | 0.41 -1.1396                 | 0.0093 -9.9 0.9 -9.9 0.7                                      |
| MATH         | 6 440139 0               | C.3.1.1            | 1 124870 0.7                 |        | 0.02 | 0.13 | 0.11 0.00              | 0.37 | 0.37          | -0.13         | -0.24          | -0.20 -0.0436                | 0.0073 9.9 1.1 9.9 1.2  |
| MATH         | 6 225357 0               | A.3.2.1            | 2 124870 0.6                 |        | 0.67 | 0.10 | 0.06 0.00              | 0.48 | -0.32         | 0.48          | -0.20          | -0.19 0.2883                 | 0.0069 -6.4 1.0 -9.9 0.9                                      |
| MATH         | 6 229425 0               | A.3.2.1            | 2 124870 0.5                 |        | 0.04 | 0.50 | 0.37 0.00              | 0.50 | -0.20         | -0.21         | 0.50           | -0.31 1.2998                 | 0.0065 -9.9 0.9 -9.9 0.9                                      |
| MATH         | 6 585634 0               | A.1.3.1            | 2 124870 0.5                 |        | 0.19 | 0.08 | 0.58 0.00              | 0.20 | -0.06         | -0.06         | -0.19          | 0.20 0.8907                  | 0.0066 9.9 1.3 9.9 1.4  |
| MATH         | 6 555221 0               | A.1.1.1            | 1 124870 0.8                 |        | 0.04 | 0.89 | 0.01 0.00              | 0.48 | -0.34         | -0.26         | 0.48           | -0.17 -1.3937                | 0.0100   -9.9   0.9   -9.9   0.6                              |
| MATH<br>MATH | 6 937016 0<br>6 955729 0 | A.2.1.1            | 1 124870 0.5<br>1 124870 0.7 |        | 0.15 | 0.14 | 0.15 0.00<br>0.03 0.00 | 0.47 | 0.47<br>-0.18 | -0.24<br>0.39 | -0.26<br>-0.26 | -0.16 1.0823<br>-0.22 0.0743 | 0.0065 -9.5   1.0 -9.5   1.0   0.0071   9.9   1.1   9.9   1.2 |
| MATH         | 6 710630 0               | A.1.1.3<br>A.1.1.1 | 1 124870 0.6                 |        | 0.72 | 0.08 | 0.03 0.00              | 0.59 | -0.18         | 0.59          | -0.20          | -0.42 0.5956                 | 0.0071 9.9 1.1 9.9 1.2  |
| MATH         | 6 813057 0               | A.1.1.1<br>A.3.2.1 | 2 124870 0.5                 |        | 0.04 | 0.16 | 0.17 0.00              | 0.52 | -0.08         | -0.18         | 0.53           | -0.42 0.3936                 | 0.0067 -9.9 0.9 -9.9 0.8                                      |
| MATH         | 6 473751 0               | A.3.2.1<br>A.1.1.3 | 1 124870 0.5                 |        | 0.16 | 0.55 | 0.07 0.00              | 0.53 | -0.38         | -0.18         | 0.33           | -0.17 1.0750                 | 0.0065 -9.9   |
| MATH         | 6 685308 0               | A.1.1.3<br>A.3.2.1 | 2 124870 0.5                 |        | 0.02 | 0.91 | 0.03 0.00              | 0.40 | -0.28         | 0.52          | -0.25          | -0.20 -1.0832                | 0.0066 -9.9 0.9 -9.9 0.9                                      |
| MATH         | 6 187865 0               | E.1.1.3            | 2 124870 0.8                 |        | 0.39 | 0.21 | 0.03 0.00              | 0.32 | -0.16         | 0.32          | -0.23          | -0.33 0.8233                 | 0.0093 1.5 1.0 -7.9 0.9                                       |
| MATH         | 6 644647 0               | E.1.1.3<br>E.1.1.1 | 2 124870 0.6                 |        | 0.10 | 0.04 | 0.03 0.00              | 0.41 | 0.46          | -0.16         | -0.22          | -0.29 0.4622                 | 0.0068 2.1 1.0 -1.4 1.0                                       |
| MATH         | 6 954958 0               | E.1.1.1<br>E.2.1.1 | 2 124870 0.5                 |        | 0.16 | 0.00 | 0.14 0.00              | 0.40 | -0.25         | -0.10         | 0.57           | -0.29 0.4622                 | 0.0068 2.1 1.0 -1.4 1.0                                       |
| MATH         | 6 786314 0               | E.2.1.1            | 2 124870 0.2                 |        | 0.10 | 0.23 | 0.14 0.00              | 0.37 | -0.23         | 0.44          | -0.25          | -0.13 0.9031                 | 0.0065 1.1 1.0 9.1 1.0  |
| MATH         | 6 443753 0               | D.2.2.1            | 2 124870 0.2                 |        | 0.49 | 0.23 | 0.11 0.00              | 0.44 | 0.13          | -0.27         | -0.25          | -0.20 1.3268                 | 0.0063 1.1 1.0 9.1 1.0  |
| MATH         | 6 737783 0               | D.2.2.1<br>D.2.1.2 | 1 124870 0.8                 |        | 0.09 | 0.04 | 0.10 0.00              | 0.44 | -0.19         | -0.27         | 0.35           | -0.17 -1.0291                | 0.0074 -4.4 1.0 -9.9 0.9                                      |
| MATH         | 6 913782 0               | D.2.1.2<br>D.2.1.2 | 1 124870 0.8                 |        | 0.11 | 0.83 | 0.01 0.00              | 0.33 | 0.49          | -0.23         | -0.29          | -0.17 -1.0291                | 0.0090 9.9 1.1 3.8 1.1  |
| MATH         | 6 345097 0               | D.2.1.2<br>D.2.2.1 | 2 124870 0.5                 |        | 0.52 | 0.03 | 0.05 0.00              | 0.49 | -0.09         | 0.39          | -0.29          | -0.20 -1.10/1                | 0.0065 9.9 1.1 9.9 1.1  |
| MATH         | 6 725977 0               | C.3.1.1            | 1 124870 0.3                 |        | 0.32 | 0.11 | 0.87 0.00              | 0.39 | -0.09         | -0.19         | -0.33          | 0.46 -1.0248                 | 0.0063 9.9 1.1 9.9 1.1  |
| IVIA I II    | 0 123711 0               | C.J.1.1            | 1 1240/0 0.0                 | / 0.11 | 0.01 | 0.01 | 0.07 0.00              | 0.40 | -0.36         | -0.17         | -0.14          | 0.40 -1.0240                 | 0.0070 -2.2 0.2 -2.2 0.7                                      |

| MATH | 6 694712 | 0 A.3.2.1              | 2 124870   | 0.69 0 | .07 0.69 | 0.14 | 0.10 0.00  | 0.49  | -0.26 | 0.49  | -0.19 | -0.31 0.2865                 | 0.0069 - | 9.9 1.0 | -9.9   | 0.9    |    |  |
|------|----------|------------------------|--|--------|----------|------|------------|-------|-------|-------|-------|------------------------------|----------|---------|--------|--------|----|--|
| MATH | 6 412145 | 0 A.1.1.1              | 1 124870   | 0.78 0 | .01 0.17 | 0.78 | 0.04 0.00  | 0.27  | -0.06 | -0.16 | 0.27  | -0.23 -0.2234                | 0.0075   | 9.9 1.1 | 9.9    | 1.1    |    |  |
| MATH | 6 403759 | 0 A.1.3.1              | 2 124870   | 0.70 0 | .14 0.70 | 0.11 | 0.05 0.00  | 0.32  | -0.15 | 0.32  | -0.12 | -0.27 0.2934                 | 0.0069   | 9.9 1.1 | 9.9    | 1.2    |    |  |
| MATH | 6 495719 | 0 A.1.1.3              | 1 124870   | 0.91 0 | .04 0.04 | 0.02 | 0.91 0.00  | 0.41  | -0.28 | -0.21 | -0.19 | 0.41 -1.5919                 | 0.0107   | 1.8     | 9.9    | 0.8    |    |  |
| MATH | 6 580220 | 0 A.3.2.1              | 1 124870   | 0.87 0 | .01 0.07 | 0.05 | 0.87 0.00  | 0.38  | -0.13 | -0.23 | -0.25 | 0.38 -1.1083                 | 0.0092   | 2.9 1.0 | -7.7   | 0.9    |    |  |
| MATH | 6 243080 | 1 D.2.1.2              | 1 12843  | 0.85 0 | .03 0.85 | 0.06 | 0.05 0.00  | 0.51  | -0.22 | 0.51  | -0.30 | -0.30 -0.9898                | 0.0273 - | 9.9 0.8 | -9.9   | 0.6 A+ | A- | A-                                     |
| MATH | 6 296941 | 1 E.1.1.3              | 2 12843  | 0.50 0 | .20 0.15 | 0.15 | 0.50 0.00  | 0.35  | -0.14 | -0.07 | -0.26 | 0.35 1.3180                  | 0.0204   | 9.9 1.2 | 9.9    | 1.2 A+ | A- | A-                                     |
| MATH | 6 535721 | 1 A-N.2.1.1            | 1 6646   | 0.32 0 | .26 0.32 | 0.13 | 0.29 0.00  | 0.38  | -0.18 | 0.38  | 0.05  | -0.25 2.2430                 | 0.0303   | 2.1 1.0 | 8.9    | 1.3 A- | A- | A-                                     |
| MATH | 6 417120 | 1 A-R.1.1.1            | 1 6646   | 0.76 0 | .13 0.05 | 0.76 | 0.06 0.00  | 0.29  | -0.18 | -0.16 | 0.29  | -0.10 -0.3118                | 0.0322   | 3.5 1.1 | 7.8    | 1.3 A+ | A+ | A-                                     |
| MATH | 6 250624 | 1 B-E.2.1.4            | 2 6646   | 0.19 0 | .11 0.19 |      | 0.39 0.00  | 0.17  | -0.03 | 0.17  | -0.23 | 0.11 3.1208                  |          | 7.3 1.2 | 9.9    | 2.2 A- | Α- | A+                                     |
| MATH | 6 148261 | 1 D-S.1.1.2            |  |        | .04 0.15 |      | 0.63 0.00  | -0.25 | -0.17 | -0.25 | -0.15 | 0.37 3.4643                  |          | 9.9 1.6 | 9.9    | 4.7 A- | A- | A+                                     |
| MATH | 6 437169 | 1 C-G.1.1.3            |  |        | .31 0.29 |      | 0.23 0.00  | 0.29  | -0.17 | -0.07 | -0.02 | 0.29 2.7955                  |          | 2.6 1.1 |        | 1.7 A+ | A+ | A+                                     |
| MATH | 6 910731 | 1 A-R.1.1.2            |  |        | .38 0.12 |      | 0.13 0.00  | 0.24  | 0.24  | -0.20 | 0.04  | -0.21 1.8875                 |          | 9.9 1.3 | 9.9    | 1.5 A- | A- | A-                                     |
| MATH | 6 776441 | 1 D-S.1                | 2 6646   |        | .59 0.16 |      | 0.09 0.00  | -0.17 | 0.29  | -0.10 | -0.16 | -0.17 4.1094                 |          | 9.9 1.4 |        | 5.2 A- | A+ | A+                                     |
| MATH | 6 406749 | 1 C-G.1.1.6            |  |        | .06 0.27 | 0.41 | 0.25 0.00  | 0.01  | -0.13 | 0.05  | 0.01  | 0.01 1.6848                  |          | 9.9 1.6 |        | 1.9 A+ | A- | A+                                     |
| MATH | 6 650060 | 1 A-N.3.1              | 2 6646   |        | .68 0.12 |      | 0.09 0.00  | 0.47  | 0.47  | -0.26 | -0.23 | -0.21 0.2309                 |          | 1.7 1.0 |        | 0.9 A- | A- | A-                                     |
| MATH | 6 500739 | 1 B-E.1.1.5            | 2 6646   |        | .14 0.16 |      | 0.52 0.00  | 0.47  | -0.01 | 0.01  | 0.04  | -0.03 3.4033                 |          | 9.9 1.3 |        | 3.0 A- | A- | A-                                     |
| MATH | 6 192047 | 2 E.2.1.1              | 1 12406  |        | .14 0.75 |      | 0.05 0.00  | 0.51  | -0.01 | 0.51  | -0.16 | -0.03 3.4033                 |          | 9.9 1.5 |        | 0.9 A+ | A+ | A+                                     |
| MATH | 6 284332 | 2 D.2.2.1              |  |        | .71 0.06 |      | 0.03 0.00  | 0.23  | 0.23  | -0.22 | -0.10 | -0.19 0.1572                 |          | 9.9 1.3 |        | 1.5 A- | A- | A-                                     |
| MATH | 6 348470 | 2 A-N.1.1.1            | 1 6197   |        | .20 0.27 | 0.19 | 0.36 0.00  | 0.23  | -0.13 | -0.22 | -0.04 | 0.52 2.0546                  |          | 9.9 0.9 |        | 0.9 A- | B- | A-                                     |
|      | 6 971923 |                        | 1  |        |          |      | 0.30 0.00  | 0.32  | 0.17  | -0.41 | 0.05  |                              |          | 9.9 0.3 |        | 1.7 A+ |    | A-                                     |
| MATH |          | 2 A-N.3<br>2 A-R.1.1.3 | 2 6197<br>2 6197                                 |        | .16 0.39 |      | 0.11 0.00  | 0.17  | -0.01 | 0.21  | -0.10 | -0.18 2.2679<br>-0.16 1.8762 |          | 9.9 1.3 | 9.9    |        | A+ | A-                                     |
| MATH |          |                        |  |        |          |      |            |       | -0.01 | 0.21  | -0.10 |                              |          |         |        |        | A- |  |
| MATH | 6 955449 | 2 B-E.1                | 2 6197   |        | .26 0.45 |      | 0.14 0.00  | 0.24  |       |       |       |                              |          |         |        | 1.4 A- | A- | A+                                     |
| MATH | 6 380409 | 2 C-G.1.1.3            | <del>                                     </del> |        | .19 0.13 |      | 0.51 0.00  | 0.49  | -0.31 | -0.19 | -0.15 | 0.49 1.2557                  |          | 3.7 1.0 |        | 0.9 A+ | A- | A-                                     |
| MATH | 6 771977 | 2 D-S.1.1.2            | 1 6197   |        | .15 0.14 |      | 0.55 0.00  | 0.48  | -0.28 | -0.19 | -0.20 | 0.48 1.0190                  |          | 2.8 1.0 |        | 0.9 A+ | A- | A-                                     |
| MATH | 6 456560 | 2 B-E.2.1.3            |  | 0.1.1  | .06 0.08 |      | 0.09 0.00  | 0.42  | -0.27 | -0.26 | 0.42  | -0.15 -0.2847                |          | ).9 1.0 |        | 1.0 A+ | A- | A+                                     |
| MATH | 6 755501 | 2 C-G.1                | 2 6197   |        | .31 0.46 |      | 0.05 0.00  | 0.20  | -0.03 | 0.20  | -0.11 | -0.19 1.4933                 |          | 9.9 1.3 |        | 1.5 A+ | A- | A-                                     |
| MATH | 6 434256 | 2 A-R.1.1              | 2 6197   |        | .43 0.14 |      | 0.06 0.00  | 0.02  | -0.31 | 0.02  | 0.37  | -0.14 3.6567                 |          | 9.9 1.3 |        | 3.1 A- | A- | A-                                     |
| MATH | 6 635504 | 2 D-S.1.1.4            | 2 6197   |        | .30 0.45 |      | 0.10 0.00  | 0.13  | 0.13  | 0.19  | -0.26 | -0.20 2.4224                 |          | 9.9 1.4 | 9.9    | 1.9 A+ | A+ | A-                                     |
| MATH | 6 733205 | 3 E.2.1.1              | 2 12448  |        | .10 0.65 |      | 0.15 0.00  | 0.55  | -0.23 | 0.55  | -0.20 | -0.38 0.4914                 |          | 9.9 0.9 |        | 0.8 A+ | A+ | A-                                     |
| MATH | 6 926746 | 3 D.2.1.2              | 1 12448  |        | .03 0.91 | 0.04 | 0.02 0.00  | 0.37  | -0.19 | 0.37  | -0.24 | -0.18 -1.6058                |          | 3.0 0.9 |        | 0.8 A+ | A- | A-                                     |
| MATH | 6 164700 | 3 A-N.2.1.1            | 1 6205   |        | .01 0.06 |      | 0.87 0.00  | 0.34  | -0.14 | -0.22 | -0.19 | 0.34 -1.0848                 |          | ).2 1.0 |        | 1.0 A+ | A- | A+                                     |
| MATH | 6 671885 | 3 C-G.1.1.4            |  |        | .20 0.38 |      | 0.21 0.00  | 0.08  | 0.08  | 0.03  | -0.06 | -0.05 3.1558                 |          | 0.9 1.3 |        | 2.4 A+ | A- | A-                                     |
| MATH | 6 167756 | 3 D-S.1.1.2            | 2 6205   |        | .15 0.25 |      | 0.28 0.00  | 0.10  | -0.13 | -0.05 | 0.05  | 0.10 2.5725                  |          | 9.9 1.4 | 9.9    | 2.2 A+ | A- | A-                                     |
| MATH | 6 430652 | 3 D-S.1.1.2            | <del>                                     </del> |        | .72 0.07 |      | 0.05 0.00  | 0.52  | 0.52  | -0.15 | -0.38 | -0.27 0.0925                 |          | 7.3 0.9 | 0.0    | 0.8 A+ | A- | A-                                     |
| MATH | 6 886225 | 3 A-R.1.1.3            | <del>                                     </del> |        | .56 0.13 |      | 0.19 0.00  | 0.30  | 0.30  | -0.16 | -0.18 | -0.09 0.9805                 | 0.0-20   | 9.9 1.2 | 9.9    | 1.3 A- | A- | A-                                     |
| MATH | 6 332368 | 3 A-R.1.1.5            |  |        | .36 0.21 | 0.35 | 0.08 0.00  | 0.07  | -0.25 | 0.07  | 0.22  | -0.06 3.0319                 |          | 9.9 1.4 |        | 2.3 A- | A- | A-                                     |
| MATH | 6 599563 | 3 B-E.2.1.3            |  |        | .04 0.10 |      | 0.73 0.00  | 0.42  | -0.19 | -0.36 | -0.14 | 0.42 0.0022                  |          | 0.3 1.0 |        | 1.1 A+ | A- | A-                                     |
| MATH | 6 479649 | 3 B-E.3.1.2            | 2 6205   |        | .46 0.06 |      | 0.13 0.00  | 0.47  | 0.47  | -0.18 | -0.22 | -0.26 1.5285                 |          | 2.5 1.0 |        | 1.0 A- | A- | A-                                     |
| MATH | 6 481242 | 3 C-G.1.1              | 2 6205   |        | .38 0.18 |      | 0.22 0.00  | 0.08  | 0.04  | -0.17 | 0.08  | 0.02 2.9114                  |          | 9.9 1.3 | 9.9    | 2.4 A- | A- | A-                                     |
| MATH | 6 387796 | 3 B-E.1.1.1            | 2 6205   |        | .21 0.16 | 0.48 | 0.14 0.00  | 0.21  | -0.09 | -0.09 | 0.21  | -0.11 1.3995                 |          | 9.9 1.3 |        | 1.5 A+ | A+ | A+                                     |
| MATH | 6 970600 | 4 D.2.2.1              | 2 12426  |        | .67 0.19 |      | 0.06 0.00  | 0.54  | 0.54  | -0.41 | -0.21 | -0.16 0.4001                 |          | 9.9 0.9 | -9.9   | 0.8 A+ | A- | A-                                     |
| MATH | 6 702875 | 4 A.1.3.2              | 1 12426  | 0.77 0 | .08 0.08 | 0.77 | 0.07 0.00  | 0.47  | -0.35 | -0.25 | 0.47  | -0.14 -0.2102                | 0.0237 - | 5.7 0.9 | -4.1   | 0.9 A+ | A- | A+                                     |
| MATH | 6 602185 | 4 A-N.1.1.1            | 1 6200   | 0.55 0 | .55 0.21 | 0.11 | 0.13 0.00  | 0.40  | 0.40  | -0.27 | -0.29 | 0.02 1.0547                  | 0.0293   | 5.0 1.1 | 4.9    | 1.1 A+ | A- | A-                                     |
| MATH | 6 366015 | 4 A-R.1.1.3            | 2 6200   | 0.72 0 | .72 0.04 | 0.19 | 0.04 0.00  | 0.47  | 0.47  | -0.21 | -0.29 | -0.25 0.0873                 | 0.0319 - | 2.9 1.0 | -2.9   | 0.9 A+ | A- | A-                                     |
| MATH | 6 681097 | 4 A-R.1.1.3            | 2 6200   | 0.07 0 | .08 0.81 | 0.04 | 0.07 0.00  | 0.17  | 0.01  | -0.08 | -0.07 | 0.17 4.5294                  | 0.0528 - | ).5 1.0 | 9.9    | 2.6 A- | A- | A+                                     |
| MATH | 6 637608 | 4 C-G.1                | 2 6200   | 0.32 0 | .44 0.10 | 0.32 | 0.13 0.00  | 0.03  | 0.09  | -0.10 | 0.03  | -0.08 2.3059                 | 0.0309   | 9.9 1.5 | 9.9    | 2.0 A- | A+ | A+                                     |
| MATH | 6 847789 | 4 B-E.1.1.5            | 1 6200   | 0.46 0 | .14 0.14 | 0.26 | 0.46 0.00  | 0.08  | -0.09 | -0.01 | -0.01 | 0.08 1.5412                  | 0.0293   | 9.9 1.5 | 9.9    | 1.7 A- | A+ | A-                                     |
| MATH | 6 391670 | 4 D-S.1.1.4            | <del>                                     </del> | 0.51 0 | .19 0.51 | 0.17 | 0.12 0.00  | 0.33  | -0.15 | 0.33  | -0.12 | -0.18 1.2533                 | 0.0292   | 9.9 1.2 | 9.9    | 1.2 A- | A- | A+                                     |
| MATH |          | 4 D-S.1                | 2 6200   |        | .25 0.21 | 0.34 | 0.20 0.00  | 0.04  | 0.04  | -0.02 | 0.05  | -0.07 2.7633                 | 0.0331   | 9.9 1.5 | 9.9    | 2.2 A- | A- | A-                                     |
| MATH | 6 700707 | 4 C-G.1.1.3            |  |        | .34 0.23 |      | 0.18 0.00  | 0.13  | 0.13  | -0.01 | -0.13 | 0.00 2.1738                  |          | 9.9 1.4 | 9.9    | 1.7 A+ | A+ | A-                                     |
|      | 0,,00,0, | ., 0 0.1.1.0           | 2 3200   | 3.5.   |          |      | 2.120 0.00 | 0.10  | 0.20  | 0.01  | 0.25  | 2.00 2.17.50                 | 3.02.03  |         | 1 / -/ |        |    | ــــــــــــــــــــــــــــــــــــــ |

| MATH         | 6 803210 | 1 | A-R.1.1                | 2 | 6200  | 0.66 | 0.08 | 0.66 | 0.14 | 0.11 | 0.00 | 0.31  | -0.07 | 0.31  | -0.16 | -0.21 | 0.4689  | 0.0304 | 9.9  | 1.2 | 6.7 | 1.2 | Λ        | A-       | A-            |
|--------------|----------|---|------------------------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|-----|-----|-----|----------|----------|---------------|
| MATH         | 6 469442 | 4 |                        | 2 | 6200  | 0.89 | 0.03 | 0.04 | 0.14 | 0.11 |      | 0.42  | -0.07 | -0.26 | -0.10 | 0.42  | -1.2343 | 0.0304 | -4.2 | 0.9 |     |     | A+       | A-       | B-            |
| MATH         | 6 567630 | 5 | E.2.1.1                | 1 | 12513 | 0.63 | 0.02 | 0.63 | 0.03 | 0.10 |      | 0.55  | -0.21 | 0.55  | -0.24 | -0.24 | 0.6467  | 0.0429 | -9.9 | 0.9 |     |     | A+       | A+       | A+            |
| MATH         | 6 720166 | 5 | A.1.1.3                | 1 | 12513 | 0.85 | 0.14 | 0.03 | 0.13 | 0.10 | 0.00 | 0.50  | -0.42 | -0.21 | 0.50  | -0.24 | -0.8497 | 0.0212 | -8.5 | 0.9 |     | 0.3 | A+       | A-       | A-            |
| MATH         | 6 740990 | 5 | A-N.2.2.2              | 2 | 6271  | 0.53 | 0.11 | 0.03 | 0.83 | 0.01 | 0.00 | 0.42  | 0.42  | -0.21 | -0.20 | -0.13 | 1.1841  | 0.0273 | 4.1  | 1.1 | 3.7 | 1.1 | A+       | A-       | A+            |
| MATH         | 6 453025 | 5 | A-N.1.1.1              | 1 | 6271  | 0.33 | 0.33 | 0.15 | 0.19 | 0.11 | 0.00 | 0.42  | 0.42  | -0.14 | -0.20 | -0.23 | 1.5312  | 0.0291 | 9.9  | 1.1 | 9.9 |     |          | A-       | A-            |
| MATH         | 6 669328 | 5 | A-N.1.1.1<br>A-R.1.1.2 | 1 | 6271  | 0.40 | 0.40 | 0.15 | 0.08 | 0.08 | 0.00 | 0.33  | 0.33  | -0.25 | -0.19 | -0.09 | 0.3302  | 0.0292 | 3.4  | 1.1 | 2.8 | 1.1 | A-       | A-       | A-            |
| MATH         | 6 413549 | 5 | C-G.1                  | 2 | 6271  | 0.30 | 0.08 | 0.13 | 0.08 | 0.08 | 0.00 | 0.40  | -0.13 | 0.12  | -0.16 | 0.07  | 2.4659  | 0.0308 | 9.9  | 1.3 |     | 2.0 |          | A-<br>A+ | A+            |
| MATH         | 6 358544 | 5 | D-S.1.1.2              | 2 | 6271  | 0.52 | 0.31 | 0.05 | 0.19 | 0.20 | 0.00 | -0.02 | 0.26  | -0.12 | -0.02 | -0.18 | 1.2324  | 0.0313 | 9.9  | 1.7 | 9.9 |     | A-<br>A+ | A-       | A-            |
| MATH         | 6 851683 | 5 | C-G.1.1.3              | 2 | 6271  | 0.32 | 0.30 | 0.03 | 0.32 | 0.13 |      | 0.22  | -0.09 | -0.21 | 0.22  | -0.18 | 2.5940  | 0.0291 | 9.9  | 1.7 |     | 1.7 |          | A-<br>A+ | A+            |
| MATH         | 6 767574 | 5 | B-E.2.1.3              | 2 | 6271  | 0.28 | 0.47 | 0.19 | 0.28 | 0.00 | 0.00 | 0.22  | 0.55  | -0.09 | -0.27 | -0.08 | 0.4324  | 0.0321 | -9.1 | 0.9 |     | 0.8 |          | A-       | A+            |
| MATH         | 6 925080 | 5 | D-S.1.1.4              | 2 | 6271  | 0.07 | 0.07 | 0.10 | 0.12 | 0.11 | 0.00 | 0.01  | -0.08 | -0.28 | 0.01  | 0.16  | 2.7650  | 0.0303 | 9.9  | 1.5 |     |     |          | A-       | A-            |
| MATH         | 6 817221 | 5 | A-R.1.1                | 2 | 6271  | 0.23 | 0.27 | 0.16 | 0.23 | 0.29 |      | 0.01  | -0.08 | -0.11 | -0.08 | 0.10  | 2.6023  | 0.0329 | 3.4  | 1.1 | 9.9 | 1.4 |          | A-       | A-            |
| MATH         | 6 443090 | 5 |                        | 2 | 6271  | 0.28 | 0.22 | 0.20 | 0.24 | 0.28 |      | 0.32  | -0.16 | -0.09 | 0.37  | -0.12 | 1.2757  | 0.0321 | 8.5  | 1.1 |     | 1.4 |          | A-<br>A+ | A+            |
| MATH         | 6 891680 | 6 | D.2.2.1                | 2 | 18630 | 0.31 | 0.23 | 0.10 | 0.31 | 0.10 | 0.00 | 0.37  | -0.14 | -0.28 | -0.19 | 0.42  | 0.0211  | 0.0291 | 1.1  | 1.0 |     | 0.9 |          | A-       | A-            |
| MATH         | 6 200442 | 6 |                        | 1 | 18630 | 0.73 | 0.04 | 0.11 | 0.12 | 0.73 | 0.00 | 0.42  | -0.21 | -0.28 | 0.19  | -0.13 | -1.1463 | 0.0186 | -5.9 | 0.9 |     |     |          | A-<br>A- | A-            |
| MATH         | 6 664940 | 6 | A-N.1.1.1              | 1 | 6198  | 0.88 | 0.10 | 0.01 | 0.88 | 0.01 |      | 0.44  | -0.36 | -0.14 | 0.44  | -0.13 | 1.2631  | 0.0241 | 5.4  | 1.1 | 3.9 | 1.1 | A+       | A-<br>A- | A-            |
| MATH         | 6 247819 | 6 |                        | 2 | 6198  | 0.31 | 0.14 | 0.24 | 0.65 | 0.10 |      | -0.06 | -0.19 | -0.20 | 0.40  | -0.26 | 4.0417  | 0.0292 | 9.9  | 1.3 |     | 4.0 |          | A+       | A-            |
| MATH         | 6 391405 | 6 | D-S.1.1.2<br>D-S.1.1.4 | 2 | 6198  | 0.11 | 0.10 | 0.11 | 0.65 | 0.14 | 0.00 | 0.21  | -0.19 | 0.21  | -0.21 | -0.26 | 1.6805  | 0.0449 | 9.9  | 1.3 |     | 1.5 |          | A+<br>A- | A-            |
| MATH         | 6 873085 | 6 | B-E.2.1.2              | 2 | 6198  | 0.43 | 0.28 | 0.43 | 0.11 | 0.17 | 0.00 | 0.21  | 0.26  | -0.22 | -0.21 | -0.09 | 1.3201  | 0.0294 | 9.9  | 1.3 | 9.9 | 1.3 |          | A-       |               |
| MATH         | 6 399803 | 0 | A-R.1.1.3              | 2 | 6198  | 0.30 | 0.30 | 0.11 | 0.19 | 0.20 |      | 0.20  | 0.20  | -0.22 | -0.14 | -0.02 | 1.5411  | 0.0292 | 0.6  | 1.0 |     | 1.0 |          | A-       | A-            |
| MATH         | 6 236072 | 0 | C-G.1.1.4              | 2 | 6198  | 0.40 | 0.40 | 0.16 | 0.09 | 0.29 | _    | 0.43  | -0.23 | -0.13 | 0.37  | -0.23 | 1.2248  | 0.0293 | 7.9  | 1.0 | 7.0 | 1.0 | A-<br>A+ | A-       | A-            |
| MATH         | 6 644000 | 6 | C-G.1.1.4              | 2 | 6198  | 0.32 | 0.17 | 0.21 | 0.32 | 0.09 | 0.00 | 0.37  | 0.03  | -0.21 | 0.37  | -0.04 | 2.0619  | 0.0292 | 9.9  | 1.1 |     |     |          | A-<br>A- | A-            |
| -            | 6 148174 | 6 | B-E.1.1.1              | 1 | 6198  | 0.55 | 0.21 | 0.13 | 0.30 | 0.27 | 0.00 | 0.13  | -0.25 | 0.13  | -0.19 | 0.02  | 1.0496  | 0.0302 | 9.9  | 1.4 | 9.9 | 1.7 |          | A-       | A+            |
| MATH<br>MATH | 6 682788 | 6 | A-R.1                  | 2 | 6198  | 0.33 | 0.10 | 0.33 | 0.11 | 0.18 | 0.00 | 0.29  | 0.23  | -0.12 | -0.19 | 0.02  | 2.2948  | 0.0293 | 9.9  | 1.2 | 9.9 | 1.6 |          | A-       | A+            |
| MATH         | 6 431106 | 6 |                        | 1 | 6198  | 0.57 | 0.32 | 0.20 | 0.23 | 0.22 |      | 0.23  | -0.32 | 0.12  | -0.14 | 0.01  | 0.9592  | 0.0309 | 9.9  | 1.2 | 9.9 | 1.4 |          | A-       | A-            |
| MATH         | 6 638517 | 7 | D.2.2.1                | 2 | 12446 | 0.37 | 0.23 | 0.06 | 0.39 | 0.14 |      | 0.47  | -0.32 | -0.22 | -0.26 | 0.11  | 1.4383  | 0.0294 | -3.0 | 1.0 |     | 1.0 |          | A-       | A+            |
| MATH         | 6 911392 | 7 | A.1.3.1                | 1 | 12446 | 0.80 | 0.00 | 0.05 | 0.80 | 0.05 | 0.00 | 0.41  | -0.21 | -0.22 | 0.41  | -0.24 | -0.4714 | 0.0249 | -0.9 | 1.0 |     | 1.0 |          | A+       | A-            |
| MATH         | 6 609714 | 7 | A-R.1.1.1              | 2 | 6215  | 0.50 | 0.11 | 0.50 | 0.14 | 0.03 | 0.00 | 0.37  | -0.21 | 0.37  | -0.28 | -0.18 | 1.3516  | 0.0292 | 8.0  | 1.0 | 6.8 | 1.1 | A-       | A-       | A-            |
| MATH         | 6 719622 | 7 | A-N.1.1.1              | 1 | 6215  | 0.40 | 0.15 | 0.25 | 0.19 | 0.40 |      | 0.43  | -0.03 | -0.24 | -0.20 | 0.43  | 1.8844  | 0.0292 | 0.5  | 1.0 |     |     | A+       | A-       | A-            |
| MATH         | 6 370375 | 7 | A-N.1.1.1<br>A-R.1.1.4 | 2 | 6215  | 0.40 | 0.10 | 0.25 | 0.19 | 0.40 | 0.00 | 0.43  | -0.07 | 0.23  | -0.19 | 0.43  | 1.0436  | 0.0297 | 9.9  | 1.0 | 9.9 | 1.5 |          | A-       | A+            |
| MATH         | 6 552269 | 7 | C-G.1.1.1              | 2 | 6215  | 0.22 | 0.53 | 0.14 | 0.22 | 0.11 | 0.00 | 0.27  | -0.17 | 0.23  | 0.27  | 0.03  | 3.0126  | 0.0275 | 3.2  | 1.1 | 9.9 | 1.5 |          | A-       | A+            |
| MATH         | 6 915923 | 7 | B-E.3.1.2              | 2 | 6215  | 0.50 | 0.50 | 0.14 | 0.25 | 0.09 |      | 0.27  | 0.37  | -0.25 | -0.10 | -0.18 | 1.3499  | 0.0292 | 7.4  | 1.1 | 7.1 | 1.2 |          | A-       | A-            |
| MATH         | 6 687113 | 7 | A-N.3.2.3              | 2 | 6215  | 0.10 | 0.30 | 0.50 | 0.22 | 0.10 |      | -0.11 | -0.23 | 0.30  | -0.10 | -0.11 | 4.2081  | 0.0252 | 9.9  | 1.4 |     | 4.6 |          | A+       | A-            |
| MATH         | 6 840717 | 7 | B-E.2.1.2              | 2 | 6215  | 0.10 | 0.13 | 0.65 | 0.10 | 0.10 | _    | 0.47  | -0.25 | 0.47  | -0.22 | -0.11 | 0.5454  | 0.0302 | -2.3 | 1.0 |     | 0.9 |          | A-       | A-            |
| MATH         | 6 305042 | 7 | C-G.1.1.4              | 2 | 6215  | 0.47 | 0.15 | 0.03 | 0.19 | 0.12 | 0.00 | 0.45  | -0.24 | -0.16 | -0.19 | 0.45  | 1.5230  | 0.0302 | -0.3 | 1.0 |     | 1.0 | _        | A-       | A-            |
| MATH         | 6 873471 | 7 | D-S.1.1.1              | 2 | 6215  | 0.42 | 0.15 | 0.24 | 0.42 | 0.19 | 0.00 | 0.20  | -0.09 | -0.10 | 0.20  | -0.06 | 1.7965  | 0.0296 | 9.9  | 1.3 |     | 1.5 |          | A-       | A+            |
| MATH         | 6 766781 | 7 | D-S.1.1.3              | 2 | 6215  | 0.35 | 0.13 | 0.35 | 0.20 |      | _    | 0.05  | 0.10  | 0.05  | -0.09 | -0.09 | 2.1798  | 0.0305 | 9.9  | 1.5 |     | 1.9 |          | A-       | A+            |
| MATH         | 6 104071 | 8 | B-E.3.1.2              | 2 | 6197  | 0.24 | 0.31 | 0.29 | 0.24 | 0.17 |      | 0.03  | 0.07  | -0.02 | 0.03  | -0.09 | 2.8759  | 0.0336 | 9.9  | 1.4 |     | 2.4 |          | A-       | A-            |
| MATH         | 6 313981 | 8 | A-R.1.1.1              | 2 | 6197  | 0.45 | 0.31 | 0.19 | 0.45 | 0.06 | 0.00 | 0.35  | -0.16 | -0.13 | 0.35  | -0.22 | 1.6207  | 0.0293 | 7.7  | 1.1 | 9.7 | 1.2 |          | A+       | A-            |
| MATH         | 6 740536 | 8 |                        | 1 | 6197  | 0.75 | 0.10 | 0.75 | 0.09 | 0.07 |      | 0.46  | -0.07 | 0.46  | -0.28 | -0.39 | -0.0476 | 0.0327 | -2.5 | 1.0 |     | 0.9 |          | A-       | A-            |
| MATH         | 6 545395 | 8 | A-R.1.1.4              | 2 | 6197  | 0.66 | 0.03 | 0.66 | 0.04 | 0.26 |      | 0.49  | -0.25 | 0.49  | -0.24 | -0.32 | 0.4659  | 0.0305 | -4.2 | 0.9 |     | 0.9 |          | A-       | A-            |
| MATH         | 6 219164 | 8 | C-G.1.1.5              | 2 | 6197  | 0.73 | 0.03 | 0.05 | 0.73 | 0.05 |      | 0.33  | -0.25 | -0.24 | 0.33  | -0.32 | 0.0557  | 0.0303 | 6.6  | 1.1 | 6.2 | 1.2 |          | A-       | A-            |
| MATH         | 6 406765 | 8 | A-N.2.1.1              | 2 | 6197  | 0.76 | 0.16 | 0.10 | 0.76 | 0.03 | 0.00 | 0.33  | -0.13 | -0.19 | 0.48  | -0.13 | -0.1135 | 0.0322 | -5.0 | 0.9 |     | 0.9 |          | A-       | A-            |
| MATH         | 6 773935 | 8 | B-E.1.1.4              | 1 | 6197  | 0.70 | 0.00 | 0.20 | 0.14 | 0.53 |      | 0.47  | -0.28 | -0.13 | -0.14 | 0.47  | 1.2175  | 0.0331 | -2.2 | 1.0 | _   | 1.0 |          | A-       | A-            |
| MATH         | 6 711876 | 8 | C-G.1.1.1              | 2 | 6197  | 0.21 | 0.15 | 0.47 | 0.14 | 0.21 | 0.00 | 0.15  | -0.23 | 0.14  | -0.12 | 0.15  | 3.0822  | 0.0232 | 9.9  | 1.2 |     | 1.9 |          | A+       | A-            |
| MATH         | 6 398504 | 8 | D-S.1.1.3              | 2 | 6197  | 0.21 | 0.13 | 0.26 | 0.10 | 0.43 | 0.00 | -0.09 | -0.23 | -0.09 | -0.12 | 0.17  | 2.7480  | 0.0349 | 9.9  | 1.6 | _   | 2.7 | A-       | A+       | A-            |
| MATH         | 6 792295 | 8 | B-E.1.1.4              | 1 | 6197  | 0.51 | 0.03 | 0.51 | 0.11 | 0.11 | 0.00 | 0.26  | -0.19 | 0.26  | -0.18 | 0.17  | 1.2985  | 0.0328 | 9.9  | 1.3 | 9.9 | 1.4 |          | A-       | A+            |
| MATH         | 6 102381 | 9 |                        | 2 | 6228  | 0.55 | 0.27 | 0.13 | 0.55 | 0.26 |      | 0.35  | -0.12 | -0.21 | 0.35  | -0.17 | 1.0466  | 0.0292 | 9.9  | 1.3 | 6.2 | 1.1 | A-       | A-       | A-            |
| MATH         | 6 328806 | 9 | B-E.2.1.2              | 2 | 6228  | 0.33 | 0.56 | 0.13 | 0.10 | 0.16 | _    | 0.20  | -0.12 | -0.21 | -0.06 | 0.20  | 3.4672  | 0.0292 | 4.6  | 1.1 | 9.9 | 1.9 |          | A-       | A+            |
| MATH         | 6 339582 | 9 | A-R.1.1.4              | 2 | 6228  | 0.10 | 0.08 | 0.13 | 0.10 | 0.10 | 0.00 | 0.20  | -0.03 | -0.10 | 0.17  | -0.02 | 1.8230  | 0.0383 | 9.9  | 1.1 | 9.9 | 1.7 |          | A-       | A-            |
| 1411/2/111   | 0 339362 | 9 | A-IX.1.1.4             | 7 | 0220  | 0.41 | 0.00 | 0.23 | 0.41 | 0.40 | 0.00 | 0.1/  | -0.10 | -0.08 | 0.17  | -0.02 | 1.0230  | 0.0290 | 2.2  | 1.4 | 7.7 | 1./ | /1-      | r1-      | /· <b>1</b> - |

| MATH         | 6 691416             | 9  | C-G.1.1.5              | 2 | 6228           | 0.56 | 0.28 | 0.06 | 0.56 | 0.10 | 0.00 | 0.21 | -0.15          | -0.16          | 0.21          | 0.00           | 1.0073           | 0.0292 | 9.9  | 1.3 | 9.9          | 1.5 A  | + A | ۸-         | A-           |
|--------------|----------------------|----|------------------------|---|----------------|------|------|------|------|------|------|------|----------------|----------------|---------------|----------------|------------------|--------|------|-----|--------------|--------|-----|------------|--------------|
| MATH         | 6 922143             | 9  | A-N.2.1.1              | 2 | 6228           | 0.54 | 0.09 | 0.54 | 0.13 | 0.23 | 0.00 | 0.47 | -0.18          | 0.47           | -0.18         | -0.29          | 1.1224           | 0.0292 | -3.3 | 1.0 | -2.8         | 0.9 A  |     | ١-         | A-           |
| MATH         | 6 859400             | 9  | D-S.1.1.2              | 2 | 6228           | 0.16 | 0.16 | 0.24 | 0.14 | 0.47 | 0.00 | 0.13 | 0.13           | -0.10          | -0.07         | 0.04           | 3.4894           | 0.0386 | 8.4  | 1.2 | 9.9          | 2.3 A  | + A | <b>\</b> + | A-           |
| MATH         | 6 621442             | 9  | B-E.1.1.4              | 1 | 6228           | 0.34 | 0.27 | 0.26 | 0.34 | 0.13 | 0.00 | 0.23 | -0.09          | -0.15          | 0.23          | -0.01          | 2.2094           | 0.0306 | 9.9  | 1.2 | 9.9          | 1.6 A  | + A | ۸-         | A+           |
| MATH         | 6 990098             | 9  | A-R.1.1.1              | 2 | 6228           | 0.55 | 0.55 | 0.12 | 0.11 | 0.22 | 0.00 | 0.49 | 0.49           | -0.24          | -0.23         | -0.22          | 1.0824           | 0.0292 | -3.6 | 1.0 | -3.2         | 0.9 A  | В   | 3-         | A-           |
| MATH         | 6 137759             | 9  | B-E.1.1.1              | 2 | 6228           | 0.80 | 0.80 | 0.07 | 0.07 | 0.05 | 0.00 | 0.33 | 0.33           | -0.12          | -0.23         | -0.19          | -0.4359          | 0.0349 | 2.6  | 1.1 | 4.2          | 1.2 B- | - A | λ+         | A-           |
| MATH         | 6 434303             | 9  | C-G.1.1.1              | 1 | 6228           | 0.48 | 0.48 | 0.28 | 0.11 | 0.13 | 0.00 | 0.23 | 0.23           | -0.09          | -0.17         | -0.07          | 1.4617           | 0.0292 | 9.9  | 1.3 | 9.9          | 1.4 A- | + A | ۸-         | A+           |
| MATH         | 6 478729             | 10 | A-N.3.1.2              | 1 | 6231           | 0.69 | 0.07 | 0.13 | 0.69 | 0.11 | 0.00 | 0.44 | -0.24          | -0.23          | 0.44          | -0.21          | 0.2780           | 0.0310 | 0.3  | 1.0 | -0.8         | 1.0 A  | . A | ١-         | A-           |
| MATH         | 6 195777             | 10 | A-N.1.1.1              | 1 | 6231           | 0.37 | 0.21 | 0.18 | 0.24 | 0.37 | 0.00 | 0.44 | -0.21          | -0.24          | -0.09         | 0.44           | 2.0330           | 0.0304 | -0.6 | 1.0 | 1.8          | 1.0 A  | + A | ١-         | A-           |
| MATH         | 6 396141             | 10 | A-R.1.1.2              | 2 | 6231           | 0.65 | 0.08 | 0.65 | 0.11 | 0.15 | 0.00 | 0.50 | -0.19          | 0.50           | -0.22         | -0.32          | 0.4676           | 0.0304 | -4.5 | ).9 | -4.7         | 0.9 A  | . A | ١-         | A+           |
| MATH         | 6 394202             | 10 | B-E.2.1                | 2 | 6231           | 0.43 | 0.10 | 0.13 | 0.34 | 0.43 | 0.00 | 0.26 | -0.17          | -0.16          | -0.05         | 0.26           | 1.7156           | 0.0297 | 9.9  | 1.3 | 9.9          | 1.4 A  | + A | ١-         | A-           |
| MATH         | 6 451307             | 10 | D-S.1.1.3              | 2 | 6231           | 0.65 | 0.65 | 0.12 | 0.11 | 0.11 | 0.00 | 0.44 | 0.44           | -0.20          | -0.24         | -0.21          | 0.4824           | 0.0304 | 1.7  | 1.0 | 1.2          | 1.0 A  | + A | ١-         | A-           |
| MATH         | 6 566380             | 10 | D-S.1.1.1              | 2 | 6231           | 0.33 | 0.33 | 0.21 | 0.14 | 0.32 | 0.00 | 0.21 | 0.21           | -0.10          | -0.08         | -0.06          | 2.2491           | 0.0311 | 9.9  | 1.3 | 9.9          | 1.6 A  | + A | ١-         | A-           |
| MATH         | 6 636984             | 10 | B-E.1.1.3              | 1 | 6231           | 0.66 | 0.11 | 0.66 | 0.10 | 0.12 | 0.00 | 0.30 | -0.26          | 0.30           | -0.14         | -0.06          | 0.4202           | 0.0306 | 9.9  | 1.2 | 9.9          | 1.4 A  | + A | λ+         | A+           |
| MATH         | 6 752526             | 10 | C-G.1.1.2              | 2 | 6231           | 0.40 | 0.40 | 0.18 | 0.26 | 0.16 | 0.00 | 0.29 | 0.29           | -0.17          | -0.07         | -0.11          | 1.8707           | 0.0300 | 9.9  | 1.2 | 9.9          | 1.4 A  | · A | ١-         | A+           |
| MATH         | 6 386569             | 10 | A-R.1.1.4              | 2 | 6231           | 0.44 | 0.33 | 0.44 | 0.16 | 0.07 | 0.00 | 0.39 | -0.19          | 0.39           | -0.11         | -0.26          | 1.6198           | 0.0296 | 6.1  | 1.1 | 6.9          | 1.2 A  | · A | ١-         | A-           |
| MATH         | 6 641451             | 10 | C-G.1.1.6              | 1 | 6231           | 0.27 | 0.15 | 0.10 | 0.27 | 0.48 | 0.00 | 0.30 | -0.21          | -0.09          | 0.30          | -0.06          | 2.6621           | 0.0329 | 5.8  | 1.1 | 9.9          | 1.5 A  | + A | ١-         | A-           |
| MATH         | 6 838401             | 11 | A.1.3.1                | 1 | 18667          | 0.63 | 0.10 | 0.21 | 0.63 | 0.06 | 0.00 | 0.38 | -0.21          | -0.15          | 0.38          | -0.24          | 0.6536           | 0.0172 | 9.8  | 1.1 | 6.5          | 1.1 A  | ⊦ A | λ+         | A+           |
| MATH         | 6 874990             | 11 | A.1.1.3                | 1 | 18667          | 0.82 | 0.82 | 0.05 | 0.07 | 0.05 | 0.00 | 0.47 | 0.47           | -0.20          | -0.29         | -0.26          | -0.5989          | 0.0210 | -7.7 | ).9 | -7.3         | 0.8 A  | + A | <b>\</b> + | A+           |
| MATH         | 6 488073             | 11 | A-R.1.1.1              | 2 | 6191           | 0.46 | 0.26 | 0.16 | 0.46 | 0.12 | 0.00 | 0.29 | -0.03          | -0.24          | 0.29          | -0.13          | 1.5662           | 0.0293 | 9.9  | 1.2 | 9.9          | 1.3 A  | . A | ١-         | A-           |
| MATH         | 6 537109             | 11 | A-R.1.1.4              | 2 | 6191           | 0.59 | 0.11 | 0.59 | 0.18 | 0.12 | 0.00 | 0.25 | -0.03          | 0.25           | -0.22         | -0.09          | 0.8594           | 0.0295 | 9.9  | 1.3 | 9.9          | 1.4 A  | · A | ١-         | A-           |
| MATH         | 6 399199             | 11 | B-E.2.1.1              | 1 | 6191           | 0.60 | 0.17 | 0.15 | 0.60 | 0.08 | 0.00 | 0.49 | -0.29          | -0.24          | 0.49          | -0.18          | 0.8062           | 0.0296 | -4.7 | ).9 | -4.5         | 0.9 A  | + A | ١-         | A+           |
| MATH         | 6 322822             | 11 | A-N.3.2.1              | 2 | 6191           | 0.38 | 0.08 | 0.45 | 0.38 | 0.09 | 0.00 | 0.27 | -0.17          | -0.01          | 0.27          | -0.28          | 2.0127           | 0.0300 |      | 1.2 | 9.9          | 1.4 A  | · A | ۸-         | A-           |
| MATH         | 6 840199             | 11 | A-N.2.1.1              | 1 | 6191           | 0.52 | 0.19 | 0.52 | 0.12 | 0.17 | 0.00 | 0.17 | -0.16          | 0.17           | -0.09         | 0.02           | 1.2367           | 0.0292 | 9.9  | 1.3 | 9.9          | 1.5 A  | · A | λ+         | A+           |
| MATH         | 6 429718             | 11 | C-G.1.1.5              | 2 | 6191           | 0.36 | 0.27 | 0.36 | 0.15 | 0.21 | 0.00 | 0.31 | -0.16          | 0.31           | -0.13         | -0.08          | 2.0808           | 0.0302 | 7.7  | 1.1 | 9.9          | 1.3 A  |     |            | <b>A</b> +   |
| MATH         | 6 476956             | 11 | D-S.1.1.1              | 2 | 6191           | 0.51 | 0.51 | 0.21 | 0.17 | 0.11 | 0.00 | 0.41 | 0.41           | -0.27          | -0.10         | -0.18          | 1.2902           | 0.0291 |      | 1.1 | 6.6          | 1.1 A  |     |            | A-           |
| MATH         | 6 178366             | 11 | D-S.1.1.3              | 2 | 6191           | 0.28 | 0.14 | 0.28 | 0.13 |      | 0.00 | 0.14 | -0.12          | 0.14           | -0.20         | 0.09           | 2.5597           | 0.0320 |      | 1.3 | 9.9          | 1.9 A  |     |            | A-           |
| MATH         | 6 456796             | 11 | B-E.3.1.1              | 2 | 6191           | 0.42 | 0.25 | 0.42 | 0.19 | 0.13 | 0.00 | 0.32 | -0.14          | 0.32           | -0.19         | -0.06          | 1.7586           | 0.0295 |      | 1.1 | 9.9          | 1.3 A  |     |            | A+           |
| MATH         | 6 396810             | 11 | C-G.1.1.1              | 2 | 6191           | 0.21 | 0.10 | 0.21 | 0.27 | 0.42 | 0.00 | 0.05 | -0.17          | 0.05           | 0.08          | -0.01          | 3.0458           | 0.0349 | 9.9  | 1.4 | 9.9          | 2.3 A  |     | _          | A+           |
| MATH         | 6 541501             | 12 | B-E.1.1.4              | 1 | 6209           | 0.37 | 0.18 | 0.24 | 0.20 |      | 0.00 | 0.39 | -0.08          | -0.21          | -0.17         | 0.39           | 2.0336           | 0.0304 |      | 1.1 | 8.0          | 1.2 A  |     |            | A-           |
| MATH         | 6 411462             | 12 | A-N.3.2.1              | 1 | 6209           | 0.57 | 0.25 | 0.11 | 0.07 |      | 0.00 | 0.49 | -0.20          | -0.26          | -0.30         | 0.49           | 0.9396           | 0.0296 |      | _   | -2.3         | 0.9 A  |     |            | A-           |
| MATH         | 6 347625             | 12 | A-N.1.1.1              | 1 | 6209           | 0.45 | 0.32 | 0.14 | 0.45 |      |      | 0.41 | -0.27          | -0.10          | 0.41          | -0.16          | 1.6085           | 0.0296 |      | 1.1 | 6.6          | 1.2 A  |     | _          | A-           |
| MATH         | 6 997775             | 12 | A-N.2                  | 2 | 6209           | 0.40 | 0.30 | 0.40 | 0.18 | 0.12 | 0.00 | 0.24 | -0.15          | 0.24           | 0.03          | -0.18          | 1.8637           | 0.0300 | 9.9  | 1.3 | 9.9          | 1.5 A  |     | ۸-         | A-           |
| MATH         | 6 186543             | 12 | A-R.1.1.1              | 2 | 6209           | 0.23 | 0.23 | 0.17 | 0.29 |      | 0.00 | 0.35 | 0.35           | 0.18           | -0.15         | -0.32          | 2.9259           | 0.0343 |      | 1.1 | 7.6          | 1.3 A  |     | _          | A-           |
| MATH         | 6 836312             | 12 | A-R.1.1.4              | 2 | 6209           | 0.76 | 0.76 | 0.09 | 0.09 |      | 0.00 | 0.44 | 0.44           | -0.28          | -0.18         | -0.23          | -0.1624          | 0.0332 |      |     | 2.0          | 1.1 A  |     |            | A+           |
| MATH         | 6 269807             | 12 | B-E.2.1.1              | 1 | 6209           | 0.43 | 0.12 | 0.43 | 0.26 |      | 0.00 | 0.45 | -0.22          | 0.45           | -0.20         | -0.16          | 1.7170           | 0.0298 | 0.0  | 1.0 | 3.0          | 1.1 A  |     |            | A-           |
| MATH         | 6 433867             | 12 | D-S.1.1.1              | 2 | 6209           | 0.67 | 0.67 | 0.21 | 0.05 |      | 0.00 | 0.50 | 0.50           | -0.31          | -0.24         | -0.23          | 0.4143           | 0.0307 |      |     | -1.4         | 1.0 A  |     |            | A-           |
| MATH         | 6 389752             | 12 | C-G.1.1.5              | 2 | 6209           | 0.66 | 0.20 | 0.05 | 0.08 | 0.66 | 0.00 | 0.31 | -0.16          | -0.13          | -0.19         | 0.31           | 0.4668           | 0.0306 | 9.9  |     | 9.9          | 1.4 A  |     |            | A-           |
| MATH         | 6 553210             | 12 | C-G.1.1.1              | 2 | 6209           | 0.37 | 0.44 | 0.09 | 0.37 |      | 0.00 | 0.46 | -0.34          | -0.07          | 0.46          | -0.12<br>-0.26 | 2.0438           | 0.0305 |      |     | 1.1<br>-4.0  | 1.0 B- |     |            | A-           |
| MATH<br>MATH | 6 231385<br>6 521588 | 13 | A.1.3.2<br>A.2.1.1     |   | 12460<br>12460 | 0.62 | 0.12 | 0.09 | 0.62 | 0.16 | 0.00 | 0.51 | -0.29<br>-0.23 | -0.18<br>-0.33 | 0.51<br>-0.15 | 0.50           | 0.7030<br>0.7516 | 0.0211 |      |     | -4.0<br>-6.0 | 0.9 A- |     |            | A-<br>A+     |
| MATH         | 6 354243             | 13 | C-G.1.1.4              | 1 | 6224           | 0.01 | 0.09 | 0.19 | 0.10 | 0.01 | 0.00 | 0.30 | 0.00           | 0.22           | -0.15         | -0.04          | 2.5186           | 0.0210 |      |     | 9.9          | 1.6 A  |     |            |              |
| MATH         | 6 628398             | 13 | B-E.1.1.5              | 1 | 6224           | 0.29 | 0.21 | 0.29 | 0.21 | 0.29 |      | 0.22 | -0.08          | 0.22           | 0.08          | -0.04          | 2.7768           | 0.0317 |      | 1.4 | 9.9          | 2.1 A  |     |            | A+<br>A-     |
| MATH         |                      | 13 | A-N.2.2.1              | 1 | 6224           | 0.23 | 0.45 | 0.21 | 0.23 |      | 0.00 | 0.08 | 0.30           | -0.20          | -0.08         | -0.10          |                  | 0.0330 | 9.9  |     | 9.9          |        |     |            |              |
| MATH         | 6 341529<br>6 938984 | 13 | A-N.2.2.1<br>A-N.2.1.1 | 1 | 6224           | 0.43 | 0.45 | 0.09 | 0.63 |      | 0.00 | 0.36 | -0.17          | -0.24          | 0.36          | -0.15          | 1.6415<br>0.6422 | 0.0293 | 8.3  | 1.4 | 7.0          | 1.3 A- |     |            | A+<br>A-     |
| MATH         | 6 784477             | 13 | D-S.1.1.2              | 1 | 6224           | 0.63 | 0.13 | 0.12 | 0.63 |      | 0.00 | 0.30 | -0.17          | -0.24          | 0.30          | -0.11          | 0.3992           | 0.0299 |      | ).9 | -3.3         | 0.9 A  |     |            | A-           |
| MATH         | 6 537869             | 13 | D-S.1.1.2<br>D-S.1.1.4 | 2 | 6224           | 0.67 | 0.13 | 0.10 | 0.67 |      | 0.00 | 0.49 | -0.34          | 0.08           | 0.49          | -0.25          | 2.7260           | 0.0307 | 9.9  | _   | 9.9          | 2.1 A  |     |            | A+           |
| MATH         | 6 294321             | 13 | D-S.1.1.4<br>B-E.1.1.1 | 1 | 6224           | 0.26 | 0.30 | 0.26 | 0.20 |      | 0.00 | 0.08 | -0.03          | -0.22          | 0.01          | -0.07          | -0.5691          | 0.0327 |      |     | -3.7         | 0.8 A  |     | \-<br>\-   | A+<br>A-     |
| MATH         | 6 559341             | 13 | A-R.1.1                | 1 | 6224           | 0.82 | 0.11 | 0.03 | 0.82 | 0.02 | 0.00 | 0.49 | 0.28           | -0.22          | -0.13         | -0.10          | 3.1319           | 0.0354 |      | 1.0 | 9.9          | 1.6 A  |     | <b>\</b> + | A+           |
| MATH         | 6 445570             | 13 | B-E.3.1.2              | 2 | 6224           | 0.20 | 0.20 | 0.21 | 0.38 | 0.21 | 0.00 | 0.28 | -0.15          | 0.32           | -0.15         | -0.11          | 1.1057           | 0.0334 | 9.9  | 1.0 | 8.9          | 1.0 A  |     |            | A+<br>A+     |
| MATH         | 6 570297             | 13 | C-G.1                  | 2 | 6224           | 0.33 | 0.17 | 0.33 | 0.11 | 00   | 0.00 | 0.32 | -0.13          | 0.32           | 0.10          | -0.16          | 2.6248           | 0.0292 |      | 1.3 | 9.9          | 2.1 A  |     |            | A+<br>A-     |
| MIAIN        | 0 3/029/             | 13 | C-U.1                  | Z | 0224           | 0.27 | 0.27 | 0.33 | 0.47 | 0.12 | 0.00 | 0.10 | -0.09          | 0.03           | 0.10          | -0.03          | 2.0248           | 0.0322 | 7.7  | 1.3 | 9.9          | 2.1 A  | ·   | Y-         | / <b>1</b> - |

| MATH | 6 111516 | 14 | C-G.1.1.2 | 2 | 6242 | 0.24 | 0.43 | 0.24 | 0.22 | 0.12 | 0.00 | 0.04  | 0.01  | 0.04  | -0.02 | -0.03 | 2.8858  | 0.0336 | 9.9  | 1.4   | 9.9  | 2.4 A | A           | A-         | A-         |
|------|----------|----|-----------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|-------|------|-------|-------------|------------|------------|
| MATH | 6 702718 | 14 | A-N.2     | 2 | 6242 | 0.25 | 0.27 | 0.22 | 0.26 | 0.25 | 0.00 | 0.17  | 0.00  | -0.13 | -0.04 | 0.17  | 2.8199  | 0.0332 | 9.9  | 1.2   | 9.9  | 2.0 A | A           | A-         | A-         |
| MATH | 6 134281 | 14 | A-N.2.1.1 | 2 | 6242 | 0.54 | 0.09 | 0.11 | 0.54 | 0.25 | 0.00 | 0.47  | -0.18 | -0.24 | 0.47  | -0.24 | 1.1463  | 0.0292 | -1.9 | 1.0 - | -0.4 | 1.0 A | - I         | B-         | A-         |
| MATH | 6 835690 | 14 | A-R.1.1.1 | 1 | 6242 | 0.53 | 0.18 | 0.53 | 0.11 | 0.17 | 0.00 | 0.33  | -0.11 | 0.33  | -0.16 | -0.19 | 1.1796  | 0.0292 | 9.9  | 1.2   | 9.7  | 1.2 A | A           | A-         | A-         |
| MATH | 6 739083 | 14 | B-E.3.1.1 | 2 | 6242 | 0.54 | 0.54 | 0.13 | 0.22 | 0.11 | 0.00 | 0.40  | 0.40  | -0.24 | -0.17 | -0.16 | 1.1472  | 0.0292 | 5.6  | 1.1   | 4.2  | 1.1 A | A           | A-         | A-         |
| MATH | 6 903011 | 14 | A-N.3.1.3 | 2 | 6242 | 0.55 | 0.14 | 0.11 | 0.55 | 0.20 | 0.00 | 0.40  | -0.17 | -0.32 | 0.40  | -0.10 | 1.0830  | 0.0293 | 6.1  | 1.1   | 5.4  | 1.1 A | A           | A-         | A-         |
| MATH | 6 426887 | 14 | D-S.1.1.1 | 2 | 6242 | 0.89 | 0.03 | 0.89 | 0.03 | 0.06 | 0.00 | 0.38  | -0.16 | 0.38  | -0.21 | -0.26 | -1.2102 | 0.0428 | -2.6 | 0.9   | 0.0  | 1.0 B | + /         | A-         | A-         |
| MATH | 6 370038 | 14 | D-S.1.1.3 | 2 | 6242 | 0.37 | 0.20 | 0.20 | 0.37 | 0.23 | 0.00 | 0.20  | -0.07 | -0.02 | 0.20  | -0.14 | 2.0615  | 0.0301 | 9.9  | 1.3   | 9.9  | 1.6 A | I           | A-         | A-         |
| MATH | 6 665670 | 14 | C-G.1.1.5 | 2 | 6242 | 0.43 | 0.04 | 0.05 | 0.43 | 0.48 | 0.00 | 0.14  | -0.20 | -0.21 | 0.14  | 0.04  | 1.7626  | 0.0295 | 9.9  | 1.4   | 9.9  | 1.7 A | I           | A-         | A+         |
| MATH | 6 562788 | 14 | B-E.1.1.3 | 2 | 6242 | 0.46 | 0.46 | 0.13 | 0.30 | 0.11 | 0.00 | 0.15  | 0.15  | -0.08 | -0.05 | -0.07 | 1.5512  | 0.0293 | 9.9  | 1.4   | 9.9  | 1.6 A | .+ <i>A</i> | A-         | A-         |
| MATH | 6 378204 | 15 | A-N.3.1.3 | 1 | 6226 | 0.88 | 0.05 | 0.04 | 0.88 | 0.03 | 0.00 | 0.30  | -0.13 | -0.21 | 0.30  | -0.15 | -1.0978 | 0.0414 | 0.8  | 1.0   | 3.6  | 1.3 A | .+ <i>A</i> | A-         | A+         |
| MATH | 6 781930 | 15 | A-N.1.1.1 | 2 | 6226 | 0.27 | 0.26 | 0.26 | 0.21 | 0.27 | 0.00 | 0.36  | -0.04 | -0.12 | -0.22 | 0.36  | 2.6726  | 0.0325 | -0.1 | 1.0   | 7.9  | 1.3 A | I           | A-         | A-         |
| MATH | 6 764123 | 15 | C-G.1.1.6 | 2 | 6226 | 0.32 | 0.35 | 0.32 | 0.20 | 0.14 | 0.00 | 0.03  | -0.01 | 0.03  | 0.00  | -0.04 | 2.3989  | 0.0313 | 9.9  | 1.5   | 9.9  | 2.2 A | A           | A-         | A-         |
| MATH | 6 620969 | 15 | C-G.1.1.2 | 2 | 6226 | 0.32 | 0.35 | 0.32 | 0.19 | 0.14 | 0.00 | 0.20  | -0.09 | 0.20  | -0.10 | -0.04 | 2.3600  | 0.0311 | 9.9  | 1.3   | 9.9  | 1.7 A | A           | A-         | A-         |
| MATH | 6 600497 | 15 | A-R.1.1.1 | 1 | 6226 | 0.47 | 0.17 | 0.19 | 0.17 | 0.47 | 0.00 | 0.38  | -0.20 | -0.16 | -0.14 | 0.38  | 1.5156  | 0.0294 | 6.9  | 1.1   | 6.1  | 1.1 A | A           | A-         | A+         |
| MATH | 6 217937 | 15 | B-E.2.1   | 2 | 6226 | 0.59 | 0.10 | 0.59 | 0.09 | 0.23 | 0.00 | 0.48  | -0.18 | 0.48  | -0.22 | -0.28 | 0.9090  | 0.0296 | -2.1 | 1.0 - | -2.5 | 0.9 A | I           | A-         | A-         |
| MATH | 6 674929 | 15 | A-R.1.1.4 | 2 | 6226 | 0.71 | 0.10 | 0.71 | 0.11 | 0.09 | 0.00 | 0.50  | -0.25 | 0.50  | -0.22 | -0.29 | 0.2144  | 0.0315 | -4.7 | ).9 - | -4.0 | 0.9 A | A           | A-         | A-         |
| MATH | 6 319196 | 15 | D-S.1.1.1 | 2 | 6226 | 0.31 | 0.27 | 0.21 | 0.20 | 0.31 | 0.00 | 0.24  | -0.13 | -0.15 | 0.01  | 0.24  | 2.4117  | 0.0313 | 9.9  | 1.2   | 9.9  | 1.6 A | A           | A-         | A+         |
| MATH | 6 653572 | 15 | D-S.1.1.3 | 2 | 6226 | 0.32 | 0.32 | 0.09 | 0.31 | 0.27 | 0.00 | 0.26  | 0.26  | -0.14 | 0.01  | -0.19 | 2.3446  | 0.0311 | 9.9  | 1.2   | 9.9  | 1.6 A | A           | A-         | A-         |
| MATH | 6 867330 | 15 | B-E.1.1.3 | 2 | 6226 | 0.53 | 0.26 | 0.11 | 0.10 | 0.53 | 0.00 | 0.41  | -0.12 | -0.26 | -0.24 | 0.41  | 1.1890  | 0.0293 | 4.1  | 1.1   | 2.9  | 1.1 A | A           | A-         | A-         |
| MATH | 6 679939 | 16 | A-N.1.1.1 | 2 | 6243 | 0.25 | 0.35 | 0.25 | 0.25 | 0.15 | 0.00 | -0.07 | 0.15  | -0.07 | -0.08 | -0.02 | 2.8365  | 0.0333 | 9.9  | 1.6   | 9.9  | 2.8 A | A           | A-         | A-         |
| MATH | 6 184241 | 16 | A-N.3.1.2 | 2 | 6243 | 0.76 | 0.07 | 0.08 | 0.76 | 0.08 | 0.00 | 0.43  | -0.30 | -0.14 | 0.43  | -0.24 | -0.1433 | 0.0332 | -0.7 | 1.0 - | -1.2 | 1.0 A | - I         | B-         | B-         |
| MATH | 6 991985 | 16 | B-E.3.1.1 | 2 | 6243 | 0.37 | 0.37 | 0.16 | 0.29 | 0.18 | 0.00 | 0.33  | 0.33  | -0.28 | 0.07  | -0.23 | 2.0751  | 0.0302 | 9.7  | 1.1   | 9.9  | 1.3 A | .+ /        | A+         | A-         |
| MATH | 6 366029 | 16 | C-G.1.1.6 | 2 | 6243 | 0.20 | 0.27 | 0.20 | 0.16 | 0.37 | 0.00 | 0.17  | -0.25 | 0.17  | 0.18  | -0.04 | 3.2198  | 0.0358 | 8.9  | 1.2   | 9.9  | 2.0 A | I           | B-         | A-         |
| MATH | 6 832821 | 16 | D-S.1.1.1 | 2 | 6243 | 0.13 | 0.18 | 0.10 | 0.13 | 0.58 | 0.00 | 0.09  | -0.07 | -0.05 | 0.09  | 0.02  | 3.8064  | 0.0412 | 5.9  | 1.2   | 9.9  | 3.0 A | A           | A-         | A-         |
| MATH | 6 283431 | 16 | C-G.1.1.2 | 2 | 6243 | 0.14 | 0.30 | 0.14 | 0.21 | 0.34 | 0.00 | 0.08  | -0.20 | 0.08  | 0.06  | 0.08  | 3.6990  | 0.0401 | 7.3  | 1.2   | 9.9  | 3.0 A | I           | A-         | A-         |
| MATH | 6 261704 | 16 | B-E.2.1   | 2 | 6243 | 0.51 | 0.51 | 0.20 | 0.14 | 0.14 | 0.00 | 0.17  | 0.17  | -0.11 | -0.09 | -0.02 | 1.2914  | 0.0293 | 9.9  | 1.4   | 9.9  | 1.6 A | I           | A-         | A-         |
| MATH | 6 351542 | 16 | A-R.1.1.1 | 2 | 6243 | 0.53 | 0.11 | 0.08 | 0.53 | 0.29 | 0.00 | 0.35  | -0.22 | -0.24 | 0.35  | -0.09 | 1.2116  | 0.0293 | 9.9  | 1.1   | 8.5  | 1.2 A | I           | A-         | A+         |
| MATH | 6 730525 | 16 | A-R.1.1.4 | 2 | 6243 | 0.67 | 0.11 | 0.10 | 0.67 | 0.12 | 0.00 | 0.48  | -0.26 | -0.30 | 0.48  | -0.16 | 0.4448  | 0.0306 | -2.9 | 1.0   | -4.1 | 0.9 A | A           | A-         | A-         |
| MATH | 6 185321 | 16 | A-N.2.1.1 | 2 | 6243 | 0.66 | 0.05 | 0.66 | 0.13 | 0.17 | 0.00 | 0.44  | -0.19 | 0.44  | -0.16 | -0.30 | 0.5147  | 0.0304 | 2.2  | 1.0   | 2.8  | 1.1 A | .+ <i>A</i> | A-         | A-         |
| MATH | 6 141448 | 17 | A-R.1     | 2 | 6256 | 0.12 | 0.28 | 0.36 | 0.24 | 0.12 | 0.00 | -0.01 | -0.05 | 0.00  | 0.06  | -0.01 | 3.9258  | 0.0431 | 7.1  | 1.2   | 9.9  | 3.7 A | A           | A+         | A+         |
| MATH | 6 729898 | 17 | A-N.2.1.1 | 1 | 6256 | 0.58 | 0.05 | 0.21 | 0.58 | 0.16 | 0.00 | 0.17  | -0.11 | -0.07 | 0.17  | -0.09 | 0.9412  | 0.0292 | 9.9  | 1.3   | 9.9  | 1.5 A |             | A-         | A-         |
| MATH | 6 791506 | 17 | B-E.2.1.2 | 2 | 6256 | 0.21 | 0.27 | 0.35 | 0.21 | 0.17 | 0.00 | 0.03  | 0.03  | 0.01  | 0.03  | -0.09 | 3.0351  | 0.0345 | 9.9  | 1.3   | 9.9  | 2.5 A | .+ <i>A</i> | A-         | A-         |
| MATH | 6 947120 | 17 | C-G.1.1.1 | 2 | 6256 | 0.46 | 0.17 | 0.46 | 0.27 | 0.10 | 0.00 | 0.30  | -0.23 | 0.30  | -0.12 | -0.03 | 1.5775  | 0.0290 | 9.9  | 1.2   | 9.9  | 1.3 A | A           | A-         | A+         |
| MATH | 6 613726 | 17 | D-S.1.1.2 | 2 | 6256 | 0.12 | 0.12 | 0.12 | 0.21 | 0.54 | 0.00 | 0.09  | 0.09  | -0.11 | -0.28 | 0.25  | 3.9054  | 0.0429 | 6.1  | 1.2   | 9.9  | 2.6 A | + 1         | <b>A</b> + | A-         |
| MATH | 6 663009 | 17 | D-S.1.1.4 | 2 | 6256 | 0.38 | 0.19 | 0.19 | 0.23 | 0.38 | 0.00 | 0.26  | -0.06 | -0.08 | -0.18 | 0.26  | 1.9931  | 0.0297 | 9.9  | 1.2   | 9.9  | 1.4 A | A           | A-         | A-         |
| MATH | 6 151156 | 17 | B-E.1.1.2 | 2 | 6256 | 0.49 | 0.49 | 0.41 | 0.05 |      | 0.00 | 0.32  | 0.32  | -0.10 | -0.26 | -0.21 | 1.4232  | 0.0289 |      |       | 9.9  | 1.2 A |             | A-         | A-         |
| MATH | 6 283627 | 17 | A-N.3.2.2 | 2 | 6256 | 0.44 | 0.28 | 0.14 | 0.14 |      | 0.00 | 0.09  | 0.00  | -0.08 | -0.05 | 0.09  | 1.6551  | 0.0291 | 9.9  |       | 9.9  | 1.7 A |             |            | A+         |
| MATH | 6 932106 | 17 | A-R.1.1.3 | 2 | 6256 | 0.16 | 0.40 | 0.16 | 0.18 | 0.26 |      | 0.12  | -0.13 | 0.12  | 0.15  | -0.07 | 3.4785  | 0.0382 |      |       | 9.9  | 2.5 A |             |            | A+         |
| MATH | 6 529131 | 17 | C-G.1.1.4 | 2 | 6256 | 0.56 | 0.12 | 0.09 | 0.23 |      |      | 0.47  | -0.23 | -0.24 | -0.21 | 0.47  | 1.0243  | 0.0291 |      |       | -2.9 | 0.9 A |             | A-         | B-         |
| MATH | 6 332149 | 18 | A-R.1.1.2 | 2 | 6220 | 0.32 | 0.19 | 0.32 | 0.20 |      | 0.00 | 0.22  | -0.10 | 0.22  | -0.19 | 0.03  | 2.3502  | 0.0310 |      | 1.2   | 9.9  | 1.6 A | _           | A-         | A-         |
| MATH | 6 377489 | 18 | A-N.1     | 2 | 6220 | 0.45 | 0.17 | 0.45 | 0.13 |      | 0.00 | -0.06 | 0.01  | -0.06 | -0.12 | 0.16  | 1.6124  | 0.0292 |      |       | 9.9  | 2.1 A |             | A+         | A+         |
| MATH | 6 986709 | 18 | C-G.1.1.3 | 2 | 6220 | 0.47 | 0.16 | 0.20 | 0.47 |      |      | 0.24  | -0.16 | -0.11 | 0.24  | -0.03 | 1.4824  | 0.0291 |      |       | 9.9  | 1.3 A |             | A-         | A-         |
| MATH | 6 471207 | 18 | A-N.1.1.1 | 2 | 6220 | 0.50 | 0.50 | 0.32 | 0.10 | 0.07 | 0.00 | 0.30  | 0.30  | -0.18 | -0.20 | -0.02 | 1.3119  | 0.0290 | 9.9  | 1.2   | 9.9  | 1.2 A |             | A-         | A-         |
| MATH | 6 179736 | 18 | A-R.1.1.5 | 2 | 6220 | 0.44 | 0.14 | 0.17 | 0.25 |      | 0.00 | 0.35  | -0.26 | -0.08 | -0.12 | 0.35  | 1.6517  | 0.0292 | 7.1  | 1.1   | 9.3  | 1.2 B |             | A-         | A-         |
| MATH | 6 138230 | 18 | B-E.1.1.2 | 2 | 6220 | 0.58 | 0.58 | 0.20 | 0.14 |      | 0.00 | 0.44  | 0.44  | -0.19 | -0.22 | -0.24 | 0.9048  | 0.0293 | 0.0  | _     | -1.5 | 1.0 A |             |            | A-         |
| MATH | 6 703957 | 18 | B-E.2.1.4 | 1 | 6220 | 0.46 | 0.23 | 0.11 | 0.46 | 0    | 0.00 | 0.00  | 0.16  | -0.16 | 0.00  | -0.03 | 1.5571  | 0.0291 |      | 1.6   | 9.9  | 1.8 A | .+ <i>F</i> | A-         | A+         |
| MATH | 6 863471 | 18 | D-S.1     | 3 | 6220 | 0.44 | 0.24 | 0.44 | 0.19 |      | 0.00 | 0.25  | -0.03 | 0.25  | -0.12 | -0.19 | 1.6320  | 0.0292 | 9.9  | 1.2   | 9.9  | 1.4 A | .+ /        | A-         | A-         |
| MATH | 6 506675 | 18 | D-S.1.1.2 | 2 | 6220 | 0.20 | 0.30 | 0.29 | 0.20 | 0.20 | 0.00 | 0.03  | 0.20  | -0.11 | -0.13 | 0.03  | 3.0881  | 0.0351 | 9.9  | 1.3   | 9.9  | 2.6 A |             | A-         | <b>A</b> + |
| MATH | 6 729417 | 18 | D-S.1.1.2 | 2 | 6220 | 0.64 | 0.18 | 0.12 | 0.05 | 0.64 | 0.00 | 0.44  | -0.18 | -0.28 | -0.21 | 0.44  | 0.5634  | 0.0300 | 0.4  |       | -2.1 | 1.0 A |             | A-         | A-         |
| MATH | 6 159354 | 19 | A-N.3.1.1 | 1 | 6236 | 0.80 | 0.03 | 0.80 | 0.15 | 0.02 | 0.00 | 0.36  | -0.20 | 0.36  | -0.23 | -0.19 | -0.4488 | 0.0352 | 1.4  | 1.0   | 2.9  | 1.1 A | (           | C-         | A-         |

| MATH         | 6 549055             | 19 | A-R.1.1.2          | 2 623                | 6 0.55 | 0.55 | 0.08 | 0.12 | 0.24 | 0.00 | 0.29  | 0.29          | -0.26          | -0.11         | -0.09 1.  | .0700          | 0.0293 | 9.9    | .2 9.9               | 1.3   | 3 A-         | A-       | A+      |
|--------------|----------------------|----|--------------------|----------------------|--------|------|------|------|------|------|-------|---------------|----------------|---------------|-----------|----------------|--------|--------|----------------------|-------|--------------|----------|---------|
| MATH         | 6 695144             | 19 | B-E.2              | 2 623                | 5 0.57 | 0.36 | 0.05 | 0.57 | 0.02 | 0.00 | 0.54  | -0.39         | -0.27          | 0.54          | -0.15 0.  | .9960          | 0.0294 | -8.9   | ).9 -6.0             |       | 9 A+         | A-       | A-      |
| MATH         | 6 720504             | 19 | C-G.1.1.3          | 2 623                | 5 0.34 | 0.43 | 0.13 | 0.10 | 0.34 | 0.00 | 0.48  | -0.27         | -0.18          | -0.11         | 0.48 2.   | .2528          | 0.0307 | -8.9 ( | ).9 -1.8             | 3 1.0 | 0 <b>A</b> - | A-       | B-      |
| MATH         | 6 896638             | 19 | A-R.1.1.5          | 2 623                | 6 0.34 | 0.48 | 0.34 | 0.15 | 0.03 | 0.00 | 0.36  | -0.26         | 0.36           | -0.06         | -0.11 2.  | .2461          | 0.0307 | 3.6    | .1 8.                | 7 1.2 | 2 C-         | B-       | A-      |
| MATH         | 6 979817             | 19 | B-E.2.1.4          | 2 623                | 6 0.39 | 0.24 | 0.20 | 0.39 | 0.17 | 0.00 | 0.15  | -0.02         | -0.13          | 0.15          | -0.04 1.  | .9603          | 0.0299 | 9.9    | .4 9.9               | 1.    | 7 A+         | A+       | A-      |
| MATH         | 6 648560             | 19 | D-S.1.1.4          | 2 623                | 6 0.18 | 0.27 | 0.41 | 0.13 | 0.18 | 0.00 | 0.00  | 0.09          | 0.02           | -0.13         | 0.00 3.   | .3066          | 0.0366 | 9.9    | .5 9.9               | 2.    | 7 A-         | A-       | A-      |
| MATH         | 6 419253             | 19 | C-G.1.1.6          | 2 623                | 6 0.25 | 0.23 | 0.21 | 0.31 | 0.25 | 0.00 | 0.33  | -0.20         | -0.15          | 0.01          | 0.33 2.   | .8106          | 0.0332 | 0.1    | .0 9.9               | 1.4   | 4 A+         | A-       | B-      |
| MATH         | 6 153384             | 19 | A-N.2.1.1          | 1 623                | 0.56   | 0.20 | 0.56 | 0.07 | 0.16 | 0.00 | 0.42  | -0.19         | 0.42           | -0.17         | -0.22 1.  | .0175          | 0.0293 | 3.9    | .1 0.3               | 3 1.0 | 0 <b>A</b> + | A-       | A-      |
| MATH         | 6 528485             | 19 | D-S.1.1.4          | 2 623                | 0.26   | 0.21 | 0.26 | 0.33 | 0.21 | 0.00 | -0.01 | -0.03         | -0.01          | 0.05          | -0.02 2.  | 7690           | 0.0330 | 9.9    | 5 9.9                | 2.4   | 4 A-         | A-       | A-      |
| MATH         | 6 158579             | 20 | A-N.1.1.1          | 2 620                | 0.54   | 0.11 | 0.22 | 0.13 | 0.54 | 0.00 | 0.52  | -0.21         | -0.30          | -0.20         | 0.52 1.   | .0945          | 0.0292 | -6.8   | ).9 -5.4             | 1 0.9 | 9 A+         | A-       | A-      |
| MATH         | 6 411359             | 20 | A-N.3.1.1          | 1 620                | 4 0.81 | 0.09 | 0.81 | 0.07 | 0.00 | 0.00 | 0.43  | -0.28         | 0.43           | -0.24         | -0.18 -0. | .5465          | 0.0358 |        | ).9 -2.3             | 0.9   | 9 A-         | A-       | A-      |
| MATH         | 6 186320             | 20 | A-R.1.1.2          | 2 620                | 4 0.65 | 0.65 | 0.15 | 0.10 | 00   | 0.00 | 0.48  | 0.48          | -0.18          | -0.33         | -0.20 0.  | .5098          | 0.0303 |        | .0 -4.               | 0.9   | 9 A-         | A-       | A-      |
| MATH         | 6 988435             | 20 | A-R.1.1.5          | 2 620                | 4 0.20 | 0.36 | 0.27 | 0.16 | 0.20 | 0.00 | 0.09  | -0.04         | 0.02           | -0.06         | 0.09 3.   | .1380          | 0.0356 |        | .3 9.9               | 2.3   | 3 A-         | A-       | A-      |
| MATH         | 6 205104             | 20 | B-E.3              | 2 620                | 0.41   | 0.15 | 0.20 | 0.24 |      | 0.00 | 0.16  | -0.08         | 0.03           | -0.14         | 0.16 1.   | .7824          | 0.0296 |        | .4 9.9               | 1.0   | 6 A+         | A+       | A-      |
| MATH         | 6 488324             | 20 | D-S.1.1.3          | 2 620                |        | 0.12 | 0.07 | 0.42 |      | 0.00 | 0.02  | -0.04         | -0.20          | 0.02          |           | .7414          | 0.0295 | 7.7    | .6 9.9               |       | 9 A-         | A-       | A-      |
| MATH         | 6 505649             | 20 | D-S.1.1.1          | 2 620                |        | 0.93 | 0.03 | 0.02 |      | 0.00 | 0.37  | 0.37          | -0.22          | -0.21         |           | .8800          | 0.0529 |        | ).9 -3.0             | _     | 7 A+         | A-       | A-      |
| MATH         | 6 947650             | 20 | D-S.1.1.4          | 2 620                |        | 0.42 | 0.17 | 0.25 |      | 0.00 | 0.12  | 0.12          | -0.09          | -0.02         | -0.03 1.  | .7667          | 0.0295 | 9.9    | .4 9.9               |       | 7 A-         | A-       | A-      |
| MATH         | 6 526268             | 20 | B-E.2              | 2 620                |        | 0.19 | 0.36 | 0.37 |      | 0.00 | 0.30  | -0.14         | -0.13          | 0.30          |           | .0148          | 0.0300 |        | .1 9.9               |       |              | A+       | A-      |
| MATH         | 6 346881             | 20 | A-N.2.1.1          | 1 620                |        | 0.13 | 0.55 | 0.23 |      | 0.00 | 0.24  | -0.08         | 0.24           | -0.12         |           | .0458          | 0.0293 |        | .3 9.9               | _     | 4 A+         | A+       | A-      |
| MATH         | 7 984768             | 0  | A.1.1.1            | 2 12829              |        | 0.03 | 0.12 | 0.78 |      | 0.00 | 0.40  | -0.12         | -0.21          | 0.40          |           | .3526          | 0.0075 | 0.0    | .0 -4.9              |       | ~            | ↓        |         |
| MATH         | 7 409847             | 0  | A.3.2.1            | 1 12829              | _      | 0.81 | 0.03 | 0.09 |      | 0.00 | 0.39  | 0.39          | -0.12          | -0.19         |           | .4911          | 0.0077 |        | .0 -1.3              | /     |              | ↓        |         |
| MATH         | 7 813466             | 0  | A.3.1.1            | 2 12829:             |        | 0.09 | 0.13 | 0.75 | 0.00 | 0.00 | 0.32  | -0.10         | -0.23          | 0.32          |           | .1429          | 0.0072 | 9.9    | .1 9.9               |       | -            | ↓        |         |
| MATH         | 7 924117             | 0  | E.4.1.1            | 2 12829              |        | 0.28 | 0.11 | 0.57 |      | 0.00 | 0.56  | -0.44         | -0.16          | 0.56          |           | .0073          | 0.0064 | 1      | ).9 -9.9             |       |              | <u> </u> | $\perp$ |
| MATH         | 7 724314             | 0  | D.3.1.1            | 1 12829:             |        | 0.07 | 0.03 | 0.05 |      | 0.00 | 0.49  | -0.25         | -0.23          | -0.32         |           | .0327          | 0.0088 |        | .0 -9.9              |       |              | <u> </u> | $\perp$ |
| MATH         | 7 618060             | 0  | D.2.2.1            | 2 12829              |        | 0.13 | 0.13 | 0.61 |      | 0.00 | 0.51  | -0.30         | -0.19          | 0.51          |           | .7636          | 0.0065 |        | ).9 -9.9             |       |              | —        | $\perp$ |
| MATH         | 7 493311             | 0  | D.3.1.1            | 2 12829:             |        | 0.08 | 0.83 | 0.05 |      | 0.00 | 0.40  | -0.14         | 0.40           | -0.28         |           | .5806          | 0.0079 |        | ).9 -1.0             |       | _            | —        | $\perp$ |
| MATH         | 7 378024             | 0  | B.2.1.1            | 2 12829              |        | 0.18 | 0.10 | 0.63 | 0.09 |      | 0.49  | -0.36         | -0.26          | 0.49          |           | .5692          | 0.0066 |        | .0 -9.9              |       |              | <u> </u> | $\perp$ |
| MATH         | 7 465595             | 0  | B.2.1.2            | 1 12829              |        | 0.12 | 0.18 | 0.62 |      | 0.00 | 0.47  | -0.30         | -0.23          | 0.47          |           | .6263          | 0.0066 |        | .0 -1.4              | 1 1.0 | ~            | <u> </u> | $\perp$ |
| MATH         | 7 766990             | 0  | B.2.2.1            | 1 12829              |        | 0.09 | 0.06 | 0.05 |      | 0.00 | 0.55  | -0.37         | -0.27          | -0.22         |           | .4569          | 0.0077 |        | 0.9 -9.9             |       |              | <u> </u> | $\perp$ |
| MATH         | 7 725149             | 0  | B.2.2.2            | 1 12829              |        | 0.09 | 0.78 | 0.11 |      | 0.00 | 0.51  | -0.28         | 0.51           | -0.37         |           | .2423          | 0.0073 |        | ).9 -9.9             |       | _            | ╄        |         |
| MATH         | 7 896757             | 0  | B.2.2.2            | 1 12829              | _      | 0.06 | 0.14 | 0.73 |      | 0.00 | 0.53  | -0.17         | -0.37          | 0.53          |           | .0034          | 0.0071 |        | 1 -9.9               |       |              | ┼        | +       |
| MATH         | 7 282881             | 0  | D.3.1.2            | 2 12829              | _      | 0.26 | 0.08 | 0.15 |      | 0.00 | 0.40  | -0.15         | -0.28          | -0.16         |           | 3528           | 0.0064 |        | .1 9.9               |       |              | —        | +       |
| MATH         | 7 961381             | 0  | B.2.2.1            | 2 12829              |        | 0.07 | 0.10 | 0.79 |      | 0.00 | 0.51  | -0.31         | -0.30          | 0.51          |           | .3720          | 0.0075 |        | ).9 -9.9             |       |              | —        | +       |
| MATH         | 7 869200             | 0  | A.1.1.1            | 1 12829              |        | 0.04 | 0.03 | 0.89 |      | 0.00 | 0.44  | -0.29         | -0.24          | 0.44          |           | .2333          | 0.0094 |        | ).8 -9.9<br>).9 -9.9 |       | -            | —        | +       |
| MATH         | 7 640425             | -  | A.1.1.1            | 1 12829:             |        | 0.07 | 0.14 | 0.02 |      | 0.00 | 0.48  | -0.09         | -0.46          | -0.14         |           | 2874           | 0.0074 |        |                      |       |              | +        | +       |
| MATH         | 7 578285             | 0  | A.2.2.5            | 2 12829              | _      | 0.05 | 0.62 | 0.18 | 0.15 |      | 0.38  | -0.26         | 0.38           | -0.30         |           | 7028           | 0.0065 |        | .1 9.9               |       |              | +        | +       |
| MATH<br>MATH | 7 845125<br>7 181619 | 0  | B.2.2.1            | 2 12829              |        | 0.14 | 0.17 | 0.13 |      | 0.00 | 0.53  | -0.42         | -0.13          | -0.21<br>0.52 |           | .9607<br>.0118 | 0.0064 |        | ).9 -9.9<br>).9 -9.9 |       |              | ₩        | +       |
| MATH         | 7 856306             | 0  | D.2.2.1<br>D.3.1.1 | 2 12829:<br>2 12829: |        | 0.11 | 0.10 | 0.73 |      | 0.00 | 0.52  | -0.27<br>0.56 | -0.28<br>-0.28 | -0.20         |           | .8383          | 0.0071 |        | ).9 -9.9             |       | ~            | ₩        | +       |
| MATH         | 7 862529             | 0  | E.3.1.1            | 2 12829              |        | 0.00 | 0.10 | 0.04 |      | 0.00 | 0.36  | 0.36          | 0.17           | -0.20         |           | .0303          | 0.0063 | 9.9    | .2 9.9               |       | _            | ┼──      | +       |
| MATH         | 7 962688             | 0  | E.3.1.1            | 2 12829              |        | 0.11 | 0.77 | 0.10 |      | 0.00 | 0.17  | 0.03          | -0.25          | -0.23         |           | .2962          | 0.0074 | +      | .0 1.0               |       |              | +        | +       |
| MATH         | 7 695146             | 0  | D.3.1.2            | 2 12829              |        | 0.53 | 0.08 | 0.03 |      | 0.00 | 0.37  | 0.37          | -0.23          | -0.21         |           | .2319          | 0.0096 | + +    | .0 9.0               |       |              | +-       | +-      |
| MATH         | 7 288763             | 0  | E.3.1.2            | 2 12829              |        | 0.33 | 0.13 | 0.27 |      | 0.00 | 0.43  | -0.45         | -0.14          | -0.31         |           | .7459          | 0.0065 |        | ).9 -9.9             |       |              | ┼──      | +       |
| MATH         | 7 587903             | 0  | E.3.1.2            | 2 12829              |        | 0.14 | 0.18 | 0.81 |      | 0.00 | 0.35  | -0.45         | -0.17          | 0.35          |           | 4161           | 0.0003 |        | .0 7.                | 1 1.  |              | +        | +-      |
| MATH         | 7 859631             | 0  | E.4.1.1            | 2 12829              |        | 0.08 | 0.07 | 0.81 |      | 0.00 | 0.33  | -0.23         | 0.49           | -0.26         |           | 7979           | 0.0076 |        | .0 -9.9              |       |              | +-       | +       |
| MATH         | 7 556718             | 0  | D.2.2.1            | 2 12829              |        | 0.10 | 0.39 | 0.13 |      | 0.00 | 0.49  | 0.40          | -0.15          | -0.23         |           | .3545          | 0.0063 | 9.9    | .1 9.9               | _     | _            | +        | +       |
| MATH         | 7 614460             | 0  | D.2.2.1<br>D.3.1.1 | 2 12829              |        | 0.05 | 0.30 | 0.11 |      | 0.00 | 0.40  | -0.26         | -0.13          | 0.55          |           | .3333          | 0.0064 |        | ).8 -9.9             |       |              | +        | +-      |
| MATH         | 7 661497             | 0  | D.3.1.1<br>D.2.2.1 | 2 12829              |        | 0.03 | 0.07 | 0.78 |      | 0.00 | 0.50  | 0.50          | -0.32          | -0.37         |           | .1523          | 0.0073 |        | ).9 -9.9             | _     |              | +-       | +       |
| MATH         | 7 961851             | 0  | B.2.1.1            | 2 12829              | _      | 0.76 | 0.07 | 0.13 |      | 0.00 | 0.59  | -0.15         | -0.52          | 0.59          |           | .1323          | 0.0072 |        | ).8 -9.9<br>).8 -9.9 | _     |              | +        | +       |
| MATH         | 7 265280             | 0  | A.1.1.1            | 1 12829              |        | 0.02 | 0.30 | 0.47 |      | 0.00 | 0.54  | -0.13         | -0.32          | -0.28         |           | 4851           | 0.0064 | 1      | ).8 -9.9<br>).8 -9.9 | 0.0   | -            | +-       | +       |
| MATH         | 7 694206             | 0  | A.3.2.1            | 2 12829              |        | 0.02 | 0.11 | 0.07 |      | 0.00 | 0.54  | 0.53          | -0.39          | -0.28         |           | 9623           | 0.0077 |        | 0.8 -9.5             |       | -            | +        | +       |
| IVIA I II    | / 094200             | U  | A.3.2.1            | 4 12029              | 0.57   | 0.57 | 0.08 | 0.27 | 0.00 | 0.00 | 0.33  | 0.33          | -U.ZI          | -0.33         | -0.19 0.  | .7023          | 0.0004 | -7.9   | ı.フ  <b>-</b> ソ.)    | y U.S | 7            | ь        |         |

| MATH         | 7 762726 0               | A.3.2.2                | 1 128295          | 0.82 | 0.06 0  | .82 ( | 0.06 | 0.06 0.00              | 0.31 | -0.25 | 0.31           | -0.10         | -0.15 -0.6356                 | 0.0080 | 7.7 1.0  | 9.9     | 1.3              |          | $\Box$       |
|--------------|--------------------------|------------------------|-------------------|------|---------|-------|------|------------------------|------|-------|----------------|---------------|-------------------------------|--------|----------|---------|------------------|----------|--------------|
| MATH         | 7 775276 0               |                        | 2 128295          |      |         |       |      | 0.21 0.00              | 0.43 | -0.28 | 0.43           | -0.24         | -0.06 1.5571                  | 0.0064 | 6.9 1.0  | 9.9     | 1.1              |          | +            |
| MATH         | 7 220604 0               |                        | 1 128295          | 0.75 |         |       |      | 0.10 0.00              | 0.27 | -0.16 | -0.15          | 0.27          | -0.12 -0.1921                 | 0.0073 | 9.9 1.3  | 2 9.9   | 1.5              |          |              |
| MATH         | 7 212362 0               | A.1.1.1                | 1 128295          | 0.73 | 0.12 0  | .73 ( | ).09 | 0.05 0.00              | 0.47 | -0.25 | 0.47           | -0.36         | -0.10 -0.0010                 | 0.0071 | -9.9 0.9 | -9.9    | 0.9              |          |              |
| MATH         | 7 825165 0               | A.1.1.1                | 1 128295          | 0.78 | 0.15 0. | .05 ( | ).78 | 0.02 0.00              | 0.54 | -0.44 | -0.22          | 0.54          | -0.14 -0.3745                 | 0.0075 | -9.9 0.9 | -9.9    | 0.7              |          |              |
| MATH         | 7 563947 0               | E.3.1.2                | 2 128295          | 0.75 | 0.19 0. | .03 ( | 0.03 | 0.75 0.00              | 0.48 | -0.35 | -0.23          | -0.21         | 0.48 -0.0081                  | 0.0071 | -9.9 0.9 | -9.9    | 0.8              |          |              |
| MATH         | 7 156412 0               | D.3.1.2                | 2 128295          | 0.80 | 0.03 0  | .10 ( |      | 0.80 0.00              | 0.40 | -0.21 | -0.25          | -0.19         | 0.40 -0.4982                  | 0.0077 | -2.1 1.0 | 2.2     | 1.0              |          |              |
| MATH         | 7 884249 0               | D.3.1.2                | 2 128295          | 0.71 | 0.21 0. | .04 ( | ).71 | 0.04 0.00              | 0.50 | -0.39 | -0.18          | 0.50          | -0.17 0.1617                  | 0.0069 | -9.9 0.9 | -9.9    | 0.8              |          |              |
| MATH         | 7 544758 0               | E.3.1.3                | 2 128295          | 0.67 | 0.17 0  | .10 ( | ).67 | 0.05 0.00              | 0.48 | -0.38 | -0.16          | 0.48          | -0.15 0.3875                  | 0.0067 | -9.9 1.0 | 9.9     | 0.9              |          |              |
| MATH         | 7 607867 0               | E.4.1.1                | 2 128295          | 0.48 | 0.20 0  | .48 ( | ).17 | 0.14 0.00              | 0.36 | -0.14 | 0.36           | -0.11         | -0.23 1.3763                  | 0.0064 | 9.9 1.   | 9.9     | 1.2              |          |              |
| MATH         | 7 953328 0               | E.4.1.1                | 2 128295          | 0.78 | 0.08 0  | .78 ( | ).07 | 0.07 0.00              | 0.33 | -0.13 | 0.33           | -0.19         | -0.19 -0.2564                 | 0.0074 | 9.9 1.   | 7.6     | 1.1              |          |              |
| MATH         | 7 132775 0               | D.3.1.1                | 2 128295          | 0.51 | 0.23 0  | .17 ( | ).51 | 0.08 0.00              | 0.42 | -0.13 | -0.25          | 0.42          | -0.21 1.2942                  | 0.0064 | 9.9 1.0  | 9.9     | 1.1              |          |              |
| MATH         | 7 424920 0               | D.2.2.1                | 2 128295          | 0.49 | 0.22 0  | .49 ( | ).17 | 0.12 0.00              | 0.45 | -0.31 | 0.45           | -0.22         | -0.05 1.3086                  | 0.0064 | 1.8 1.0  | 2.7     | 1.0              |          |              |
| MATH         | 7 726063 0               | D.3.1.1                | 2 128295          | 0.67 | 0.05 0  | .67 ( | ).23 | 0.05 0.00              | 0.53 | -0.20 | 0.53           | -0.36         | -0.24 0.4271                  | 0.0067 | -9.9 0.9 | -9.9    | 0.8              |          |              |
| MATH         | 7 396881 0               | D.3.1.2                | 2 128295          | 0.35 | 0.20 0  | .35 ( | ).09 | 0.36 0.00              | 0.46 | -0.17 | 0.46           | -0.05         | -0.28 2.1534                  | 0.0067 | -9.9 0.9 | 4.6     | 1.0              |          |              |
| MATH         | 7 640367 0               | D.2.2.1                | 2 128295          | 0.46 | 0.10 0  | .23   | 0.20 | 0.46 0.00              | 0.46 | -0.23 | -0.16          | -0.23         | 0.46 1.3726                   | 0.0064 | -6.8 1.0 | -2.3    | 1.0              |          |              |
| MATH         | 7 300637 0               | B.2.1.2                | 1 128295          | 0.53 | 0.16    | .24   | ).53 | 0.08   0.00            | 0.48 | -0.36 | -0.20          | 0.48          | -0.08 1.1726                  | 0.0064 | -7.7 1.0 | -3.1    | 1.0              |          |              |
| MATH         | 7 604894 0               | B.2.1.2                | 2 128295          | 0.00 |         |       |      | 0.09 0.00              | 0.37 | -0.30 | 0.37           | -0.17         | -0.02 0.7960                  | 0.0065 | 9.9 1.   | 9.9     | 1.1              |          | $oxed{oxed}$ |
| MATH         | 7 292260 0               |                        | 2 128295          |      |         |       |      | 0.07 0.00              | 0.54 | -0.28 | 0.54           | -0.28         | -0.30 -0.1700                 | 0.0073 | -9.9 0.9 |         | 0.7              |          |              |
| MATH         | 7 310524 0               | 2.2.111                | 2 128295          |      |         |       |      | 0.22 0.00              | 0.40 | -0.23 | 0.40           | 0.02          | -0.34 1.0717                  | 0.0064 | 9.9 1.   | 9.9     | 1.1              |          |              |
| MATH         | 7 773381 0               |                        | 2 128295          |      |         |       |      | 0.07 0.00              | 0.33 | 0.33  | -0.23          | -0.15         | -0.13 -0.2092                 | 0.0073 | 9.9 1.   | 9.9     | 1.3              |          |              |
| MATH         | 7 962921 0               |                        | 1 128295          |      |         |       |      | 0.06 0.00              | 0.45 | -0.27 | 0.45           | -0.30         | -0.11 0.5962                  | 0.0066 | 7.5 1.0  |         | 1.0              |          |              |
| MATH         | 7 576228 0               |                        | 1 128295          |      |         | _     |      | 0.05 0.00              | 0.27 | 0.27  | -0.13          | -0.13         | -0.18 0.0407                  | 0.0070 |          |         | 1.4              |          |              |
| MATH         | 7 511630 0               |                        | 1 128295          |      |         |       |      | 0.07 0.00              | 0.43 | -0.16 | 0.43           | -0.21         | -0.24 1.5200                  | 0.0064 | 2.6 1.0  |         | 1.0              |          |              |
| MATH         | 7 913171 0               |                        | 2 128295          |      |         |       |      | 0.07 0.00              | 0.42 | 0.42  | -0.30          | -0.23         | -0.14 0.3166                  | 0.0068 | 3.4 1.0  |         | 1.0              |          |              |
| MATH         | 7 374399 0               |                        | 2 128295          |      |         | _     |      | 0.10 0.00              | 0.41 | 0.41  | -0.27          | -0.12         | -0.23 0.9424                  | 0.0064 | 9.9 1.   |         | 1.0              |          |              |
| MATH         | 7 657157 0               |                        | 2 128295          |      |         |       |      | 0.50 0.00              | 0.45 | -0.21 | -0.15          | -0.25         | 0.45 1.2936                   | 0.0064 | -2.1 1.0 |         | 1.0              |          | 4            |
| MATH         | 7 299437 0               |                        | 2 128295          |      |         |       |      | 0.06 0.00              | 0.33 | -0.27 | 0.33           | -0.14         | -0.07 0.2289                  | 0.0068 | 9.9 1.   |         | 1.2              |          | 1            |
| MATH         | 7 639934 1               | D.3.1.2                | 2 13219           |      |         |       |      | 0.40 0.00              | 0.17 | -0.04 | -0.03          | -0.13         | 0.17 1.8226                   | 0.0204 | 9.9 1.4  | 1 9.9   | 1.5 A-           | A-       | A-           |
| MATH<br>MATH | 7 597701 1<br>7 287364 1 | A.2.1.1<br>A-R.1       | 1 13219<br>2 6821 |      |         |       |      | 0.03 0.00<br>0.14 0.00 | 0.33 | -0.17 | -0.24<br>-0.30 | -0.13<br>0.51 | -0.18 -0.4036<br>-0.23 0.8359 | 0.0233 | 5.2 1.   |         | 1.2 A+<br>0.9 A- | A-<br>A- | A+<br>A-     |
| MATH         | 7 539151 1               | B-E.1.1.1              | 1 6821            |      |         |       |      | 0.14 0.00              | 0.31 | 0.01  | 0.12           | -0.13         | 0.01 2.5642                   | 0.0279 | 9.9 1.3  | 3 9.9   | 1.9 A-           | A+       | A-           |
| MATH         | 7 492791 1               | B-E.1.1.1<br>B-E.2.2.1 | 2 6821            |      |         |       |      | 0.24 0.00              | 0.12 | -0.26 | 0.12           | -0.13         | -0.25 0.5987                  | 0.0312 | -3.5 1.0 |         | 0.9 A-           | A-       | A-           |
| MATH         | 7 838248 1               | A-N.1.1.3              | 1 6821            | 0.00 | 0.00    |       |      | 0.17 0.00              | 0.49 | -0.20 | -0.18          | 0.34          | -0.20 1.4813                  | 0.0283 | 9.9 1.0  |         | 1.2 A+           | A-       | A-           |
| MATH         | 7 529316 1               | D-S.1.1.2              | 1 6821            |      |         |       |      | 0.17 0.00              | 0.34 | -0.02 | -0.13          | 0.34          | -0.34 0.5063                  | 0.0279 | 2.9 1.0  |         | 1.2 A+           | A+       | A-           |
| MATH         | 7 871771 1               | A-R.1.1.5              | 2 6821            |      |         |       |      | 0.27 0.00              | 0.14 | -0.23 | -0.02          | -0.10         | 0.14 2.4827                   | 0.0308 | 9.9 1.3  | 3 9.9   | 1.8 A-           | A-       | A+           |
| MATH         | 7 869367 1               | B-E.2.2.2              | 2 6821            |      |         |       |      | 0.11 0.00              | 0.00 | 0.18  | -0.02          | 0.00          | -0.15 2.6340                  | 0.0308 | 9.9 1.4  |         | 2.3 A+           | A+       | A+           |
| MATH         | 7 148582 1               | C-G.2.1.2              | 2 6821            |      |         | _     |      | 0.09 0.00              | 0.30 | -0.26 | -0.05          | 0.30          | -0.06 1.7278                  | 0.0283 | 9.9 1.   | 2 9.9   | 1.3 A-           | A-       | A-           |
| MATH         | 7 344217 1               | C-G.1.1.3              | 2 6821            |      |         |       |      | 0.14 0.00              | 0.10 | -0.18 | -0.03          | 0.10          | 0.10 3.5135                   | 0.0383 | 8.4 1.2  |         | 2.3 A-           | A-       | A-           |
| MATH         | 7 756276 1               | D-S.3.2.1              | 2 6821            |      |         |       |      | 0.62 0.00              | 0.42 | -0.30 | -0.14          | -0.21         | 0.42 0.5635                   | 0.0283 | 3.0 1.0  |         | 1.1 A+           | A-       | A-           |
| MATH         | 7 699865 2               | B.2.2.1                | 2 19188           |      |         |       |      | 0.80 0.00              | 0.51 | -0.21 | -0.30          | -0.31         | 0.51 -0.5024                  | 0.0200 | -9.9 0.9 |         | 0.7 A-           | A-       | A-           |
| MATH         | 7 647149 2               | D.3.1.1                | 2 19188           |      | 0.13 0  |       |      | 0.18 0.00              | 0.54 | -0.31 | 0.54           | -0.23         | -0.24 0.7502                  | 0.0169 | -9.9 0.9 |         | 0.9 A+           | A-       | A-           |
| MATH         | 7 577153 2               | A-R.1.1.1              | 2 6413            | 0.38 |         |       |      | 0.38 0.00              | 0.40 | -0.01 | -0.23          | -0.28         | 0.40 1.9273                   | 0.0296 | 4.8 1.   | 6.3     | 1.1 A-           | A-       | A-           |
| MATH         | 7 313524 2               | A-N.1.1.2              | 1 6413            | 0.31 | 0.31 0  | .23 ( | ).18 | 0.28 0.00              | 0.33 | 0.33  | -0.11          | -0.11         | -0.14 2.3511                  | 0.0309 | 5.7 1.   | 1 9.9   | 1.4 A-           | A-       | A-           |
| MATH         | 7 562948 2               | D-S.1.1.2              | 2 6413            | 0.38 | 0.34 0  | .19 ( | ).38 | 0.09 0.00              | 0.36 | -0.05 | -0.28          | 0.36          | -0.14 1.9247                  | 0.0296 | 7.5 1.   | 9.9     | 1.2 A-           | A-       | A-           |
| MATH         | 7 837348 2               | A-R.1.1.3              | 1 6413            | 0.56 | 0.14 0  | .13 ( | ).56 | 0.16 0.00              | 0.28 | -0.08 | -0.10          | 0.28          | -0.22 0.9512                  | 0.0289 | 9.9 1.2  | 9.9     | 1.4 A+           | A-       | A+           |
| MATH         | 7 413005 2               | B-E.2.2.2              | 2 6413            | 0.31 | 0.14 0  | .10 ( | ).46 | 0.31 0.00              | 0.09 | -0.16 | -0.15          | 0.11          | 0.09 2.3578                   | 0.0309 | 9.9 1.4  | 9.9     | 2.0 A+           | A-       | A-           |
| MATH         | 7 596708 2               | C-G.2.1.2              | 1 6413            | 0.83 | 0.04 0  | .83 ( | 0.06 | 0.06 0.00              | 0.40 | -0.21 | 0.40           | -0.21         | -0.22 -0.7334                 | 0.0363 | -2.1 1.0 | -0.4    | 1.0 A-           | A-       | A-           |
| MATH         | 7 461053 2               | B-E.2.1.1              | 2 6413            | 0.51 | 0.19 0  | .17 ( | ).14 | 0.51 0.00              | 0.50 | -0.24 | -0.24          | -0.19         | 0.50 1.2539                   | 0.0288 | -3.9 1.0 | -3.1    | 0.9 A-           | A+       | A-           |
| MATH         | 7 420842 2               | C-G.1.1.3              | 2 6413            | 0    |         |       |      | 0.13 0.00              | 0.21 | 0.21  | 0.00           | -0.15         | -0.13 1.8325                  | 0.0294 | 9.9 1.3  | / / / / | 1.5 A-           | A-       | A-           |
| MATH         | 7 572371 2               | D-S.3.2.1              | 2 6413            | 0.63 | 0.16    | .12   | 0.09 | 0.63 0.00              | 0.47 | -0.15 | -0.32          | -0.23         | 0.47 0.5921                   | 0.0295 | -1.0 1.0 | 0.3     | 1.0 A-           | B-       | B-           |

|      |          | - |                        | 1  |       |      |      |      |      |        |      |       |       |       |       |       |         |        |      |     |      |        | т.   |    | _ |
|------|----------|---|------------------------|----|-------|------|------|------|------|--------|------|-------|-------|-------|-------|-------|---------|--------|------|-----|------|--------|------|----|---|
| MATH | 7 609158 | 2 | B-E.1                  | 2  | 6413  | 0.36 | 0.36 | 0.13 | 0.17 | 0.33 0 |      | 0.22  | 0.22  | -0.11 | -0.14 | -0.03 | 2.0307  | 0.0299 |      | 1.3 | 9.9  | 1.5 A+ | A-   | A+ |   |
| MATH | 7 539072 | 3 | A-N.1.1.1              | 1  | 6383  | 0.55 | 0.55 | 0.12 | 0.23 | 0.10 0 | 0.00 | 0.46  | 0.46  | -0.36 | -0.20 | -0.08 | 1.0845  | 0.0287 | -0.5 | 1.0 | -2.2 | 1.0 A- | A-   | A- |   |
| MATH | 7 220095 | 3 | A-R.1.1.3              | 2  | 6383  | 0.49 | 0.49 | 0.21 | 0.25 | 0.05 0 | 0.00 | 0.25  | 0.25  | -0.15 | -0.07 | -0.17 | 1.3793  | 0.0286 | 9.9  | 1.3 | 9.9  | 1.3 A+ | A+   | A- |   |
| MATH | 7 205998 | 3 | B-E.2.2.2              | 2  | 6383  | 0.28 | 0.28 | 0.44 | 0.15 | 0.13 0 | 0.00 | 0.07  | 0.07  | 0.33  | -0.30 | -0.25 | 2.5952  | 0.0315 | 9.9  | 1.4 | 9.9  | 2.0 A- | A+   | A- |   |
| MATH | 7 785399 | 3 | C-G.1.1.1              | 2  | 6383  | 0.21 | 0.21 | 0.28 | 0.13 | 0.37 0 | 0.00 | -0.03 | -0.03 | -0.15 | -0.05 | 0.20  | 3.0136  | 0.0339 | 9.9  | 1.5 | 9.9  | 2.5 A+ | A-   | A- | 1 |
| MATH | 7 724630 | 3 | A-R.1.1                | 2  | 6383  | 0.23 | 0.16 | 0.13 | 0.47 | 0.23 0 | 0.00 | 0.21  | -0.02 | -0.26 | 0.02  | 0.21  | 2.8805  | 0.0330 | 9.6  | 1.2 | 9.9  | 1.6 A- | A+   | A- | _ |
| MATH | 7 625467 | 3 | D-S.1.1.2              | 2  | 6383  | 0.49 | 0.27 | 0.14 | 0.49 | 0.10 0 | 0.00 | 0.33  | -0.10 | -0.22 | 0.33  | -0.15 | 1.4218  | 0.0286 | 9.9  | 1.1 | 9.9  | 1.2 A+ | A-   | A- | _ |
| MATH | 7 328179 | 3 | B-E.2.1.1              | 2  | 6383  | 0.27 | 0.20 | 0.30 | 0.23 | 0.27 0 | 0.00 | 0.28  | -0.11 | -0.16 | -0.02 | 0.28  | 2.6061  | 0.0315 | 6.4  | 1.1 | 9.9  | 1.4 A+ | A-   | A- | 1 |
| MATH | 7 929899 | 3 | C-G.1.1.3              | 2  | 6383  | 0.38 | 0.22 | 0.38 | 0.17 | 0.24 0 | 0.00 | 0.25  | -0.08 | 0.25  | -0.21 | -0.02 | 1.9802  | 0.0293 | 9.9  | 1.2 | 9.9  | 1.4 A+ | A-   | A- | 1 |
| MATH | 7 610404 | 3 | D-S.3.2.1              | 2  | 6383  | 0.63 | 0.20 | 0.12 | 0.63 |        | 0.00 | 0.53  | -0.41 | -0.17 | 0.53  | -0.16 | 0.6770  | 0.0293 | -7.8 | 0.9 | -5.2 | 0.9 A+ | Α-   | Α- | 1 |
| MATH | 7 632765 | 3 | B-E.1                  | 2. | 6383  | 0.32 | 0.24 | 0.32 | 0.34 |        | 0.00 | 0.13  | -0.02 | 0.13  | -0.03 | -0.12 | 2.3401  | 0.0304 | 9.9  | 1.3 | 9.9  | 1.7 A- | A-   | A+ | 1 |
| MATH | 7 401175 | 4 | E.3.1.2                | 2  | 19168 | 0.62 | 0.04 | 0.62 | 0.06 |        | 0.00 | 0.34  | -0.26 | 0.34  | -0.21 | -0.14 | 0.6780  | 0.0168 | 9.9  | 1.1 | 9.9  | 1.2 A+ |      | A- | 1 |
| MATH | 7 130947 | 4 | D.2.2.1                | 2  | 19168 | 0.34 | 0.34 | 0.27 | 0.23 |        | 0.00 | 0.37  | 0.37  | -0.14 | -0.10 | -0.19 | 2.2078  | 0.0174 | 4.8  | 1.0 | 9.9  | 1.2 A- | A-   | A- | 1 |
| MATH | 7 165023 | 4 |                        | 1  | 6371  | 0.26 | 0.26 | 0.24 | 0.30 | 0.20 0 |      | 0.09  | 0.09  | 0.07  | -0.08 | -0.08 | 2.6466  | 0.0321 |      | 1.3 | 9.9  | 1.9 A+ |      | A+ | 1 |
| MATH | 7 503222 | 1 | A-N.1.1.2              | 2  | 6371  | 0.25 | 0.25 | 0.38 | 0.12 |        | 0.00 | 0.18  | 0.03  | -0.11 | -0.13 | 0.05  | 2.6694  | 0.0321 | 9.9  | 1.3 | 9.9  | 1.7 A- | A-   | A- | 1 |
| MATH | 7 488059 | 1 | A-R.1.1.1              | 1  | 6371  | 0.39 | 0.23 | 0.23 | 0.12 |        | 0.00 | 0.10  | -0.15 | -0.11 | 0.31  | -0.12 | 1.8890  | 0.0322 | 9.6  | 1.1 | 9.9  | 1.7 A- | A-   | A+ | 1 |
| MATH | 7 383445 | 1 | C-G.2.1.2              | 2  | 6371  | 0.39 | 0.20 | 0.23 | 0.39 |        | 0.00 | 0.31  | -0.13 | -0.11 | -0.08 | 0.38  | 1.5860  | 0.0293 | 5.7  | 1.1 | 5.4  | 1.1 A- | A-   | A- | ┨ |
| MATH | 7 423649 | 1 | B-E.1.1.1              | 2  | 6371  | 0.44 | 0.20 | 0.11 | 0.24 |        | 0.00 | 0.38  | 0.23  | -0.32 | -0.14 | -0.06 | 2.1879  | 0.0287 | 9.9  | 1.1 | 9.9  | 1.1 A- | A+   | A+ | ┪ |
| MATH | 7 268526 | 4 | B-E.2.2.1              | 1  | 6371  | 0.39 | 0.33 | 0.33 | 0.13 |        | 0.00 | 0.23  | -0.26 | -0.09 | -0.14 | 0.36  | 1.8667  | 0.0301 |      | 1.1 | 8.5  | 1.3 A+ | A-   | A+ | 4 |
| MATH | 7 187765 | 4 | C-G.1.1.3              | 2  | 6371  | 0.39 | 0.20 | 0.18 | 0.17 |        | 0.00 | -0.05 | 0.03  | 0.01  | -0.07 | 0.30  | 3.0998  | 0.0292 | 9.9  | 1.1 | 9.9  | 2.6 A- | A-   | A+ | - |
|      | 7 251779 | 4 |                        | 2  |       |      | 0.17 |      | 0.19 | 0      | 0.00 | 0.09  | -0.13 | 0.01  | 0.01  | 0.02  | 2.7165  | 0.0330 |      | 1.4 | 9.9  | 1.9 A- |      | A+ | 4 |
| MATH | 7 137863 | 4 | A-R.1.1.5              | 2  | 6371  | 0.25 | 0.26 | 0.25 | 0.23 |        | 0.00 | 0.09  | -0.13 | 0.09  | -0.06 | -0.23 |         | 0.0323 | 9.9  | 1.3 | 9.9  | 1.9 A- | A+   | A+ | - |
| MATH | , 10,000 |   | A-R.1.1.3<br>D-S.1.1.1 | 2  |       |      |      |      |      |        |      |       | -0.23 | -0.19 |       | -0.23 | 1.0861  | 0.0286 |      | 1.2 | 9.9  |        | A+   | _  | 4 |
| MATH | 7 020300 | 4 |                        | 2  | 6371  | 0.55 | 0.09 | 0.18 | 0.55 | 0.18 0 |      | 0.27  |       |       | 0.27  |       |         |        |      | 1.2 |      | 1.3 A+ | A-   | A- | 4 |
| MATH | 7 117162 | 5 | D.3.1.2                | 2  | 12799 | 0.71 | 0.71 | 0.07 | 0.18 |        | 0.00 | 0.37  | 0.37  | -0.25 | -0.15 | -0.22 | 0.1806  | 0.0219 | 6.9  | 1.1 | 8.6  | 1.2 A- | A-   | A- | 4 |
| MATH | 7 664667 | 5 | B.2.1.2                | 1  | 12799 | 0.64 | 0.23 | 0.64 | 0.07 |        | 0.00 | 0.48  | -0.33 | 0.48  | -0.25 | -0.12 | 0.5581  | 0.0210 | -2.8 | 1.0 | -2.1 | 1.0 A+ | A-   | A- | 4 |
| MATH | 7 877277 | 2 | A-R.1.1.4              | 2  | 6406  | 0.20 | 0.21 | 0.20 | 0.45 | 0      | 0.00 | 0.06  | -0.03 | 0.06  | 0.05  | -0.11 | 3.1306  | 0.0349 |      | 1.3 | 9.9  | 2.5 A- | A-   | A- | 4 |
| MATH | 7 921595 | 5 | A-N.1.1.2              | 2  | 6406  | 0.60 | 0.12 | 0.60 | 0.20 |        | 0.00 | 0.43  | -0.18 | 0.43  | -0.21 | -0.26 | 0.7799  | 0.0292 |      | 1.0 | 0.3  | 1.0 A- | A-   | A+ | _ |
| MATH | 7 123946 | 5 | A-N.1.1.3              | 2  | 6406  | 0.42 | 0.18 | 0.15 | 0.42 |        | 0.00 | 0.39  | -0.15 | -0.21 | 0.39  | -0.14 | 1.7777  | 0.0291 |      | 1.1 | 7.8  | 1.2 A- | A-   | A- | 4 |
| MATH | 7 395194 | 5 | B-E.1.1.1              | 2  | 6406  | 0.58 | 0.21 | 0.58 | 0.10 |        | 0.00 | 0.31  | -0.07 | 0.31  | -0.19 | -0.22 | 0.9325  | 0.0289 |      | 1.2 | 9.9  | 1.3 A+ | A-   | A+ | 4 |
| MATH | 7 437944 | 5 | A-R.1.1.1              | 2  | 6406  | 0.56 | 0.31 | 0.06 | 0.07 |        | 0.00 | 0.40  | -0.17 | -0.29 | -0.19 | 0.40  | 1.0326  | 0.0288 |      | 1.1 | 4.8  | 1.1 A+ | A-   | A+ | 4 |
| MATH | 7 824338 | 5 | D-S.1.1.1              | 2  | 6406  | 0.54 | 0.34 | 0.04 | 0.54 | 0.00   | 0.00 | 0.27  | -0.07 | -0.25 | 0.27  | -0.19 | 1.1494  | 0.0288 | 9.9  | 1.3 | 9.9  | 1.4 A+ | Α-   | A- | 4 |
| MATH | 7 572971 | 5 | B-E.2.2.1              | 2  | 6406  | 0.57 | 0.10 | 0.57 | 0.12 | 0.20 0 |      | 0.48  | -0.15 | 0.48  | -0.30 | -0.22 | 0.9484  | 0.0289 | -2.7 | 1.0 | -3.8 | 0.9 A- | A-   | A- | 4 |
| MATH | 7 380817 | 5 | B-E.2.2.2              | 2  | 6406  | 0.59 | 0.09 | 0.11 | 0.21 |        | 0.00 | 0.41  | -0.27 | -0.23 | -0.13 | 0.41  | 0.8611  | 0.0290 | 4.3  | 1.1 | 1.6  | 1.0 A- | B-   | A- | 4 |
| MATH | 7 182431 | 5 | D-S.3.2.2              | 2  | 6406  | 0.75 | 0.16 | 0.75 | 0.04 |        | 0.00 | 0.60  | -0.48 | 0.60  | -0.18 | -0.23 | -0.0803 | 0.0321 | -9.9 | 0.8 | -9.9 | 0.7 A+ | B-   | A- | _ |
| MATH | 7 191114 | 5 | C-G.1.1.2              | 1  | 6406  | 0.69 | 0.09 | 0.19 | 0.69 |        | 0.00 | 0.23  | -0.15 | -0.08 | 0.23  | -0.20 | 0.2661  | 0.0306 | 9.9  | 1.2 | 9.9  | 1.6 A+ | _    | A- | _ |
| MATH | 7 623395 | 6 | A-N.1.1.1              | 1  | 6405  | 0.34 | 0.25 | 0.27 | 0.14 | 0.00   | 0.00 | 0.47  | -0.44 | -0.05 | -0.03 | 0.47  | 2.1721  | 0.0301 | 0.7  | 0.9 | 0.2  | 1.0 A- | A-   | A- |   |
| MATH | 7 223138 | 6 | A-R.1.1.1              | 2  | 6405  | 0.33 | 0.06 | 0.33 | 0.12 |        | 0.00 | 0.35  | -0.11 | 0.35  | -0.25 | -0.11 | 2.2663  | 0.0304 |      | 1.1 | 9.9  | 1.3 A+ | _    | A- |   |
| MATH | 7 448273 | 6 | C-G.2.1.2              | 2  | 6405  | 0.58 | 0.58 | 0.10 | 0.20 |        | 0.00 | 0.34  | 0.34  | -0.24 | -0.05 | -0.23 | 0.8780  | 0.0289 | /./  | 1.2 | 9.9  | 1.3 A+ | B-   | A- |   |
| MATH | 7 868906 | 6 | B-E.1.1.1              | 2  | 6405  | 0.28 | 0.28 | 0.18 | 0.37 |        | 0.00 | 0.30  | 0.30  | -0.14 | -0.03 | -0.17 | 2.5275  | 0.0315 | 4.7  | 1.1 | 9.9  | 1.4 A- | A-   | A- | ╛ |
| MATH | 7 529073 | 6 | D-S.1.1.2              | 2  | 6405  | 0.27 | 0.60 | 0.05 | 0.07 |        | 0.00 | 0.35  | -0.22 | -0.14 | -0.08 | 0.35  | 2.5764  | 0.0317 | -1.1 | 1.0 | 9.9  | 1.4 A- | A-   | A- |   |
| MATH | 7 679589 | 6 | A-R.1.1.5              | 2  | 6405  | 0.57 | 0.57 | 0.16 | 0.18 | 0.09 0 |      | 0.37  | 0.37  | -0.29 | -0.02 | -0.24 | 0.9570  | 0.0288 | 8.4  | 1.1 | 9.9  | 1.3 A- | A-   | A- |   |
| MATH | 7 597122 | 6 | A-R.1.1.3              | 2  | 6405  | 0.44 | 0.19 | 0.44 | 0.23 | 0.14 0 | 0.00 | 0.38  | -0.38 | 0.38  | 0.04  | -0.15 | 1.6202  | 0.0289 | 8.0  | 1.1 | 8.2  | 1.2 A+ | A-   | A- |   |
| MATH | 7 694310 | 6 | B-E.2.2.2              | 2  | 6405  | 0.51 | 0.30 | 0.05 | 0.13 | 0.51 0 | 0.00 | 0.42  | -0.16 | -0.21 | -0.26 | 0.42  | 1.2476  | 0.0286 | 3.8  | 1.1 | 3.7  | 1.1 A+ | A-   | A- |   |
| MATH | 7 268384 | 6 | C-G.1.1.3              | 2  | 6405  | 0.39 | 0.15 | 0.39 | 0.39 | 0.07 0 | 0.00 | 0.04  | -0.14 | 0.04  | 0.08  | -0.03 | 1.9003  | 0.0294 | 9.9  | 1.5 | 9.9  | 1.8 A- | A+   | A+ | J |
| MATH | 7 255987 | 6 | A-N.1.1.3              | 2  | 6405  | 0.39 | 0.39 | 0.19 | 0.33 | 0.09 0 | 0.00 | 0.28  | 0.28  | -0.15 | -0.05 | -0.19 | 1.8797  | 0.0293 | 9.9  | 1.2 | 9.9  | 1.4 A+ | A+   | A- | 1 |
| MATH | 7 788527 | 7 | A.2.2.4                | 1  | 12786 | 0.84 | 0.05 | 0.03 | 0.84 | 0.07 0 | 0.00 | 0.43  | -0.12 | -0.21 | 0.43  | -0.35 | -0.8307 | 0.0265 | -5.6 | 0.9 | -3.1 | 0.9 A+ | A-   | A- | 1 |
| MATH | 7 139076 | 7 | E.4.1.1                | 2  | 12786 | 0.48 | 0.19 | 0.48 | 0.21 | 0.12 0 | 0.00 | 0.40  | -0.20 | 0.40  | -0.18 | -0.16 | 1.4123  | 0.0202 | 5.5  | 1.1 | 6.5  | 1.1 A- | A+   | A- | 1 |
| MATH | 7 884191 | 7 | B-E.2.3.1              | 2  | 6417  | 0.36 | 0.16 | 0.25 | 0.23 | 0.36 0 | 0.00 | 0.25  | -0.08 | -0.04 | -0.17 | 0.25  | 2.0633  | 0.0297 | 9.9  | 1.2 | 9.9  | 1.5 A- | A-   | A- | 1 |
| MATH | 7 981204 | 7 | C-G.2.1.2              | 2  | 6417  | 0.32 | 0.24 | 0.21 | 0.32 |        | 0.00 | 0.26  | -0.05 | -0.14 | 0.26  | -0.11 | 2.2856  | 0.0304 | 9.9  | 1.2 | 9.9  | 1.5 A- | A-   | A- | ٦ |
| MATH | 7 971855 | 7 | A-R.1.1.4              | 2  | 6417  | 0.60 | 0.12 | 0.11 | 0.60 |        | 0.00 | 0.48  | -0.21 | -0.30 | 0.48  | -0.20 | 0.7779  | 0.0290 | -3.1 | 1.0 | -3.8 | 0.9 A+ | A-   | A- | 1 |
| MATH | 7 877849 | 7 | A-N.1.1.2              | 2  | 6417  | 0.30 | 0.30 | 0.11 | 0.40 | 0.18 0 |      | 0.27  | 0.27  | -0.21 | 0.01  | -0.16 | 2.3988  | 0.0308 | 8.7  | 1.1 | 9.9  | 1.5 B- | A-   | A- | 1 |
|      | , 0,,019 | , |                        | -  | 0117  | 0.50 | 3.50 | J.11 | 0.10 | 5.10   |      | 5.27  | 0.27  | 0.21  | 0.01  | 0.10  | 2.5700  | 0.0500 | 0.7  | 4.1 | 7.7  | 2.0    | 14.4 |    |   |

| MATH   | MATH | 7 161615 | 7  | A-N.1.1.2 | 2 | 6417  | 0.20 | 0.10 | 0.49 | 0.20 | 0.20 | 0.00 | 0.38  | -0.02 | -0.07 | -0.27 | 0.38  | 3.1050  | 0.0348 | -4.1 | 0.9   | 3.1 | 1.1   | Α-         | A- | A- |
|--|------|----------|----|-----------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|-------|-----|-------|------------|----|----|
| MATH   |      |          | 7  |           | 2 |       |      | 0.08 |      | 0.06 |      |      |       |       |       |       |       |         |        | 5.5  |       | _   | 1.2   | A+         |    |    |
| MATH   | MATH | 7 528509 | 7  | B-E.1.1.1 | 2 | 6417  | 0.21 | 0.16 | 0.21 | 0.29 | 0.34 | 0.00 | 0.02  | -0.16 |       | -0.02 | 0.13  | 3.0218  | 0.0342 | 9.9  | 1.4   | 9.9 | 2.5   | <b>A</b> - | A- | A+ |
| MATH   7   497880   7   C.G.  1.12   2   6117   0.32   0.37   0.19   0.31   0.32   0.00   0.00   0.01   0.15   2.392   0.0036   90   1.2   99   1.3   A. A. A. A. MATH   7   477995   8   D.2.1   2   12762   0.00   0.11   0.11   0.08   0.70   0.00   0.57   0.31   0.30   0.26   0.57   0.208   0.0218   99   0.9   9.9   0.7   A. A. A. MATH   7   477995   8   D.2.1   2   12762   0.00   0.01   0.11   0.08   0.70   0.00   0.05   0.31   0.30   0.26   0.07   0.228   0.028   9.9   9.9   0.7   A. A. A. MATH   7   49981   8   B.2.1   2   12762   0.00      | MATH | 7 792789 | 7  | B-E.2.2.1 | 2 | 6417  |      | 0.14 |      |      | 0.14 | 0.00 |       | -0.10 | 0.51  | -0.35 | -0.23 | 1.2160  | 0.0286 | -6.1 | 0.9 - | 5.0 | 0.9   | <b>A</b> - | A- | A+ |
| MATH   |      | 7 497580 | 7  | C-G.1.1.2 | 2 | 6417  | 0.31 | 0.27 | 0.19 | 0.31 | 0.23 | 0.00 |       |       |       | 0.00  |       |         | 0.0305 | 9.9  | 1.5   | 9.9 | 2.1   | <b>A</b> - | A+ |    |
| MATH   7 477905   8   D.2.1   2   1276   20 & 0.70   0.11   0.01   0.08   0.70   0.00   0.57   0.31   0.30   0.02   0.5   0.57   0.208   0.0218   9.9   0.9   9.9   7/h.   Ar.   A   |      |          | 7  |           | 2 |       |      |      |      |      |      |      |       |       |       | 0.05  |       |         |        |      | 1.2   | 9.9 |       |            |    |    |
| MATH   7   356004   8   B.L.1   2   1276   202   0.29   0.25   0.30   0.31   0.31   0.30   0.11   0.30   0.17   0.04   27525   0.0220   0.81   1.9   1.5   A.   B.   A.   A.   A.   A.   A.   A.   |      |          | 8  |           | 2 |       |      |      |      |      |      |      |       |       |       |       | 0.57  |         | 0.0218 |      | 0.9 - | 9.9 | _     |            | A+ | _  |
| MATH   7   999180   8   D-S.2.1.1   2   6422   042   043   047   049     |      |          | _  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       |     | _     |            |    |    |
| MATH   7   28252   8   AR.   1.12   2   6422   0.14   0.07   0.09   0.14   0.10   0.00   4.00   0.00   0.05   0.19   0.27   -0.05   0.19   3.674   0.0397   99   1.4   9.9   3.4   A.   A.   A.   A.   A.   MATH   7   785136   8   A.   A.   A.   A.   A.   A.   A.   |      | 7 999180 | 8  |           | 2 | 6422  | 0.22 | 0.35 |      | 0.18 | 0.22 | 0.00 |       | 0.11  | -0.18 | -0.07 | 0.14  | 2.9951  | 0.0339 |      | 1.3   | 9.9 | 2.0   | <b>A</b> - | A- | A- |
| MATH   |      | 7 282252 | 8  |           | 2 |       |      |      |      |      |      |      |       |       |       |       | -0.19 |         |        | 9.9  | 1.4   | 9.9 | _     |            | Α- | A- |
| MATH 7 19881 8 A-R.1.6 2 6422 0.31 0.14 0.36 0.31 0.20 0.00 0.42 0.18 0.25 0.42 0.06 2.4600 0.039 3.4 1.0 3.5 1.1 A - A - A - MATH 7 798339 8 C-G.1.1.2 2 6422 0.61 0.07 0.15 0.17 0.01 0.00 0.47 0.27 0.26 0.12 0.33 0.49 0.7620 0.029 2.7 1.0 1.5 1.0 A - A - A - MATH 7 989339 8 A-R.1.1.4 2 6422 0.61 0.07 0.15 0.17 0.01 0.00 0.49 0.26 0.12 0.33 0.49 0.7620 0.029 2.7 1.0 1.5 1.0 A - A - A - MATH 7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  |      |          | 8  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       | -       |        |      | 1.2   | 9.9 |       |            |    | +  |
| MATH   |      |          | 8  |           | 2 |       | 0.31 | 0.14 |      |      |      |      |       |       |       |       |       |         | 0.0309 |      | 1.0   | 3.5 |       |            |    |    |
| MATH   |      | 7 671410 | 8  |           | 2 |       |      | 0.64 |      |      |      |      |       |       |       |       |       |         |        |      |       |     | 1.3   | A-         | A- |    |
| MATH   |      |          | 8  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      | 1.0 - | 1.5 |       |            |    |    |
| MATH   7   275530   8   B-E.2.1   2   6422   0.77   0.77   0.10   0.06   0.07   0.00   0.48   0.48   -0.21   -0.27   -0.28   0.2106   0.0328   4.9   0.9   4.1   0.9   A.   A.   A.   MATH   7   6759088   8   A.N.1.1.1   1   6422   0.67   0.08   0.14   0.67   0.10   0.00   0.55   -0.28   -0.28   0.50   -0.19   0.3764   0.031   5.2   0.9   5.9   0.9   A.   A.   A.   MATH   7   639088   9   E.3.1.1   2   1.2791   0.78   0.75   0.07   0.01   0.00   0.50   -0.28   -0.28   0.50   -0.19   0.3764   0.031   5.2   0.9   5.9   0.9   A.   A.   A.   MATH   7   105804   9   E.3.1.1   2   6409   0.44   0.44   0.32   0.10   0.15   0.00   0.57   0.35   0.00   0.60   0.41   0.47   0.023   0.00   0.60   0.41   0.44   0.32   0.028   0.9   0.8   0.9   0.8   0.9   0.8   0.9   0.7   A.   A.   A.   MATH   7   64761   9   A.N.1.1.3   2   6409   0.05   0.   |      | 7 217559 | 8  |           | 1 |       |      | 0.44 |      |      |      | 0.00 |       |       |       |       | 0.04  |         | 0.0289 | 9.9  | 1.3   | 9.9 |       |            |    |    |
| MATH   771431   8   C.G.2.1.1   2   6422   0.24   0.42   0.24   0.16   0.19   0.00   0.25   -0.06   0.25   -0.06   0.05   5.8549   0.033   5.6   1.1   9.9   1.7   A.   A.   |      |          | 8  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      | 0.9 - | 4.1 |       |            |    | _  |
| MATH   769968  |      |          | 8  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      | _     | _   |       |            |    | 1  |
| MATH   |      |          | 8  |           | 1 | _     |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       |     |       |            |    |    |
| MATH   7   105804   9   B.2.2.2   21791   0.78   0.78   0.99   0.05   0.07   0.00   0.57   0.57   0.30   0.28   0.33   0.3426   0.0238   9.9   0.8   9.9   0.8   0.4   A.   A.   A.   A.   A.   A.   A.  |      |          | -  |           | 2 | _     |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       | _   |       |            |    |    |
| MATH   |      |          | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       |     |       |            |    | _  |
| MATH   |      |          | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       |     |       |            |    |    |
| MATH   7 (83628   9   A-R. I.1.4   2   6409   0.65   0.14   0.65   0.15   0.70   0.00   0.51   0.28   0.51   0.23   0.26   0.26   0.027   0.56   0.9   5.5   0.9   A-R.   A-R.   |      |          | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       | _   |       |            |    |    |
| MATH   7   852352   9   C-G.2.1.1   2   6409   0.30   0.30   0.39   0.13   0.18   0.00   0.28   0.28   -0.02   -0.18   -0.15   2.4302   0.0309   8.0   1.1   9.9   1.4   A-   A-   A-   A-   A-   A-   A-   A  |      |          | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      | 0.9 - | 5.5 | 0.9   | <b>A</b> + | A+ | _  |
| MATH   7   200830   9   B.E.I.I.I   1   6409   0.19   0.14   0.15   0.51   0.19   0.00   0.04   -0.07   -0.08   0.07   0.04   3.1936   0.0353   9.9   1.4   9.9   2.4   A.   A.   A.   A.   A.   MATH   7   470907   9   B.E.2.3.1   2   6409   0.37   0.23   0.11   0.28   0.37   0.00   0.29   -0.03   -0.26   -0.09   0.29   2.0132   0.0295   9.9   1.2   9.9   1.4   A.   A.   A.   A.   A.   A.   A.   |      |          | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       |     |       |            |    |    |
| MATH   |      |          | 9  |           | 1 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      | 1.4   | 9.9 |       |            |    | _  |
| MATH   |      |          | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       |     | _     |            |    |    |
| MATH   |      | 7 816196 | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       | 0.04  |         | 0.0372 | 9.9  | 1.2   | 9.9 |       |            | A- | _  |
| MATH         7         202373         9         A-N.1.1.1         2         6409         0.87         0.87         0.06         0.04         0.03         0.00         0.43         0.43         -0.26         -0.23         -0.23         -1.0451         0.0399         -4.5         0.9         -5.3         0.7         C+         A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-  |      |          | 9  |           | 2 |       |      |      |      |      |      |      |       |       |       |       |       |         |        |      |       | _   |       |            |    | _  |
| MATH   | MATH | 7 602230 | 9  | D-S.2.1.1 | 2 | 6409  | 0.20 | 0.26 | 0.10 | 0.20 | 0.43 | 0.00 | 0.11  | -0.33 | -0.07 | 0.11  | 0.25  | 3.1066  | 0.0347 | 9.9  | 1.3   | 9.9 | 2.1   | <b>A</b> - | A+ | A- |
| MATH   | MATH | 7 202373 | 9  | A-N.1.1.1 | 2 | 6409  | 0.87 | 0.87 | 0.06 | 0.04 | 0.03 | 0.00 | 0.43  | 0.43  | -0.26 | -0.23 | -0.23 | -1.0451 | 0.0399 | -4.5 | 0.9 - | 5.3 | 0.7   | C+         | A- | A- |
| MATH         7         327284         10         D-S.I         2         6408         0.39         0.17         0.17         0.26         0.39         0.00         0.36         -0.18         -0.09         0.36         1.9172         0.0292         5.1         1.1         8.9         1.2         A-         A-           MATH         7         766567         10         A-N.1.1.2         1         6408         0.38         0.38         0.37         0.05         0.19         0.00         0.42         0.42         -0.13         -0.14         -0.28         1.9428         0.0292         1.0         1.0         4.3         1.1         B-A         A-           MATH         7         247598         10         B-E.1.1.1         1         6408         0.22         0.22         0.17         0.00         0.03         0.01         0.9599         0.0336         9.9         1.4         9.9         2.3         A-         A+           MATH         7         347468         10         B-E.2.2.1         2         6408         0.30         0.12         0.01         0.00         0.01         0.01         0.91         0.13         0.07         0.17         0.02  | MATH | 7 883492 | 10 |           | 2 | 12809 | 0.69 | 0.13 | 0.69 | 0.06 | 0.12 | 0.00 | 0.58  | -0.35 | 0.58  | -0.16 | -0.35 | 0.2914  | 0.0215 | -9.9 | 0.8   | 9.9 | 0.7   | <b>A</b> + | A- | A- |
| MATH         7 766567         10 A-N.1.1.2         1 6408 0.38 0.38 0.38 0.37 0.05 0.19 0.00 0.42 0.42 -0.13 -0.14 -0.28 1.9428 0.029 1.0 1.0 4.3 1.1 B- A- A- MATH         A- A- MATH           MATH         7 446184 10 B-E.2.3.1 2 6408 0.60 0.10 0.13 0.60 0.17 0.00 0.38 -0.15 -0.27 0.38 -0.13 0.8040 0.0290 7.0 1.1 4.6 1.1 A- A- A- MATH         A- MATH         7 217598 10 B-E.1.1.1 1 6408 0.22 0.23 0.39 0.22 0.16 0.00 0.01 0.00 0.08 0.01 -0.11 2.9569 0.0336 9.9 1.4 9.9 2.3 A- A- A- A- MATH         A- MATH         7 347468 10 B-E.2.2.1 2 6408 0.30 0.12 0.18 0.40 0.30 0.00 -0.02 -0.13 -0.07 0.17 -0.02 2.4206 0.0307 9.9 1.5 9.9 2.1 A+ A- A- MATH         A- MATH         7 305309 10 C-G.1.1.2 2 6408 0.09 0.38 0.09 0.44 0.09 0.00 -0.12 -0.03 -0.15 0.18 -0.12 4.2102 0.0470 8.1 1.3 9.9 4.2 A- A- A- A- MATH         A- MATH         7 374942 10 A-R.1.1.5 2 6408 0.37 0.32 0.15 0.37 0.37 0.16 0.00 0.01 0.00 0.25 0.09 -0.30 0.25 -0.14 2.006 0.024 9.9 1.5 9.9 3.2 A- A- A- A- MATH         A- MATH         7 308205 10 A-R.1.1.1 2 6408 0.37 0.32 0.15 0.37 0.15 0.00 0.25 0.09 -0.30 0.25 -0.14 2.006 0.0294 9.9 1.1 9.9 1.3 A- A- A- A- MATH         A- MATH         7 308205 10 A-R.1.1.1 2 6408 0.37 0.27 0.37 0.16 0.20 0.00 0.31 -0.16 0.31 -0.01 -0.19 2.0013 0.0294 9.9 1.1 9.9 1.3 A- A- A- A- MATH         A- MATH         7 305012 11 A-N.1.1.1 1 6408 0.69 0.08 0.12 0.11 0.69 0.00 0.41 -0.18 -0.25 -0.20 0.41 0.2864 0.0304 2.0 1.0 -0.6 1.0 A+ A- A- MATH         A- MATH         7 305012 11 A-N.1.1.1 1 6408 0.69 0.08 0.12 0.11 0.69 0.00 0.31 -0.16 0.31 -0.01 0.31 -0.01 0.32 0.300 2.9 5 0.9 9.0 0.8 A- B- A- MATH         A- MATH         7 305012 11 A-N.1.1.1 1 6408 0.69 0.08 0.12 0.11 0.69 0.00 0.31 0.00 0.32 -0.13 0.00 0.32 0.00 0.31 0.00 0.32 0.00 0.30 0.9 0.00 0.31 0.00 0.32 0.00 0.00 0.31  | MATH | 7 622721 | 10 | A.2.2.5   | 2 | 12809 | 0.76 | 0.09 | 0.76 | 0.09 | 0.06 | 0.00 | 0.56  | -0.28 | 0.56  | -0.30 | -0.32 | -0.2171 | 0.0232 | -9.9 | 0.8   | 9.9 | 0.7   | <b>A</b> + | A- | A- |
| MATH         7 446184         10         B-E.2.3.1         2         6408         0.60         0.13         0.60         0.17         0.00         0.38         -0.15         -0.27         0.38         -0.13         0.8040         0.0290         7.0         1.1         4.6         1.1         A-         A-           MATH         7 217598         10         B-E.1.1.1         1         6408         0.22         0.23         0.39         0.22         0.16         0.00         0.01         -0.01         2.9569         0.0336         9.9         1.4         9.9         2.3         A-         A-           MATH         7 347468         10         B-E.2.2.1         2         6408         0.09         0.38         0.09         0.44         0.09         0.00         -0.15         -0.07         0.17         -0.02         2.4206         0.0307         9.9         2.1         A-         A-         A+           MATH         7 337390         10         C-G.2.1.1         2         6408         0.09         0.38         0.09         0.04         0.00         -0.15         0.18         -0.12         2.40         A-         A+         A+           MATH         7 37  | MATH | 7 327284 | 10 | D-S.1     | 2 | 6408  | 0.39 | 0.17 | 0.17 | 0.26 | 0.39 | 0.00 | 0.36  | -0.18 | -0.18 | -0.09 | 0.36  | 1.9172  | 0.0292 | 5.1  | 1.1   | 8.9 | 1.2   | A-         | A- | A- |
| MATH 7 217598 10 B-E.1.1.1 1 6408 0.22 0.23 0.39 0.22 0.16 0.00 0.01 0.00 0.08 0.01 -0.11 2.9569 0.0336 9.9 1.4 9.9 2.3 A- A- A- A- MATH 7 307309 10 C-G.1.1.2 2 6408 0.09 0.38 0.09 0.44 0.09 0.00 -0.02 -0.13 -0.07 0.17 -0.02 2.4206 0.0307 9.9 1.5 9.9 2.1 A+ A- A+ A- MATH 7 307309 10 C-G.1.1.2 2 6408 0.09 0.38 0.09 0.44 0.09 0.00 -0.12 -0.03 -0.15 0.18 -0.12 4.2102 0.0470 8.1 1.3 9.9 4.2 A- A- A+ A- MATH 7 307309 10 C-G.1.1.2 2 6408 0.19 0.43 0.19 0.28 0.10 0.00 -0.16 0.19 -0.16 0.00 -0.12 3.1876 0.0353 9.9 1.5 9.9 3.2 A- A- A+ A- A- MATH 7 308205 10 A-R.1.1.5 2 6408 0.37 0.32 0.15 0.37 0.15 0.00 0.25 0.09 -0.30 0.25 -0.14 2.0064 0.0294 9.9 1.2 9.9 1.5 A- A- A- A- MATH 7 308205 10 A-R.1.1.1 2 6408 0.69 0.08 0.12 0.11 0.69 0.00 0.41 -0.18 -0.25 -0.20 0.41 0.2864 0.0304 2.0 1.0 -0.6 1.0 A+ A- A- MATH 7 308305 11 A-N.1.1.1 2 6393 0.68 0.8 0.8 0.8 0.8 0.10 0.10 0.0 0.55 -0.26 0.55 -0.31 -0.26 0.3661 0.0302 -9.5 0.9 -9.0 0.8 A- B- MATH 7 400435 11 C-G.1.1.1 2 6393 0.54 0.08 0.19 0.54 0.19 0.00 0.34 -0.32 0.00 -0.02 0.34 2.3979 0.0309 3.1 1.1 9.9 1.3 A- A- A- MATH 7 809384 11 A-R.1.1.2 2 6393 0.68 0.10 0.20 0.00 0.00 0.00 0.34 -0.32 0.00 -0.02 0.34 2.3979 0.0309 3.1 1.1 9.9 1.3 A- A- B- MATH 7 809384 11 A-R.1.1.1 1 6308 0.69 0.00 0.20 0.00 0.00 0.34 -0.32 0.00 -0.02 0.34 2.3979 0.0309 3.1 1.1 9.9 1.3 A- A- B- MATH 7 809384 11 A-R.1.1.1 1 6308 0.68 0.11 0.10 0.00 0.00 0.00 0.00 0.00 0.0  | MATH | 7 766567 | 10 | A-N.1.1.2 | 1 | 6408  | 0.38 | 0.38 | 0.37 | 0.05 | 0.19 | 0.00 | 0.42  | 0.42  | -0.13 | -0.14 | -0.28 | 1.9428  | 0.0292 | 1.0  | 1.0   | 4.3 | 1.1 I | B-         | A- | A- |
| MATH         7 347468         10 B-E.2.2.1         2 6408 0.30 0.12 0.18 0.40 0.30 0.00 -0.02 -0.13 -0.07 0.17 -0.02 2.4206 0.307 9.9 1.5 9.9 2.1 A+ A- A+   | MATH | 7 446184 | 10 | B-E.2.3.1 | 2 | 6408  | 0.60 | 0.10 | 0.13 | 0.60 | 0.17 | 0.00 | 0.38  | -0.15 | -0.27 | 0.38  | -0.13 | 0.8040  | 0.0290 | 7.0  | 1.1   | 4.6 | 1.1   | <b>A</b> - | A- | A- |
| MATH 7 305309 10 C-G.1.1.2 2 6408 0.09 0.38 0.09 0.44 0.09 0.00 -0.12 -0.03 -0.15 0.18 -0.12 4.2102 0.0470 8.1 1.3 9.9 4.2 A- A- A- A- MATH 7 305309 10 C-G.2.1.1 2 6408 0.19 0.43 0.19 0.28 0.10 0.00 -0.16 0.19 -0.16 0.00 -0.12 3.1876 0.0353 9.9 1.5 9.9 3.2 A- A- A- A- MATH 7 374942 10 A-R.1.1.5 2 6408 0.37 0.32 0.15 0.37 0.15 0.00 0.25 0.09 -0.30 0.25 -0.14 2.0064 0.0294 9.9 1.2 9.9 1.5 A- A- A- A- MATH 7 308205 10 A-R.1.1.1 1 6408 0.69 0.08 0.12 0.11 0.69 0.00 0.41 -0.18 -0.25 -0.20 0.41 0.2864 0.0304 2.0 1.0 -0.6 1.0 A- A- A- A- MATH 7 305012 11 A-N.1.1.1 2 6393 0.68 0.08 0.68 0.11 0.13 0.00 0.55 -0.26 0.55 -0.31 -0.26 0.3661 0.0302 -9.5 0.9 -9.0 0.8 A- B- MATH 7 400435 11 C-G.1.1.1 2 6393 0.54 0.08 0.19 0.54 0.19 0.00 0.34 -0.32 0.00 0.34 -0.32 0.00 0.04 1.1168 0.0289 9.9 1.2 8.9 1.2 A- A- A- B- MATH 7 809384 11 A-R.1.1.2 2 6393 0.70 0.04 0.17 0.70 0.09 0.00 0.34 -0.32 0.00 0.24 -0.12 0.33 0.028 4.1 1.1 5.0 1.1 A+ A- A- MATH 7 817703 11 B-E.2.3.1 2 6393 0.34 0.34 0.18 0.34 0.29 0.19 0.00 0.42 0.42 -0.28 -0.16 -0.23 1.5103 0.0289 4.1 1.1 5.0 1.1 A+ A- A- MATH 7 7 702280 11 C-G.2 2 6393 0.34 0.31 0.30 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A- A- A- MATH 7 7 702280 11 C-G.2 2 6393 0.34 0.31 0.30 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A- A- A- MATH 7 7 702280 11 C-G.2 2 6393 0.34 0.31 0.34 0.32 0.10 0.04 0.04 0.04 0.08 0.00 0.44 -0.10 0.04 0.08 0.00 0.04 0.0 | MATH | 7 217598 | 10 | B-E.1.1.1 | 1 | 6408  | 0.22 | 0.23 | 0.39 | 0.22 | 0.16 | 0.00 | 0.01  | 0.00  | 0.08  | 0.01  | -0.11 | 2.9569  | 0.0336 | 9.9  | 1.4   | 9.9 | 2.3   | <b>A</b> - | A- | A+ |
| MATH 7 233234 10 C-G.2.1.1 2 6408 0.19 0.43 0.19 0.28 0.10 0.00 -0.16 0.19 -0.16 0.00 -0.12 3.1876 0.0353 9.9 1.5 9.9 3.2 A- A- A- MATH 7 374942 10 A-R.1.1.5 2 6408 0.37 0.32 0.15 0.37 0.15 0.00 0.25 0.09 -0.30 0.25 -0.14 2.0064 0.0294 9.9 1.2 9.9 1.5 A- A- A- MATH 7 308205 10 A-R.1.1.1 2 6408 0.69 0.08 0.12 0.11 0.69 0.00 0.31 -0.16 0.31 -0.01 -0.19 2.0013 0.0294 9.9 1.1 9.9 1.3 A- A- A- MATH 7 305012 11 A-N.1.1.1 2 6393 0.68 0.08 0.68 0.11 0.13 0.00 0.55 -0.26 0.55 -0.31 -0.26 0.3661 0.0302 -9.5 0.9 -9.0 0.8 A- B- A- MATH 7 400435 11 C-G.1.1.1 2 6393 0.34 0.30 0.23 0.17 0.31 0.00 0.34 -0.32 0.00 -0.02 0.34 2.3979 0.0309 3.1 1.1 9.9 1.3 A- A- A- MATH 7 972126 11 A-N.1.1.1 1 6393 0.68 0.11 0.10 0.68 0.11 0.10 0.68 0.11 0.00 0.55 -0.24 -0.25 0.36 0.35 0.32 0.34 0.38 0.34 0.28 0.19 0.04 0.08 0.00 0.42 0.42 -0.25 -0.31 0.03 0.23 1.5103 0.0289 4.1 1.1 5.0 1.1 A+ A- A- MATH 7 704010 11 D-S.3 1 6393 0.34 0.21 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A- MATH 7 702280 11 C-G.2 2 6393 0.34 0.21 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A- A- MATH 7 702280 11 C-G.2 2 6393 0.34 0.21 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A-   | MATH | 7 347468 | 10 | B-E.2.2.1 | 2 | 6408  | 0.30 | 0.12 | 0.18 | 0.40 | 0.30 | 0.00 | -0.02 | -0.13 | -0.07 | 0.17  | -0.02 | 2.4206  | 0.0307 | 9.9  | 1.5   | 9.9 | 2.1   | <b>A</b> + | A- | A+ |
| MATH         7         374942         10         A-R.1.1.5         2         6408         0.37         0.32         0.15         0.00         0.25         0.09         -0.30         0.25         -0.14         2.0064         0.0294         9.9         1.2         9.9         1.5         A-         A+         A+           MATH         7         308205         10         A-R.1.1.1         2         6408         0.37         0.27         0.37         0.16         0.20         0.00         0.31         -0.16         0.31         -0.01         -0.19         2.0013         0.0294         9.9         1.1         9.9         1.3         A-         A-           MATH         7         682675         10         A-N.1.1.1         1         6408         0.69         0.08         0.12         0.11         0.69         0.00         0.41         -0.18         -0.25         -0.20         0.41         0.2864         0.0304         2.0         1.0         A-         A+         A+           MATH         7         360355         11         B-E.2.1.1         2         6393         0.54         0.08         0.19         0.54         0.19         0.00         0.32  | MATH | 7 305309 | 10 | C-G.1.1.2 | 2 | 6408  | 0.09 | 0.38 | 0.09 | 0.44 | 0.09 | 0.00 | -0.12 | -0.03 | -0.15 | 0.18  | -0.12 | 4.2102  | 0.0470 | 8.1  | 1.3   | 9.9 | 4.2   | A-         | A- | A+ |
| MATH         7         308205         10         A-R.1.1.1         2         6408         0.37         0.27         0.37         0.16         0.20         0.00         0.31         -0.16         0.31         -0.01         -0.19         2.0013         0.0294         9.9         1.1         9.9         1.3         A-         A-           MATH         7         682675         10         A-N.1.1.1         1         6408         0.69         0.08         0.12         0.11         0.69         0.00         0.41         -0.18         -0.25         -0.20         0.41         0.2864         0.0304         2.0         1.0         -0.6         1.0         A+         A+           MATH         7         305012         11         A-N.1.1.1         2         6393         0.68         0.08         0.68         0.11         0.13         0.00         0.55         -0.26         0.55         -0.31         -0.26         0.3661         0.0302         -9.5         0.9         9.0         0.8         A-         A-           MATH         7         360355         11         B-E.2.1.1         2         6393         0.31         0.03         0.22         0.13         -0.21  | MATH | 7 233234 | 10 | C-G.2.1.1 | 2 | 6408  | 0.19 | 0.43 | 0.19 | 0.28 | 0.10 | 0.00 | -0.16 | 0.19  | -0.16 | 0.00  | -0.12 | 3.1876  | 0.0353 | 9.9  | 1.5   | 9.9 | 3.2   | A-         | A- | A+ |
| MATH         7         682675         10         A-N.1.1.1         1         6408         0.69         0.08         0.12         0.11         0.69         0.00         0.41         -0.25         -0.20         0.41         0.2864         0.0304         2.0         1.0         -0.6         1.0         A+         A+         A+           MATH         7         305012         11         A-N.1.1.1         2         6393         0.68         0.08         0.68         0.11         0.13         0.00         0.55         -0.26         0.55         -0.31         -0.26         0.3661         0.0302         -9.5         0.9         -9.0         0.8         A-         B-           MATH         7         360355         11         B-E.2.1.1         2         6393         0.54         0.08         0.19         0.54         0.19         0.00         0.32         -0.13         -0.21         0.32         -0.10         1.1168         0.0289         9.9         1.2         8.9         1.2         A-         A-           MATH         7         400435         11         C-G.1.1.1         2         6393         0.31         0.30         0.23         0.17         0.31   | MATH | 7 374942 | 10 | A-R.1.1.5 | 2 | 6408  | 0.37 | 0.32 | 0.15 | 0.37 | 0.15 | 0.00 | 0.25  | 0.09  | -0.30 | 0.25  | -0.14 | 2.0064  | 0.0294 | 9.9  | 1.2   | 9.9 | 1.5   | A-         | A+ | A+ |
| MATH         7         305012         11         A-N.1.1.1         2         6393         0.68         0.08         0.68         0.11         0.13         0.00         0.55         -0.26         0.55         -0.31         -0.26         0.3661         0.0302         -9.5         0.9         -9.0         0.8         A-         B-         A-           MATH         7         360355         11         B-E.2.1.1         2         6393         0.54         0.08         0.19         0.54         0.19         0.00         0.32         -0.13         -0.21         0.32         -0.10         1.1168         0.0289         9.9         1.2         8.9         1.2         A-         A+         A-           MATH         7         400435         11         C-G.1.1.1         2         6393         0.31         0.30         0.23         0.17         0.31         0.00         0.34         -0.32         0.00         -0.02         0.34         2.3979         0.0309         3.1         1.1         9.9         1.3         A-         A-           MATH         7         972126         11         A-N.1.1.1         1         6393         0.68         0.11         0.00  | MATH | 7 308205 | 10 | A-R.1.1.1 | 2 | 6408  | 0.37 | 0.27 | 0.37 | 0.16 | 0.20 | 0.00 | 0.31  | -0.16 | 0.31  | -0.01 | -0.19 | 2.0013  | 0.0294 | 9.9  | 1.1   | 9.9 | 1.3   | A-         | A- | A- |
| MATH 7 360355 11 B-E.2.1.1 2 6393 0.54 0.08 0.19 0.54 0.19 0.00 0.32 -0.13 -0.21 0.32 -0.10 1.1168 0.0289 9.9 1.2 8.9 1.2 A- A+ A- MATH 7 809384 11 A-R.1.1.2 2 6393 0.31 0.30 0.23 0.17 0.31 0.00 0.34 -0.32 0.00 -0.02 0.34 2.3979 0.0309 3.1 1.1 9.9 1.3 A- A- B- MATH 7 872126 11 A-N.1.1.1 1 6393 0.68 0.11 0.10 0.68 0.11 0.10 0.68 0.11 0.00 0.50 -0.24 -0.25 0.50 -0.26 0.3524 0.0303 -4.8 0.9 -3.2 0.9 A- A- A- MATH 7 817703 11 B-E.2.3.1 2 6393 0.34 0.34 0.38 0.34 0.38 0.39 0.34 0.38 0.39 0.39 0.39 0.39 0.39 0.39 0.39 0.39   | MATH | 7 682675 | 10 | A-N.1.1.1 | 1 | 6408  | 0.69 | 0.08 | 0.12 | 0.11 | 0.69 | 0.00 | 0.41  | -0.18 | -0.25 | -0.20 | 0.41  | 0.2864  | 0.0304 | 2.0  | 1.0 - | 0.6 | 1.0   | <b>A</b> + | A+ | A+ |
| MATH 7 400435 11 C-G.1.1.1 2 6393 0.31 0.30 0.23 0.17 0.31 0.00 0.34 -0.32 0.00 -0.02 0.34 2.3979 0.0309 3.1 1.1 9.9 1.3 A- A- B- MATH 7 809384 11 A-R.1.1.2 2 6393 0.70 0.04 0.17 0.70 0.09 0.00 0.43 -0.22 -0.31 0.43 -0.12 0.2334 0.0307 1.2 1.0 -0.1 1.0 A+ A+ A+ MATH 7 972126 11 A-N.1.1.1 1 6393 0.68 0.11 0.10 0.68 0.11 0.00 0.50 -0.24 -0.25 0.50 -0.26 0.3524 0.0303 -4.8 0.9 -3.2 0.9 A- A- A- MATH 7 817703 11 B-E.2.3.1 2 6393 0.47 0.47 0.06 0.40 0.08 0.00 0.42 0.42 -0.28 -0.16 -0.23 1.5103 0.0289 4.1 1.1 5.0 1.1 A+ A- A- MATH 7 704010 11 D-S.3 1 6393 0.34 0.18 0.34 0.29 0.19 0.00 0.12 -0.06 0.12 -0.04 -0.03 2.2254 0.0303 9.9 1.4 9.9 1.8 A- A- MATH 7 702280 11 C-G.2 2 6393 0.34 0.21 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A- A-  | MATH | 7 305012 | 11 | A-N.1.1.1 | 2 | 6393  | 0.68 | 0.08 | 0.68 | 0.11 | 0.13 | 0.00 | 0.55  | -0.26 | 0.55  | -0.31 | -0.26 | 0.3661  | 0.0302 | -9.5 | 0.9   | 9.0 | 0.8   | A-         | B- | A- |
| MATH         7         809384         11         A-R.1.1.2         2         6393         0.70         0.04         0.17         0.70         0.09         0.00         0.43         -0.22         -0.31         0.43         -0.12         0.2334         0.0307         1.2         1.0         -0.1         1.0         A+         A+         A+           MATH         7         972126         11         A-N.1.1.1         1         6393         0.68         0.11         0.10         0.68         0.11         0.00         0.50         -0.24         -0.25         0.50         -0.26         0.3524         0.0303         -4.8         0.9         -3.2         0.9         A-         A-           MATH         7         817703         11         B-E.2.3.1         2         6393         0.47         0.47         0.06         0.40         0.08         0.00         0.42         -0.28         -0.16         -0.23         1.5103         0.0289         4.1         1.1         5.0         1.1         A+         A-           MATH         7         704010         11         D-S.3         1         6393         0.34         0.29         0.19         0.00         0.12  | MATH | 7 360355 | 11 | B-E.2.1.1 | 2 | 6393  | 0.54 | 0.08 | 0.19 | 0.54 | 0.19 | 0.00 | 0.32  | -0.13 | -0.21 | 0.32  | -0.10 | 1.1168  | 0.0289 | 9.9  | 1.2   | 8.9 | 1.2   | A-         | A+ | A- |
| MATH         7         972126         11         A-N.1.1.1         1         6393         0.68         0.11         0.10         0.68         0.11         0.00         0.50         -0.24         -0.25         0.50         -0.26         0.3524         0.0303         -4.8         0.9         -3.2         0.9         A-         A-         A-           MATH         7         817703         11         B-E.2.3.1         2         6393         0.47         0.47         0.06         0.40         0.08         0.00         0.42         -0.28         -0.16         -0.23         1.5103         0.0289         4.1         1.1         5.0         1.1         A+         A-           MATH         7         704010         11         D-S.3         1         6393         0.34         0.18         0.34         0.29         0.19         0.00         0.12         -0.06         0.12         -0.04         -0.03         2.2254         0.0303         9.9         1.4         9.9         1.8         A-         A-           MATH         7         702280         11         C-G.2         2         6393         0.34         0.21         0.00         0.00         0.04         -   | MATH | 7 400435 | 11 | C-G.1.1.1 | 2 | 6393  | 0.31 | 0.30 | 0.23 | 0.17 | 0.31 | 0.00 | 0.34  | -0.32 | 0.00  | -0.02 | 0.34  | 2.3979  | 0.0309 | 3.1  | 1.1   | 9.9 | 1.3   | Α-         | Α- | B- |
| MATH         7         817703         11         B-E.2.3.1         2         6393         0.47         0.47         0.06         0.40         0.08         0.00         0.42         -0.28         -0.16         -0.23         1.5103         0.0289         4.1         1.1         5.0         1.1         A-         A-           MATH         7         704010         11         D-S.3         1         6393         0.34         0.18         0.34         0.29         0.19         0.00         0.12         -0.06         0.12         -0.04         -0.03         2.2254         0.0303         9.9         1.4         9.9         1.8         A-         A-           MATH         7         702280         11         C-G.2         2         6393         0.34         0.21         0.00         0.01         -0.06         0.12         -0.04         -0.03         2.2254         0.0303         9.9         1.4         9.9         1.8         A-         A-           MATH         7         702280         11         C-G.2         2         6393         0.34         0.21         0.00         0.04         -0.01         0.04         0.08         -0.05         2.2107         0   | MATH | 7 809384 | 11 | A-R.1.1.2 | 2 | 6393  | 0.70 | 0.04 | 0.17 | 0.70 | 0.09 | 0.00 | 0.43  | -0.22 | -0.31 | 0.43  | -0.12 | 0.2334  | 0.0307 | 1.2  | 1.0 - | 0.1 | 1.0   | <b>A</b> + | A+ | A+ |
| MATH 7 704010 11 D-S.3 1 6393 0.34 0.18 0.34 0.29 0.19 0.00 0.12 -0.06 0.12 -0.04 -0.03 2.2254 0.0303 9.9 1.4 9.9 1.8 A- A- A- MATH 7 702280 11 C-G.2 2 6393 0.34 0.21 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A- A-   | MATH | 7 972126 | 11 | A-N.1.1.1 | 1 | 6393  | 0.68 | 0.11 | 0.10 | 0.68 | 0.11 | 0.00 | 0.50  | -0.24 | -0.25 | 0.50  | -0.26 | 0.3524  | 0.0303 | -4.8 | 0.9   | 3.2 | 0.9   | Α-         | Α- | A- |
| MATH 7 702280 11 C-G.2 2 6393 0.34 0.21 0.34 0.33 0.12 0.00 0.04 -0.10 0.04 0.08 -0.05 2.2107 0.0303 9.9 1.5 9.9 2.0 A- A- A-  | MATH | 7 817703 | 11 | B-E.2.3.1 | 2 | 6393  | 0.47 | 0.47 | 0.06 | 0.40 | 0.08 | 0.00 | 0.42  | 0.42  | -0.28 | -0.16 | -0.23 | 1.5103  | 0.0289 | 4.1  | 1.1   | 5.0 | 1.1   | <b>A</b> + | Α- | A- |
|  | MATH | 7 704010 | 11 | D-S.3     | 1 | 6393  | 0.34 | 0.18 | 0.34 | 0.29 | 0.19 | 0.00 | 0.12  | -0.06 | 0.12  | -0.04 | -0.03 | 2.2254  | 0.0303 | 9.9  | 1.4   | 9.9 | 1.8   | A-         | A- | A- |
| MATH 7 150803 11 B-E.2.2.1 2 6393 0.30 0.11 0.11 0.30 0.48 0.00 0.30 -0.28 -0.14 0.30 -0.01 2.4539 0.0312 7.7 1.1 9.9 1.5 B- A- B-   | MATH | 7 702280 | 11 | C-G.2     | 2 | 6393  | 0.34 | 0.21 | 0.34 | 0.33 | 0.12 | 0.00 | 0.04  | -0.10 | 0.04  | 0.08  | -0.05 | 2.2107  | 0.0303 | 9.9  | 1.5   | 9.9 | 2.0   | A-         | A- | A- |
|  | MATH | 7 150803 | 11 | B-E.2.2.1 | 2 | 6393  | 0.30 | 0.11 | 0.11 | 0.30 | 0.48 | 0.00 | 0.30  | -0.28 | -0.14 | 0.30  | -0.01 | 2.4539  | 0.0312 | 7.7  | 1.1   | 9.9 | 1.5 I | B-         | A- | B- |

| MATH         7         296220         11         A-R.1.1.4         2         6393         0.17         0.16         0.35         0.32         0.17         0.00         0.23         -0.07         -0.21         0.09         0.23         3.3872         0.0371         2.5           MATH         7         962649         12         A-N.1.1.3         2         6401         0.53         0.17         0.53         0.15         0.15         0.00         0.42         -0.21         -0.24         -0.21         1.1616         0.0288         3.3           MATH         7         580325         12         A-R.1.1.6         2         6401         0.39         0.17         0.18         0.26         0.39         0.00         0.49         -0.22         -0.20         -0.18         0.49         1.9074         0.0295         -9.0           MATH         7         917521         12         A-R.1.1.4         2         6401         0.44         0.44         0.13         0.20         0.23         0.00         0.46         -0.46         -0.11         -0.26         -0.20         1.6152         0.0290         -1.3           MATH         7         322702         12         B-E.2.3.1   | 1.0<br>0.9 | 9.9  | 1.0 | ) A-  | A- | A- |
|---|------------|------|-----|-------|----|----|
| MATH 7 917521 12 A-R.1.1.4 2 6401 0.44 0.44 0.13 0.20 0.23 0.00 0.46 0.46 -0.11 -0.26 -0.20 1.6152 0.0290 -1.3  | 0.7        |      |     | ) A-  | A- | A- |
|   |            | 0.7  | 1.0 | ) B-  | Α- | A- |
| MATH 7 322702 12 R.F. 2.3.1 2 6401 0.34 0.16 0.27 0.34 0.23 0.00 0.21 0.13 0.00 0.21 0.02 2.1011 0.2202 0.01  | 1.0        | 0.7  | 1.0 | ) A-  | A+ | A+ |
| [[vicali1]] $[[vicali2]]$ | 1.2        | 9.9  | 1.6 | 6 A-  | A+ | A- |
| MATH 7 159702 12 A-R.1.1.4 1 6401 0.68 0.13 0.12 0.68 0.06 0.00 0.52 -0.30 -0.25 0.52 -0.24 0.3165 0.0303 -7.4  | 0.9        | -6.8 | 0.8 | 3 A+  | A+ | A+ |
| MATH 7 766714 12 B-E.2.2.1 2 6401 0.31 0.44 0.31 0.08 0.17 0.00 0.26 -0.03 0.26 -0.22 -0.12 2.3750 0.0309 9.9   | 1.2        | 9.9  | 1.5 | 5 A-  | A- | A+ |
| MATH 7 958869 12 A-N.1.1.1 2 6401 0.48 0.48 0.10 0.10 0.32 0.00 0.39 0.39 -0.26 -0.25 -0.09 1.4079 0.0288 6.6   | 1.1        | 6.8  | 1.1 | A+    | A- | A+ |
| MATH 7 215213 12 C-G.2.2.2 2 6401 0.29 0.20 0.26 0.29 0.25 0.00 0.08 0.03 -0.05 0.08 -0.05 2.5100 0.0315 9.9  | 1.4        | 9.9  | 2.0 | ) A-  | A- | A- |
| MATH 7 556221 12 D-S.2.1.1 2 6401 0.42 0.12 0.35 0.10 0.42 0.00 0.27 -0.10 -0.17 0.27 1.7079 0.0291 9.9   | 1.3        | 9.9  | 1.4 | 1 A-  | A+ | A+ |
| MATH 7 352345 12 C-G.2 2 6401 0.17 0.22 0.17 0.45 0.16 0.00 -0.06 0.00 -0.06 0.11 -0.09 3.3792 0.0371 9.9   | 1.4        | 9.9  | 3.1 | A-    | A+ | A+ |
| MATH 7 936906 13 A-N.1.1.1 1 6340 0.41 0.14 0.41 0.35 0.09 0.00 0.24 -0.09 0.24 -0.10 -0.12 1.7927 0.0292 9.9   | 1.3        | 9.9  | 1.4 | 1 A-  | A+ | A- |
| MATH 7 304630 13 A-R.1.1.2 2 6340 0.44 0.32 0.44 0.17 0.07 0.00 0.23 0.04 0.23 -0.21 -0.19 1.6325 0.0290 9.9  | 1.3        | 9.9  | 1.5 | 5 A-  | A- | A- |
| MATH 7 831210 13 A-R.1.1.6 2 6340 0.41 0.22 0.15 0.41 0.21 0.00 0.20 -0.12 -0.02 0.20 -0.10 1.7996 0.0293 9.9   | 1.3        | 9.9  | 1.5 | 5 A-  | A- | A- |
| MATH 7 857225 13 D-S.3 2 6340 0.31 0.40 0.21 0.09 0.00 0.06 0.06 -0.06 -0.04 0.06 2.3920 0.0310 9.9   | 1.4        | 9.9  | 2.0 | ) A-  | A- | A- |
| MATH 7 150068 13 C-G.1.1.1 2 6340 0.88 0.04 0.05 0.88 0.03 0.00 0.43 -0.26 -0.24 0.43 -0.21 -1.1048 0.0409 -4.4   | 0.9        | -6.6 | 0.6 | 6 A+  | A- | A- |
| MATH 7 835405 13 B-E.1.1.1 1 6340 0.34 0.19 0.15 0.32 0.34 0.00 0.32 -0.15 -0.20 -0.04 0.32 2.2286 0.0304 5.4   | 1.1        | 9.9  | 1.3 | 3 A+  | A- | A+ |
| MATH 7 888279 13 B-E.1.1.1 2 6340 0.34 0.14 0.34 0.40 0.12 0.00 0.22 -0.15 0.22 -0.09 -0.02 2.2065 0.0303 9.9   | 1.2        | 9.9  | 1.5 | 5 A-  | A- | A- |
| MATH 7 627788 13 B-E.2.3.1 2 6340 0.51 0.12 0.16 0.51 0.21 0.00 0.46 -0.30 -0.13 0.46 -0.21 1.2734 0.0288 -0.7  | 1.0        | -0.6 | 1.0 | ) A-  | B- | A- |
| MATH 7 306466 13 A-N.1.1.2 1 6340 0.74 0.74 0.21 0.04 0.01 0.00 0.48 0.48 -0.35 -0.29 -0.12 -0.0091 0.0319 -4.9   | 0.9        | -3.2 | 0.9 | ) A-  | B- | B- |
| MATH 7 142828 13 C-G.2.2.2 2 6340 0.24 0.15 0.20 0.40 0.24 0.00 0.29 -0.14 -0.07 -0.08 0.29 2.8114 0.0330 4.7   | 1.1        | 9.9  | 1.4 | 1 A+  | A- | A- |
| MATH 7 845226 14 A-N.1.1.1 2 6392 0.52 0.18 0.14 0.16 0.52 0.00 0.57 -0.27 -0.28 -0.22 0.57 1.1854 0.0285 -9.9  | 0.9        | -9.9 | 0.8 | 3 A-  | A- | A- |
| MATH 7 532126 14 C-G.1.1.1 2 6392 0.18 0.30 0.30 0.22 0.18 0.00 -0.04 0.05 0.09 -0.11 -0.04 3.2658 0.0361 9.9   | 1.4        | 9.9  | 2.8 | 3 A-  | A- | A- |
| MATH 7 152123 14 B-E.2.1.1 2 6392 0.43 0.29 0.09 0.43 0.19 0.00 0.41 -0.37 -0.23 0.41 0.09 1.6737 0.0288 2.6  | 1.0        | 4.0  | 1.1 | l A-  | A- | A- |
| MATH 7 350777 14 A-R.1.1.2 2 6392 0.36 0.36 0.39 0.11 0.14 0.00 0.27 0.27 -0.06 -0.21 -0.09 2.0799 0.0297 9.9   | 1.2        | 9.9  | 1.3 | 3 A-  | A+ | A- |
| MATH 7 546560 14 A-R.1.1.6 2 6392 0.35 0.21 0.22 0.21 0.35 0.00 0.23 0.00 -0.19 -0.07 0.23 2.0852 0.0297 9.9  | 1.3        | 9.9  | 1.4 | 1 A+  | A+ | A- |
| MATH 7 669595 14 C-G.1.1.4 2 6392 0.43 0.06 0.23 0.28 0.43 0.00 0.03 -0.12 0.04 -0.01 0.03 1.6995 0.0288 9.9  | 1.5        | 9.9  | 1.8 | 3 A+  | A+ | A- |
| MATH 7 957498 14 C-G.2.2.2 2 6392 0.40 0.40 0.26 0.25 0.09 0.00 0.12 0.12 -0.11 0.01 -0.06 1.8352 0.0291 9.9  | 1.4        | 9.9  | 1.6 | 6 A+  | A- | A- |
| MATH 7 590624 14 B-E.2.3.1 2 6392 0.40 0.35 0.20 0.40 0.05 0.00 0.41 -0.25 -0.12 0.41 -0.14 1.8522 0.0291 0.1   | 1.0        | 5.6  | 1.1 | l A+  | A- | A- |
| MATH 7 915647 14 A-R.1.1.4 2 6392 0.62 0.15 0.62 0.13 0.10 0.00 0.31 -0.14 0.31 -0.16 -0.15 0.6590 0.0292 9.9   | 1.2        | 7.6  | 1.2 | 2 A+  | A+ | A+ |
| MATH 7 653500 14 A-N.1.1.1 2 6392 0.32 0.34 0.14 0.20 0.32 0.00 0.40 -0.08 -0.22 -0.18 0.40 2.2923 0.304 0.8  | 1.0        | 3.3  | 1.1 | l A-  | A- | A- |
| MATH 7 660272 15 A-N.1.1.2 2 6392 0.49 0.24 0.22 0.49 0.05 0.00 0.51 -0.22 -0.28 0.51 -0.18 1.3687 0.0289 -6.3  | 0.9        | -4.9 | 0.9 | ) A-  | A- | A- |
| MATH 7 500829 15 A-N.1.1.1 1 6392 0.62 0.13 0.12 0.62 0.14 0.00 0.48 -0.25 -0.25 0.48 -0.19 0.6706 0.0294 -1.8  | 1.0        | -3.4 | 0.9 | B-    | A- | A- |
| MATH 7 303697 15 B-E.2.3.1 2 6392 0.57 0.18 0.57 0.14 0.10 0.00 0.43 -0.13 0.43 -0.23 -0.27 0.9112 0.0290 3.1   | 1.0        | 1.0  | 1.0 | ) A-  | A- | A- |
| MATH 7 960413 15 D-S.1 2 6392 0.38 0.15 0.08 0.38 0.40 0.00 0.23 -0.32 -0.26 0.23 0.15 1.9769 0.0297 9.9  | 1.3        | 9.9  | 1.5 | 5 A-  | A- | A- |
| MATH 7 979402 15 D-S.3.2.3 2 6392 0.23 0.57 0.14 0.23 0.06 0.00 -0.02 0.19 -0.18 -0.02 -0.10 2.8676 0.0334 9.9  | 1.5        | 9.9  | 2.6 | 6 A-  | A- | A+ |
| MATH 7 197253 15 A-R.1.1.4 2 6392 0.41 0.41 0.24 0.24 0.10 0.00 0.23 0.23 0.08 -0.23 -0.15 1.7982 0.0293 9.9  | 1.3        | 9.9  | 1.5 | 5 A+  | A- | A+ |
| MATH 7 980820 15 B-E.1.1.1 1 6392 0.26 0.26 0.28 0.24 0.21 0.00 0.21 0.21 -0.07 0.01 -0.17 2.6732 0.0323 9.9  | 1.2        | 9.9  | 1.7 | 7 A+  | A- | A- |
| MATH 7 214028 15 A-R.1.1.5 1 6392 0.41 0.26 0.09 0.24 0.41 0.00 0.50 -0.24 -0.18 -0.21 0.50 1.8008 0.0293 -6.6  | 0.9        |      | 0.9 | 9 B-  | A- | A- |
| MATH 7 454913 15 B-E.2.2.1 2 6392 0.57 0.57 0.24 0.13 0.06 0.00 0.45 0.45 -0.18 -0.26 -0.25 0.9398 0.0290 0.9   | 1.0        |      |     | ) A-  | A- | A- |
| MATH 7 294358 15 C-G.2.1.1 2 6392 0.40 0.25 0.40 0.26 0.09 0.00 0.31 -0.25 0.31 -0.05 -0.08 1.8302 0.0294 9.9   | 1.2        | 9.9  | 1.3 | 3 A+  | A- | A+ |
| MATH 7 135834 16 A-N.1 2 6382 0.41 0.22 0.24 0.41 0.13 0.00 0.09 0.03 -0.04 0.09 -0.11 1.7598 0.0290 9.91   | 1.5        | 9.9  | 1.7 | 7 A-  | A+ | A+ |
| MATH 7 924251 16 C-G.1 2 6382 0.53 0.24 0.14 0.53 0.09 0.00 0.35 -0.16 -0.16 0.35 -0.18 1.1635 0.0286 9.8   | 1.1        | 8.5  | 1.2 | 2 A+  | A- | A- |
| MATH 7 376951 16 B-E.2.1.1 2 6382 0.36 0.16 0.22 0.26 0.36 0.00 0.51 -0.29 -0.21 -0.12 0.51 2.0484 0.0296 -9.9  | 0.9        | -4.8 | 0.9 | ) A-  | A- | A- |
| MATH 7 473479 16 A-R.1.1.2 2 6382 0.46 0.46 0.17 0.16 0.20 0.00 0.44 0.44 -0.20 -0.17 -0.20 1.5012 0.0287 -1.1  | 1.0        | 0.6  |     | ) A+  | A+ | A+ |
| MATH 7 486855 16 A-R.1.1.6 2 6382 0.29 0.18 0.27 0.29 0.26 0.00 0.08 0.07 -0.13 0.08 -0.01 2.4619 0.0311 9.9  | 1.4        | 9.9  |     | ) A-  | A+ | A+ |
| MATH 7 943740 16 A-N.1.1.3 1 6382 0.40 0.40 0.07 0.12 0.40 0.00 0.33 0.33 -0.05 -0.18 -0.18 1.8139 0.0291 7.6   | 1.1        | 9.9  | 1.2 |       | A- | A- |
| MATH 7 7 724833 16 D-S.2 2 6382 0.20 0.21 0.20 0.45 0.14 0.00 -0.18 0.06 -0.18 0.19 -0.12 3.0820 0.0347 9.9   | 1.6        | 9.9  | 3.3 | 3 A+  | A+ | A+ |
| MATH 7 761888 16 C-G.2.2.1 2 6382 0.34 0.24 0.17 0.34 0.24 0.00 0.28 -0.07 -0.10 0.28 -0.14 2.1522 0.0300 9.9   | 1.2        | 9.9  | 1.4 | 1 2 1 | A- | A- |
| MATH 7 277650 16 B-E.2.2.1 2 6382 0.29 0.13 0.35 0.23 0.29 0.00 0.19 -0.13 -0.02 -0.07 0.19 2.4882 0.0312 9.9   | 1.2        | 9.9  | 1.7 |       | A+ | A+ |
| MATH 7 899363 16 A-R.1.1.4 2 6382 0.39 0.39 0.21 0.22 0.18 0.00 0.19 0.19 -0.04 -0.05 -0.13 1.8794 0.0292 9.9   | 1.3        | 9.9  | 1.5 | 5 A+  | A- | A- |

| MATH | 7 946828 | 17 | D.3.1.1   | 2 12746  | 0.38 | 0.38 | 0.19 | 0.21 | 0.22 0 | .00 | 0.22  | 0.22  | -0.08 | -0.18 | -0.01 | 1.9832  | 0.0208 | 9.9  | 1.3 | 9.9  | 1.5 | A+ | A+ | A+      |
|------|----------|----|-----------|----------|------|------|------|------|--------|-----|-------|-------|-------|-------|-------|---------|--------|------|-----|------|-----|----|----|---------|
| MATH | 7 625607 | 17 | A.2.1.1   | 1 12746  |      | 0.10 | 0.07 | 0.08 |        | .00 | 0.48  | -0.25 | -0.22 | -0.27 |       | -0.1013 | 0.0228 | -6.6 | 0.9 | -6.8 | _   | A+ | A+ | A+      |
| MATH | 7 713894 | 17 | D-S.3.1.1 | 2 6398   | 0.62 | 0.04 | 0.14 | 0.21 | 0.62 0 | .00 | 0.36  | -0.23 | -0.22 | -0.14 | 0.36  | 0.7004  | 0.0292 | 8.3  | 1.1 | 8.0  | 1.2 | A+ | A- | A+      |
| MATH | 7 321471 | 17 | A-N.1.1.3 | 2 6398   | 0.33 | 0.16 | 0.23 | 0.28 | 0.33 0 | .00 | 0.41  | -0.30 | -0.25 | 0.05  | 0.41  | 2.2264  | 0.0302 | -0.5 | 1.0 | 2.9  | 1.1 | A- | A- | A-      |
| MATH | 7 109178 | 17 | D-S.2     | 2 6398   | 0.56 | 0.22 | 0.08 | 0.14 | 0.56 0 | .00 | 0.48  | -0.16 | -0.26 | -0.31 | 0.48  | 0.9910  | 0.0287 | -3.1 | 1.0 | -2.2 | 1.0 | A- | A- | A-      |
| MATH | 7 864573 | 17 | B-E.2.1.1 | 2 6398   | 0.27 | 0.23 | 0.37 | 0.12 | 0.27 0 | .00 | 0.29  | -0.17 | -0.01 | -0.15 | 0.29  | 2.6170  | 0.0318 | 3.1  | 1.1 | 9.9  | 1.5 | A- | A- | A-      |
| MATH | 7 207265 | 17 | A-R.1.1.6 | 2 6398   | 0.20 | 0.20 | 0.42 | 0.20 | 0.18 0 | .00 | 0.02  | 0.02  | 0.27  | -0.17 | -0.19 | 3.0882  | 0.0347 | 9.9  | 1.3 | 9.9  | 2.3 | A- | A- | A+      |
| MATH | 7 388309 | 17 | C-G.1     | 2 6398   | 0.16 | 0.09 | 0.41 | 0.33 | 0.16 0 | .00 | 0.08  | -0.25 | -0.15 | 0.25  | 0.08  | 3.3996  | 0.0372 | 9.9  | 1.3 | 9.9  | 2.2 | A- | A- | A-      |
| MATH | 7 630200 | 17 | C-G.2.2.1 | 1 6398   | 0.38 | 0.20 | 0.38 | 0.20 | 0.22 0 | .00 | 0.41  | -0.13 | 0.41  | -0.28 | -0.08 | 1.9878  | 0.0295 | 0.7  | 1.0 | 6.5  | 1.1 | A+ | A+ | A+      |
| MATH | 7 498316 | 17 | C-G.1.1.4 | 1 6398   | 0.33 | 0.31 | 0.02 | 0.33 | 0.33 0 | .00 | 0.15  | -0.12 | -0.10 | 0.15  | 0.01  | 2.2446  | 0.0302 | 9.9  | 1.3 | 9.9  | 1.7 | A+ | A+ | A+      |
| MATH | 7 222997 | 17 | B-E.2.2.1 | 2 6398   | 0.37 | 0.12 | 0.37 | 0.25 | 0.26 0 | .00 | 0.24  | -0.14 | 0.24  | -0.11 | -0.06 | 1.9947  | 0.0295 | 9.9  | 1.2 | 9.9  | 1.4 | A- | A- | A-      |
| MATH | 7 373431 | 17 | A-R.1.1.2 | 2 6398   | 0.50 | 0.50 | 0.12 | 0.30 | 0.08 0 | .00 | 0.25  | 0.25  | -0.28 | 0.05  | -0.20 | 1.3395  | 0.0286 | 9.9  | 1.3 | 9.9  | 1.4 | A- | A+ | A-      |
| MATH | 7 797208 | 18 | A-N.1.1.3 | 1 6348   | 0.26 | 0.17 | 0.26 | 0.34 | 0.23 0 | .00 | 0.10  | -0.08 | 0.10  | 0.03  | -0.06 | 2.7117  | 0.0323 | 9.9  | 1.3 | 9.9  | 1.9 | A- | A- | A-      |
| MATH | 7 315230 | 18 | A-R.1.1.1 | 2 6348   | 0.43 | 0.24 | 0.13 | 0.43 | 0.19 0 | .00 | 0.34  | -0.16 | -0.25 | 0.34  | -0.03 | 1.6800  | 0.0290 | 9.1  | 1.1 | 9.9  | 1.2 | A- | A- | A-      |
| MATH | 7 989448 | 18 | C-G.2.1.2 | 2 6348   | 0.32 | 0.12 | 0.18 | 0.32 | 0.38 0 | .00 | 0.14  | -0.14 | -0.14 | 0.14  | 0.08  | 2.3182  | 0.0305 | 9.9  | 1.3 | 9.9  | 1.7 | A- | A- | A-      |
| MATH | 7 516296 | 18 | B-E.1.1.1 | 2 6348   | 0.29 | 0.29 | 0.35 | 0.16 | 0.20 0 | .00 | 0.22  | 0.22  | -0.08 | -0.08 | -0.06 | 2.5143  | 0.0313 | 9.7  | 1.2 | 9.9  | 1.7 | A- | A- | A+      |
| MATH | 7 165808 | 18 | C-G.1.1.3 | 2 6348   | 0.32 | 0.14 | 0.25 | 0.32 | 0.28 0 | .00 | -0.01 | -0.19 | 0.00  | -0.01 | 0.16  | 2.3145  | 0.0305 | 9.9  | 1.6 | 9.9  | 2.1 | A- | A+ | A+      |
| MATH | 7 689036 | 18 | D-S.3.2.2 | 2 6348   | 0.64 | 0.09 | 0.07 | 0.64 | 0.20 0 | .00 | 0.59  | -0.21 | -0.33 | 0.59  | -0.34 | 0.5735  | 0.0296 | -9.9 | 0.8 | -9.9 | 0.8 | B- | A- | A-      |
| MATH | 7 681423 | 18 | A-R.1.1.5 | 2 6348   | 0.23 | 0.23 | 0.34 | 0.11 | 0.33 0 | .00 | 0.13  | 0.13  | 0.03  | -0.27 | 0.03  | 2.9097  | 0.0335 | 9.9  | 1.2 | 9.9  | 1.9 | A- | A- | A-      |
| MATH | 7 276041 | 18 | B-E.2.2.1 | 2 6348   | 0.57 | 0.57 | 0.20 | 0.09 | 0.14 0 | .00 | 0.54  | 0.54  | -0.33 | -0.33 | -0.12 | 0.9652  | 0.0289 | -9.2 | 0.9 | -7.7 | 0.9 | A+ | A- | A-      |
| MATH | 7 766395 | 18 | D-S.1.1.1 | 1 6348   | 0.66 | 0.16 | 0.07 | 0.66 | 0.11 0 | .00 | 0.42  | -0.30 | -0.23 | 0.42  | -0.10 | 0.4707  | 0.0299 | 2.1  | 1.0 | 0.0  | 1.0 | A+ | A- | A-      |
| MATH | 7 165869 | 18 | B-E.2.2.2 | 2 6348   | 0.47 | 0.11 | 0.12 | 0.47 | 0.30 0 | .00 | 0.32  | -0.20 | -0.23 | 0.32  | -0.04 | 1.4927  | 0.0288 | 9.9  | 1.2 | 9.9  | 1.3 | A+ | A+ | A+      |
| MATH | 7 632382 | 19 | A-R.1.1.3 | 2 6398   | 0.66 | 0.06 | 0.66 | 0.12 | 0.16 0 | .00 | 0.55  | -0.19 | 0.55  | -0.32 | -0.30 | 0.4825  | 0.0297 | -9.9 | 0.9 | -9.6 | 0.8 | A+ | A- | A-      |
| MATH | 7 308485 | 19 | C-G.1.1.4 | 2 6398   | 0.18 | 0.27 | 0.34 | 0.20 | 0.18 0 | .00 | 0.11  | -0.07 | -0.06 | 0.04  | 0.11  | 3.2430  | 0.0359 | 9.9  | 1.3 | 9.9  | 2.1 | A+ | A- | A-      |
| MATH | 7 324761 | 19 | B-E.2.2.2 | 2 6398   | 0.27 | 0.21 | 0.40 | 0.11 | 0.27 0 | .00 | 0.27  | -0.12 | -0.03 | -0.18 | 0.27  | 2.5907  | 0.0317 | 8.5  | 1.1 | 9.9  | 1.5 | A- | A- | A-      |
| MATH | 7 654695 | 19 | A-N.1.1.3 | 2 6398   | 0.46 | 0.09 | 0.46 | 0.33 | 0.12 0 | .00 | 0.43  | -0.15 | 0.43  | -0.24 | -0.18 | 1.5308  | 0.0287 | -0.1 | 1.0 | 2.4  | 1.0 | A- | A- | A+      |
| MATH | 7 525677 | 19 | B-E.2.1.1 | 2 6398   | 0.35 | 0.10 | 0.35 | 0.34 | 0.21 0 | .00 | 0.35  | -0.08 | 0.35  | -0.21 | -0.10 | 2.1181  | 0.0299 | 3.2  | 1.0 | 9.7  | 1.2 | A- | A- | A-      |
| MATH | 7 700444 | 19 | C-G.1     | 2 6398   | 0.39 | 0.39 | 0.26 | 0.17 | 0.18 0 | .00 | 0.14  | 0.14  | 0.05  | -0.14 | -0.10 | 1.9149  | 0.0293 | 9.9  | 1.4 | 9.9  | 1.6 | A- | A+ | A-      |
| MATH | 7 373348 | 19 | C-G.2.2.1 | 2 6398   | 0.27 | 0.22 | 0.44 | 0.27 | 0.07 0 | .00 | 0.14  | 0.03  | -0.09 | 0.14  | -0.12 | 2.6109  | 0.0318 | 9.9  | 1.3 | 9.9  | 1.8 | A- | A- | A-      |
| MATH | 7 833436 | 19 | A-R.1.1.6 | 2 6398   | 0.39 | 0.06 | 0.39 | 0.15 | 0.39 0 | .00 | 0.50  | -0.16 | -0.34 | -0.12 | 0.50  | 1.8780  | 0.0293 | -8.0 | 0.9 | -4.2 | 0.9 | A- | B- | A-      |
| MATH | 7 730386 | 19 | D-S.1.1.2 | 2 6398   | 0.44 | 0.21 | 0.44 | 0.29 | 0.06 0 | .00 | 0.28  | -0.33 | 0.28  | 0.08  | -0.16 | 1.6485  | 0.0289 | 9.9  | 1.2 | 9.9  | 1.3 | A- | A- | A-      |
| MATH | 7 644539 | 19 | D-S.3.1.1 | 2 6398   | 0.57 | 0.14 | 0.25 | 0.57 | 0.04 0 | .00 | 0.43  | -0.27 | -0.17 | 0.43  | -0.23 | 0.9377  | 0.0288 | 2.1  | 1.0 | 1.1  | 1.0 |    | A- | B-      |
| MATH | 7 728082 | 20 | A-N.1.1   | 2 6369   | 0.41 | 0.17 | 0.21 | 0.22 | 0.41 0 | .00 | 0.45  | -0.24 | -0.27 | -0.05 | 0.45  | 1.7963  | 0.0290 | -3.0 | 1.0 | 0.9  | 1.0 | A- | A- | A-      |
| MATH | 7 333183 | 20 | B-E.2.2.2 | 2 6369   | 0.28 | 0.19 | 0.48 | 0.28 | 0.05 0 | .00 | 0.22  | -0.22 | 0.04  | 0.22  | -0.14 | 2.5392  | 0.0315 | 9.9  | 1.2 | 9.9  | 1.6 | A- | A- | A-      |
| MATH | 7 234846 | 20 | A-R.1.1.5 | 2 6369   | 0.80 | 0.11 | 0.05 | 0.04 | 0.80 0 | .00 | 0.46  | -0.30 | -0.22 | -0.22 | 0.46  | -0.4251 | 0.0341 | -5.4 | 0.9 | -4.7 | 0.8 | A- | B- | B-      |
| MATH | 7 424950 | 20 | C-G.1.1.4 | 2 6369   | 0.37 | 0.11 | 0.37 | 0.30 | 0.22 0 | .00 | 0.21  | -0.20 | 0.21  | 0.08  | -0.18 | 1.9862  | 0.0295 | 9.9  | 1.3 | 9.9  | 1.4 |    | A- | A-      |
| MATH | 7 514669 | 20 | D-S.2     | 2 6369   | 0.45 | 0.15 | 0.15 | 0.26 | 0.45 0 | .00 | 0.34  | -0.19 | -0.22 | -0.05 | 0.34  | 1.5746  | 0.0287 | 9.8  | 1.1 | 9.9  | 1.2 | A- | A- | A-      |
| MATH | 7 913954 | 20 | A-N.1.1.3 | 2 6369   | 0.38 | 0.30 | 0.38 | 0.15 | 0.17 0 | .00 | 0.18  | 0.05  | 0.18  | -0.19 | -0.11 | 1.9481  | 0.0294 | 9.9  | 1.3 | 9.9  | 1.5 | A- | A- | A-      |
| MATH | 7 839357 | 20 | B-E.2.1.1 | 2 6369   |      | 0.41 | 0.11 | 0.27 |        | .00 | 0.33  | 0.33  | -0.20 | -0.09 | -0.15 | 1.7458  | 0.0290 |      | 1.1 | 9.9  | 1.2 |    | A- | A+      |
| MATH | 7 548365 | 20 | C-G.1.1   | 2 6369   |      | 0.25 | 0.35 | 0.17 |        | .00 | 0.00  | 0.01  | 0.14  | -0.19 | 0.00  | 2.9013  | 0.0335 | 9.9  | 1.4 | 9.9  | 2.3 | A+ | A+ | A+      |
| MATH | 7 567954 | 20 | A-R.1.1.6 | 2 6369   |      | 0.30 | 0.36 | 0.22 |        |     | -0.01 | -0.15 | 0.01  | 0.15  | -0.01 | 3.8847  | 0.0429 | 7.4  | 1.2 | 9.9  |     | A- | A+ | A+      |
| MATH | 7 444506 | 20 | C-G.2.2.1 | 2 6369   | 0.35 | 0.43 | 0.35 | 0.19 | 0.04 0 | .00 | -0.02 | 0.07  | -0.02 | 0.00  | -0.12 | 2.1278  | 0.0299 | 9.9  | 1.6 | 9.9  | 1.9 | A- | A- | A-      |
| MATH | 8 112008 | 0  | C.1.2.1   | 1 128678 |      | 0.13 | 0.64 | 0.20 |        |     | 0.59  | -0.20 | 0.59  | -0.47 |       | 0.7070  | 0.0068 |      | 0.9 | -9.9 | 0.8 |    |    |         |
| MATH | 8 412087 | 0  | E.4.1.2   | 1 128678 |      | 0.02 | 0.03 | 0.09 |        | .00 | 0.43  | -0.21 | -0.23 | -0.28 | 0.43  | -1.0792 | 0.0094 | 6.1  | 1.0 | 1.8  | 1.0 |    |    |         |
| MATH | 8 111557 | 0  | D.4.1.3   | 2 128678 |      | 0.78 | 0.11 | 0.06 | 0.0.   | .00 | 0.54  | 0.54  | -0.35 | -0.28 |       | -0.3075 | 0.0078 |      | 0.9 | -9.9 | 0.8 |    |    |         |
| MATH | 8 148322 | 0  | E.4.1.1   | 2 128678 |      | 0.07 | 0.02 | 0.04 |        | .00 | 0.47  | -0.34 | -0.21 | -0.21 |       | -0.9504 | 0.0091 |      | 0.9 |      | 0.7 |    |    |         |
| MATH | 8 956071 | 0  | C.1.2.1   | 1 128678 |      | 0.62 | 0.08 | 0.05 |        | .00 | 0.62  | 0.62  | -0.18 | -0.20 | -0.48 | 0.8304  | 0.0067 |      | 0.8 | -9.9 | 0.7 |    |    | $\perp$ |
| MATH | 8 189778 | 0  | D.2.2.1   | 2 128678 | 0.81 | 0.04 | 0.11 | 0.81 | 0.03 0 | .00 | 0.55  | -0.29 | -0.37 | 0.55  | -0.22 | -0.4924 | 0.0081 | -9.9 | 0.9 | -9.9 | 0.7 |    |    |         |
| MATH | 8 932280 | 0  | C.1.2.1   | 1 128678 | 0.72 | 0.05 | 0.05 | 0.72 |        | .00 | 0.61  | -0.28 | -0.18 | 0.61  | -0.45 | 0.1589  | 0.0072 |      | 0.9 | -9.9 | 0.7 |    |    |         |
| MATH | 8 352961 | 0  | D.1.1.3   | 1 128678 | 0.84 | 0.05 | 0.84 | 0.07 | 0.00   | .00 | 0.53  | -0.27 | 0.53  | -0.28 | 0.00  | -0.6649 | 0.0084 | -9.9 | 0.9 | -9.9 | 0.8 |    |    |         |
| MATH | 8 480517 | 0  | D.4.1.2   | 2 128678 | 0.69 | 0.69 | 0.11 | 0.07 | 0.13 0 | .00 | 0.45  | 0.45  | -0.21 | -0.26 | -0.23 | 0.4436  | 0.0070 | 9.9  | 1.0 | 6.3  | 1.0 |    |    |         |

| MATH      | 8 503133 0 | C.1.2.1            | 2 128678 | 0.71   | 0.06       | 0.71 | 0.20 0.00 | 0.61 | -0.21 | -0.26 | 0.61  | -0.45 0.2271  | 0.0072 -9.9   0.8 -9.9   0.7                     |
|-----------|------------|--------------------|----------|--------|------------|------|-----------|------|-------|-------|-------|---------------|--|
| MATH      | 8 924147 0 | D.2.2.2            | 2 128678 | 0.72   | 0.72       | 0.09 | 0.08 0.00 | 0.45 | -0.17 | 0.45  | -0.30 | -0.23 0.2271  | 0.0072   9.9   1.0   -2.7   1.0                  |
| MATH      | 8 329776 0 | E.4.1.1            | 1 128678 | 0.86   | 0.03       | 0.04 | 0.86 0.00 | 0.45 | -0.24 | -0.24 | -0.27 | 0.45 -0.7765  | 0.0087 -9.9 0.9 -9.9 0.7                         |
| MATH      | 8 953556 0 | D.2.2.2            | 1 128678 | 0.82   | 0.05       | 0.05 | 0.82 0.00 | 0.54 | -0.27 | -0.35 | -0.28 | 0.54 -0.5143  | 0.0082 -9.9 0.8 -9.9 0.7                         |
| MATH      | 8 112071 0 | D.2.1.1            | 1 128678 | 0.88   | 0.03       | 0.88 | 0.03 0.00 | 0.45 | -0.27 | -0.24 | 0.45  | -0.25 -0.9749 | 0.0091 -9.9 0.8 -9.9 0.8                         |
| MATH      | 8 527490 0 | D.4.1.2            | 1 128678 | 0.79   | 0.08       | 0.79 | 0.06 0.00 | 0.55 | -0.32 | -0.31 | 0.55  | -0.24 -0.2560 | 0.0078 -9.9 0.9 -9.9 0.7                         |
| MATH      | 8 201457 0 | D.1.1.3            | 2 128678 | 0.71   | 0.10       | 0.08 | 0.71 0.00 | 0.60 | -0.31 | -0.33 | -0.28 | 0.60 0.2911   | 0.0071 -9.9 0.8 -9.9 0.7                         |
| MATH      | 8 589675 0 | A.2.1.1            | 1 128678 | 0.63   | 0.13 0.63  | 0.09 | 0.15 0.00 | 0.45 | -0.18 | 0.45  | -0.20 | -0.27 0.8383  | 0.0067 9.9 1.1 6.6 1.0                           |
| MATH      | 8 993641 0 | D.4.1.3            | 1 128678 | 0.84   | 0.06 0.04  | 0.84 | 0.07 0.00 | 0.53 | -0.30 | -0.28 | 0.53  | -0.29 -0.7510 | 0.0086 -9.9 0.9 -9.9 0.7                         |
| MATH      | 8 355499 0 | D.4.1.1            | 1 128678 |        | 0.79 0.10  | _    | 0.07 0.00 | 0.50 | 0.50  | -0.29 | -0.22 | -0.30 -0.2373 | 0.0077 -9.9 0.9 -9.9 0.9                         |
| MATH      | 8 563360 0 | D.4.1.3            | 1 128678 | 0.59 ( | 0.06 0.25  | 0.09 | 0.59 0.00 | 0.47 | -0.29 | -0.19 | -0.26 | 0.47 1.0319   | 0.0066 8.0 1.0 3.6 1.0                           |
| MATH      | 8 526447 0 | E.4.1.2            | 2 128678 |        | 0.09 0.03  |      | 0.04 0.00 | 0.29 | -0.12 | -0.21 | 0.29  | -0.19 -0.6120 | 0.0083 9.9 1.1 9.9 1.3                           |
| MATH      | 8 593255 0 | D.2.1.1            | 1 128678 |        | 0.06 0.80  | 0.09 | 0.05 0.00 | 0.39 | -0.20 | 0.39  | -0.32 | -0.07 -0.3233 | 0.0079 7.5 1.0 9.9 1.2                           |
| MATH      | 8 100448 0 | A.1.1.1            | 1 128678 |        | 0.78 0.10  |      | 0.07 0.00 | 0.44 | 0.44  | -0.23 | -0.21 | -0.27 -0.1975 | 0.0077 5.8 1.0 -1.6 1.0                          |
| MATH      | 8 330093 0 | D.2.2.2            | 2 128678 |        | 0.06 0.12  | 0.75 | 0.07 0.00 | 0.46 | -0.28 | -0.29 | 0.46  | -0.14 -0.0324 | 0.0075 9.9 1.1 2.4 1.0                           |
| MATH      | 8 902469 0 | E.4.1.2            | 2 128678 |        | 0.04 0.13  | 0.81 | 0.02 0.00 | 0.50 | -0.21 | -0.39 | 0.50  | -0.15 -0.4835 | 0.0081 -9.9 0.9 -9.9 0.8                         |
| MATH      | 8 943592 0 | C.1.2.1            | 2 128678 |        | 0.13 0.63  | 0.13 | 0.12 0.00 | 0.55 | -0.29 | 0.55  | -0.14 | -0.38 0.9565  | 0.0066 -9.9 0.9 -9.9 0.8                         |
| MATH      | 8 165100 0 | C.1.2.1            | 2 128678 |        | 0.14 0.72  | 0.08 | 0.06 0.00 | 0.53 | -0.37 | 0.53  | -0.10 | -0.35 0.1983  | 0.0072 -9.9 1.0 -9.9 0.8                         |
| MATH      | 8 452857 0 | D.2.1.1            | 1 128678 |        | 0.64 0.18  |      | 0.07 0.00 | 0.39 | 0.39  | -0.19 | -0.22 | -0.17 0.6685  | 0.0068 9.9 1.2 9.9 1.2                           |
| MATH      | 8 752458 0 | D.2.2.2            | 2 128678 |        | 0.13 0.18  | 0.61 | 0.08 0.00 | 0.46 | -0.23 | -0.19 | 0.46  | -0.26 0.8476  | 0.0067 9.9 1.1 8.9 1.1                           |
| MATH      | 8 924590 0 | D.4.1.2            | 1 128678 |        | 0.15 0.04  | 0.05 | 0.76 0.00 | 0.48 | -0.26 | -0.27 | -0.26 | 0.48 -0.0378  | 0.0075 -7.6 1.0 0.0 1.0                          |
| MATH      | 8 249703 0 | D.4.1.3            | 2 128678 |        | 0.78 0.10  | 0.06 | 0.07 0.00 | 0.58 | 0.58  | -0.36 | -0.26 | -0.29 -0.1293 | 0.0076 -9.9 0.8 -9.9 0.7                         |
| MATH      | 8 366955 0 | E.4.1.2            | 2 128678 |        | 0.07 0.24  |      | 0.12 0.00 | 0.38 | -0.17 | -0.24 | 0.38  | -0.13 1.1195  | 0.0066 9.9 1.2 9.9 1.2                           |
| MATH      | 8 315053 0 | D.4.1.1            | 1 128678 |        | 0.05 0.77  | 0.15 | 0.03 0.00 | 0.55 | -0.23 | 0.55  | -0.39 | -0.23 0.0076  | 0.0074 -9.9 0.9 -9.9 0.7                         |
| MATH      | 8 254319 0 | E.4.1.1            | 2 128678 |        | 0.05 0.24  | 0.04 | 0.66 0.00 | 0.41 | -0.22 | -0.22 | -0.25 | 0.41 0.5541   | 0.0069 9.9 1.1 9.9 1.2                           |
| MATH      | 8 405120 0 | D.4.1.1            | 1 128678 |        | 0.08 0.14  |      | 0.08 0.00 | 0.50 | -0.22 | -0.31 | 0.50  | -0.23 0.4158  | 0.0070 -9.9 1.0 -9.9 0.9                         |
| MATH      | 8 860734 0 | D.1.1.3            | 2 128678 |        | 0.05 0.07  | 0.08 | 0.80 0.00 | 0.61 | -0.31 | -0.31 | -0.36 | 0.61 -0.2992  | 0.0078 -9.9 0.8 -9.9 0.6                         |
| MATH      | 8 997129 0 | D.2.2.1            | 2 128678 |        | 0.10 0.73  | 0.06 | 0.11 0.00 | 0.49 | -0.24 | 0.49  | -0.24 | -0.29 0.1045  | 0.0073 -1.6 1.0 -7.2 0.9                         |
| MATH      | 8 584381 0 | D.2.2.2            | 2 128678 |        | 0.77 0.12  | 0.06 | 0.04 0.00 | 0.48 | 0.48  | -0.25 | -0.27 | -0.26 -0.0279 | 0.0074 -9.9 0.9 -7.6 0.9                         |
| MATH      | 8 126911 0 | C.1.2.1            | 1 128678 |        | 0.10 0.72  | 0.03 | 0.15 0.00 | 0.50 | -0.23 | 0.50  | -0.17 | -0.35 0.2458  | 0.0071 -4.5 1.0 -9.9 0.9                         |
| MATH      | 8 676077 0 | C.1.2.1            | 2 128678 |        | 0.38 0.52  | 0.03 | 0.06 0.00 | 0.54 | -0.45 | 0.54  | -0.15 | -0.08 1.3816  | 0.0065 -9.9 0.9 -9.9 0.9                         |
| MATH      | 8 900640 0 | A.1.1.1            | 1 128678 |        | 0.82 0.04  |      | 0.02 0.00 | 0.48 | 0.48  | -0.21 | -0.38 | -0.14 -0.5640 | 0.0083 -9.8 1.0 -9.9 0.9                         |
| MATH      | 8 779369 0 | A.1.1.1            | 1 128678 |        | 0.10 0.81  | 0.06 | 0.03 0.00 | 0.53 | -0.37 | 0.53  | -0.28 | -0.16 -0.5000 | 0.0081 -9.9 0.9 -9.9 0.8                         |
| MATH      | 8 196171 0 | A.1.1.1            | 1 128678 |        | 0.09 0.65  | 0.07 | 0.20 0.00 | 0.52 | -0.22 | 0.52  | -0.19 | -0.35 0.7184  | 0.0068 -9.9 1.0 -9.9 0.9                         |
| MATH      | 8 503627 0 | E.4.1.1            | 1 128678 |        | 0.80 0.05  | _    | 0.07 0.00 | 0.49 | 0.49  | -0.27 | -0.29 | -0.22 -0.3327 | 0.0079 -9.9 0.9 -9.9 0.8                         |
| MATH      | 8 565441 0 | D.4.1.3            | 2 128678 |        | 0.10  0.06 |      | 0.04 0.00 | 0.56 | -0.35 | -0.33 | 0.56  | -0.21 -0.3150 | 0.0078 -9.9 0.9 -9.9 0.7                         |
| MATH      | 8 820302 0 | E.4.1.2            | 2 128678 | *****  | 0.06 0.38  | _    | 0.08 0.00 | 0.25 | -0.30 | -0.05 | 0.25  | -0.10 1.5886  | 0.0065 9.9 1.3 9.9 1.5                           |
| MATH      | 8 834155 0 | D.4.1.2            | 1 128678 |        | 0.74 0.10  | 0.12 | 0.05 0.00 | 0.43 | 0.43  | -0.23 | -0.26 | -0.18 0.1686  | 0.0072 8.5 1.0 9.9 1.2                           |
| MATH      | 8 532860 0 | D.2.2.2            | 2 128678 |        | 0.04 0.13  | 0.71 | 0.13 0.00 | 0.40 | -0.24 | -0.23 | 0.40  | -0.18 0.3110  | 0.0071 9.9 1.1 9.9 1.1                           |
| MATH      | 8 836223 0 | D.2.1.1            | 1 128678 |        | 0.05 0.05  | 0.04 | 0.86 0.00 | 0.42 | -0.32 | -0.24 | -0.11 | 0.42 -0.8180  | 0.0088 -9.9 0.9 3.5 1.1                          |
| MATH      | 8 976452 0 | D.2.2.2            | 2 128678 |        | 0.06 0.75  | 0.10 | 0.09 0.00 | 0.46 | -0.29 | 0.46  | -0.27 | -0.16 0.0255  | 0.0074 5.4 1.0 -4.8 1.0                          |
| MATH      | 8 498857 0 | D.4.1.1            | 1 128678 |        | 0.08 0.08  | 0.19 | 0.65 0.00 | 0.51 | -0.16 | -0.17 | -0.39 | 0.51 0.7184   | 0.0068 -9.9 1.0 -9.9 0.9                         |
| MATH      | 8 257210 0 | D.2.2.1            | 2 128678 |        | 0.30 0.06  | 0.19 | 0.14 0.00 | 0.31 | -0.17 | -0.17 | 0.37  | -0.13 1.5589  | 0.0065 9.9 1.1 9.9 1.2                           |
| MATH      | 8 992574 0 | C.1.2.1            | 2 128678 |        | 0.11 0.72  | 0.10 | 0.07 0.00 | 0.45 | -0.17 | 0.45  | -0.24 | -0.10 0.1593  | 0.0072 9.9 1.1 -5.3 1.0                          |
| MATH      | 8 494718 0 | A.1.1.2            | 1 128678 |        | 0.11  0.72 | 0.10 | 0.01 0.00 | 0.53 | -0.47 | -0.18 | 0.53  | -0.07 -0.9746 | 0.0072 9.9 1.1 -9.9 1.6                          |
| MATH      | 8 658440 0 | A.2.1.1            | 1 128678 |        | 0.11 0.02  | 0.06 | 0.56 0.00 | 0.54 | -0.37 | -0.13 | -0.20 | 0.54 1.1746   | 0.0066 -9.9 0.9 -9.9 0.9                         |
| MATH      | 8 509340 0 | A.1.1.1            | 1 128678 |        | 0.11  0.27 | _    | 0.05 0.00 | 0.53 | -0.34 | -0.23 | 0.53  | -0.26 -0.2065 | 0.0077 -9.9 0.9 -9.9 0.8                         |
| MATH      | 8 778422 0 | A.1.1.2            | 1 128678 |        | 0.88 0.04  |      | 0.03 0.00 | 0.33 | 0.37  | -0.24 | -0.22 | -0.17 -1.2487 | 0.0077 -9.9 0.9 -9.9 0.8 0.0098 9.9 1.1 -3.6 0.9 |
| MATH      | 8 464302 0 | C.1.2.1            | 2 128678 |        | 0.53 0.10  | 0.03 | 0.04 0.00 | 0.37 | 0.37  | -0.23 | -0.22 | -0.17 -1.2487 | 0.0065 9.9 1.1 9.9 1.2                           |
| MATH      | 8 269085 0 | E.4.1.1            | 2 128678 |        | 0.73 0.10  | 0.20 | 0.17 0.00 | 0.37 | 0.37  | -0.17 | -0.29 | -0.14 1.2800  | 0.0003 9.9 1.1 9.9 1.2 0.0072 -3.2 1.0 -4.9 1.0  |
| MATH      | 8 258223 0 | E.4.1.1<br>E.4.1.1 | 2 128678 |        | 0.32 0.10  |      | 0.04 0.00 | 0.49 | -0.02 | -0.25 | 0.32  | -0.19 2.3130  | 0.0067 9.9 1.2 9.9 1.7                           |
| 1V1/Λ 1 Π | 0 230223 0 | E.4.1.1            | 4 1200/8 | 0.43   | 1.34 U.IU  | 0.43 | 0.15 0.00 | 0.52 | -0.02 | -0.20 | 0.32  | -0.17 2.3130  | 0.0007 3.7 1.4 7.7 1.7                           |

| MATH 8 689628 I D.1.5 1, 13221 0.6 0.12 0.11 0.0 0.00 0.7 0.24 0.34 0.32 0.27 0.57 0.57 0.0021 9.9 0.9 4.0 8.8 A. A. A. MATH 8 203641 1 C.63.1,1 2 6807 0.07 0.10 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.   | MATH | 8 736416 1 | E.4.1.1   | 2 13223 | 0.83 | 0.04 0. | 0.0    | 5 0.83 0.00 | 0.49  | -0.26 | -0.28 | -0.25 | 0.49 -0.7398  | 0.0264 | -4.5 0.9 | -7.4 | 0.7 A- | C- | A- |
|--|------|------------|-----------|---------|------|---------|--------|-------------|-------|-------|-------|-------|---------------|--------|----------|------|--------|----|----|
| MATH   \$ 20461   1 C G 3.1   2 680   0.32   0.32   0.32   0.32   0.30   0.09   0.00   0.06   0.30   0.01   0.09   0.00   2.01   0.09   0.10   0.9   1.5 A   A   A   A   A   A   A   A   A   A   | MATH | 8 674903 1 | D.1.1.3   | 1 13223 | 0.66 | 0.12 0. | 11 0.1 | 1 0.66 0.00 | 0.57  | -0.24 | -0.34 | -0.27 | 0.57 0.5706   | 0.0214 | -9.9 0.9 | -9.4 | 0.8 A+ | A+ | A+ |
| MATH   | MATH | 8 886928 1 | D-S.1.1.3 | 2 6807  | 0.69 | 0.14 0. | 69 0.0 | 8 0.09 0.00 | 0.41  | -0.18 | 0.41  | -0.29 | -0.18 0.3155  | 0.0304 | 6.9 1.1  | 3.0  | 1.1 B- | A- | B- |
| MATH 8   39901   1   B-B-3.15   2   6807   0.52   0.52   0.52   0.52   0.10   0.10   0.00   0.03   -0.15   0.03   -0.19   1.09   1.00   0.00   0.01   | MATH | 8 203641 1 | C-G.3.1.1 | 2 6807  | 0.32 | 0.32 0. | 26 0.2 | 3 0.19 0.00 | 0.36  | 0.36  | -0.10 | -0.08 | -0.23 2.4221  | 0.0300 | 2.0 1.0  | 9.9  | 1.5 A+ | A- | A+ |
| MATH   | MATH | 8 428249 1 | B-E.3.1.2 | 2 6807  | 0.43 | 0.36 0. | 14 0.4 | 3 0.07 0.00 | 0.26  | -0.07 | -0.16 | 0.26  | -0.16 1.7889  | 0.0287 | 9.9 1.3  | 9.9  | 1.6 A- | A+ | A- |
| MATH 8 \$25327 1 B-B.I.1.4 1 6807 0.40 0.46 0.21 0.24 0.09 0.00 0.21 0.21 -0.10 -0.03 0.00 0.40 0.00 0.41 0.00 0.47 0.00 0.97 0.41 1.99 1.5 A. A. A. MATH 8 \$17220 1 B-B.I.1.1 2 6807 0.30 0.00 0.40 0.00 0.34 0.00 0.34 0.00 0.30 0.3  | MATH | 8 396917 1 | B-E.3.1.5 | 2 6807  | 0.52 | 0.23 0. | 52 0.1 | 6 0.10 0.00 | 0.33  | -0.15 | 0.33  | -0.13 | -0.19 1.2951  | 0.0286 | 9.9 1.2  | 9.9  | 1.3 A- | A- | A+ |
| MATH 8   871854  | MATH | 8 822443 1 | C-G.1.1   | 2 6807  | 0.24 | 0.14 0. | 24 0.3 | 4 0.28 0.00 | -0.03 | 0.05  | -0.03 | -0.06 | 0.06 2.9474   | 0.0323 | 9.9 1.6  | 9.9  | 3.1 A+ | A- | A- |
| MATH 8   17210   | MATH | 8 825327 1 | B-E.1.1.4 | 1 6807  | 0.46 | 0.46 0. | 21 0.2 | 4 0.09 0.00 | 0.21  | 0.21  | -0.16 | -0.03 | -0.09 1.6274  | 0.0286 | 9.9 1.4  | 9.9  | 1.7 A+ | A+ | A+ |
| MATH   | MATH | 8 871854 1 | A-N.1.1.4 | 2 6807  | 0.34 | 0.25 0. | 22 0.1 | 9 0.34 0.00 | 0.34  | -0.01 | -0.20 | -0.19 | 0.34 2.3203   | 0.0297 | 6.4 1.1  | 9.9  | 1.5 A- | A- | A- |
| MATH 8 353816 1 B F2.1 2 6.007 0.56 0.11 0.56 0.10 0.22 0.00 0.27 0.02 0.00 0.27 0.20 0.00 0.28 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.0   | MATH | 8 172210 1 | B-E.1.1.1 | 2 6807  | 0.70 | 0.04 0. | 70 0.2 | 0.05 0.00   | 0.38  | -0.07 | 0.38  | -0.29 | -0.18 0.2286  | 0.0307 | 9.5 1.2  | 6.9  | 1.2 A- | A- | A- |
| MATH 8 19905 2 D.4.1.3 1 19225 0.79 0.11 0.79 0.08 0.03 0.00 0.52 0.33 0.52 0.26 0.25 0.25 0.20 0.20 9.6 0.9 4.9 0.9 A.> A. A. A. MATH 8 \$40209 2 B.F.1.1.1 2 6.97 0.37 0.36 0.37 0.13 0.14 0.00 0.09 0.03 0.09 0.11 0.02 2.049 0.028 9.9 1.5 9.9 2.0 A. A. A. MATH 8 \$40209 2 B.F.1.1.1 2 6.97 0.37 0.36 0.37 0.13 0.14 0.00 0.09 0.03 0.09 0.11 0.02 2.049 0.028 9.9 1.3 9.9 2.0 A. A. A. MATH 8 \$90863 2 C. A.N.1.1.4 1 6.97 0.24 0.04 0.04 0.04 0.03 0.05 0.05 0.02 0.19 0.10 0.02 2.049 9.9 1.3 9.9 1.3 9.9 2.0 A. A. A. MATH 8 \$79926 2 B.F.1.1.3 2 6.97 0.79 0.19 0.14 0.04 0.00 0.05 0.05 0.05 0.02 0.19 0.18 2.682 0.0312 2.9 10 7.9 1.3 A. A. A. MATH 8 \$15093 2 C. B.F.1.1.3 2 6.97 0.79 0.19 0.10 0.04 0.05 0.05 0.05 0.02 0.19 0.18 2.682 0.0312 2.9 10 7.9 1.3 A. A. A. MATH 8 \$12029 2 B.F.1.2 2 6.97 0.74 0.04 0.05 0.05 0.05 0.05 0.02 0.19 0.04 0.05 5.121 0.036 0.19 1.3 9.1 0.0 A. A. A. MATH 8 \$12029 2 B.F.1.2 2 6.97 0.74 0.04 0.05 0.05 0.05 0.05 0.05 0.05 0.0   | MATH | 8 934340 1 | B-F.1.1.1 | 1 6807  | 0.34 | 0.21 0. | 34 0.1 | 3 0.31 0.00 | 0.20  | 0.04  | 0.20  | -0.24 | -0.06 2.2886  | 0.0296 | 9.9 1.4  | 9.9  | 1.8 A+ | A- | A- |
| MATH 8 \$40785 2 C.1.2.1 2 1925 641 0.11 0.38 0.41 0.10 0.00 0.25 -0.13 -0.05 0.25 -0.20 20792 0.0170 99 12 99 1.6 A. A. A. A. A. MATH 8 \$40298 2 B-F1.1.1 2 6370 37 3.36 0.37 0.35 0.37 0.36 0.37 0.38 0.38 0.38 0.38 0.38 0.38 0.38 0.38  | MATH | 8 335816 1 | B-F.2.1   | 2 6807  | 0.56 | 0.11 0. | 56 0.1 | 0 0.22 0.00 | 0.27  | -0.08 | 0.27  | -0.22 | -0.10 1.0491  | 0.0288 | 9.9 1.3  | 9.9  | 1.5 A- | A- | A- |
| MATH 8   302093   2   B-F1.1.1   2   637   0.37   0.36   0.37   0.13   0.14   0.00   0.00   0.013   0.00   0.01   0.012   0.016   0.022   0.0038   90   1.5   90   2.0   A-   A-   A-   A-   A-   A-   A-   A  | MATH | 8 119505 2 | D.4.1.3   | 1 19225 | 0.79 | 0.11 0. | 79 0.0 | 8 0.03 0.00 | 0.52  | -0.33 | 0.52  | -0.26 | -0.25 -0.2723 | 0.0200 | -9.6 0.9 | -4.9 | 0.9 A+ | A- | A- |
| MATH   | MATH | 8 540785 2 | C.1.2.1   | 2 19225 | 0.41 | 0.11 0. | 38 0.4 | 1 0.10 0.00 | 0.25  | -0.13 | -0.05 | 0.25  | -0.20 2.0752  | 0.0170 | 9.9 1.2  | 9.9  | 1.6 A- | A- | A+ |
| MATH   8   999326   2   B-E.I.1.I   2   6397   0.29   0.14   0.40   0.17   0.00   0.35   0.36   -0.02   -0.19   -0.18   2.6482   0.0312   2.9   1.0   7.9   1.3   A.   A.   A.   MATH   8   362892   2   B-E.I.1.3   2   6397   0.24   0.24   0.39   0.17   0.21   0.00   0.14   0.14   0.02   -0.15   -0.03   3.0161   0.0331   3.9   3.04   A.   A.   MATH   8   229299   2   B-F.Z.1.2   2   6397   0.75   0.03   0.06   0.75   0.15   0.00   0.05   0.01   0.01   0.00   0.05   0.01   0.00   0.05   0.01   0.00   0.05   0.01   0.00   0.05   0.01   0.00   0.05   0.00   0.0 | MATH | 8 402093 2 | B-F.1.1.1 | 2 6397  | 0.37 | 0.36 0. | 37 0.1 | 3 0.14 0.00 | 0.09  | -0.03 | 0.09  | -0.11 | 0.02 2.2049   | 0.0298 | 9.9 1.5  | 9.9  | 2.0 A+ | A- | A+ |
| MATH 8 413039 2 C.G.1.1.3 2 6397 0.17 0.31 0.31 0.21 0.17 0.00 0.05 0.10 -0.10 -0.04 0.05 3.5121 0.0366 9.9 1.3 9.9 3.0 A. A. A. MATH 8 363892 2 B.E.I.1.3 2 6397 0.24 0.24 0.10 0.05 0.05 0.05 0.05 0.05 0.05 0.05  | MATH | 8 590863 2 | A-N.1.1.4 | 1 6397  | 0.24 | 0.41 0. | 20 0.1 | 4 0.24 0.00 | 0.13  | 0.10  | -0.12 | -0.16 | 0.13 2.9737   | 0.0328 | 9.9 1.3  | 9.9  | 2.2 A- | A- | A- |
| MATH 8 \$362892 2 B-E-1.13 2 6397 0.24 0.34 0.39 0.17 0.21 0.00 0.14 0.14 0.02 -0.15 -0.03 3.0161 0.0331 9.9 1.2 9.9 2.3 A. A. A. A. MATH 8 \$229292 2 B-F-2.12 2 6397 0.75 0.03 0.06 0.75 0.15 0.00 0.50 -0.26 -0.28 0.50 0.28 0.0112 0.0329 -3.2 1.0 4.5 0.8 A. A. B. MATH 8 \$45757 2 B-F-1.13 1 6397 0.24 0.10 0.24 0.48 0.18 0.00 0.14 -0.16 0.14 0.05 -0.09 2.997 0.0330 9.9 1.3 9.9 2.2 A. A. A. MATH 8 \$858599 2 D-S.1.1.2 2 6397 0.42 0.10 0.24 0.48 0.18 0.00 0.14 -0.16 0.14 0.05 -0.09 2.997 0.0330 9.9 1.3 9.9 1.2 9.1 1.3 A. A. A. MATH 8 \$89804 2 C-G.3.1.1 2 6397 0.24 0.10 0.24 0.07 0.02 0.19 0.00 0.32 -0.17 -0.16 0.32 -0.15 0.18 0.00 0.30 0.99 1.3 9.9 1.2 9.1 1.3 A. A. A. MATH 8 \$89804 2 C-G.3.1.1 2 6416 0.42 0.14 0.42 0.21 0.22 0.00 0.33 -0.17 -0.16 0.32 -0.15 0.18 0.00 0.30 0.30 0.3 1.1 9.9 1.3 A. A. A. MATH 8 \$89604 3 A.N.1.1.5 1 6416 0.55 0.32 0.55 0.08 0.04 0.00 0.36 -0.21 0.022 -0.03 0.36 0.2200 0.00 0.30 0.30 0.30 0.30 0.30 0.   | MATH | 8 799326 2 | B-E.1.1.1 | 2 6397  | 0.29 | 0.29 0. | 14 0.4 | 0 0.17 0.00 | 0.36  | 0.36  | -0.02 | -0.19 | -0.18 2.6482  | 0.0312 | 2.9 1.0  | 7.9  | 1.3 A- | A+ | A- |
| MATH   |      |            | C-G.1.1.3 | 2 6397  | 0.17 | 0.31 0. | 31 0.2 | 1 0.17 0.00 |       | 0.10  | -0.10 | -0.04 | 0.05 3.5121   | 0.0366 | 9.9 1.3  | 9.9  | 3.0 A- | A- | A- |
| MATH 8 543757 2 B-F.1.3 1 6397 0.24 0.10 0.24 0.48 0.18 0.00 0.14 -0.16 0.14 0.05 -0.09 2.997 0.0330 9.9 1.3 9.9 2.2 A- A- A- MATH 8 818599 2 D-S.1.1.2 2 6397 0.62 0.12 0.07 0.62 0.19 0.00 0.23 -0.10 0.23 -0.15 0.8142 0.0029 9.9 1.3 9.9 1.3 9.9 1.6 A- A- A- MATH 8 818599 2 B-E.3.1.2 1 6397 0.62 0.12 0.07 0.62 0.19 0.00 0.23 -0.17 0.16 0.32 -0.15 0.8142 0.0029 9.9 1.3 9.9 1.3 A- A- A- MATH 8 898084 2 C-G.3.1.1 2 6397 0.62 0.12 0.07 0.62 0.19 0.00 0.32 -0.17 0.16 0.32 -0.15 0.8142 0.0029 9.9 1.2 9.9 1.3 A- A- A- MATH 8 404563 3 C-G.1.1 2 6416 0.42 0.14 0.42 0.21 0.30 0.36 0.30 0.30 0.30 0.30 0.30 0.30   | MATH | 8 362892 2 | B-E.1.1.3 | 2 6397  | 0.24 | 0.24 0. | 39 0.1 | 7 0.21 0.00 | 0.14  | 0.14  | 0.02  | -0.15 | -0.03 3.0161  | 0.0331 | 9.9 1.2  | 9.9  | 2.3 A- | A- | A- |
| MATH 8 855399 2 D-S.1.1.2 2 6397 0.42 0.19 0.42 0.20 0.18 0.00 0.23 -0.10 0.23 -0.14 -0.04 1.9037 0.203 0.91 0.3 99 1.6 \( \) A- A- A- MATH 8 1818690 2 B-E.3.1.2 1 6397 0.52 0.13 0.22 0.07 0.62 0.19 0.00 0.32 -0.17 -0.16 0.32 -0.15 0.8142 0.029 9.9 1.2 9.9 1.3 A+ A- A- MATH 8 4046363 3 C-G.1.1.1 2 6416 0.42 0.14 0.42 0.21 0.22 0.00 0.33 -0.13 0.33 -0.24 -0.05 1.9843 0.020 9.9 1.2 9.9 1.3 A+ A- A- MATH 8 4046363 3 C-G.1.1.1 1 6416 0.35 0.8 0.00 0.05 0.05 0.05 0.00 0.03 0.00 0.03 0.00 0.30 0.00 0.0  | MATH | 8 222929 2 | B-F.2.1.2 | 2 6397  | 0.75 | 0.03 0. | 06 0.7 | 5 0.15 0.00 | 0.50  | -0.26 | -0.28 | 0.50  | -0.28 0.0112  | 0.0329 | -3.2 1.0 | -4.5 | 0.8 A- | A- | B- |
| MATH 8   818969   2   B-E.3.1.2   1   6397   0.62   0.12   0.07   0.62   0.19   0.00   0.32   -0.17   -0.16   0.32   -0.15   0.8142   0.0299   99   1.2   99   1.3   A+  | MATH | 8 543757 2 | B-F.1.1.3 | 1 6397  | 0.24 | 0.10 0. | 24 0.4 | 8 0.18 0.00 | 0.14  | -0.16 | 0.14  | 0.05  | -0.09 2.9997  | 0.0330 | 9.9 1.3  | 9.9  | 2.2 A- | A- | A- |
| MATH   | MATH | 8 855399 2 | D-S.1.1.2 | 2 6397  | 0.42 | 0.19 0. | 42 0.2 | 0 0.18 0.00 | 0.23  | -0.10 | 0.23  | -0.14 | -0.04 1.9037  | 0.0293 | 9.9 1.3  | 9.9  | 1.6 A- | A+ | A+ |
| MATH 8 464563 3 C.G.II 2 6416 0.42 0.14 0.42 0.21 0.20 0.00 0.33 0.13 0.33 0.24 0.05 1.9843 0.0296 9.9 1.2 9.9 1.4 A. A. A. A. MATH 8 490698 3 A.N.I.II 1 6416 0.55 0.30 0.8 0.27 0.06 0.024 0.01 0.36 0.27 0.25 1.2498 0.0295 9.9 1.2 9.9 1.3 A. A. A. A. MATH 8 850623 3 B.E.I.I. 1 6416 0.62 0.15 0.18 0.02 0.04 0.00 0.24 0.10 0.11 0.24 0.30 2.3181 0.0302 9.9 1.3 9.9 1.7 A. A. A. A. MATH 8 830805 3 D.S.I.2.I 2 6416 0.62 0.15 0.18 0.62 0.04 0.00 0.24 0.10 0.11 0.24 0.30 2.3181 0.0302 9.9 1.3 9.9 1.7 A. A. A. A. MATH 8 831333 3 B.F.I.1.2 2 6416 0.62 0.15 0.18 0.62 0.04 0.00 0.24 0.10 0.11 0.24 0.30 2.3181 0.0302 9.9 1.3 9.9 1.7 A. A. A. A. MATH 8 298401 3 B.F.I.1.2 2 6416 0.42 0.21 0.29 0.80 0.42 0.00 0.35 0.35 0.31 0.21 0.02 1.027 1.5979 0.0293 6.6 0.9 3.5 0.9 A. A. A. A. MATH 8 839308 3 B.F.I.1.2 2 6416 0.42 0.11 0.40 0.00 0.00 0.32 0.06 0.12 0.27 1.5979 0.0293 6.6 0.9 3.5 0.9 A. A. A. A. MATH 8 839368 3 B.F.I.1.4 1 6416 0.66 0.80 0.10 0.66 0.16 0.00 0.32 0.06 0.12 0.29 0.32 1.9503 0.0295 9.9 1.2 9.9 1.5 A. A. A. A. MATH 8 839368 3 B.F.I.1.2 2 6416 0.37 0.11 0.35 0.15 0.00 0.24 0.03 0.24 0.06 0.23 0.2590 0.0301 9.9 1.2 9.9 1.7 A. A. A. A. A. MATH 8 839368 3 B.F.I.1.4 1 6416 0.37 0.11 0.35 0.15 0.00 0.24 0.03 0.24 0.06 0.02 0.25 0.0301 9.9 1.2 9.9 1.7 A. A. A. A. A. MATH 8 8395180 3 A.N.I.1.1 1 9271 0.80 0.80 0.12 0.05 0.04 0.00 0.24 0.03 0.24 0.06 0.23 0.2590 0.0301 9.9 1.2 9.9 1.7 A. A. A. A. A. MATH 8 8391024 4 A.1.1.1 1 19271 0.80 0.80 0.80 0.12 0.05 0.04 0.00 0.49 0.49 0.30 0.20 0.26 0.25 0.3218 0.024 5.4 0.9 1.2 1.9 1.9 1.4 A. A. A. A. MATH 8 891930 4 B.F.I.1.2 2 6423 0.51 0.08 0.80 0.15 0.05 0.04 0.00 0.49 0.49 0.30 0.20 0.26 0.25 0.3218 0.024 5.4 0.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 A. A. A. A. MATH 8 891930 4 B.F.I.1.2 2 6423 0.51 0.08 0.80 0.80 0.80 0.33 0.51 0.00 0.05 0.00 0.25 0.04 0.00 0.52 0.01 0.03 1.4866 0.029 1.5 0.9 1.3 1.9 1.6 A. A. A. A. MATH 8 891930 4 B.F.I.1.2 2 6423 0.51 0.08 0.80 0.80 0.30 0.00 0.00 0.00 0.00  | MATH | 8 818969 2 | B-E.3.1.2 | 1 6397  | 0.62 | 0.12 0. | 07 0.6 | 2 0.19 0.00 | 0.32  | -0.17 | -0.16 | 0.32  | -0.15 0.8142  | 0.0299 | 9.9 1.2  | 9.9  | 1.3 A+ | A+ | A+ |
| MATH 8 490698 3 A.N.I.1.5 1 6416 0.55 0.32 0.55 0.08 0.04 0.00 0.36 0.21 0.36 0.27 0.25 1.2498 0.0295 9.9 1.2 9.9 1.3 A. A. A. A. MATH 8 850623 3 B-E.I.1.1 1 6416 0.36 0.08 0.27 0.36 0.29 0.00 0.24 0.10 0.11 0.24 0.03 0.2181 0.0302 9.9 1.2 9.9 1.3 A. A. A. A. MATH 8 398905 3 D.S.1.2.1 2 6416 0.62 0.15 0.18 0.62 0.04 0.00 0.41 0.02 0.11 0.24 0.03 0.2181 0.0302 9.9 1.3 9.9 1.7 A. A. A. A. MATH 8 341338 3 B-F.2.1.1 2 6416 0.49 0.49 0.19 0.14 0.19 0.00 0.53 0.53 0.53 0.21 0.21 0.27 1.5979 0.0293 0.66 0.9 3.5 0.9 A. A. A. A. MATH 8 298401 3 B-F.1.1.2 1 6416 0.66 0.08 0.10 0.66 0.16 0.00 0.32 0.06 0.12 0.29 0.32 1.9503 0.0295 9.9 1.2 9.9 1.5 A. A. A. A. MATH 8 139180 3 B-F.1.1.4 1 6416 0.66 0.08 0.10 0.66 0.16 0.00 0.38 0.18 0.23 0.38 0.16 0.6248 0.0307 9.9 1.2 9.9 1.5 A. A. A. A. MATH 8 399386 3 B-E.3.1.4 2 6416 0.37 0.13 0.37 0.35 0.15 0.00 0.24 0.03 0.24 0.06 0.23 2.2590 0.0301 9.9 1.3 9.9 1.2 A. A. A. A. MATH 8 396180 3 A.N.1.1 1 2 6416 0.37 0.13 0.37 0.35 0.15 0.00 0.24 0.03 0.24 0.06 0.23 2.2590 0.0301 9.9 1.2 9.9 1.7 A. A. A. MATH 8 396180 3 A.N.1.1 1 1 9271 0.80 0.80 0.23 0.23 0.31 0.08 0.00 0.21 0.00 0.26 0.24 0.03 0.22 0.02 0.26 2.2762 0.0301 9.9 1.2 9.9 1.7 A. A. A. MATH 8 390184 3 A. M.1.1 1 1 19271 0.80 0.80 0.80 0.12 0.05 0.04 0.00 0.26 0.24 0.03 0.20 0.26 2.2762 0.0301 9.9 1.2 9.9 1.7 A. A. A. A. MATH 8 390104 4 A.1.1 1 1 19271 0.80 0.80 0.80 0.12 0.05 0.04 0.00 0.24 0.03 0.24 0.03 0.20 0.26 2.2762 0.0301 9.9 1.2 9.9 1.9 A. A. A. MATH 8 1809111 4 C.G.3.1.1 2 6423 0.40 0.15 0.40 0.78 0.05 0.00 0.25 0.40 0.00 0.20 0.26 0.25 0.19 0.017 0.79 0.9 5.80 9.A A. A. A. MATH 8 1809111 4 C.G.3.1.1 2 6423 0.40 0.15 0.40 0.29 0.15 0.00 0.23 0.16 0.23 0.01 0.01 0.01 0.03 1.48 6.00 0.09 9.9 1.3 9.9 1.6 A. A. A. MATH 8 187913 4 A.N.1.1.1 1 6423 0.71 0.08 0.71 0.10 0.00 0.00 0.00 0.23 0.00 0.00 0.00 0.0  | MATH | 8 989084 2 | C-G.3.1.1 | 2 6397  | 0.36 | 0.13 0. | 22 0.3 | 0 0.36 0.00 | 0.36  | -0.21 | -0.22 | -0.03 | 0.36 2.2800   | 0.0300 | 4.3 1.1  | 9.9  | 1.3 A- | A- | A- |
| MATH   | MATH | 8 464563 3 | C-G.1.1.1 | 2 6416  | 0.42 | 0.14 0. | 42 0.2 | 1 0.22 0.00 | 0.33  | -0.13 | 0.33  | -0.24 | -0.05 1.9843  | 0.0296 | 9.9 1.2  | 9.9  | 1.4 A- | A- | A- |
| MATH   | MATH | 8 490698 3 | A-N.1.1.5 | 1 6416  | 0.55 | 0.32 0. | 55 0.0 | 8 0.04 0.00 | 0.36  | -0.11 | 0.36  | -0.27 | -0.25 1.2498  | 0.0295 | 9.9 1.2  | 9.9  | 1.3 A- | A- | A- |
| MATH         8 341338         3         B-F.2.1.1         2         6416         0.49         0.49         0.19         0.14         0.19         0.00         0.53         0.53         -0.21         -0.27         1.5979         0.0293         -6.6         0.9         -3.5         0.9         A-         A+         A-           MATH         8 298401         3         B-F.1.1.2         2         6416         0.42         0.10         0.06         0.08         0.04         0.00         0.02         -0.06         -0.12         -0.29         0.32         1.9503         0.0295         9.9         1.2         9.9         1.5         A+         A-           MATH         8 399386         3         B-E.3.1.4         2         6416         0.37         0.13         0.37         0.35         0.15         0.00         0.24         -0.03         0.24         -0.06         -0.23         2.2590         0.0301         9.9         1.2         9.9         1.7         A+         A-           MATH         8 399186         3         B-E.1.1.1         1         9.01         0.31         0.38         0.02         0.02         -0.00         0.02         2.2762         0.0301  | MATH | 8 850623 3 | B-E.1.1.1 | 1 6416  | 0.36 | 0.08 0. | 27 0.3 | 6 0.29 0.00 | 0.24  | -0.10 | 0.11  | 0.24  | -0.30 2.3181  | 0.0302 | 9.9 1.3  | 9.9  | 1.7 A- | A+ | A+ |
| MATH         8 298401         3         B-F.1.1.2         2         6416         0.42         0.29         0.08         0.42         0.00         0.32         -0.06         -0.12         -0.29         0.32         1.9503         0.0255         9.9         1.2         9.9         1.5         A+         A-           MATH         8 641758         3         B-E.1.1.4         1         6416         0.60         0.00         0.03         -0.16         0.6248         0.0307         9.9         1.2         6.4         A-         A-           MATH         8 399386         3         B-E.1.1.4         2         6416         0.37         0.11         0.01         0.024         -0.03         -0.225         0.2301         9.9         1.2         9.9         1.74         A-         A-           MATH         8 396180         3         A-N.1.1.1         2         6416         0.37         0.11         0.41         0.01         0.02         -0.25         0.276         0.256         0.021         0.00         0.01         0.02         0.02         0.02         0.03         1.9         1.9         1.9         9.1         9.9         1.6         A-         A-         A- <td>MATH</td> <td>8 398905 3</td> <td>D-S.1.2.1</td> <td>2 6416</td> <td>0.62</td> <td>0.15 0.</td> <td>18 0.6</td> <td>2 0.04 0.00</td> <td>0.41</td> <td>-0.26</td> <td>-0.18</td> <td>0.41</td> <td>-0.17 0.8319</td> <td>0.0301</td> <td>8.2 1.1</td> <td>5.6</td> <td>1.2 A-</td> <td>A-</td> <td>A-</td>   | MATH | 8 398905 3 | D-S.1.2.1 | 2 6416  | 0.62 | 0.15 0. | 18 0.6 | 2 0.04 0.00 | 0.41  | -0.26 | -0.18 | 0.41  | -0.17 0.8319  | 0.0301 | 8.2 1.1  | 5.6  | 1.2 A- | A- | A- |
| MATH         8 641758         3 B-E.1.1.4         1 6416 0.66 0.08 0.10 0.66 0.16 0.00 0.38 -0.18 -0.23 0.38 -0.16 0.6248 0.0307 9.9 1.2 6.4 1.2 A- A- A- MATH         8 399386         3 B-E.3.1.4 2 6416 0.37 0.13 0.37 0.35 0.15 0.00 0.024 -0.03 0.24 -0.06 -0.23 2.2590 0.0301 9.9 1.2 9.9 1.7 A+ A- A- A- MATH         8 396180 3 A-N.1.1.1 2 6416 0.37 0.11 0.41 0.11 0.37 0.00 0.26 -0.24 0.03 -0.20 0.26 2.2762 0.0301 9.9 1.2 9.9 1.7 A+ A- A- A- MATH         8 387224 3 C-G.2.1.2 2 6416 0.37 0.11 0.41 0.11 0.37 0.00 0.26 -0.24 0.03 -0.02 0.26 2.2762 0.0301 9.9 1.2 9.9 1.2 9.9 1.9 A- A- A- MATH         8 A77224 3 C-G.2.1.2 2 6416 0.37 0.10 0.41 0.10 0.41 0.00 0.00 0.21 0.00 0.21 0.00 0.21 0.00 0.21 0.09 0.00 0.21 0.00 0.21 0.09 0.00 0.21 0.00 0.21 0.09 0.00 0.21 0.00 0.21 0.00 0.21 0.00 0.21 0.09 0.00 0.21 0.00 0.21 0.00 0.21 0.00 0.22 0.026 0.25 0.0311 9.9 1.2 9.9 1.2 9.9 1.9 A- A- A- MATH         8 A78224 A A.1.1.1 1 19271 0.78 0.11 0.06 0.78 0.05 0.00 0.22 0.00 0.25 0.00 0.25 0.02 0.25 0.021 0.00 0.21 0.00 0.29 0.58 0.9 1.3 9.9 1.6 A- A- A- MATH         8 A78224 A A.1.1.1 1 19271 0.78 0.11 0.06 0.78 0.05 0.00 0.22 0.00 0.23 0.01 0.01 0.01 0.02 0.79 0.9 5.8 0.9 A+ A- A- MATH         8 A78224 A A.1.1.1 1 19271 0.78 0.11 0.06 0.78 0.00 0.02 0.05 0.00 0.23 0.01 0.01 0.01 0.02 0.02 0.00 0.02 0.00 0.00   | MATH | 8 341338 3 | B-F.2.1.1 | 2 6416  | 0.49 | 0.49 0. | 19 0.1 | 4 0.19 0.00 | 0.53  | 0.53  | -0.21 | -0.21 | -0.27 1.5979  | 0.0293 | -6.6 0.9 | -3.5 | 0.9 A- | A+ | A- |
| MATH         8         399386         3         B-E.3.1.4         2         6416         0.37         0.13         0.37         0.35         0.15         0.00         0.24         -0.03         0.24         -0.06         -0.23         2.2590         0.0301         9.9         1.2         9.9         1.7         A+         A-           MATH         8         396180         3         A-N.1.1.1         2         6416         0.37         0.11         0.41         0.11         0.37         0.00         0.26         -0.24         0.03         -0.20         0.26         0.217-02         0.0301         9.9         1.2         9.9         1.9         A-         A-           MATH         8         780009         4         D.4.1.1         1         19271         0.08         0.01         0.05         0.04         0.00         0.49         0.30         -0.25         -0.23         -0.219         0.011         9.9         1.2         9.9         1.9         A-         A-         A-           MATH         8         910911         4         C-G.3.1.1         2         6423         0.01         0.05         0.00         0.23         -0.01         -0.14 <t></t>   | MATH | 8 298401 3 | B-F.1.1.2 | 2 6416  | 0.42 | 0.21 0. | 29 0.0 | 8 0.42 0.00 | 0.32  | -0.06 | -0.12 | -0.29 | 0.32 1.9503   | 0.0295 | 9.9 1.2  | 9.9  | 1.5 A+ | A+ | A- |
| MATH         8         396180         3         A-N.1.1.1         2         6416         0.37         0.11         0.31         0.02         0.26         -0.24         0.03         -0.20         0.26         2.2762         0.0301         9.9         1.3         9.9         1.6         A-         A-           MATH         8         437224         3         C-G.2.1.2         2         6416         0.31         0.38         0.23         0.31         0.08         0.00         0.21         0.00         -0.10         0.21         -0.19         2.6169         0.0311         9.9         1.2         9.9         1.9         A-         A-           MATH         8         78009         4         D.4.1.1         1         19271         0.80         0.80         0.12         0.00         0.49         -0.30         -0.26         -0.25         -0.3218         0.0204         -5.4         0.9         -2.0         1.0         A-   | MATH | 8 641758 3 | B-E.1.1.4 | 1 6416  | 0.66 | 0.08 0. | 10 0.6 | 6 0.16 0.00 | 0.38  | -0.18 | -0.23 | 0.38  | -0.16 0.6248  | 0.0307 | 9.9 1.2  | 6.4  | 1.2 A- | A+ | A- |
| MATH         8 437224         3 C-G.2.1.2         2 6416         0.31         0.38         0.23         0.31         0.08         0.00         0.21         0.00         -0.10         0.21         -0.19         2.6169         0.0311         9.9         1.2         9.9         1.9         A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-   | MATH | 8 399386 3 | B-E.3.1.4 | 2 6416  | 0.37 | 0.13 0. | 37 0.3 | 5 0.15 0.00 | 0.24  | -0.03 | 0.24  | -0.06 | -0.23 2.2590  | 0.0301 | 9.9 1.2  | 9.9  | 1.7 A+ | A- | A- |
| MATH 8 780009 4 D.4.1.1 1 19271 0.80 0.80 0.12 0.05 0.04 0.00 0.49 0.49 -0.30 -0.26 -0.25 -0.3218 0.0204 -5.4 0.9 -2.0 1.0 A+ A- A- A- MATH 8 10911  | MATH | 8 396180 3 | A-N.1.1.1 | 2 6416  | 0.37 | 0.11 0. | 41 0.1 | 1 0.37 0.00 | 0.26  | -0.24 | 0.03  | -0.20 | 0.26 2.2762   | 0.0301 | 9.9 1.3  | 9.9  | 1.6 A- | A- | A- |
| MATH 8 391024 4 A.1.1.1 1 19271 0.78 0.11 0.06 0.78 0.05 0.00 0.52 -0.40 -0.20 0.52 -0.19 -0.2117 0.0200 -7.9 0.9 -5.8 0.9 A+ A- A- MATH 8 16500 4 P-S.1.1.1 2 6423 0.40 0.15 0.40 0.29 0.15 0.00 0.23 -0.16 0.23 -0.01 -0.14 2.0830 0.0295 9.9 1.3 9.9 1.6 A+ A- A- MATH 8 16500 4 P-S.1.1.1 2 6423 0.71 0.71 0.03 0.71 0.02 0.09 0.00 0.40 -0.23 0.40 -0.20 0.33 1.4866 0.0291 9.9 1.2 9.9 1.3 A+ A- A- MATH 8 16500 4 P-S.1.1.3 1 6423 0.71 0.71 0.71 0.71 0.71 0.71 0.71 0.71  | MATH | 8 437224 3 | C-G.2.1.2 | 2 6416  | 0.31 | 0.38 0. | 23 0.3 | 1 0.08 0.00 | 0.21  | 0.00  | -0.10 | 0.21  | -0.19 2.6169  | 0.0311 | 9.9 1.2  | 9.9  | 1.9 A- | A- | A- |
| MATH 8 109111 4 C-G.3.1.1 2 6423 0.40 0.15 0.40 0.29 0.15 0.00 0.23 -0.16 0.23 -0.01 -0.14 2.0830 0.0295 9.9 1.3 9.9 1.6 A+ A- A- MATH 8 173789 4 C-G.1.1 2 6423 0.25 0.26 0.25 0.24 0.25 0.26 0.25 0.23 0.00 0.77 0.25 0.08 0.00 0.77 0.25 0.28 0.00 0.77 0.17 0.17 0.17 0.17 0.17 0.17   | MATH | 8 780009 4 | D.4.1.1   | 1 19271 | 0.80 | 0.80 0. | 12 0.0 | 5 0.04 0.00 | 0.49  | 0.49  | -0.30 | -0.26 | -0.25 -0.3218 | 0.0204 | -5.4 0.9 | -2.0 | 1.0 A+ | A- | A- |
| MATH 8 961930 4 B-F.1.1.2 2 6423 0.51 0.08 0.08 0.33 0.51 0.00 0.33 -0.26 -0.31 -0.02 0.33 1.4866 0.0291 9.9 1.2 9.9 1.3 A+  | MATH | 8 391024 4 | A.1.1.1   | 1 19271 | 0.78 | 0.11 0. | 06 0.7 | 8 0.05 0.00 | 0.52  | -0.40 | -0.20 | 0.52  | -0.19 -0.2117 | 0.0200 | -7.9 0.9 | -5.8 | 0.9 A+ | A- | A- |
| MATH 8 878203 4 A-N.1.1.1 1 6423 0.71 0.08 0.71 0.12 0.09 0.00 0.40 -0.23 0.40 -0.20 -0.18 0.3049 0.0319 6.8 1.1 1.8 1.1 A+ A- A- MATH 8 445060 4 B-E.2.1.1 2 6423 0.71 0.71 0.13 0.07 0.09 0.00 0.45 0.45 -0.25 -0.22 -0.22 0.3201 0.0318 2.2 1.0 -0.3 1.0 A+ A- A- MATH 8 173789 4 C-G.1.1 2 6423 0.25 0.40 0.27 0.25 0.08 0.00 0.17 -0.15 0.09 -0.17 0.17 2.8153 0.0317 9.9 1.3 9.9 2.0 A+ A- MATH 8 15946 4 D-S.1.1.1 2 6423 0.25 0.26 0.26 0.25 0.25 0.23 0.00 0.07 0.00 0.07 0.02 -0.04 0.02 0.00 3.0011 0.0326 9.9 1.6 9.9 3.0 A- A- MATH 8 15946 4 D-S.1.1.1 2 6423 0.68 0.68 0.68 0.08 0.09 0.14 0.00 0.49 0.49 0.49 0.28 -0.29 -0.20 0.4962 0.0311 0.7 1.0 1.0 1.0 A+ A- A- MATH 8 286559 5 C.1.2.1 2 12811 0.57 0.57 0.23 0.09 0.14 0.00 0.32 0.00 0.46 -0.20 0.46 -0.29 -0.18 0.5065 0.0308 2.2 1.0 0.9 1.0 A+ A- A- MATH 8 958342 5 A-N.1.1.1 1 6425 0.68 0.08 0.68 0.16 0.08 0.00 0.46 -0.20 0.46 -0.20 -0.18 0.505 0.0301 0.0319 6.8 1.1 1.8 1.1 A+ A-  | MATH | 8 109111 4 | C-G.3.1.1 | 2 6423  | 0.40 | 0.15 0. | 40 0.2 | 9 0.15 0.00 | 0.23  | -0.16 | 0.23  | -0.01 | -0.14 2.0830  | 0.0295 | 9.9 1.3  | 9.9  | 1.6 A+ | A- | A- |
| MATH 8 445060 4 B-E.2.1.1 2 6423 0.71 0.71 0.13 0.07 0.09 0.00 0.45 0.45 -0.25 -0.22 -0.22 0.3201 0.0318 2.2 1.0 -0.3 1.0 A+ A- A- MATH 8 8 638522 4 B-E.3.1.5 2 6423 0.41 0.41 0.25 0.17 0.16 0.00 0.36 0.36 -0.07 -0.19 -0.20 2.0414 0.029 6.9 1.1 9.9 1.3 A- A- A- MATH 8 187913 4 A-N.1.1.3 1 6423 0.25 0.40 0.27 0.25 0.08 0.00 0.21 0.00 -0.19 0.21 -0.02 3.0406 0.0328 6.5 1.1 9.9 2.2 A- A- A- MATH 8 173789 4 C-G.1.1 2 6423 0.25 0.20 0.25 0.34 0.21 0.00 -0.04 0.02 -0.04 0.02 0.00 3.0011 0.0326 9.9 1.6 9.9 3.0 A- A- MATH 8 115946 4 D-S.1.1.1 2 6423 0.68 0.68 0.08 0.08 0.09 0.14 0.00 0.49 0.49 0.49 -0.28 -0.29 -0.20 0.4962 0.0311 -0.7 1.0 -1.8 1.0 A- B- MATH 8 286559 5 C.1.2.1 2 12811 0.57 0.57 0.23 0.09 0.11 0.00 0.32 0.03 0.046 0.032 0.32 0.32 0.00 0.32 0.32 0.32 0.3  | MATH | 8 961930 4 | B-F.1.1.2 | 2 6423  | 0.51 | 0.08 0. | 08 0.3 | 3 0.51 0.00 | 0.33  | -0.26 | -0.31 | -0.02 | 0.33 1.4866   | 0.0291 | 9.9 1.2  | 9.9  | 1.3 A+ | A+ | A+ |
| MATH 8 638522 4 B-E.3.1.5 2 6423 0.41 0.41 0.25 0.17 0.16 0.00 0.36 0.36 -0.07 -0.19 -0.20 2.0414 0.0294 6.9 1.1 9.9 1.3 A- A- A- MATH 8 187913 4 A-N.1.1.3 1 6423 0.25 0.40 0.27 0.25 0.08 0.00 0.21 0.00 -0.19 0.21 -0.02 3.0406 0.0328 6.5 1.1 9.9 2.2 A- A- A- MATH 8 173789 4 C-G.1.1 2 6423 0.25 0.20 0.25 0.34 0.21 0.00 -0.04 0.02 -0.04 0.02 0.00 3.0011 0.0326 9.9 1.6 9.9 3.0 A- A- A- MATH 8 15946 4 D-S.1.1.3 2 6423 0.68 0.68 0.08 0.08 0.09 0.14 0.00 0.49 0.49 0.49 0.28 0.29 0.29 0.29 0.31 0.07 1.0 -1.8 1.0 A- B- MATH 8 286559 5 C.1.2.1 2 12811 0.57 0.57 0.23 0.09 0.11 0.00 0.32 0.00 0.32 0.32 0.32 0.32 0.32  | MATH | 8 878203 4 | A-N.1.1.1 | 1 6423  | 0.71 | 0.08 0. | 71 0.1 | 2 0.09 0.00 | 0.40  | -0.23 | 0.40  | -0.20 | -0.18 0.3049  | 0.0319 | 6.8 1.1  | 1.8  | 1.1 A+ | A- | A- |
| MATH 8 187913 4 A-N.1.1.3 1 6423 0.25 0.40 0.27 0.25 0.08 0.00 0.21 0.00 -0.19 0.21 -0.02 3.0406 0.0328 6.5 1.1 9.9 2.2 A- A- A- MATH 8 173789 4 C-G.1.1 2 6423 0.25 0.20 0.25 0.34 0.21 0.00 -0.04 0.02 -0.04 0.02 0.00 3.0011 0.0326 9.9 1.6 9.9 3.0 A- A- A- MATH 8 115946 4 D-S.1.1.1 2 6423 0.68 0.68 0.08 0.08 0.09 0.14 0.00 0.49 0.49 0.49 0.28 0.29 0.29 0.29 0.29 0.31 0.07 1.0 -1.8 1.0 A- B- MATH 8 286559 5 C.1.2.1 2 12811 0.57 0.57 0.23 0.09 0.11 0.00 0.32 0.32 0.32 0.32 0.32 0.32 0.32  | MATH | 8 445060 4 | B-E.2.1.1 | 2 6423  | 0.71 | 0.71 0. | 13 0.0 | 7 0.09 0.00 | 0.45  | 0.45  | -0.25 | -0.22 | -0.22 0.3201  | 0.0318 | 2.2 1.0  | -0.3 | 1.0 A+ | A- | A- |
| MATH 8 624626 4 A-N.1.1.4 2 6423 0.28 0.18 0.36 0.17 0.28 0.00 0.17 -0.15 0.09 -0.17 0.17 2.8153 0.0317 9.9 1.3 9.9 2.0 A+ A- A+   | MATH | 8 638522 4 | B-E.3.1.5 | 2 6423  | 0.41 | 0.41 0. | 25 0.1 | 7 0.16 0.00 | 0.36  | 0.36  | -0.07 | -0.19 | -0.20 2.0414  | 0.0294 | 6.9 1.1  | 9.9  | 1.3 A- | A- | A- |
| MATH 8 816600 4 D-S.1.1.3 2 6423 0.25 0.26 0.26 0.25 0.23 0.00 0.07 0.02 -0.04 0.02 0.00 3.0011 0.0326 9.9 1.6 9.9 3.0 A- A- A- MATH 8 115946 4 D-S.1.1.1 2 6423 0.68 0.68 0.08 0.09 0.14 0.00 0.49 0.49 0.49 0.49 0.28 -0.29 -0.20 0.4962 0.0313 -0.7 1.0 -1.8 1.0 A- B- MATH 8 286559 5 D.4.1.3 1 12811 0.70 0.13 0.09 0.07 0.70 0.00 0.51 -0.23 -0.29 -0.26 0.51 0.3749 0.0223 -3.3 1.0 -2.1 1.0 A+ A+ A+ MATH 8 679985 5 B-F.2.1.1 2 6425 0.49 0.19 0.13 0.49 0.18 0.00 0.32 0.32 -0.07 -0.17 0.32 -0.18 1.5503 0.0291 9.9 1.2 9.9 1.3 A+ A+ A+ MATH 8 958342 5 A-N.1.1.1 1 6425 0.68 0.08 0.08 0.08 0.08 0.09 0.04 0.08 0.09 0.44 0.00 0.46 -0.29 -0.18 0.5065 0.0308 2.2 1.0 0.9 1.0 A+ A+ A-  | MATH | 8 187913 4 | A-N.1.1.3 | 1 6423  | 0.25 | 0.40 0. | 27 0.2 | 5 0.08 0.00 | 0.21  | 0.00  | -0.19 | 0.21  | -0.02 3.0406  | 0.0328 | 6.5 1.1  | 9.9  | 2.2 A- | A- | A- |
| MATH 8 816600 4 D-S.1.1.3 2 6423 0.25 0.26 0.26 0.25 0.23 0.00 0.07 0.02 -0.10 0.07 0.02 2.9862 0.0325 9.9 1.3 9.9 2.7 A+  | MATH | 8 624626 4 | A-N.1.1.4 | 2 6423  |      |         | 36 0.1 | 7 0.28 0.00 | 0.17  | -0.15 | 0.09  | -0.17 | 0.17 2.8153   | 0.0317 | 9.9 1.3  | 9.9  | 2.0 A+ | A- | A+ |
| MATH 8 115946 4 D-S.1.1.1 2 6423 0.68 0.68 0.08 0.09 0.14 0.00 0.49 0.49 -0.28 -0.29 -0.20 0.4962 0.0311 -0.7 1.0 -1.8 1.0 A- B- A- MATH 8 286559 5 D.4.1.3 1 12811 0.70 0.13 0.09 0.07 0.70 0.00 0.51 -0.23 -0.29 -0.26 0.51 0.3749 0.0223 -3.3 1.0 -2.1 1.0 A+ A+ A+ MATH 8 679985 5 B-F.2.1.1 2 6425 0.49 0.19 0.13 0.49 0.18 0.00 0.32 0.32 -0.21 -0.19 -0.06 1.1345 0.020 9.9 1.2 9.9 1.3 A+ A- A+ MATH 8 958342 5 A-N.1.1.1 1 6425 0.68 0.08 0.68 0.16 0.08 0.00 0.46 -0.20 0.46 -0.29 -0.18 0.5065 0.0308 2.2 1.0 0.9 1.0 A+ A+ A-  | MATH | 8 173789 4 | C-G.1.1   | 2 6423  | 0.25 | 0.20 0. | 25 0.3 | 4 0.21 0.00 | -0.04 | 0.02  | -0.04 | 0.02  | 0.00 3.0011   | 0.0326 | 9.9 1.6  | 9.9  | 3.0 A- | A- | A- |
| MATH 8 429494 5 D.4.1.3 1 12811 0.70 0.13 0.09 0.07 0.70 0.00 0.51 -0.23 -0.29 -0.26 0.51 0.3749 0.0223 -3.3 1.0 -2.1 1.0 A+ A+ A+ A+ MATH 8 958342 5 A-N.1.1.1 1 6425 0.68 0.08 0.68 0.16 0.08 0.00 0.46 -0.20 0.46 -0.29 -0.18 0.5065 0.0308 2.2 1.0 0.9 1.0 A+ A+ A- A-   | MATH | 8 816600 4 | D-S.1.1.3 | 2 6423  | 0.25 | 0.26 0. | 26 0.2 | 5 0.23 0.00 | 0.07  | 0.02  | -0.10 | 0.07  | 0.02 2.9862   | 0.0325 |          | 9.9  |        | A+ | A+ |
| MATH     8 286559     5     C.1.2.1     2     12811     0.57     0.57     0.23     0.09     0.11     0.00     0.32     0.32     -0.21     -0.19     -0.06     1.1345     0.0209     9.9     1.2     9.9     1.3     A+     A-     A+       MATH     8 679985     5     B-F.2.1.1     2     6425     0.49     0.19     0.13     0.49     0.18     0.00     0.32     -0.07     -0.17     0.32     -0.18     1.5503     0.0291     9.9     1.2     9.9     1.3     A+     A+       MATH     8 958342     5     A-N.1.1.1     1     6425     0.68     0.08     0.68     0.16     0.08     0.00     0.46     -0.20     0.46     -0.29     -0.18     0.5065     0.0308     2.2     1.0     0.9     1.0     A+     A+   | MATH | 0          | D-S.1.1.1 | 2 6423  | 0.68 | 0.68 0. |        |             | 0.49  | 0.49  | -0.28 | -0.29 | -0.20 0.4962  | 0.0311 | -0.7 1.0 | -1.8 |        | B- | A- |
| MATH 8 679985 5 B-F.2.1.1 2 6425 0.49 0.19 0.13 0.49 0.18 0.00 0.32 -0.07 -0.17 0.32 -0.18 1.5503 0.0291 9.9 1.2 9.9 1.3 A+ A+ A+ MATH 8 958342 5 A-N.1.1.1 1 6425 0.68 0.08 0.68 0.16 0.08 0.00 0.46 -0.20 0.46 -0.29 -0.18 0.5065 0.0308 2.2 1.0 0.9 1.0 A+ A+ A-  | MATH | 8 429494 5 | D.4.1.3   | 1 12811 | 0.70 | 0.13 0. | 0.0    | 7 0.70 0.00 | 0.51  | -0.23 | -0.29 | -0.26 | 0.51 0.3749   | 0.0223 | -3.3 1.0 | -2.1 | 1.0 A+ | A+ | A+ |
| MATH 8 958342 5 A-N.1.1.1 1 6425 0.68 0.08 0.68 0.16 0.08 0.00 0.46 -0.20 0.46 -0.29 -0.18 0.5065 0.0308 2.2 1.0 0.9 1.0 A+ A+ A-  | MATH | 8 286559 5 | C.1.2.1   | 2 12811 | 0.57 | 0.57 0. | 23 0.0 | 9 0.11 0.00 | 0.32  | 0.32  | -0.21 | -0.19 | -0.06 1.1345  | 0.0209 | 9.9 1.2  | 9.9  | 1.3 A+ | A- | A+ |
|  | MATH | 8 679985 5 | B-F.2.1.1 | 2 6425  | 0.49 | 0.19 0. | 13 0.4 | 9 0.18 0.00 | 0.32  | -0.07 | -0.17 | 0.32  | -0.18 1.5503  | 0.0291 |          | 9.9  | 1.3 A+ | A+ | A+ |
| MATH   8 672344   5 B-E.2.1.1   2 6425   0.48   0.12   0.24   0.48   0.16   0.00   0.35   -0.07   -0.24   0.35   -0.13   1.6464   0.0292   9.9   1.2   9.9   1.3   A-   A-   A-  | MATH | 8 958342 5 | A-N.1.1.1 | 1 6425  | 0.68 | 0.08 0. | 68 0.1 | 6 0.08 0.00 | 0.46  | -0.20 | 0.46  | -0.29 | -0.18 0.5065  | 0.0308 |          | 0.9  | 1.0 A+ | A+ | A- |
|  | MATH | 8 672344 5 | B-E.2.1.1 | 2 6425  | 0.48 | 0.12 0. | 24 0.4 | 8 0.16 0.00 | 0.35  | -0.07 | -0.24 | 0.35  | -0.13 1.6464  | 0.0292 | 9.9 1.2  | 9.9  | 1.3 A- | A+ | A- |

| MATH         | 8 626442             |        | C-G.1.1.1              | 2 | 6425  | 0.36 | 0.31 | 0.16 | 0.36 | 0.16 | 0.00 | 0.20  | 0.01           | -0.17          | 0.20           | -0.10          | 2.2678             | 0.0301 | 9.9         | 1 2 | 9.9          | 1.7 | A- | A-       | A+       |
|--------------|----------------------|--------|------------------------|---|-------|------|------|------|------|------|------|-------|----------------|----------------|----------------|----------------|--------------------|--------|-------------|-----|--------------|-----|----|----------|----------|
| MATH         | 8 459988             | 5      | B-E.3.1.5              | 2 | 6425  | 0.30 | 0.31 | 0.16 | 0.30 | 0.10 | 0.00 | 0.20  | -0.20          | 0.17           | -0.09          | -0.10          | 1.5715             | 0.0301 | 9.9         | 1.3 | 9.9          | 1.7 |    | A-<br>A- | A+       |
|              |                      |        |                        | 2 |       |      |      |      |      |      | 0.00 |       |                |                |                |                |                    | 0.0292 |             | 1.3 |              |     |    |          |          |
| MATH<br>MATH | 8 455161<br>8 813873 | 5      | B-E.3.1.1<br>B-E.1.1.2 |   | 6425  | 0.53 | 0.30 | 0.53 | 0.10 | 0.07 | 0.00 | 0.40  | -0.17<br>-0.29 | 0.40           | -0.23          | -0.21<br>0.15  | 1.3301<br>3.9245   | 0.0292 | 7.6<br>5.5  | 1.1 | 6.1<br>9.9   | 2.6 | A+ | A+       | A-       |
|              | 8 849071             | 5      | A-N.1.1.4              | 2 | 6425  | 0.14 |      |      |      | 0.14 | 0.00 | 0.15  | -0.29          | -0.17<br>0.00  | 0.19           | -0.06          | 2.0601             | 0.0403 |             | 1.4 | 9.9          |     | A+ | A-       | A-       |
| MATH         |                      | 5      |                        | 2 | 6425  |      | 0.15 | 0.33 | 0.40 |      |      | 0.18  |                |                |                |                |                    | 0.0296 |             | 1.4 | 9.9          | 1.7 |    | A-<br>A- | A-       |
| MATH         | 8 936301<br>8 116869 | 5      | D-S.1.1.3              | 2 | 6425  | 0.55 | 0.25 | 0.12 | 0.55 | 0.07 | 0.00 | 0.28  | 0.01           | -0.28          | 0.28           | -0.20          | 1.2223             |        |             | 1.3 | 9.9          | 1.3 |    |          | A-       |
| MATH         | 0                    | _      | D-S.1.1.1              | 2 | 6425  | 0.50 |      | 0.50 | 0.18 | 0.15 | 0.00 | 0.32  | -0.01          | 0.32           | -0.25          | -0.16          | 1.5189             | 0.0291 | /./         | 1.2 | 9.9          |     |    | A-       | A-       |
| MATH         | 8 720723             | 6      | E.4.1.2                |   | 12828 | 0.59 | 0.11 | 0.24 | 0.59 | 0.06 | 0.00 | 0.38  | -0.31          | -0.13          | 0.38           | -0.15          | 1.0810             |        | 9.9         | 0.0 |              |     | A- | A-       | A-       |
| MATH         | 8 713265             | 6      | D.4.1.1                | 1 | 12828 | 0.74 | 0.07 | 0.74 | 0.09 |      |      | 0.54  | -0.23          | 0.54           | -0.31          | -0.30          | 0.0789             | 0.0232 |             | 0.9 | -7.2<br>9.9  | 0.8 |    | A-       | A-       |
| MATH         | 8 682971             | 6      | B-F.2.1.1              | 2 | 6391  | 0.49 | 0.29 | 0.49 | 0.15 | 0.07 | 0.00 | 0.34  | -0.11          | 0.34           | -0.16          | -0.24          | 1.5802             | 0.0293 | 9.9         | 1.2 |              | 1.3 |    | A-       | Α-       |
| MATH         | 8 189944             | 6      | A-N.1.1.1              | 2 | 6391  | 0.37 | 0.21 | 0.34 | 0.37 | 0.08 | 0.00 | 0.13  | -0.15          | 0.08           | 0.13           | -0.15          | 2.2535             | 0.0301 | 9.9         | 1.4 | 9.9          | 1.9 |    | A+       | A+       |
| MATH         | 8 291283             | 6      | B-E.3.1.5              | 1 | 6391  | 0.68 | 0.07 | 0.13 | 0.12 | 0.68 | 0.00 | 0.20  | -0.10          | -0.19          | -0.01<br>-0.22 | 0.20           | 0.5089             | 0.0310 | 9.9         | 1.4 | 2.6          |     | A+ | A-       | A-       |
| MATH         | 8 259577             | 6      | B-E.3.1.1              | 2 | 6391  | 0.54 | 0.08 |      | 0.30 |      |      | 0.46  | -0.23          | 0.46           |                | -0.22          | 1.3061             |        |             | 1.0 |              |     | A+ | A-       | A-       |
| MATH         | 8 776369             | 6      | B-F.1.1.2              | 2 | 6391  | 0.57 | 0.57 | 0.15 | 0.15 | 0.13 | 0.00 | 0.41  | 0.41           | -0.22          | -0.24          | -0.11          | 1.1369             | 0.0296 |             | 1.1 | 5.0          |     | A- | A-       | A-       |
| MATH         | 8 882558             | 6      | C-G.1.1.3              | 2 | 6391  | 0.40 | 0.28 | 0.19 | 0.12 | 0.40 | 0.00 | 0.35  | -0.19          | -0.12          | -0.13          | 0.35           | 2.0833             | 0.0298 |             | 1.1 | 9.9          | 1.3 |    | A-       | A+       |
| MATH         | 8 226804             | 6      | B-E.1.1.1              | 2 | 6391  | 0.48 | 0.48 | 0.15 | 0.25 | 0.12 | 0.00 | 0.19  | 0.19           | -0.04          | -0.11          | -0.10          | 1.6429             | 0.0293 | 9.9         | 1.4 | 9.9          |     |    | A+       | A-       |
| MATH         | 8 356386             | 6      | A-N.1.1.4              | 1 | 6391  | 0.70 | 0.09 | 0.10 | 0.70 | 0.11 | 0.00 | 0.47  | -0.18          | -0.37          | 0.47           | -0.16          | 0.3562             | 0.0316 | 0.6         | 1.0 | 0.6          | 1.0 |    | A+       | A+       |
| MATH         | 8 316986             | 6      | C-G.2.1.3              | 2 | 6391  | 0.42 | 0.10 | 0.31 | 0.42 | 0.17 |      | 0.52  | -0.20          | -0.26          | 0.52           | -0.20          | 1.9724             | 0.0296 |             | 0.9 | -0.9         | 1.0 |    | A-       | A-       |
| MATH         | 8 567862             | 6      | D-S.1.1.3              | 2 | 6391  | 0.62 | 0.11 | 0.62 | 0.19 | 0.08 | 0.00 | 0.44  | -0.22          | 0.44           | -0.22          | -0.21          | 0.8269             | 0.0301 | 4.9         | 1.1 | 2.3          | _   | A+ | A-       | A+       |
| MATH         | 8 640982             | 7      | C-G.1.1.1              | 2 | 6411  | 0.32 | 0.22 | 0.22 | 0.23 | 0.32 | 0.00 | 0.19  | -0.13          | -0.10          | 0.02           | 0.19           | 2.4889             | 0.0306 | 9.9         | 1.3 | 9.9          | 1.8 |    | A-       | A+       |
| MATH         | 8 944645             | 7      | D-S.1.2.1              | 2 | 6411  | 0.34 | 0.19 | 0.22 | 0.25 | 0.34 | 0.00 | 0.29  | -0.14          | -0.20          | 0.00           | 0.29           | 2.3641             | 0.0302 | 7.7         | 1.2 | /./          | 1.5 |    | A-       | A-       |
| MATH         | 8 999963             | 7      | A-N.1.1.5              | 2 | 6411  | 0.44 | 0.43 | 0.44 | 0.07 | 0.05 | 0.00 | 0.21  | 0.07           | 0.21           | -0.30          | -0.26          | 1.8208             | 0.0291 | 9.9         | 1.4 | 9.9          | 1.6 |    | A+       | A-       |
| MATH         | 8 748556             | 7      | B-F.2.1.1              | 2 | 6411  | 0.15 | 0.09 | 0.15 | 0.23 | 0.53 | 0.00 | -0.01 | -0.17          | -0.01          | -0.22          | 0.29           | 3.7656             | 0.0388 | 9.9         | 1.3 | 9.9          | 3.9 | _  | A+       | A+       |
| MATH         | 8 697163             | 7      | B-E.1.1.2              | 2 | 6411  | 0.24 | 0.24 | 0.49 | 0.10 | 0.17 | 0.00 | 0.35  | 0.35           | -0.04          | -0.16          | -0.22          | 3.0303             | 0.0331 | -1.9        | 1.0 | 7.7          | 1.3 |    | A+       | A-       |
| MATH         | 8 616198             | 7      | A-N.1.1.1              | 1 | 6411  | 0.59 | 0.59 | 0.07 | 0.30 | 0.05 | 0.00 | 0.25  | 0.25           | -0.26          | -0.02          | -0.22          | 1.0286             | 0.0294 | 9.9         | 1.3 | 9.9          | 1.5 |    | A-       | A-       |
| MATH         | 8 995358             | 7      | D-S.1.1.1              | 1 | 6411  | 0.78 | 0.08 | 0.08 | 0.78 | 0.06 | 0.00 | 0.48  | -0.24          | -0.27          | 0.48           | -0.26          | -0.2040            | 0.0342 |             | 1.0 |              | 0.8 |    | B-       | B-       |
| MATH         | 8 915350             | 7      | B-F.1.1.2              | 2 | 6411  | 0.43 | 0.43 | 0.19 | 0.23 | 0.16 |      | 0.30  | 0.30           | -0.17          | -0.09          | -0.12          | 1.8983             | 0.0292 | 9.9         | 1.2 | 9.9          | 1.4 |    | A-       | A-       |
| MATH         | 8 183580             | 7      | B-E.1.1.4              | 2 | 6411  | 0.30 | 0.25 | 0.30 | 0.19 | 0.25 | 0.00 | 0.21  | 0.06           | 0.21           | -0.11          | -0.17          | 2.6057             | 0.0310 | 9.9         | 1.2 | 9.9          | 1.8 |    | A+       | A-       |
| MATH         | 8 955067             | /      | B-E.3.1.4              | 1 | 6411  | 0.44 | 0.44 | 0.18 | 0.22 | 0.15 |      | 0.32  | 0.32           | -0.18          | -0.13          | -0.10          | 1.8192             | 0.0291 | 9.9         | 1.2 |              |     |    | A-       | A+       |
| MATH         | 8 410959             | 8      | B-E.3.1.5              | 1 | 6453  | 0.43 | 0.10 | 0.43 | 0.21 | 0.26 | 0.00 | 0.38  | -0.17          | 0.38           | -0.16          | -0.16          | 1.9260             | 0.0295 |             | 1.1 | 9.9          | 1.3 |    | A+       | A+       |
| MATH         | 8 484704             | 8      | A-N.1.1.5              | 1 | 6453  | 0.78 | 0.78 | 0.04 | 0.09 |      | 0.00 | 0.57  | 0.57           | -0.22          | -0.31          | -0.36          | -0.2153            | 0.0343 |             | 0.8 | ,            |     | A+ | A-       | A-       |
| MATH         | 8 286377<br>8 108739 | 8      | A-N.1.1.3              | 1 | 6453  | 0.63 | 0.63 | 0.19 | 0.09 | 0.09 | 0.00 | 0.53  | -0.22          | -0.24          | -0.29          | -0.27          | 0.8003             | 0.0301 | -3.7<br>9.8 | 1.0 | -4.9         | 0.9 |    | A-       | A-       |
| MATH         | 0 -00.07             | 8      | C-G.2.1.3              | 2 | 6453  | 0.48 | 0.09 | 0.32 | 0.48 | 0.11 |      | 0.36  |                | -0.13          | 0.36           | -0.17          | 1.6316             |        |             | 1.1 | 9.9          | 1.3 |    | A-       | A-       |
| MATH         | 8 892753             | 8      | D-S.1.2.1              | 2 | 6453  | 0.22 | 0.61 | 0.11 | 0.07 | 0.22 |      | 0.23  | 0.05           | -0.21          | -0.22          | 0.23           | 3.2562             | 0.0345 |             | 1.1 | 9.9          |     | B- | A-       | A+       |
| MATH         | 8 954628<br>8 170474 | 8      | A-N.1.1.1              | 2 | 6453  | 0.41 | 0.41 | 0.27 | 0.16 | 0.16 | 0.00 | 0.28  | 0.28           | -0.14          | -0.19          | -0.02          | 2.0223             | 0.0297 | 9.9         | 1.2 | 9.9          | 1.5 |    | A+       | A-       |
| MATH         | 0 -70.77             | 8      | B-E.2<br>C-G.1.1.1     | 2 | 6453  | 0.34 |      | 0.14 | 0.30 | 0.22 | 0.00 | 0.30  | 0.30           | -0.27          | -0.12          | 0.02           | 2.4144             |        | 9.9         | 1.2 | 9.9          | 1.5 |    | A-       | A-       |
| MATH         | 8 145024             | 8      |                        | 2 | 6453  | 0.48 | 0.14 | 0.48 | 0.15 | 0.23 | 0.00 | 0.35  | -0.22          | 0.35           | -0.16          | -0.10          | 1.6239             | 0.0293 |             | 1.2 |              | 1.3 |    | A-       | A-       |
| MATH         | 8 833657             | ð<br>e | B-F.1.1.2              | 2 | 6453  | 0.27 | 0.25 | 0.18 | 0.27 | 0.00 |      | 0.17  | -0.04          | -0.13          | 0.17           | -0.01<br>-0.13 | 2.8734             | 0.0323 |             | 1.3 | 9.9          |     |    | A-       | A-       |
| MATH         | 8 214520             | 8      | D-S.1.1.1              | 2 | 6453  | 0.31 | 0.31 | 0.11 | 0.30 | 0.28 | 0.00 | 0.20  | 0.20           | -0.14          | 0.03           |                | 2.5873             | 0.0311 |             | 1.3 | 9.9          | 1.9 |    | A-       | A-       |
| MATH         | 8 850619<br>8 772493 | 9      | D.4.1.2<br>D.1.1.3     | 1 | 12842 | 0.79 | 0.10 | 0.06 | 0.79 | 0.05 | 0.00 | 0.53  | -0.29          | -0.31<br>-0.33 | 0.53           | -0.25<br>-0.26 | -0.2546<br>-0.2254 | 0.0246 |             | 0.9 | -7.6<br>-9.9 | 0.8 |    | A-       | A-<br>A+ |
| MATH         |                      | 9      |                        | 1 | 12842 |      |      | 0.08 | 0.78 |      |      | 0.60  | -0.36          |                |                |                |                    |        |             |     |              |     | A+ | A+       | _        |
| MATH         | 8 873177             | 9      | C-G.1.1.2              | 2 | 6418  | 0.28 | 0.28 | 0.14 | 0.42 | 0.16 |      | 0.15  | 0.15           | -0.25          | 0.01           | 0.04           | 2.7540             | 0.0315 | 9.9         | 1.3 | 9.9          |     | A- | A-       | A+       |
| MATH         | 8 190083             | 9      | B-E.1.1                | 2 | 6418  | 0.49 | 0.49 | 0.13 | 0.17 | 0.21 | 0.00 | 0.08  | 0.08           | -0.04          | -0.11          | 0.04           | 1.5613             | 0.0290 |             | 1.6 | 9.9          | 1.8 |    | A-       | A+       |
| MATH         | 8 810038             | 9      | B-E.3.1.4              | 2 | 6418  | 0.22 | 0.08 | 0.37 | 0.22 | 0.32 | 0.00 | -0.04 | -0.18          | 0.08           | -0.04          | 0.06           | 3.1457             | 0.0336 | 9.9         | 1.4 | 9.9          | 3.3 |    | A+       | A-       |
| MATH         | 8 660551             | 9      | D-S.1.1.1              | 2 | 6418  | 0.25 | 0.26 | 0.35 | 0.25 | 0.14 |      | 0.18  | -0.08          | -0.01          | 0.18           | -0.12          | 2.9869             | 0.0326 | 9.9         | 1.2 |              | _   | A- | A-       | A-       |
| MATH         | 8 709916             | 9      | B-E.1.1.2              | 1 | 6418  | 0.51 | 0.06 | 0.16 | 0.51 | 0.26 | 0.00 | 0.22  | -0.09          | 0.01           | 0.22           | -0.22          | 1.4415             | 0.0291 |             | 1.4 | 9.9          | 1.6 |    | A+       | A-       |
| MATH         | 8 810164             | 9      | A-N.1.1.2              | 1 | 6418  | 0.29 | 0.43 | 0.29 | 0.23 | 0.06 | 0.00 | 0.27  | -0.15          | 0.27           | 0.02           | -0.25          | 2.7097             | 0.0313 | 9.9         | 1.2 | 9.9          |     |    | A-       | A+       |
| MATH         | 8 425625             | 9      | C-G.2.1.2              | 2 | 6418  | 0.51 | 0.08 | 0.19 | 0.51 | 0.22 | 0.00 | 0.49  | -0.27          | -0.14          | 0.49           | -0.28          | 1.4694             | 0.0290 | -2.3        | 1.0 | 0.1          | 1.0 |    | A-       | A-       |
| MATH         | 8 465854             | 9      | B-F.1.1.1              | 1 | 6418  | 0.52 | 0.21 | 0.52 | 0.13 | 0.14 | 0.00 | 0.21  | -0.05          | 0.21           | -0.17          | -0.09          | 1.4060             | 0.0291 | 9.9         | 1.4 | 9.9          | 1.6 |    | A+       | A+       |
| MATH         | 8 703958             | 9      | B-F.2.1.1              | 2 | 6418  | 0.10 | 0.10 | 0.14 | 0.55 | 0.21 | 0.00 | -0.02 | -0.02          | -0.15          | 0.07           | 0.06           | 4.3434             | 0.0457 | 4.2         | 1.1 | 9.9          | _   |    | A-       | A+       |
| MATH         | 8 609390             | 9      | D-S.1.2.1              | 1 | 6418  | 0.94 | 0.02 | 0.03 | 0.94 | 0.02 | 0.00 | 0.38  | -0.21          | -0.23          | 0.38           | -0.20          | -1.8743            | 0.0539 | -2.6        | 0.9 | -4.6         | 0.6 | R+ | A-       | A-       |

| MATH | 8 193123 | 10 | C-G.1.1.4 | 2  | 6424  | 0.30 | 0.30 | 0.17 | 0.31 | 0.22 | 0.00 | 0.16  | 0.16  | -0.14 | -0.06 | 0.03  | 2.6805  | 0.0312 | 9.9  | 1 3 | 9.9  | 2.1 | A- | A-       | A- |
|------|----------|----|-----------|----|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|-----|------|-----|----|----------|----|
| MATH | 8 254922 | 10 | B-E.1.1.4 | 2  | 6424  | 0.22 | 0.30 | 0.17 | 0.16 |      |      | 0.15  | 0.15  | -0.14 | -0.00 | 0.03  | 3.1908  | 0.0312 | 9.9  | 1.2 | 9.9  | 2.4 |    | A+       | A+ |
| MATH | 8 607624 | 10 | C-G.3.1.1 | 2  | 6424  | 0.30 | 0.22 | 0.28 | 0.10 | 0.33 |      | 0.19  | 0.00  | -0.13 | 0.19  | -0.20 | 2.6689  | 0.0338 | 9.9  | 1.2 | 9.9  | 2.0 |    | A+       | A+ |
| MATH | 8 870998 | 10 | A-N.1.1.3 | 1  | 6424  | 0.30 | 0.23 | 0.28 | 0.30 | 0.19 | 0.00 | 0.19  | -0.33 | -0.01 | 0.19  | -0.20 | 0.3470  | 0.0311 | -3.6 | 1.0 |      | 0.8 |    | A+       | A- |
| MATH | 8 752981 | 10 | C-G.2.1   | 2  | 6424  | 0.71 | 0.10 | 0.45 | 0.71 | 0.04 | 0.00 | 0.04  | 0.08  | 0.04  | -0.07 | -0.21 | 1.7881  | 0.0310 | 9.9  | 1.6 |      | 2.1 | A- | A-       | A+ |
| MATH | 8 803598 | 10 | A-N.1.1.2 | 1  | 6424  | 0.73 | 0.07 | 0.43 | 0.10 | 0.73 |      | 0.50  | -0.24 | -0.28 | -0.07 | 0.50  | 0.2181  | 0.0291 | -2.6 | 1.0 |      | 0.9 |    | A+       | A+ |
| MATH | 8 172707 | 10 | B-F.1     | 2  | 6424  | 0.73 | 0.52 | 0.12 | 0.08 | 0.73 | 0.00 | 0.24  | 0.24  | -0.24 | 0.00  | -0.19 | 1.4037  | 0.0322 | 9.9  | 1.3 |      | 1.6 | _  | A-       | A- |
| MATH | 8 422777 | 10 | B-E.3.1.1 | 2  | 6424  | 0.52 | 0.32 | 0.11 | 0.31 | 0.51 | 0.00 | 0.24  | -0.26 | -0.24 | -0.15 | 0.36  | 1.4800  | 0.0291 | 9.9  | 1.3 | 9.9  | 1.3 |    | A-       | A- |
| MATH | 8 453550 | 10 | B-F.2.1.2 | 2  | 6424  | 0.48 | 0.16 | 0.48 | 0.11 | 0.31 | 0.00 | 0.39  | -0.20 | 0.39  | -0.15 | -0.23 | 1.6306  | 0.0291 | 8.8  | 1.1 | 8.4  | 1.2 |    | д-<br>В- | A- |
| MATH | 8 539719 | 10 | D-S.1.1.2 | 2  | 6424  | 0.46 | 0.10 | 0.48 | 0.35 | 0.32 | 0.00 | 0.40  | -0.13 | -0.22 | 0.40  | -0.23 | 2.3660  | 0.0291 | -0.7 | 1.0 |      | 1.3 |    | В-       | B- |
| MATH | 8 739696 | 11 | C-G.1.1.2 | 2  | 6437  | 0.33 | 0.03 | 0.20 | 0.33 | 0.18 | 0.00 | 0.40  | -0.24 | -0.22 | -0.11 | 0.31  | 2.2320  | 0.0301 | 9.9  | 1.0 | 9.9  | 1.5 |    | Б-<br>А- | A+ |
| MATH | 8 848639 | 11 | B-E.2.1.1 | 2  | 6437  | 0.38 | 0.21 | 0.72 | 0.05 | 0.09 | 0.00 | 0.03  | 0.03  | 0.27  | -0.11 | -0.25 | 3.9650  | 0.0298 | 7.1  | 1.2 | 9.9  | 4.2 |    | A-       | A- |
| MATH | 8 330291 | 11 | B-E.1.1.2 | 1  | 6437  | 0.14 | 0.14 | 0.72 | 0.03 | 0.05 | 0.00 | 0.03  | 0.03  | -0.04 | -0.27 | -0.23 | 0.5862  | 0.0308 | 6.7  | 1.1 | 7.0  | 1.2 | _  | A+       | A- |
| MATH | 8 745115 | 11 | A-N.1.1.2 | 1  | 6437  | 0.55 | 0.07 | 0.55 | 0.14 | 0.03 | 0.00 | 0.32  | -0.23 | 0.32  | -0.21 | -0.17 | 1.2816  | 0.0303 | 9.9  | 1.2 | 9.9  | 1.4 |    | A+       | A- |
| MATH | 8 161739 | 11 | B-E.1.1.4 | 1  | 6437  | 0.55 | 0.55 | 0.16 | 0.08 | 0.21 | 0.00 | 0.40  | 0.40  | -0.14 | -0.23 | -0.00 | 1.2979  | 0.0293 | 9.0  | 1.1 | 6.4  |     | A+ | A+       | A+ |
| MATH | 8 664968 | 11 | B-E.3.1.4 | 1  | 6437  | 0.69 | 0.33 | 0.10 | 0.69 | 0.06 | 0.00 | 0.40  | -0.16 | -0.14 | 0.27  | -0.21 | 0.4349  | 0.0293 | 9.9  | 1.3 |      | 1.6 |    | A-       | A- |
| MATH | 8 753749 | 11 | A-N.1.1.5 | 1  | 6437  | 0.09 | 0.14 | 0.10 | 0.09 | 0.00 | 0.00 | 0.49  | -0.17 | -0.14 | 0.49  | -0.10 | 0.4349  | 0.0313 | -0.8 | 1.0 |      | 1.0 |    | A+       | A- |
| MATH | 8 943247 | 11 | D-S.1.2.1 | 2  | 6437  | 0.71 | 0.12 | 0.08 | 0.71 | 0.58 |      | 0.49  | -0.17 | -0.24 | -0.15 | 0.36  | 1.1287  | 0.0317 | 9.9  | 1.2 |      | 1.3 |    | A-       | A- |
| MATH | 8 809787 | 11 | C-G.2.1.2 | 2  | 6437  | 0.30 | 0.14 | 0.16 | 0.30 | 0.31 | 0.00 | 0.28  | -0.13 | -0.27 | 0.28  | -0.10 | 2.7000  | 0.0233 | 9.9  | 1.2 |      | 1.7 | A- | A-       | A- |
| MATH | 8 703628 | 11 | B-F.2.1.1 | 2  | 6437  | 0.51 | 0.12 | 0.18 | 0.51 | 0.19 | 0.00 | 0.46  | -0.12 | -0.30 | 0.46  | -0.19 | 1.4933  | 0.0292 | 0.6  | 1.0 | /./  | 1.7 | A- | A-       | A- |
| MATH | 8 847361 | 12 | B-F.1.1.1 | 2  | 6417  | 0.36 | 0.19 | 0.24 | 0.36 | 0.20 | 0.00 | 0.16  | -0.09 | -0.08 | 0.16  | -0.01 | 2.2624  | 0.0298 | 9.9  | 1.3 |      | 1.8 |    | A-       | A- |
| MATH | 8 800506 | 12 | C-G.1.1.4 | 2. | 6417  | 0.42 | 0.30 | 0.42 | 0.18 | 0.10 | 0.00 | 0.19  | 0.00  | 0.19  | -0.13 | -0.16 | 1.9481  | 0.0292 | 9.9  | 1.3 | 9.9  | 1.6 |    | A+       | A- |
| MATH | 8 852605 | 12 | B-E.1.1.4 | 2  | 6417  | 0.55 | 0.08 | 0.19 | 0.55 | 0.18 | 0.00 | 0.40  | -0.23 | -0.22 | 0.40  | -0.13 | 1.2249  | 0.0291 | 7.2  | 1.1 | 5.9  |     | A+ | A-       | A- |
| MATH | 8 584159 | 12 | A-N.1.1.4 | 2  | 6417  | 0.53 | 0.10 | 0.17 | 0.21 | 0.53 | 0.00 | 0.18  | -0.02 | -0.07 | -0.14 | 0.18  | 1.3776  | 0.0290 | 9.9  | 1.4 | 9.9  | 1.6 |    | A+       | A+ |
| MATH | 8 118862 | 12 | B-E.3.1   | 2  | 6417  | 0.20 | 0.29 | 0.33 | 0.18 | 0.20 | 0.00 | 0.03  | 0.00  | 0.04  | -0.08 | 0.03  | 3.3363  | 0.0349 |      | 1.3 | 9.9  | 2.9 |    | A-       | A+ |
| MATH | 8 112683 | 12 | C-G.3.1.1 | 2  | 6417  | 0.17 | 0.17 | 0.24 | 0.44 | 0.15 | 0.00 | -0.15 | -0.15 | -0.14 | 0.28  | -0.06 | 3.5542  | 0.0366 | 9.9  | 1.5 | 9.9  |     | A+ | A+       | A+ |
| MATH | 8 483389 | 12 | B-E.1.1.2 | 1  | 6417  | 0.87 | 0.01 | 0.04 | 0.87 | 0.07 | 0.00 | 0.41  | -0.12 | -0.22 | 0.41  | -0.31 | -0.9754 | 0.0410 | -1.7 | 1.0 | -4.4 | 0.8 | A- | A+       | A- |
| MATH | 8 573021 | 12 | B-F.1.1   | 2  | 6417  | 0.51 | 0.26 | 0.09 | 0.51 | 0.14 | 0.00 | 0.31  | -0.14 | -0.06 | 0.31  | -0.22 | 1.4691  | 0.0289 | 9.9  | 1.2 | 9.9  | 1.3 | A- | A-       | A+ |
| MATH | 8 980281 | 12 | B-F.1.1.3 | 1  | 6417  | 0.47 | 0.15 | 0.15 | 0.22 | 0.47 | 0.00 | 0.28  | -0.13 | -0.15 | -0.08 | 0.28  | 1.6691  | 0.0289 | 9.9  | 1.3 | 9.9  | 1.4 | A+ | A+       | A+ |
| MATH | 8 624148 | 12 | D-S.1.1.2 | 2  | 6417  | 0.29 | 0.29 | 0.50 | 0.15 | 0.06 | 0.00 | 0.13  | 0.13  | 0.05  | -0.11 | -0.17 | 2.7144  | 0.0313 | 9.9  | 1.3 | 9.9  | 2.0 | A- | A-       | A+ |
| MATH | 8 344814 | 13 | D.4.1.3   | 1  | 12828 | 0.72 | 0.12 | 0.06 | 0.11 | 0.72 | 0.00 | 0.59  | -0.34 | -0.29 | -0.28 | 0.59  | 0.2545  | 0.0226 | -9.9 | 0.9 | -8.9 | 0.8 | A+ | A+       | A+ |
| MATH | 8 857749 | 13 | D.4.1.1   | 1  | 12828 | 0.74 | 0.10 | 0.11 | 0.05 | 0.74 | 0.00 | 0.44  | -0.18 | -0.28 | -0.22 | 0.44  | 0.0788  | 0.0231 | 2.7  | 1.0 | 3.0  | 1.1 | A+ | A-       | A- |
| MATH | 8 410592 | 13 | C-G.1.1.3 | 2  | 6410  | 0.45 | 0.45 | 0.13 | 0.33 | 0.10 | 0.00 | 0.36  | 0.36  | -0.22 | -0.12 | -0.18 | 1.7743  | 0.0291 | 7.7  | 1.1 | 9.9  | 1.3 | A- | A-       | A- |
| MATH | 8 962049 | 13 | B-F.1.1.1 | 1  | 6410  | 0.26 | 0.11 | 0.24 | 0.26 | 0.39 | 0.00 | 0.20  | -0.13 | -0.14 | 0.20  | 0.03  | 2.8872  | 0.0322 | 9.9  | 1.2 | 9.9  | 1.9 | A- | A-       | A- |
| MATH | 8 166638 | 13 | C-G.2.1.2 | 2  | 6410  | 0.33 | 0.39 | 0.16 | 0.33 | 0.12 | 0.00 | 0.07  | 0.18  | -0.19 | 0.07  | -0.15 | 2.4620  | 0.0305 | 9.9  | 1.5 | 9.9  | 2.2 | A- | A+       | A- |
| MATH | 8 547982 | 13 | B-F.1.1.3 | 1  | 6410  | 0.52 | 0.21 | 0.52 | 0.15 | 0.12 | 0.00 | 0.34  | -0.05 | 0.34  | -0.25 | -0.19 | 1.4013  | 0.0291 | 9.9  | 1.2 | 9.9  | 1.2 | A+ | A-       | A- |
| MATH | 8 149701 | 13 | D-S.1.1.2 | 2  | 6410  | 0.70 | 0.09 | 0.13 | 0.08 | 0.70 | 0.00 | 0.47  | -0.21 | -0.24 | -0.27 | 0.47  | 0.3524  | 0.0314 | 0.6  | 1.0 | -2.3 | 0.9 | A- | Ċ        | B- |
| MATH | 8 809324 | 13 | B-E.1.1.1 | 1  | 6410  | 0.29 | 0.39 | 0.23 | 0.29 | 0.09 | 0.00 | -0.06 | 0.16  | -0.04 | -0.06 | -0.12 | 2.6799  | 0.0313 | 9.9  | 1.6 | 9.9  | 2.8 | A+ | A+       | A+ |
| MATH | 8 351680 | 13 | B-E.3.1.3 | 2  | 6410  | 0.46 | 0.46 | 0.13 | 0.20 | 0.21 | 0.00 | 0.36  | 0.36  | -0.20 | -0.18 | -0.09 | 1.7327  | 0.0291 | 9.9  | 1.1 | 9.9  | 1.2 | A+ | A+       | A+ |
| MATH | 8 306735 | 13 | A-N.1.1.2 | 1  | 6410  | 0.19 | 0.19 | 0.34 | 0.25 | 0.22 | 0.00 | 0.06  | 0.06  | -0.15 | 0.15  | -0.03 | 3.4253  | 0.0357 | 9.9  | 1.3 | 9.9  | 2.8 |    | A+       | A+ |
| MATH | 8 679996 | 13 | C-G.3.1.1 | 1  | 6410  | 0.74 | 0.16 | 0.74 | 0.07 | 0.03 |      | 0.51  | -0.34 | 0.51  | -0.24 | -0.21 | 0.0859  | 0.0326 | -3.6 | 0.9 |      | 0.9 |    | A-       | A- |
| MATH | 8 749819 | 13 | D-S.1.2.1 | 2  | 6410  | 0.18 | 0.20 | 0.55 | 0.18 | 0.07 | 0.00 | 0.03  | -0.13 | 0.16  | 0.03  | -0.16 | 3.4897  | 0.0362 | 9.9  | 1.3 |      | 3.3 |    | A-       | A- |
| MATH | 8 290208 | 14 | D.4.1.2   | 1  | 12838 | 0.74 | 0.05 | 0.09 | 0.12 | 0.74 | 0.00 | 0.56  | -0.26 | -0.35 | -0.27 | 0.56  | 0.1393  | 0.0231 | -9.9 | 0.9 |      | 0.8 |    | A-       | A- |
| MATH | 8 260948 | 14 | C.1.2.1   | 1  | 12838 | 0.62 | 0.12 | 0.12 | 0.62 | 0.14 | 0.00 | 0.60  | -0.21 | -0.23 | 0.60  | -0.42 | 0.8834  | 0.0212 | -9.9 | 0.9 |      | 0.8 |    | A-       | A- |
| MATH | 8 206642 | 14 | A-N.1.1.2 | 1  | 6422  | 0.73 | 0.11 | 0.08 | 0.73 | 0.08 | 0.00 | 0.37  | -0.16 | -0.25 | 0.37  | -0.16 | 0.1575  | 0.0326 | 8.4  | 1.2 | 6.8  | 1.3 |    | A+       | A+ |
| MATH | 8 995116 | 14 | D-S.1.1.1 | 2  | 6422  | 0.42 | 0.25 | 0.42 | 0.14 | 0.19 |      | 0.25  | -0.02 | 0.25  | -0.23 | -0.09 | 2.0009  | 0.0295 | 9.9  | 1.3 |      | 1.6 |    | A-       | A- |
| MATH | 8 849155 | 14 | B-E.1.1.4 | 1  | 6422  | 0.53 | 0.07 | 0.33 | 0.53 | 0.08 | 0.00 | 0.33  | -0.22 | -0.08 | 0.33  | -0.26 | 1.3838  | 0.0293 | 9.9  | 1.2 | 9.9  | 1.3 | A+ | A+       | A+ |
| MATH | 8 259520 | 14 | B-E.3.1.4 | 1  | 6422  | 0.40 | 0.25 | 0.18 | 0.17 | 0.40 | 0.00 | 0.46  | -0.28 | -0.19 | -0.09 | 0.46  | 2.1007  | 0.0297 | -2.5 | 1.0 |      | 1.1 | A+ | A+       | A- |
| MATH | 8 461953 | 14 | D-S.1.2.1 | 2  | 6422  | 0.74 | 0.74 | 0.10 | 0.09 | 0.07 | 0.00 | 0.43  | 0.43  | -0.20 | -0.27 | -0.21 | 0.0921  | 0.0329 | 3.1  | 1.1 | 3.4  | 1.1 | A+ | B-       | A- |
| MATH | 8 932818 | 14 | A-N.1.1.5 | 1  | 6422  | 0.72 | 0.09 | 0.11 | 0.72 | 0.08 | 0.00 | 0.51  | -0.26 | -0.27 | 0.51  | -0.24 | 0.2558  | 0.0321 | -2.2 | 1.0 |      | 0.9 | _  | A-       | A- |
| MATH | 8 259770 | 14 | C-G.1.1.1 | 2  | 6422  | 0.41 | 0.41 | 0.24 | 0.07 | 0.28 | 0.00 | 0.31  | 0.31  | -0.12 | -0.22 | -0.11 | 2.0437  | 0.0296 | 9.9  | 1.2 | 9.9  | 1.4 | A- | A-       | A- |

| MATH | 8 460773 | 14 | B-F.1.1.2 | 2 | 6422  | 0.25 | 0.25 | 0.32 | 0.07 | 0.35 | 0.00 | 0.07  | 0.07  | 0.03  | -0.16 | 0.00  | 2.9926  | 0.0326 | 9.9  | 1.4 | 9.9  | 2.5 | A-         | A-         | A- |
|------|----------|----|-----------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|-----|------|-----|------------|------------|----|
| MATH | 8 974776 | 14 | B-E.2.1.3 | 1 | 6422  | 0.28 | 0.28 | 0.43 | 0.04 | 0.24 | 0.00 | 0.26  | 0.26  | 0.02  | -0.23 | -0.18 | 2.7992  | 0.0317 | 9.9  | 1.2 | 9.9  | 1.7 | Α-         | A+         | A+ |
| MATH | 8 943919 | 14 | B-E.1.1.1 | 2 | 6422  | 0.24 | 0.17 | 0.24 | 0.42 | 0.17 | 0.00 | 0.20  | 0.08  | 0.20  | -0.16 | -0.11 | 3.1066  | 0.0333 | 9.9  | 1.2 | 9.9  | 2.0 | A-         | A-         | A- |
| MATH | 8 515093 | 15 | A-N.1.1.3 | 1 | 6416  | 0.51 | 0.21 | 0.51 | 0.18 | 0.09 | 0.00 | 0.40  | -0.26 | 0.40  | -0.10 | -0.19 | 1.4945  | 0.0291 | 6.1  | 1.1 | 7.7  | 1.2 | A-         | A+         | A- |
| MATH | 8 839436 | 15 | B-E.1.1.4 | 2 | 6416  | 0.48 | 0.23 | 0.14 | 0.48 | 0.15 | 0.00 | 0.41  | -0.07 | -0.20 | 0.41  | -0.29 | 1.6772  | 0.0291 | 5.5  | 1.1 | 7.3  | 1.2 | B-         | A-         | A- |
| MATH | 8 675643 | 15 | A-N.1.1.4 | 1 | 6416  | 0.64 | 0.14 | 0.09 | 0.64 | 0.14 | 0.00 | 0.43  | -0.22 | -0.22 | 0.43  | -0.20 | 0.7783  | 0.0302 | 5.5  | 1.1 | 3.9  | 1.1 | A+         | A-         | A- |
| MATH | 8 447377 | 15 | B-E.3.1.2 | 1 | 6416  | 0.30 | 0.17 | 0.15 | 0.38 | 0.30 | 0.00 | 0.17  | -0.07 | -0.08 | -0.05 | 0.17  | 2.6560  | 0.0310 | 9.9  | 1.3 | 9.9  | 2.0 | A+         | A-         | A- |
| MATH | 8 397029 | 15 | B-E.2.1.2 | 2 | 6416  | 0.23 | 0.23 | 0.37 | 0.11 | 0.28 | 0.00 | 0.04  | 0.04  | 0.01  | -0.23 | 0.11  | 3.1038  | 0.0331 | 9.9  | 1.4 | 9.9  | 2.8 | A-         | A+         | A+ |
| MATH | 8 447045 | 15 | B-F.1.1.3 | 1 | 6416  | 0.18 | 0.48 | 0.14 | 0.19 | 0.18 | 0.00 | 0.14  | 0.22  | -0.24 | -0.19 | 0.14  | 3.4840  | 0.0357 | 8.4  | 1.2 | 9.9  | 2.5 | A+         | A+         | A+ |
| MATH | 8 687243 | 15 | B-F.2.1.2 | 2 | 6416  | 0.53 | 0.29 | 0.53 | 0.11 | 0.08 | 0.00 | 0.27  | -0.04 | 0.27  | -0.23 | -0.17 | 1.3866  | 0.0292 | 9.9  | 1.3 | 9.9  | 1.4 | A-         | A-         | A- |
| MATH | 8 214362 | 15 | D-S.1.1.2 | 2 | 6416  | 0.32 | 0.35 | 0.32 | 0.21 | 0.12 | 0.00 | 0.04  | 0.12  | 0.04  | -0.10 | -0.11 | 2.5584  | 0.0306 | 9.9  | 1.5 | 9.9  | 2.4 | A-         | A+         | A+ |
| MATH | 8 419383 | 15 | C-G.1.1.3 | 2 | 6416  | 0.28 | 0.20 | 0.19 | 0.33 | 0.28 | 0.00 | 0.21  | -0.11 | -0.19 | 0.06  | 0.21  | 2.7738  | 0.0314 | 9.9  | 1.2 | 9.9  | 1.8 | A-         | A-         | A- |
| MATH | 8 649379 | 15 | C-G.3.1.1 | 2 | 6416  | 0.15 | 0.12 | 0.09 | 0.15 | 0.64 | 0.00 | -0.01 | -0.32 | -0.25 | -0.01 | 0.38  | 3.7755  | 0.0383 | 9.9  | 1.3 | 9.9  | 3.6 | A-         | A-         | A- |
| MATH | 8 345510 | 16 | B-E.3.1.5 | 2 | 6395  | 0.35 | 0.24 | 0.35 | 0.22 | 0.19 | 0.00 | 0.15  | 0.01  | 0.15  | -0.04 | -0.15 | 2.4030  | 0.0305 | 9.9  | 1.4 | 9.9  | 2.0 | A+         | A+         | A- |
| MATH | 8 419172 | 16 | B-F.2.1.1 | 2 | 6395  | 0.74 | 0.74 | 0.06 | 0.16 | 0.04 | 0.00 | 0.55  | 0.55  | -0.29 | -0.35 | -0.22 | 0.1355  | 0.0328 | -6.1 | 0.9 | -7.5 | 0.7 | A-         | A-         | A- |
| MATH | 8 327852 | 16 | A-N.1.1.1 | 1 | 6395  | 0.61 | 0.19 | 0.11 | 0.61 | 0.09 | 0.00 | 0.34  | -0.12 | -0.19 | 0.34  | -0.21 | 0.9249  | 0.0301 | 9.9  | 1.2 | 9.9  | 1.3 | A+         | A+         | A+ |
| MATH | 8 730957 | 16 | A-N.1.1.3 | 1 | 6395  | 0.48 | 0.09 | 0.48 | 0.18 | 0.25 | 0.00 | 0.36  | -0.16 | 0.36  | -0.04 | -0.28 | 1.6871  | 0.0294 | 9.9  | 1.2 | 9.9  | 1.3 | A+         | A-         | A- |
| MATH | 8 694909 | 16 | B-E.2.1   | 2 | 6395  | 0.54 | 0.09 | 0.54 | 0.27 | 0.09 | 0.00 | 0.35  | -0.24 | 0.35  | -0.13 | -0.16 | 1.3186  | 0.0295 | 9.9  | 1.2 | 9.9  | 1.3 | A-         | A-         | A- |
| MATH | 8 808885 | 16 | C-G.2.1.3 | 2 | 6395  | 0.28 | 0.51 | 0.28 | 0.18 | 0.03 | 0.00 | 0.36  | -0.20 | 0.36  | -0.08 | -0.18 | 2.8194  | 0.0320 | -0.2 | 1.0 | 9.9  | 1.5 | A-         | A-         | A- |
| MATH | 8 965231 | 16 | B-F.1.1.2 | 2 | 6395  | 0.22 | 0.22 | 0.26 | 0.20 | 0.32 | 0.00 | 0.20  | 0.20  | -0.10 | -0.11 | 0.02  | 3.2480  | 0.0343 | 8.0  | 1.2 | 9.9  | 2.3 | A-         | A-         | A+ |
| MATH | 8 126325 | 16 | D-S.1.1.1 | 2 | 6395  | 0.77 | 0.09 | 0.06 | 0.77 | 0.08 | 0.00 | 0.41  | -0.23 | -0.26 | 0.41  | -0.16 | -0.0835 | 0.0339 | 3.2  | 1.1 | 4.2  | 1.2 | A+         | A-         | B- |
| MATH | 8 223571 | 16 | A-N.1.1.4 | 2 | 6395  | 0.50 | 0.25 | 0.50 | 0.17 | 0.08 | 0.00 | 0.35  | -0.08 | 0.35  | -0.24 | -0.19 | 1.5524  | 0.0294 | 9.9  | 1.2 | 9.9  | 1.3 | A+         | A-         | A- |
| MATH | 8 297969 | 16 | D-S.1.1.3 | 2 | 6395  | 0.36 | 0.10 | 0.16 | 0.37 | 0.36 | 0.00 | 0.20  | -0.21 | -0.21 | 0.10  | 0.20  | 2.3384  | 0.0303 | 9.9  | 1.4 | 9.9  | 1.8 | A+         | A-         | A- |
| MATH | 8 599996 | 17 | C-G.1.1.2 | 2 | 6386  | 0.26 | 0.17 | 0.40 | 0.17 | 0.26 | 0.00 | 0.18  | -0.17 | 0.08  | -0.14 | 0.18  | 2.9447  | 0.0327 | 9.9  | 1.3 | 9.9  | 2.0 | A-         | A-         | A- |
| MATH | 8 159100 | 17 | A-N.1.1.3 | 1 | 6386  | 0.47 | 0.47 | 0.15 | 0.21 | 0.17 | 0.00 | 0.47  | 0.47  | -0.04 | -0.27 | -0.30 | 1.6792  | 0.0295 | 1.2  | 1.0 | 1.5  | 1.0 | A-         | A+         | A+ |
| MATH | 8 505390 | 17 | D-S.1.1.1 | 2 | 6386  | 0.51 | 0.19 | 0.13 | 0.51 | 0.17 | 0.00 | 0.32  | -0.07 | -0.26 | 0.32  | -0.11 | 1.4856  | 0.0295 | 9.9  | 1.2 | 9.9  | 1.3 | A-         | A-         | A- |
| MATH | 8 255962 | 17 | B-E.2.1.3 | 1 | 6386  | 0.59 | 0.59 | 0.15 | 0.17 | 0.10 | 0.00 | 0.45  | 0.45  | -0.14 | -0.30 | -0.20 | 1.0481  | 0.0299 | 4.0  | 1.1 | 2.7  | 1.1 | A+         | A-         | A- |
| MATH | 8 258462 | 17 | B-F.1.1.2 | 2 | 6386  | 0.57 | 0.14 | 0.13 | 0.16 | 0.57 | 0.00 | 0.52  | -0.23 | -0.28 | -0.23 | 0.52  | 1.1457  | 0.0297 |      | 0.9 | -2.6 | 0.9 | A+         | A-         | A+ |
| MATH | 8 624820 | 17 | B-E.1.1.3 | 1 | 6386  | 0.61 | 0.13 | 0.15 | 0.11 | 0.61 | 0.00 | 0.39  | -0.18 | -0.22 | -0.16 | 0.39  | 0.9423  | 0.0300 | 9.9  | 1.2 | 7.0  | 1.2 | A-         | A+         | A- |
| MATH | 8 795031 | 17 | A-N.1.1.2 | 1 | 6386  | 0.67 | 0.14 | 0.12 | 0.67 | 0.07 | 0.00 | 0.43  | -0.27 | -0.14 | 0.43  | -0.23 | 0.5565  | 0.0310 | 5.9  | 1.1 | 1.8  | 1.1 | A-         | A+         | A- |
| MATH | 8 614061 | 17 | B-E.1.1.3 | 2 | 6386  | 0.33 | 0.07 | 0.33 | 0.16 | 0.44 | 0.00 | 0.38  | -0.03 | 0.38  | -0.10 | -0.27 | 2.5251  | 0.0310 | 2.4  | 1.0 | 9.9  | 1.3 | A-         | A-         | A- |
| MATH | 8 743815 | 17 | B-E.3.1.3 | 2 | 6386  | 0.76 | 0.13 | 0.05 | 0.76 | 0.06 | 0.00 | 0.51  | -0.34 | -0.26 | 0.51  | -0.18 | -0.0473 | 0.0336 |      | 0.9 | -4.0 | 0.8 |            | B-         | A- |
| MATH | 8 883973 | 17 | B-F.2.1.1 | 2 | 6386  | 0.22 | 0.18 | 0.18 | 0.41 | 0.22 | 0.00 | 0.13  | -0.12 | -0.21 | 0.15  | 0.13  | 3.2265  | 0.0343 | 9.9  | 1.3 | 9.9  | 2.5 | A-         | A-         | A+ |
| MATH | 8 816944 | 18 | C-G.3.1.1 | 2 | 6418  | 0.45 | 0.45 | 0.21 | 0.20 | 0.15 |      | 0.30  | 0.30  | -0.14 | -0.17 | -0.05 | 1.8233  | 0.0292 | 9.9  | 1.2 | 9.9  | 1.4 | A-         | A-         | A- |
| MATH | 8 980171 | 18 | D-S.1.1.3 | 2 | 6418  | 0.23 | 0.17 | 0.20 | 0.39 | 0.23 | 0.00 | 0.15  | -0.10 | -0.21 | 0.13  | 0.15  | 3.1085  | 0.0333 |      | 1.3 | 9.9  |     | A-         | A-         | A- |
| MATH | 8 244635 | 18 | B-E.1.1.4 | 1 | 6418  | 0.71 | 0.71 | 0.16 | 0.08 | 0.05 | 0.00 | 0.37  | 0.37  | -0.18 | -0.21 | -0.20 | 0.3397  | 0.0316 | 8.4  | 1.1 | 4.0  |     | A-         | A+         | A+ |
| MATH | 8 470895 | 18 | B-E.3.1.2 | 1 | 6418  | 0.63 | 0.09 | 0.19 | 0.63 | 0.09 | 0.00 | 0.37  | -0.17 | -0.17 | 0.37  | -0.20 | 0.8024  | 0.0301 | 9.9  | 1.2 | 6.3  |     | A-         | A-         | A- |
| MATH | 8 678484 | 18 | A-N.1.1.4 | 2 | 6418  | 0.29 | 0.18 | 0.13 | 0.39 | 0.29 | 0.00 | 0.31  | -0.12 | -0.08 | -0.14 | 0.31  | 2.7032  | 0.0313 | 8.2  | 1.1 | 9.9  | 1.5 |            | <u>A</u> + | A+ |
| MATH | 8 980404 | 18 | B-E.2.1.1 | 2 | 6418  | 0.84 | 0.05 | 0.84 | 0.02 |      |      | 0.49  | -0.22 | 0.49  | -0.18 | -0.38 | -0.6440 | 0.0378 |      | 0.9 | -3.7 | 0.8 |            | A-         | A- |
| MATH | 8 831485 | 18 | B-E.1.1.1 | 1 | 6418  | 0.32 | 0.32 | 0.12 | 0.28 | 0.28 | 0.00 | 0.35  | 0.35  | -0.19 | -0.12 | -0.10 | 2.5677  | 0.0308 | 3.4  | 1.1 | 9.9  | 1.4 |            | A-         | A- |
| MATH | 8 365658 | 18 | B-F.1.1.1 | 1 | 6418  | 0.32 | 0.27 | 0.32 | 0.24 | 0.18 | 0.00 | 0.14  | 0.01  | 0.14  | -0.05 | -0.13 | 2.5488  | 0.0307 | 9.9  | 1.4 | 9.9  | 2.0 |            | A-         | A- |
| MATH | 8 120141 | 18 | B-F.2.1.2 | 2 | 6418  | 0.44 | 0.09 | 0.32 | 0.15 | 0.44 | 0.00 | 0.33  | -0.30 | -0.08 | -0.11 | 0.33  | 1.8711  | 0.0292 | 9.9  | 1.2 | 9.9  | 1.3 |            | A-         | B- |
| MATH | 8 890384 | 18 | C-G.1.1.4 | 2 | 6418  | 0.28 | 0.21 | 0.21 | 0.28 | 0.30 |      | 0.03  | -0.07 | -0.04 | 0.03  | 0.07  | 2.8265  | 0.0318 | 9.9  | 1.4 | 9.9  |     | A-         | <u>A</u> + | A+ |
| MATH | 8 984208 | 19 | D.4.1.2   | 1 | 12783 | 0.79 | 0.79 | 0.09 | 0.06 | 0.06 | 0.00 | 0.57  | 0.57  | -0.34 | -0.29 | -0.27 | -0.2516 | 0.0247 |      | 0.9 | -9.9 |     | <u>A</u> + | <u>A-</u>  | A+ |
| MATH | 8 975224 | 19 | D.1.1.3   | 1 | 12783 | 0.82 | 0.08 | 0.07 | 0.82 | 0.04 | 0.00 | 0.57  | -0.35 | -0.32 | 0.57  | -0.25 | -0.4690 | 0.0258 |      | 0.8 | -9.9 |     | <u>A</u> + | <u>A-</u>  | A- |
| MATH | 8 152877 | 19 | B-F.1.1.1 | 2 | 6392  | 0.41 | 0.16 | 0.17 | 0.25 | 0.41 | 0.00 | 0.24  | -0.07 | -0.19 | -0.03 | 0.24  | 2.0362  | 0.0296 | 9.9  | 1.3 | 9.9  | 1.6 |            | <u>A-</u>  | A- |
| MATH | 8 373871 | 19 | B-F.1.1.3 | 2 | 6392  | 0.27 | 0.30 | 0.27 | 0.08 | 0.35 | 0.00 | 0.02  | -0.08 | 0.02  | -0.18 | 0.16  | 2.9163  | 0.0323 | 9.9  | 1.5 | 9.9  |     | A-         | <u>A</u> + | A+ |
| MATH | 8 769342 | 19 | D-S.1.1.1 | 2 | 6392  | 0.79 | 0.07 | 0.08 | 0.06 | 0.79 | 0.00 | 0.51  | -0.25 | -0.31 | -0.25 | 0.51  | -0.2033 | 0.0347 | -4.7 | 0.9 | -5.9 | 0.0 | A-         | B-         | A- |
| MATH | 8 339165 | 19 | B-E.1.1.2 | 1 | 6392  | 0.65 | 0.65 | 0.15 | 0.13 | 0.06 | 0.00 | 0.50  | 0.50  | -0.24 | -0.25 | -0.27 | 0.7168  | 0.0305 | -0.9 | 1.0 | -1.2 | 1.0 |            | <u>A</u> + | A+ |
| MATH | 8 240515 | 19 | B-E.1.1.3 | 2 | 6392  | 0.58 | 0.09 | 0.15 | 0.17 | 0.58 | 0.00 | 0.39  | -0.21 | -0.18 | -0.17 | 0.39  | 1.0867  | 0.0297 | 9.7  | 1.1 | 7.5  |     | A-         | <u>A</u> + | A+ |
| MATH | 8 429063 | 19 | B-E.3.1.3 | 1 | 6392  | 0.29 | 0.29 | 0.17 | 0.10 | 0.43 | 0.00 | 0.20  | 0.20  | -0.18 | -0.24 | 0.11  | 2.7620  | 0.0316 | 9.9  | 1.2 | 9.9  | 2.1 | A-         | A-         | A- |

| MATH               | 8 151650             | 19 | A-N.1.1.2          | 1 639              | 2 0.29 | 0.16 | 0.07 | 0.48 | 0.29 | 0.00 | 0.27 | -0.26 | -0.16          | 0.03           | 0.27          | 2.7600            | 0.0316 | 9.9          | 1.2 | 9.9          | 1.7 | A+       | A+ | A+   |
|--------------------|----------------------|----|--------------------|--------------------|--------|------|------|------|------|------|------|-------|----------------|----------------|---------------|-------------------|--------|--------------|-----|--------------|-----|----------|----|--|
| MATH               | 8 377646             | 19 | C-G.1.1.2          | 2 639              | 2 0.14 | 0.29 | 0.39 | 0.18 | 0.14 | 0.00 | 0.07 | -0.02 | -0.03          | 0.01           | 0.07          | 3.9137            | 0.0397 | 9.5          | 1.3 | 9.9          | 3.5 | A-       | A+ | A-   |
| MATH               | 8 119611             | 19 | C-G.2.1.1          | 1 639              | 2 0.46 | 0.16 | 0.17 | 0.21 | 0.46 | 0.00 | 0.44 | -0.25 | -0.17          | -0.16          | 0.44          | 1.7671            | 0.0293 | 1.6          | 1.0 | 3.6          | 1.1 | A+       | A+ | A+   |
| MATH               | 8 119918             | 19 | D-S.1.2.1          | 2 639              | 2 0.70 | 0.12 | 0.70 | 0.12 | 0.06 | 0.00 | 0.38 | -0.18 | 0.38           | -0.23          | -0.18         | 0.3902            | 0.0316 | 7.8          | 1.1 | 5.4          | 1.2 | A-       | A- | A-   |
| MATH               | 8 647639             | 20 | B-E.3.1            | 2 639              | 1 0.34 | 0.27 | 0.23 | 0.34 | 0.16 | 0.00 | 0.18 | -0.05 | -0.12          | 0.18           | -0.03         | 2.4154            | 0.0304 | 9.9          | 1.3 | 9.9          | 1.9 | A+       | A- | <b>A</b> +                                       |
| MATH               | 8 578824             | 20 | B-E.1.1.4          | 1 639              | 1 0.67 | 0.11 | 0.08 | 0.14 | 0.67 | 0.00 | 0.38 | -0.24 | -0.20          | -0.14          | 0.38          | 0.5670            | 0.0308 | 8.5          | 1.1 | 6.2          | 1.2 | A-       | A+ | A+   |
| MATH               | 8 513635             | 20 | B-F.1.1.1          | 1 639              | 1 0.30 | 0.15 | 0.30 | 0.34 | 0.21 | 0.00 | 0.14 | -0.15 | 0.14           | 0.01           | -0.03         | 2.6239            | 0.0311 | 9.9          | 1.3 | 9.9          | 2.1 | A-       | A- | A-   |
| MATH               | 8 496256             | 20 | C-G.1.1.4          | 2 639              | 1 0.37 | 0.37 | 0.13 | 0.33 | 0.17 | 0.00 | 0.20 | 0.20  | -0.16          | 0.00           | -0.12         | 2.2168            | 0.0299 | 9.9          | 1.3 | 9.9          | 1.7 | A-       | A- | A-   |
| MATH               | 8 770379             | 20 | A-N.1.1.4          | 2 639              | 0.39   | 0.18 | 0.29 | 0.39 | 0.13 | 0.00 | 0.20 | -0.14 | -0.06          | 0.20           | -0.04         | 2.1238            | 0.0297 | 9.9          | 1.3 | 9.9          | 1.7 | A+       | A+ | A+   |
| MATH               | 8 770978             | 20 | B-E.1.1.2          | 1 639              | 0.24   | 0.50 | 0.24 | 0.19 | 0.07 | 0.00 | 0.18 | 0.13  | 0.18           | -0.27          | -0.14         | 3.0484            | 0.0331 | 9.9          | 1.2 | 9.9          | 2.2 | A+       | A- | A+   |
| MATH               | 8 582392             | 20 | C-G.3.1.1          | 1 639              | 0.76   | 0.14 | 0.76 | 0.08 | 0.03 | 0.00 | 0.47 | -0.38 | 0.47           | -0.16          | -0.17         | -0.0027           | 0.0333 | -1.1         | 1.0 | -1.7         | 0.9 | A+       | A- | A-   |
| MATH               | 8 818157             | 20 | D-S.1.1.2          | 2 639              |        | 0.05 | 0.58 | 0.27 | 0.07 | 0.00 | 0.30 | -0.25 | 0.30           | -0.01          | -0.29         | 1.0590            | 0.0296 | 9.9          | 1.3 | 9.9          | 1.4 | A+       | A- | A-   |
| MATH               | 8 883624             | 20 | B-F.1.1.3          | 1 639              |        | 0.52 | 0.17 | 0.18 | 0.12 | 0.00 | 0.46 | 0.46  | -0.13          | -0.24          | -0.25         | 1.4189            | 0.0292 | 1.1          | 1.0 | 2.9          | 1.1 | A+       | A- | A+   |
| MATH               | 8 528884             | 20 | C-G.2.1            | 2 639              | 1 0.74 | 0.10 | 0.74 | 0.07 | 0.10 | 0.00 | 0.25 | -0.08 | 0.25           | -0.15          | -0.15         | 0.1401            | 0.0325 | 9.9          | 1.3 | 9.9          | 1.8 | A+       | A+ | A-   |
| READING            | 3 300690             | 0  | A.1.1.1            | 12449              | 5 0.41 | 0.33 | 0.16 | 0.10 |      | 0.00 | 0.40 | -0.09 | -0.20          | -0.26          | 0.40          | 1.4406            | 0.0066 | -8.3         | 1.0 | 9.9          | 1.1 |          |    |  |
| READING            | 3 308022             | 0  | A.1.3.1            | 12449              |        | 0.09 | 0.72 | 0.11 |      | 0.01 | 0.50 | -0.25 | 0.50           | -0.23          | -0.28         | -0.3042           | 0.0072 | -9.9         | 1.0 | -9.9         |     |          |    |  |
| READING            | 3 570670             | 0  | A.1.2.2            | 12449              |        | 0.76 | 0.06 | 0.04 |      | 0.00 | 0.35 | 0.35  | -0.30          | -0.25          | -0.09         | -0.4353           | 0.0074 | 9.9          | 1.1 | 9.9          | 1.2 |          |    |  |
| READING            | 3 781773             | 0  | B.1.1.1            | 12449              |        | 0.14 | 0.07 | 0.73 |      | 0.01 | 0.59 | -0.39 | -0.25          | 0.59           | -0.26         | -0.2814           | 0.0072 | -9.9         | 0.8 | -9.9         |     |          |    |  |
| READING            | 3 193034             | 0  | B.1.1.1            | 12449              |        | 0.13 | 0.06 | 0.70 | 0.10 |      | 0.56 | -0.26 | -0.28          | 0.56           | -0.33         | -0.2511           | 0.0072 | -9.9         | 0.9 | -9.9         |     |          |    |  |
| READING            | 3 454920             | 0  | A.1.3.1            | 12449              |        | 0.12 | 0.14 | 0.12 | 0.60 |      | 0.54 | -0.30 | -0.29          | -0.19          | 0.54          | 0.4937            | 0.0066 | -9.9         | 0.9 | -9.9         | 0.8 |          |    |  |
| READING            | 3 548838             | 0  | A.1.5.1            | 12449              |        | 0.55 | 0.15 | 0.20 | 0.10 |      | 0.39 | 0.39  | -0.29          | -0.06          | -0.22         | 0.7767            | 0.0066 | 9.9          | 1.1 | 9.9          |     |          |    |  |
| READING            | 3 594347             | 0  | A.1.3.1            | 12449              |        | 0.05 | 0.10 | 0.69 | 0.15 | _    | 0.55 | -0.29 | -0.25          | 0.55           | -0.31         | -0.0637           | 0.0070 | -9.9         | 0.9 | -9.9         | 0.8 |          |    |  |
| READING            | 3 690957             | 0  | A.2.4.1            | 12449              |        | 0.09 | 0.28 | 0.56 |      | 0.01 | 0.30 | -0.29 | 0.01           | 0.30           | -0.29         | 0.5052            | 0.0066 | 9.9          | 1.2 | 9.9          | 1.4 |          |    |  |
| READING            | 3 137818             | 0  | A.2.4.1            | 12449              |        | 0.12 | 0.63 | 0.12 |      | 0.01 | 0.51 | -0.31 | 0.51           | -0.23          | -0.20         | 0.3287            | 0.0067 | -9.9         | 0.9 | -9.9         | 0.9 |          |    |  |
| READING            | 3 674645             | 0  | A.2.3.1            | 12449              |        | 0.09 | 0.13 | 0.14 |      | 0.01 | 0.46 | -0.20 | -0.22          | -0.24          | 0.46          | 0.2136            | 0.0068 | 1.7          | 1.0 | 0.6          |     |          |    |  |
| READING            | 3 595530             | 0  | A.2.4.1            | 12449              |        | 0.08 | 0.70 | 0.04 |      | 0.01 | 0.51 | -0.27 | 0.51           | -0.28          | -0.27         | -0.1604           | 0.0071 | -9.9         | 0.9 | -9.9         |     |          |    |  |
| READING            | 3 452768             | 0  | A.2.6.1            | 12449              |        | 0.04 | 0.66 | 0.18 |      | 0.01 | 0.43 | -0.29 | 0.43           | -0.18          | -0.24         | 0.0451            | 0.0069 | 9.9          | 1.1 | 9.9          |     |          |    |  |
| READING            | 3 331600             | 0  | A.2.4.1            | 12449              |        | 0.63 | 0.05 | 0.16 |      | 0.01 | 0.50 | 0.50  | -0.26          | -0.19          | -0.30         | 0.3112            | 0.0067 | -9.9         | 1.0 | -6.0         |     |          |    |  |
| READING            | 3 606300             | 0  | A.2.4.1            | 12449              |        | 0.12 | 0.13 | 0.67 |      | 0.01 | 0.52 | -0.23 | -0.27          | 0.52           | -0.29         | 0.0292            | 0.0069 | -9.9         | 0.9 | -9.9         | 0.9 |          |    |  |
| READING            | 3 986607             | 0  | A.2.4.1            | 12449              |        | 0.16 | 0.15 | 0.11 | 0.57 | _    | 0.48 | -0.29 | -0.10          | -0.28          | 0.48          | 0.6072            | 0.0066 | -8.1         | 1.0 | -9.1         | 1.0 |          |    |  |
| READING            | 3 408330             | 0  | B.1.1.1            | 2 12449            | _      | 0.02 | 0.08 | 0.03 | 0.86 |      | 0.46 | -0.25 | -0.30          | -0.22          | 0.46          | -1.2824           | 0.0088 | -9.9         | 0.8 | -9.9         | 0.7 |          |    |  |
| READING            | 3 560275             | 0  | A.1.4.1            | 2 12449            |        | 0.04 | 0.05 | 0.59 |      | 0.00 | 0.43 | -0.30 | -0.32          | 0.43           | -0.17         | 0.4523            | 0.0067 | 9.9          | 1.1 | 9.9          |     |          |    | <del>                                     </del> |
| READING            | 3 766875             | 0  | A.1.3.1            | 2 12449            |        | 0.02 | 0.02 | 0.03 |      | 0.00 | 0.47 | -0.27 | -0.24          | -0.28          | 0.47          | -1.9994           | 0.0108 | -9.9         | 0.8 | -9.9         |     |          |    | -  |
| READING            | 3 725011             | 0  | B.1.1.1            | 2 12449            |        | 0.85 | 0.02 | 0.09 |      | 0.00 | 0.41 | 0.41  | -0.23          | -0.23          | -0.24         | -1.5135           | 0.0093 | 9.9          | 1.1 | 8.0          |     |          |    | -  |
| READING            | 3 663978             | 0  | A.1.4.1            | 1 12449            |        | 0.13 | 0.68 | 0.14 | 0.04 | 0.00 | 0.53 | -0.27 | 0.53           | -0.27          | -0.30         | -0.0133           | 0.0069 | -9.9         | 0.9 | -9.9         |     |          |    | -  |
| READING            | 3 473939             | 0  | A.1.4.1            | 1 12449            |        | 0.11 | 0.68 | 0.16 |      | 0.00 | 0.49 | -0.33 | 0.49           | -0.18          | -0.26         | -0.0231           | 0.0069 | -9.9         | 1.0 | -9.9<br>7.1  |     |          |    | +  |
| READING<br>READING | 3 425466<br>3 513157 | 0  | B.1.1.1<br>A.2.2.1 | 2 12449<br>2 12449 |        | 0.82 | 0.11 | 0.03 |      | 0.00 | 0.41 | 0.41  | -0.21<br>-0.25 | -0.25<br>-0.24 | -0.26<br>0.01 | -0.9320<br>0.1770 | 0.0081 | -9.9<br>9.9  | 1.0 | -7.1<br>9.9  | 0.9 | 1        | 1  | +  |
| READING            | 3 420408             | 0  | A.2.2.1<br>A.2.2.2 | 2 12449            |        | 0.04 | 0.03 | 0.03 |      | 0.00 | 0.16 | -0.26 | 0.56           | -0.24          | -0.30         | -0.5211           | 0.0068 | -9.9         | 0.8 | -9.9<br>-9.9 | 0.7 | 1        | 1  | +  |
| READING            | 3 227069             | 0  | B.3.3.1            | 2 12449            |        | 0.07 | 0.77 | 0.07 |      | 0.01 | 0.36 | -0.26 | 0.36           | -0.32          | -0.30         | 0.3190            | 0.0073 | -6.0         | 1.0 | -9.9<br>-9.9 | 0.7 | <b> </b> |    | ++   |
| READING            | 3 243649             | 0  | B.3.3.2            | 2 12449            |        | 0.21 | 0.00 | 0.07 |      | 0.01 | 0.49 | -0.23 | -0.24          | -0.23          | 0.49          | -0.3010           | 0.0007 | -9.9         | 0.9 | -9.9<br>-9.9 |     | <u> </u> |    | <del>                                     </del> |
| READING            | 3 565461             | 0  | B.3.3.2            | 2 12449            |        | 0.08 | 0.09 | 0.09 |      | 0.01 | 0.49 | 0.44  | -0.24          | -0.24          | -0.23         | -0.4314           | 0.0072 | -3.0         | 1.0 | 3.2          | 1.0 | <b>-</b> |    | +  |
| READING            | 3 502971             | 0  | A.2.4.1            | 2 12449            |        | 0.73 | 0.07 | 0.09 |      | 0.01 | 0.44 | -0.14 | -0.25          | 0.37           | -0.23         | -0.4314           | 0.0074 | 9.9          | 1.1 | 5.0          |     | <b>-</b> |    | +  |
| READING            | 3 254463             | 0  | A.2.4.1<br>A.2.4.1 | 2 12449            |        | 0.07 | 0.13 | 0.72 |      | 0.01 | 0.57 | -0.14 | 0.52           | -0.27          | -0.10         | 0.3359            | 0.0071 | -9.9         | 0.9 | -9.9         |     | <b>-</b> |    | +  |
| READING            | 3 221842             | 0  | A.2.4.1            | 1 12449            |        | 0.13 | 0.05 | 0.74 |      | 0.01 | 0.32 | -0.27 | -0.24          | 0.41           | -0.24         | -0.3603           | 0.0007 | 5.4          | 1.0 | 7.3          |     |          |    | $\vdash$   |
| READING            | 3 367922             | 0  | A.2.4.1            | 2 12449            |        | 0.16 | 0.66 | 0.74 |      | 0.01 | 0.50 | -0.28 | 0.50           | -0.20          | -0.24         | 0.1509            | 0.0073 | -9.9         | 0.9 | -9.9         |     |          |    | $\vdash$   |
| READING            | 3 387722             | 0  | B.1.2.1            | 2 12449            |        | 0.16 | 0.00 | 0.65 |      | 0.01 | 0.34 | -0.26 | -0.14          | 0.34           | -0.20         | 0.1509            | 0.0068 | 9.9          | 1.1 | 9.9          | 1.2 |          |    | $\vdash$   |
| READING            | 3 981019             | 0  | A.1.4.1            | 2 12449            |        | 0.16 | 0.13 | 0.03 |      | 0.01 | 0.34 | -0.20 | -0.14          | -0.26          | 0.45          | 1.2221            | 0.0065 | -3.1         | 1.0 | 9.9          |     | 1        | 1  | +  |
| READING            | 3 947312             | 0  | A.1.4.1<br>A.1.3.1 | 2 12449            |        | 0.10 | 0.21 | 0.13 |      | 0.00 | 0.45 | 0.46  | -0.13          | -0.25          | -0.25         | -0.5469           | 0.0003 | -9.9         | 0.9 | -9.9         | 0.8 | 1        | 1  | +  |
| READING            | 3 378581             | 0  | A.1.3.1            | 2 12449            |        | 0.82 | 0.11 | 0.04 | 0.07 | 0.00 | 0.48 | 0.48  | -0.24          | -0.23          | -0.25         | -0.9496           | 0.0073 | -9.9         | 0.9 | -9.9         | 0.3 |          |    | $\vdash$   |
| READING            | 3 613387             | 0  | A.1.3.1<br>A.1.1.1 | 2 12449            | _      | 0.82 | 0.07 | 0.78 | 0.04 | 0.01 | 0.43 | -0.25 | -0.28          | 0.43           | -0.23         | -0.5477           | 0.0075 | -9.9<br>-9.9 | 0.9 | -9.9<br>-9.9 | 0.7 | 1        | 1  | +  |
| KEADING            | 5 015567             | U  | Λ.1.1.1            | 4 14449            | 0.70   | 0.10 | 0.03 | 0.70 | 0.00 | 0.01 | 0.43 | -0.23 | -0.21          | 0.43           | -0.22         | -0.5411           | 0.0073 | -7.7         | 0.9 | -2.9         | 0.9 |          | 1  | <u> </u>   |

| READING | 3 | 596772 | 0 | A.1.4.1   | 2 | 124495 | 0.82 | 0.09 | 0.82 | 0.05 | 0.04 0.0 | .00 | 0.43 | -0.26 | 0.43  | -0.22 | -0.21 | -1.2020 | 0.0086 | 9.9  | 1.1 1.6  | 1.0 |    |    |    |
|---------|---|--------|---|-----------|---|--------|------|------|------|------|----------|-----|------|-------|-------|-------|-------|---------|--------|------|----------|-----|----|----|----|
| READING | 3 | 396081 | 0 | A.1.1.1   | 2 | 124495 | 0.70 | 0.11 | 0.10 | 0.70 | 0.08 0.0 | .01 | 0.41 | -0.21 | -0.19 | 0.41  | -0.22 | -0.1068 | 0.0070 | 9.9  | 1.0 7.0  | 1.1 |    |    |    |
| READING | 3 | 749852 | 0 | A.1.6.1   | 2 | 124495 | 0.62 | 0.10 | 0.62 | 0.18 | 0.09 0.0 | .00 | 0.36 | -0.23 | 0.36  | -0.11 | -0.21 | 0.2297  | 0.0068 | 9.9  | 1.1 9.9  | 1.2 |    |    |    |
| ELA     | 3 | 133694 | 1 | B.2.1.1   | 2 | 69320  | 0.62 | 0.08 | 0.09 | 0.62 | 0.20 0.0 | .00 | 0.46 | -0.27 | -0.19 | 0.46  | -0.22 | 0.3023  | 0.0090 | -2.5 | 1.0 -5.7 | 1.0 | A- | A- | A- |
| ELA     | 3 | 629142 | 1 | B.1.1.1   | 2 | 69320  | 0.52 | 0.08 | 0.19 | 0.21 | 0.52 0.0 | .00 | 0.46 | -0.16 | -0.14 | -0.31 | 0.46  | 0.8699  | 0.0087 | -4.7 | 1.0 -2.9 | 1.0 | A- | A- | A- |
| ELA     | 3 | 653437 | 1 | A.1.4.1   | 1 | 69320  | 0.72 | 0.72 | 0.09 | 0.08 | 0.11 0.0 | .00 | 0.53 | 0.53  | -0.27 | -0.28 | -0.28 | -0.2493 | 0.0095 | -9.9 | 0.9 -9.9 | 0.8 | A+ | A- | A- |
| ELA     | 3 | 155970 | 1 | A.1.3.1   | 2 | 69320  | 0.69 | 0.14 | 0.11 | 0.69 | 0.05 0.0 | .01 | 0.37 | -0.17 | -0.18 | 0.37  | -0.25 | -0.1223 | 0.0094 | 9.9  | 1.1 9.9  | 1.2 | A+ | A- | A- |
| ELA     | 3 | 452627 | 1 | A.1.5.1   | 3 | 69320  | 0.54 | 0.16 | 0.54 | 0.19 | 0.11 0.0 | .00 | 0.35 | -0.30 | 0.35  | -0.10 | -0.07 | 0.7414  | 0.0088 | 9.9  | 1.1 9.9  | 1.2 | A- | A- | A- |
| ELA     | 3 | 412268 | 1 | A.1.3.1   | 2 | 69320  | 0.76 | 0.11 | 0.04 | 0.08 | 0.76 0.0 | .00 | 0.44 | -0.30 | -0.30 | -0.10 | 0.44  | -0.5408 | 0.0100 | -6.1 | 1.0 8.3  | 1.1 | A+ | A- | A- |
| ELA     | 3 | 863036 | 1 | B.1.1.1   | 2 | 69320  | 0.57 | 0.57 | 0.03 | 0.33 | 0.07 0.0 | .01 | 0.38 | 0.38  | -0.23 | -0.18 | -0.25 | 0.6154  | 0.0088 | 9.9  | 1.1 9.9  | 1.1 | A+ | A- | A- |
| ELA     | 3 | 814418 | 1 | A.1.2.2   | 2 | 69320  | 0.84 | 0.84 | 0.03 | 0.06 | 0.06 0.0 | .01 | 0.48 | 0.48  | -0.27 | -0.26 | -0.26 | -1.1910 | 0.0114 | -9.9 | 0.9 -9.9 | 0.7 | A- | A- | C- |
| ELA     | 3 | 949839 | 1 | B-C.3.1.1 | 2 | 14010  | 0.55 | 0.11 | 0.17 | 0.55 | 0.15 0.0 | .02 | 0.44 | -0.26 | -0.11 | 0.44  | -0.24 | 0.6463  | 0.0195 | 1.1  | 1.0 0.4  | 1.0 | A+ | A- | A- |
| ELA     | 3 | 395870 | 1 | B-K.1.1.2 | 2 | 14010  | 0.66 | 0.66 | 0.14 | 0.12 | 0.08 0.0 |     | 0.40 | 0.40  | -0.19 | -0.25 | -0.14 | 0.0468  | 0.0203 | 5.1  | 1.1 9.9  | 1.2 | A- | A- | A- |
| ELA     | 3 | 354965 | 1 | B-C.2.1.1 | 2 | 14010  | 0.29 | 0.30 | 0.29 | 0.19 | 0.20 0.0 | .02 | 0.16 | 0.06  | 0.16  | -0.16 | -0.07 | 2.0685  | 0.0209 | 9.9  | 1.2 9.9  | 1.8 | A- | A- | A+ |
| ELA     | 3 | 257948 | 1 | B-V.4.1.2 | 2 | 14010  | 0.81 | 0.81 | 0.09 | 0.06 | 0.03 0.0 | .01 | 0.34 | 0.34  | -0.17 | -0.20 | -0.18 | -0.9999 | 0.0240 | 1.8  | 1.0 9.9  | 1.3 | A- | A- | A- |
| ELA     | 3 | 426811 | 1 | B-K.1.1.1 | 2 | 14010  | 0.51 | 0.14 | 0.24 | 0.10 | 0.51 0.0 | .01 | 0.26 | -0.26 | 0.01  | -0.14 | 0.26  | 0.8349  | 0.0194 | 9.9  | 1.2 9.9  | 1.3 | A- | A+ | A+ |
| ELA     | 3 | 241873 | 1 | B-K.1.1.3 | 2 | 14010  | 0.59 | 0.09 | 0.59 | 0.12 | 0.19 0.0 | .01 | 0.40 | -0.32 | 0.40  | -0.18 | -0.11 | 0.4132  | 0.0197 | 6.8  | 1.1 6.2  | 1.1 | A- | A- | A- |
| ELA     | 3 | 787269 | 1 | B-V.4.1.1 | 2 | 14010  | 0.79 | 0.06 | 0.10 | 0.04 | 0117     | .00 | 0.55 | -0.34 | -0.29 | -0.25 | 0.55  | -0.8319 | 0.0231 | -9.9 | 0.8 -9.9 | 0.7 |    | A- | B- |
| ELA     | 3 | 535997 | 1 | B-V.4.1.1 | 2 | 14010  | 0.58 | 0.12 | 0.20 | 0.58 | 0.10 0.0 | _   | 0.44 | -0.25 | -0.12 | 0.44  | -0.28 | 0.4749  | 0.0196 | 0.7  | 1.0 0.4  | 1.0 | A- | A- | A- |
| ELA     | 3 | 371653 | 2 | B-V.4.1.2 | 2 | 13860  | 0.73 | 0.11 | 0.08 | 0.73 | 0.08 0.0 | .01 | 0.52 | -0.22 | -0.29 | 0.52  | -0.30 | -0.3168 | 0.0215 | -9.9 | 0.9 -9.9 | 0.8 | A- | A+ | A- |
| ELA     | 3 | 809221 | 2 | B-K.1.1.3 | 2 | 13860  | 0.50 | 0.26 | 0.08 | 0.50 | 0.14 0.0 | _   | 0.43 | -0.21 | -0.25 | 0.43  | -0.15 | 0.9594  | 0.0195 | -1.2 | 1.0 0.6  |     |    | A- | A- |
| ELA     | 3 | 856560 | 2 | B-V.4.1.2 | 2 | 13860  | 0.50 | 0.50 | 0.36 | 0.05 | 0.07 0.0 | .01 | 0.32 | 0.32  | -0.04 | -0.29 | -0.29 | 0.9445  | 0.0195 | 9.9  | 1.1 9.9  | 1.2 | B- | A- | B- |
| ELA     | 3 | 884745 | 2 | B-C.3.1.1 | 3 | 13860  | 0.43 | 0.33 | 0.43 | 0.10 | 0.13 0.0 | .01 | 0.31 | -0.06 | 0.31  | -0.25 | -0.13 | 1.3230  | 0.0197 | 9.9  | 1.1 9.9  | 1.3 | A- | A- | A- |
| ELA     | 3 | 575066 | 2 | B-C.3.1.2 | 3 | 13860  | 0.35 | 0.20 | 0.27 | 0.18 | 0.35 0.0 | .00 | 0.34 | -0.11 | -0.20 | -0.06 | 0.34  | 1.8016  | 0.0203 | 6.0  | 1.1 9.9  | 1.2 | A- | A- | A- |
| ELA     | 3 | 888679 | 2 | B-C.3.1.2 | 3 | 13860  | 0.62 | 0.62 | 0.12 | 0.13 | 0.12 0.0 | .00 | 0.44 | 0.44  | -0.24 | -0.25 | -0.15 | 0.2954  | 0.0201 | 1.4  | 1.0 -0.5 | 1.0 | A- | A- | A- |
| ELA     | 3 | 740987 | 2 | B-V.4.1.1 | 2 | 13860  | 0.75 | 0.09 | 0.08 | 0.08 | 0.75 0.0 | .00 | 0.59 | -0.34 | -0.30 | -0.28 | 0.59  | -0.4751 | 0.0221 | -9.9 | 0.8 -9.9 | 0.6 | A- | A- | A+ |
| ELA     | 3 | 723334 | 2 | B-C.3.1.3 | 3 | 13860  | 0.50 | 0.23 | 0.50 | 0.13 | 0.14 0.0 | .01 | 0.40 | -0.21 | 0.40  | -0.14 | -0.18 | 0.9694  | 0.0195 | 4.1  | 1.0 5.7  | 1.1 | A- | A- | A- |
| ELA     | 3 | 676052 | 3 | B-K.1.1.3 | 2 | 13843  | 0.48 | 0.48 | 0.12 | 0.13 | 0.26 0.0 | .01 | 0.30 | 0.30  | -0.14 | -0.17 | -0.11 | 1.0557  | 0.0195 | 9.9  | 1.2 9.9  | 1.3 | A+ | A+ | A+ |
| ELA     | 3 | 859893 | 3 | B-C.2.1.1 | 2 | 13843  | 0.42 | 0.19 | 0.26 | 0.42 | 0.13 0.0 |     | 0.29 | -0.14 | -0.05 | 0.29  | -0.20 | 1.3628  | 0.0197 | 9.9  |          | 1.3 | A- | A- | A- |
| ELA     | 3 | 664936 | 3 | B-C.3.1.1 | 2 | 13843  | 0.36 | 0.37 | 0.11 | 0.36 | 0.15 0.0 |     | 0.24 | -0.02 | -0.28 | 0.24  | -0.03 | 1.7087  | 0.0202 | 9.9  |          |     |    | A+ | A- |
| ELA     | 3 | 956674 | 3 | B-V.4.1.1 | 2 | 13843  | 0.72 | 0.72 | 0.13 | 0.07 | 0.07 0.0 | .00 | 0.45 | 0.45  | -0.18 | -0.28 | -0.26 | -0.3152 | 0.0215 | -2.8 | 1.0 -3.2 | 0.9 | A+ | A- | A- |
| ELA     | 3 | 912895 | 3 | B-V.4.1.2 | 2 | 13843  | 0.69 | 0.15 | 0.09 | 0.06 | 0.69 0.0 | .01 | 0.52 | -0.23 | -0.30 | -0.30 | 0.52  | -0.1118 | 0.0209 | -9.9 | 0.9 -9.3 | 0.8 |    | A- | A- |
| ELA     | 3 | 942203 | 3 | B-K.1.1.1 | 2 | 13843  | 0.60 | 0.19 | 0.60 | 0.12 | 0.00     | .02 | 0.54 | -0.28 | 0.54  | -0.24 | -0.27 | 0.4164  | 0.0199 | -9.9 | 0.9 -9.9 | 0.8 |    | A+ | A+ |
| ELA     | 3 | 737743 | 3 | B-K.1.1.1 | 2 | 13843  | 0.50 | 0.22 | 0.13 | 0.15 | 0.50 0.0 | _   | 0.34 | -0.15 | -0.17 | -0.14 | 0.34  | 0.9530  | 0.0195 | 9.9  | 1.1 9.9  | 1.2 |    | A+ | A+ |
| ELA     | 3 | 630429 | 3 | B-V.4.1.1 | 2 | 13843  | 0.80 | 0.80 | 0.08 | 0.07 | 0.05 0.0 |     | 0.39 | 0.39  | -0.24 | -0.19 | -0.20 | -0.8846 | 0.0237 | 0.2  | 1.0 -2.5 | 0.9 |    | A- | A- |
| ELA     | 3 | 645442 | 4 | B-C.2.1.1 | 3 | 13810  | 0.56 | 0.19 | 0.56 | 0.15 |          | .00 | 0.46 | -0.19 | 0.46  | -0.22 | -0.24 | 0.6761  | 0.0199 | 0.3  | 1.0 -0.9 | 1.0 |    | A+ | A- |
| ELA     | 3 | 665554 | 4 | B-C.3.1.1 | 2 | 13810  | 0.61 | 0.61 | 0.10 | 0.13 | 0.15 0.0 |     | 0.40 | 0.40  | -0.18 | -0.21 | -0.19 | 0.4045  | 0.0202 | 8.4  | 1.1 4.8  | 1.1 |    | A- | A- |
| ELA     | 3 | 757358 | 4 | B-C.3.1.3 | 2 | 13810  | 0.63 | 0.08 | 0.63 | 0.09 | 0.18 0.0 |     | 0.45 | -0.31 | 0.45  | -0.19 | -0.18 | 0.2940  | 0.0204 | 1.7  | 1.0 0.0  |     |    | A- | A- |
| ELA     | 3 | 130301 | 4 | B-K.1.1.2 | 3 | 13810  | 0.71 | 0.71 | 0.14 | 0.09 | 0.06 0.0 |     | 0.45 | 0.45  | -0.20 | -0.28 | -0.22 | -0.2027 | 0.0215 | 0.1  | 1.0 -2.4 | 1.0 |    | A- | A- |
| ELA     | 3 | 712013 | 4 | B-K.1.1.3 | 2 | 13810  | 0.51 | 0.17 | 0.21 | 0.51 | 0.11 0.0 |     | 0.41 | -0.21 | -0.13 | 0.41  | -0.21 | 0.9812  | 0.0198 | 6.4  | 1.1 7.5  |     |    | A- | A- |
| ELA     | 3 | 461288 | 4 | B-V.4.1.1 | 2 | 13810  | 0.73 | 0.07 | 0.10 | 0.09 | 0.73 0.0 |     | 0.58 | -0.28 | -0.30 | -0.31 | 0.58  | -0.3295 | 0.0219 | -9.9 | 0.8 -9.9 | 0.7 |    | A- | A- |
| ELA     | 3 | 989692 | 4 | B-V.4.1.2 | 2 | 13810  | 0.84 | 0.03 | 0.09 | 0.03 | 0.84 0.0 |     | 0.53 | -0.26 | -0.36 | -0.24 | 0.53  | -1.1515 | 0.0256 | -9.9 | 0.8 -8.3 | 0.7 |    | A- | A- |
| ELA     | 3 | 641181 | 4 | B-C.2.1.2 | 1 | 13810  | 0.64 | 0.09 | 0.06 | 0.64 | 0.20 0.0 |     | 0.42 | -0.23 | -0.23 | 0.42  | -0.18 | 0.2427  | 0.0205 | 5.8  |          | 1.1 |    | A- | A- |
| ELA     | 3 | 826954 | 5 | B-C.2.1.2 | 2 | 13797  | 0.58 | 0.13 | 0.58 | 0.20 | 0.08 0.0 |     | 0.46 | -0.32 | 0.46  | -0.11 | -0.27 | 0.5339  | 0.0197 | -2.7 | 1.0 -3.5 | 1.0 | A- | A- | A- |
| ELA     | 3 | 780145 | 5 | B-C.3.1.3 | 2 | 13797  | 0.41 | 0.41 | 0.36 | 0.08 | 0.15 0.0 |     | 0.24 | 0.24  | 0.00  | -0.17 | -0.19 | 1.4729  | 0.0197 | 9.9  |          |     |    | A- | A- |
| ELA     | 3 | 574860 | 5 | B-C.3.1.1 | 3 | 13797  | 0.80 | 0.80 | 0.06 | 0.11 | 0.03 0.0 |     | 0.43 | 0.43  | -0.24 | -0.26 | -0.18 | -0.7774 | 0.0235 | -2.8 |          | 0.7 |    | A- | A- |
| ELA     | 3 | 737335 | 5 | B-C.3.1.2 | 3 | 13797  | 0.56 | 0.22 | 0.10 | 0.12 |          | .00 | 0.42 | -0.17 | -0.28 | -0.16 | 0.42  | 0.6742  | 0.0196 | 3.0  |          | + + |    | A- | A- |
| ELA     | 3 | 503317 | 5 | B-C.3.1.2 | 3 | 13797  | 0.70 | 0.09 | 0.08 | 0.70 | 0.12 0.0 |     | 0.52 | -0.30 | -0.27 | 0.52  | -0.23 | -0.1222 | 0.0210 |      | 0.9 -9.9 | 0.0 |    | A- | A- |
| ELA     | 3 | 951046 | 5 | B-V.4.1.1 | 2 | 13797  | 0.40 | 0.10 | 0.31 | 0.40 | 00       | .00 | 0.17 | -0.34 | 0.06  | 0.17  | -0.02 | 1.4903  | 0.0197 | 9.9  | 1.3 9.9  | 1.5 |    | A- | A- |
| ELA     | 3 | 217284 | 5 | B-V.4.1.2 | 2 | 13797  | 0.90 | 0.06 | 0.90 | 0.02 | 0.00     | .00 | 0.51 | -0.41 | 0.51  | -0.22 | -0.18 | -1.8110 | 0.0308 | -9.9 | 0.8 -9.9 | 0.4 |    |    | B- |
| ELA     | 3 | 446530 | 5 | B-C.2.1.1 | 2 | 13797  | 0.43 | 0.24 | 0.18 | 0.12 | 0.43 0.0 | .03 | 0.26 | -0.07 | -0.10 | -0.17 | 0.26  | 1.3398  | 0.0196 | 9.9  | 1.2 9.9  | 1.3 | A- | A- | A- |

| ELA     | 3 263141 | 6 | A.2.3.1   | 2 55 | 157 0. | 72 0.1 | 0.09   | 0.72 | 0.09 | 0.01 | 0.55 | -0.30 | -0.26 | 0.55  | -0.29 | -0.2093 | 0.0108 | -9.9 | 0.9 | -9.9 | 0.7 | A+ | A- | A-       |
|---------|----------|---|-----------|------|--------|--------|--------|------|------|------|------|-------|-------|-------|-------|---------|--------|------|-----|------|-----|----|----|----------|
| ELA     | 3 953947 | 6 |           |      |        | 56 0.0 |        |      |      | 0.01 | 0.39 | -0.30 | 0.39  | -0.23 | -0.29 | 0.7143  | 0.0108 | 9.9  | 1.1 | 9.9  |     | A+ | A- | A-       |
| ELA     | 3 206864 | 6 | B.3.1.1   |      | 157 0. |        |        | 0.10 |      |      | 0.37 | -0.29 | -0.17 | -0.24 | 0.47  | 0.7143  | 0.0000 | -3.5 | 1.0 |      | 1.0 |    | A- | A-       |
| ELA     | 3 463075 | 6 | A.2.4.1   |      | 157 0. |        |        | 0.10 | 0.05 |      | 0.55 | 0.55  | -0.17 | -0.32 | -0.30 | -0.9368 | 0.0103 | -9.9 | 0.8 | -9.9 | 0.6 |    | B- | B-       |
| ELA     | 3 486678 | 6 | A.2.4.1   |      | 157 0. |        |        | 0.77 | 0.03 |      | 0.58 | -0.41 | -0.25 | 0.58  | -0.22 | -0.5446 | 0.0122 | -9.9 | 0.8 | -9.9 |     | A- | A- | B-       |
| ELA     | 3 740323 | 6 | A.2.3.1   |      | 157 0. |        |        | 0.77 | 0.04 |      | 0.54 | -0.41 | -0.26 | 0.54  | -0.22 | -0.5778 | 0.0113 | -9.9 | 0.9 | -9.9 |     | A- | A- | A-       |
| ELA     | 3 552250 | 6 |           |      | 157 0. | _      | _      | _    | 0.08 | 0.00 | 0.34 | -0.28 | -0.26 | 0.49  | -0.23 | 0.0498  | 0.0114 | -9.9 | 1.0 |      | 0.7 |    | A- | A-       |
| ELA     | 3 688099 | 6 |           |      | 157 0. | _      | _      | _    | 0.17 | 0.00 | 0.49 | -0.20 | 0.29  | -0.15 | -0.23 | 1.1560  | 0.0104 | 9.9  | 1.0 | 9.9  | 1.3 |    | A- | A-       |
| ELA     | 3 376582 | 6 |           |      | 824 0. |        |        |      | 0.05 |      | 0.46 | 0.46  | -0.25 | -0.13 | -0.15 | 0.2960  | 0.0004 | -1.0 | 1.0 |      | 0.9 |    | A- | A+       |
| ELA     | 3 657974 | 6 |           |      | 824 0. |        |        |      |      |      | 0.28 | -0.20 | 0.28  | -0.03 | -0.15 | 1.1506  | 0.0207 | 9.9  | 1.2 | 9.9  | 1.3 |    | A- | A-       |
| ELA     | 3 415621 | 6 |           |      | 824 0. |        |        | 0.11 | 0.71 | 0.01 | 0.56 | -0.29 | -0.33 | -0.23 | 0.56  | -0.1761 | 0.0214 | -9.9 | 0.9 | -9.9 | 0.8 |    | A- | B-       |
| ELA     | 3 262561 | 6 |           |      | 824 0. |        |        | 0.79 |      | 0.01 | 0.56 | -0.33 | -0.32 | 0.56  | -0.25 | -0.7028 | 0.0214 | -9.9 | 0.8 | -9.9 |     | A- | A- | A-       |
| ELA     | 3 580542 | 6 | A-V.4.1.1 |      | 824 0. |        | 0.07   | 0.79 |      |      | 0.53 | -0.29 | -0.34 | 0.53  | -0.23 | -0.7357 | 0.0234 | -9.9 | 0.9 | -9.9 |     | A- | A- | A-       |
| ELA     | 3 346861 | 6 | A-K.1.1.1 |      | 824 0. |        |        | 0.10 |      |      | 0.31 | 0.23  | -0.24 | -0.16 | -0.10 | 0.5049  | 0.0201 | 9.9  | 1.2 | 9.9  | 1.3 |    | A+ | A-       |
| ELA     | 3 696922 | 6 | A-K.1.1.2 |      | 824 0. |        |        | 0.13 | 0.10 |      | 0.49 | -0.30 | 0.49  | -0.23 | -0.18 | 0.3434  | 0.0203 | -4.4 | 1.0 | -6.3 | 0.9 |    | A- | A-       |
| ELA     | 3 680021 | 6 | A-V.4.1.2 |      | 824 0. |        |        | 0.13 | 0.77 |      | 0.51 | -0.30 | -0.24 | -0.27 | 0.51  | -0.5758 | 0.0203 | -9.5 | 0.9 | -9.9 | 0.8 |    | A- | A-       |
| ELA     | 3 756645 | 7 | A-K.1.1.1 |      | 752 0. |        |        | 0.43 |      |      | 0.34 | -0.22 | -0.23 | 0.34  | -0.04 | 1.3907  | 0.0228 | 9.9  | 1.1 | 9.9  | 1.2 |    | A- | A-       |
| ELA     | 3 918930 | 7 | A-C.2.1.1 |      | 752 0. |        |        | 0.19 |      |      | 0.31 | 0.31  | -0.20 | -0.11 | -0.13 | 0.7306  | 0.0199 | 9.9  | 1.2 | 9.9  | 1.3 |    | A+ | A-       |
| ELA     | 3 916489 | 7 | A-C.2.1.1 |      | 752 0. |        |        | 0.30 |      |      | 0.42 | -0.19 | -0.17 | -0.20 | 0.42  | 1.2302  | 0.0197 | 0.5  | 1.0 | 6.1  |     | A- | A- | A-       |
| ELA     | 3 422859 | 7 | A-K.1.1.1 |      | 752 0. |        |        | 0.14 |      |      | 0.46 | -0.16 | -0.24 | -0.27 | 0.46  | 0.4036  | 0.0202 | -0.9 | 1.0 | -0.7 | 1.0 |    | A- | A-       |
| ELA     | 3 196262 | 7 | A-V.4.1.2 |      | 752 0. | _      | _      | 0.51 | 0.09 |      | 0.41 | -0.18 | -0.08 | 0.41  | -0.34 | 1.0039  | 0.0197 | 5.3  | 1.1 | 6.2  | _   | A+ | A+ | A-       |
| ELA     | 3 192090 | 7 | A-V.4.1.1 |      | 752 0. | _      |        | 0.05 | 0.09 | _    | 0.49 | -0.27 | 0.49  | -0.25 | -0.25 | -0.6273 | 0.0231 | -7.7 | 0.9 | -5.6 | 0.9 |    | A- | A-       |
| ELA     | 3 398866 | 7 | A-V.4.1.1 |      | 752 0. |        |        | 0.00 | 0.07 | 0.01 | 0.55 | 0.55  | -0.30 | -0.29 | -0.30 | -0.7116 | 0.0235 | -9.9 | 0.8 | -9.9 |     | A- | A- | A-       |
| ELA     | 3 591957 | 7 | A-V.4.1.2 |      | 752 0. |        |        | 0.11 | 0.06 |      | 0.49 | -0.23 | 0.49  | -0.22 | -0.33 | -0.1192 | 0.0214 | -5.1 | 1.0 | -6.0 | 0.9 | A- | A- | B-       |
| ELA     | 3 405580 | 8 |           |      | 843 0. |        |        |      | 0.13 |      | 0.26 | -0.19 | 0.26  | -0.10 | -0.06 | 1.1773  | 0.0195 | 9.9  | 1.2 | 9.9  | 1.3 |    | A+ | A-       |
| ELA     | 3 664922 | 8 |           |      | 843 0. |        |        | +    | 0.24 |      | 0.13 | 0.13  | -0.06 | -0.23 | 0.03  | 0.9158  | 0.0195 | 9.9  | 1.4 | 9.9  | 1.6 |    | A- | A-       |
| ELA     | 3 232809 | 8 | A-C.2.1.1 |      | 843 0. | 60 0.1 | 5 0.15 | 0.10 | 0.60 | 0.01 | 0.47 | -0.31 | -0.16 | -0.19 | 0.47  | 0.4951  | 0.0198 | -3.8 | 1.0 | -5.0 | 0.9 | A+ | A- | A-       |
| ELA     | 3 763464 | 8 | A-V.4.1.2 | 2 13 | 843 0. | 80 0.8 | 0.05   | 0.04 | 0.10 | 0.00 | 0.35 | 0.35  | -0.27 | -0.19 | -0.13 | -0.7846 | 0.0236 | 3.1  | 1.0 | 5.4  | 1.2 | A+ | A- | B-       |
| ELA     | 3 638944 | 8 | A-V.4.1.2 | 2 13 | 843 0. | 76 0.1 | 2 0.76 | 0.06 | 0.05 | 0.01 | 0.45 | -0.20 | 0.45  | -0.29 | -0.24 | -0.5033 | 0.0224 | -4.8 | 1.0 | 0.9  | 1.0 | A+ | A- | A-       |
| ELA     | 3 898350 | 8 |           | 2 13 | 843 0. | 72 0.1 | 0 0.14 | 0.04 | 0.72 | 0.01 | 0.40 | -0.27 | -0.13 | -0.27 | 0.40  | -0.1913 | 0.0213 | 2.6  | 1.0 | 3.0  | 1.1 | A+ | A- | A-       |
| ELA     | 3 150082 | 8 | A-V.4.1.1 | 2 13 | 843 0. | 49 0.0 | 8 0.13 | 0.49 | 0.29 | 0.01 | 0.35 | -0.25 | -0.23 | 0.35  | -0.05 | 1.0679  | 0.0195 | 9.9  | 1.1 | 9.9  | 1.1 | A- | A+ | A+       |
| ELA     | 3 293151 | 8 | A-C.2.1.1 | 2 13 | 843 0. | 36 0.1 | 5 0.29 | 0.19 | 0.36 | 0.01 | 0.22 | -0.20 | -0.01 | -0.07 | 0.22  | 1.7834  | 0.0201 | 9.9  | 1.2 | 9.9  | 1.5 | A+ | A- | A-       |
| ELA     | 3 849706 | 9 | A-K.1.1.1 | 2 13 | 738 0. | 63 0.1 | 5 0.12 | 0.09 | 0.63 | 0.00 | 0.47 | -0.32 | -0.23 | -0.13 | 0.47  | 0.3007  | 0.0204 | -2.0 | 1.0 | -3.3 | 1.0 | A- | A+ | A-       |
| ELA     | 3 925126 | 9 | A-V.4.1.1 | 2 13 | 738 0. | 69 0.1 | 3 0.09 | 0.69 | 0.09 | 0.01 | 0.45 | -0.24 | -0.19 | 0.45  | -0.25 | -0.0377 | 0.0211 | -0.4 | 1.0 | -1.5 | 1.0 | A+ | A- | A-       |
| ELA     | 3 572665 | 9 | A-V.4.1.1 | 2 13 | 738 0. | 80 0.0 | 8 0.06 | 0.06 | 0.80 | 0.01 | 0.53 | -0.26 | -0.31 | -0.29 | 0.53  | -0.8251 | 0.0239 | -9.9 | 0.9 | -9.9 | 0.7 | A- | A- | A-       |
| ELA     | 3 613018 | 9 | A-K.1.1.1 | 2 13 | 738 0. | 76 0.0 | 5 0.76 | 0.06 | 0.12 | 0.01 | 0.57 | -0.30 | 0.57  | -0.32 | -0.30 | -0.5373 | 0.0227 | -9.9 | 0.8 | -9.9 | 0.7 | A- | A- | A-       |
| ELA     | 3 581726 | 9 | A-K.1.1.1 | 1 13 | 738 0. | 66 0.6 | 6 0.11 | 0.11 | 0.12 |      | 0.60 | 0.60  | -0.41 | -0.29 | -0.20 | 0.1130  | 0.0208 | -9.9 | 0.8 | -9.9 | 0.7 | A- | A- | A-       |
| ELA     | 3 724823 | 9 | A-K.1.1.2 | 3 13 | 738 0. | 52 0.1 | 1 0.25 | 0.52 | 0.11 | 0.00 | 0.34 | -0.26 | -0.04 | 0.34  | -0.22 | 0.8827  | 0.0198 | 9.9  | 1.2 | 9.9  | 1.2 | A- | A- | A-       |
| ELA     | 3 154891 | 9 | A-C.2.1.1 | 2 13 | 738 0. | 54 0.2 | 4 0.54 | 0.10 |      | 0.00 | 0.34 | -0.07 | 0.34  | -0.21 | -0.25 | 0.7802  | 0.0199 | 9.9  | 1.2 | 9.9  | 1.2 | A- | A- | A-       |
| ELA     | 3 184426 | 9 | A-K.1.1.2 |      | 738 0. |        |        |      |      | 0.03 | 0.34 | 0.34  | -0.11 | -0.14 | -0.24 | 1.2892  | 0.0199 | 9.9  | 1.1 | 9.9  | 1.3 | A- | A- | A-       |
| READING | 4 684037 | 0 |           |      | 593 0. |        |        | 0.06 | 0.73 |      | 0.52 | -0.27 | -0.29 | -0.23 | 0.52  | -0.2269 | 0.0070 | -9.9 | 0.9 |      | 0.8 |    |    |          |
| READING | 4 455230 | 0 |           |      | 593 0. |        |        | 0.09 |      |      | 0.41 | -0.27 | 0.41  | -0.24 | -0.13 | 0.4115  | 0.0065 | -1.8 | 1.0 |      | 1.0 |    |    |          |
| READING | 4 497464 | 0 | A.2.2.2   |      | 593 0. |        |        |      |      |      | 0.39 | 0.39  | -0.21 | -0.23 | -0.23 | -0.6730 | 0.0076 | -8.4 | 1.0 |      | 0.9 |    |    |          |
| READING | 4 124780 | 0 | A.2.2.1   |      | 593 0. |        |        | +    |      | 0.00 | 0.41 | -0.24 | 0.41  | -0.21 | -0.20 | -0.2256 | 0.0070 | 4.2  | 1.0 |      | 1.0 |    |    |          |
| READING | 4 957687 | 0 | A.2.4.1   |      | 593 0. |        |        | 0.74 | 0.12 |      | 0.52 | -0.29 | -0.32 | 0.52  | -0.22 | -0.3832 | 0.0072 | -9.9 | 0.9 | -9.9 | 0.8 |    |    |          |
| READING | 4 233178 | 0 | A.2.3.1   |      | 593 0. | _      |        | _    | 0.58 |      | 0.45 | -0.28 | -0.26 | -0.11 | 0.45  | 0.6088  | 0.0064 | -9.9 | 1.0 |      | 1.0 |    |    |          |
| READING | 4 461518 | 0 | A.2.3.1   |      | 593 0. |        |        | 0.09 | 0.08 | 0.00 | 0.37 | 0.37  | -0.13 | -0.21 | -0.25 | -0.1784 | 0.0070 | 9.9  | 1.1 | 9.9  | 1.1 |    |    | <u> </u> |
| READING | 4 651740 | 0 |           |      | 593 0. | _      |        | 0.80 | 0.05 |      | 0.55 | -0.32 | -0.30 | 0.55  | -0.26 | -0.8201 | 0.0079 | -9.9 | 0.9 | -9.9 | 0.7 |    |    | <u> </u> |
| READING | 4 130045 | 0 | 11111011  |      | 593 0. | _      |        | 0.79 |      | 0.00 | 0.47 | -0.28 | -0.23 | 0.47  | -0.25 | -0.6389 | 0.0076 | -9.9 | 0.9 | -9.9 | 0.8 |    |    |          |
| READING | 4 728295 | 0 |           |      | 593 0. |        | _      | 0.17 | 0.27 | 0.00 | 0.18 | -0.14 | 0.18  | -0.14 | 0.03  | 1.2507  | 0.0063 | 9.9  | 1.2 | 9.9  | 1.4 |    |    |          |
| READING | 4 431563 | 0 | A.1.3.1   | 126  | 593 0. | 54 0.0 | 9 0.25 | 0.12 | 0.54 | 0.00 | 0.27 | -0.27 | -0.04 | -0.13 | 0.27  | 0.9220  | 0.0063 | 9.9  | 1.2 | 9.9  | 1.2 |    |    |          |

| READING            | 4 659609             | 0 | A.1.4.1            | 126593               | 0.72 | 0.06 | 0.07 | 0.15 | 0.72   | 0.00 | 0.43 | -0.22          | -0.20 | -0.25 | 0.43 -0.3395                   | 0.0072 | 9.3 1.              | 0 -3.3 | 1.0        | $\overline{1}$ | $\top$ |
|--------------------|----------------------|---|--------------------|----------------------|------|------|------|------|--------|------|------|----------------|-------|-------|--------------------------------|--------|---------------------|--------|------------|----------------|--------|
| READING            | 4 244615             | 0 | A.1.4.1            | 126593               | 0.67 | 0.20 | 0.67 | 0.04 |        | 0.00 | 0.43 | -0.24          | 0.43  | -0.21 | -0.24 -0.1833                  | 0.0070 | 9.9 1.              |        | 1.0        | +              | 1      |
| READING            | 4 126038             | 0 | A.1.4.1            | 126593               | 0.71 | 0.06 | 0.10 | 0.13 | 0.71   | 0.00 | 0.44 | -0.24          | -0.24 | -0.21 | 0.44 -0.0997                   | 0.0069 | -9.9 1.             | 0 -9.9 | 0.9        |                |        |
| READING            | 4 213205             | 0 | A.1.2.1            | 126593               | 0.59 | 0.59 | 0.09 | 0.21 | 0.11   | 0.00 | 0.15 | 0.15           | -0.17 | 0.06  | -0.15 0.5137                   | 0.0064 | 9.9 1.              | 3 9.9  | 1.4        | 1              |        |
| READING            | 4 784267             | 0 | B.3.3.4            | 2 126593             | 0.58 | 0.14 | 0.15 | 0.58 | 0.12   | 0.01 | 0.35 | -0.13          | -0.18 | 0.35  | -0.17 0.6728                   | 0.0064 | 9.9 1.              | 1 9.9  | 1.1        | 1              |        |
| READING            | 4 986107             | 0 | A.2.4.1            | 2 126593             | 0.68 | 0.09 | 0.08 | 0.68 | 0.15   | 0.01 | 0.37 | -0.23          | -0.24 | 0.37  | -0.10 -0.0288                  | 0.0068 | 9.9 1.              | 1 9.9  | 1.1        |                |        |
| READING            | 4 129718             | 0 | A.2.3.1            | 2 126593             | 0.76 | 0.05 | 0.12 | 0.06 | 0.76   | 0.01 | 0.56 | -0.29          | -0.29 | -0.30 | 0.56 -0.4059                   | 0.0072 | 2 -9.9 0.           | 8 -9.9 | 0.7        |                |        |
| READING            | 4 731885             | 0 | A.2.4.1            | 1 126593             | 0.60 | 0.27 | 0.60 | 0.04 | 0.08   | 0.01 | 0.49 | -0.26          | 0.49  | -0.23 | -0.26 0.3712                   | 0.0065 | 9.9 0.              | 9 -9.9 | 0.9        |                |        |
| READING            | 4 179797             | 0 | A.2.2.1            | 2 126593             | 0.87 | 0.05 | 0.03 | 0.04 | 0.87   | 0.01 | 0.50 | -0.29          | -0.28 | -0.24 | 0.50 -1.4248                   | 0.0092 | 9.9 0.              | 9 -9.9 | 0.7        |                |        |
| READING            | 4 463444             | 0 | A.2.4.1            | 2 126593             | 0.70 | 0.06 | 0.70 | 0.13 | 0.10   | 0.01 | 0.46 | -0.24          | 0.46  | -0.24 | -0.20 -0.0999                  | 0.0069 | -9.9 1.             | 0 -7.2 | 1.0        | $\perp$        |        |
| READING            | 4 751467             | 0 | A.2.4.1            | 1 126593             | 0.50 | 0.50 | 0.16 | 0.07 |        | 0.01 | 0.42 | 0.42           | -0.28 | -0.28 | -0.06 0.9262                   | 0.0063 | 8 -8.7 1.           |        | 1.0        | $\perp$        |        |
| READING            | 4 439585             | 0 | A.2.3.1            | 2 126593             | 0.62 | 0.21 | 0.05 | 0.62 |        | 0.01 | 0.44 | -0.21          | -0.26 | 0.44  | -0.19 0.3216                   | 0.0065 |                     | , ,    | 1.0        |                |        |
| READING            | 4 883614             | 0 | A.1.2.1            | 2 126593             | 0.80 | 0.80 | 0.12 | 0.05 |        | 0.01 | 0.42 | 0.42           | -0.19 | -0.25 | -0.28 -0.7030                  | 0.0077 | -9.9 0.             |        | 0.9        |                |        |
| READING            | 4 854674             | 0 | A.1.1.1            | 2 126593             | 0.75 | 0.03 | 0.17 | 0.05 |        | 0.01 | 0.47 | -0.27          | -0.24 | -0.27 | 0.47 -0.3533                   | 0.0072 |                     |        | 0.9        | Д              |        |
| READING            | 4 708540             | 0 |                    | 2 126593             | 0.61 | 0.19 | 0.13 | 0.06 |        | 0.01 | 0.41 | -0.26          | -0.13 | -0.20 | 0.41 0.3070                    | 0.0066 |                     |        | 1.1        | Д              |        |
| READING            | 4 654724             | 0 |                    | 2 126593             | 0.77 | 0.12 | 0.77 | 0.03 |        | 0.01 | 0.40 | -0.14          | 0.40  | -0.24 | -0.28 -0.5910                  | 0.0075 |                     | , ,    | 1.1        | Д              |        |
| READING            | 4 764523             | 0 |                    | 2 126593             | 0.56 | 0.10 | 0.08 | 0.56 |        | 0.01 | 0.48 | -0.29          | -0.24 | 0.48  | -0.17 0.8649                   | 0.0063 | 9.9 0.              |        | 0.9        |                |        |
| READING            | 4 672759             | 0 | B.2.1.2            | 2 126593             | 0.72 | 0.72 | 0.07 | 0.16 |        | 0.01 | 0.44 | 0.44           | -0.19 | -0.23 | -0.26 -0.2222                  | 0.0070 |                     |        | 1.0        | <del></del>    |        |
| READING            | 4 872821             | 0 | B.1.1.1            | 2 126593             | 0.87 | 0.06 | 0.04 | 0.87 |        | 0.01 | 0.48 | -0.28          | -0.28 | 0.48  | -0.21 -1.3221                  | 0.0089 | -9.9 0.             |        | 0.7        | ┼              |        |
| READING            | 4 597614             | 0 | A.1.3.1            | 2 126593             | 0.65 | 0.10 | 0.05 | 0.65 |        | 0.00 | 0.51 | -0.37          | -0.24 | 0.51  | -0.20 0.2404                   | 0.0066 |                     |        | 0.9        | +              | +      |
| READING            | 4 338279             | 0 | B.1.1.1            | 2 126593             | 0.77 | 0.77 | 0.05 | 0.14 |        | 0.00 | 0.23 | 0.23           | -0.26 | 0.01  | -0.22 -0.5390                  | 0.0074 | 9.9 1.              |        | 1.5        | +              | +      |
| READING            | 4 970286             | 0 | A.1.3.1            | 2 126593             | 0.82 | 0.05 | 0.06 | 0.07 | 0.0-   | 0.00 | 0.51 | -0.28          | -0.26 | -0.29 | 0.51 -0.8808                   | 0.0080 | 9.9 0.<br>9.9 1.    |        | 0.7<br>1.4 | +              | +      |
| READING            | 4 406179<br>4 833841 | 0 | A.1.3.1<br>B.1.1.1 | 2 126593             | 0.69 | 0.02 | 0.03 | 0.69 |        | 0.00 | 0.25 | -0.25<br>-0.25 | -0.27 | -0.11 | -0.07 -0.0465<br>-0.19 -0.6541 | 0.0068 |                     |        | 1.4        | +              | +      |
| READING<br>READING | 4 127210             | 0 |                    | 2 126593<br>2 126593 | 0.78 | 0.06 | 0.78 | 0.12 |        | 0.00 | 0.32 | -0.25          | -0.29 | -0.11 | -0.19 -0.6541<br>0.39 -0.4515  | 0.0076 | 9.9 1.<br>3 -4.9 1. |        | 1.1        | +              | +      |
| READING            | 4 280998             | 0 |                    | 2 126593             | 0.77 | 0.14 | 0.67 | 0.04 | 0.77   |      | 0.39 | -0.18          | 0.42  | -0.19 | -0.16 0.2424                   | 0.0073 |                     |        | 0.9        | +              | +      |
| READING            | 4 867821             | 0 | B.1.1.1            | 2 126593             | 0.80 | 0.17 | 0.04 | 0.03 | 0.10 ( |      | 0.42 | 0.33           | -0.23 | -0.27 | -0.16 0.2424                   | 0.0007 | 8.9 1.              |        | 1.1        | +              | +      |
| READING            | 4 177316             | 0 | A.1.4.1            | 2 126593             | 0.74 | 0.09 | 0.04 | 0.11 |        | 0.00 | 0.33 | -0.27          | -0.20 | -0.19 | 0.41 -0.3091                   | 0.0071 | -5.7 1.             | _      | 1.0        | +              | +      |
| READING            | 4 939681             | 0 | A.1.4.1            | 1 126593             | 0.58 | 0.05 | 0.22 | 0.12 |        | 0.00 | 0.38 | -0.30          | -0.04 | 0.38  | -0.26 0.5045                   | 0.0064 | 9.9 1.              |        | 1.1        | +              | +1     |
| ELA                | 4 759480             | 1 | A.2.2.1            | 2 70599              | 0.85 | 0.06 | 0.05 | 0.85 |        | 0.00 | 0.52 | -0.28          | -0.29 | 0.52  | -0.27 -1.1684                  | 0.0114 | -9.9 0.             |        | 0.6 A+     | A-             | A-     |
| ELA                | 4 900812             | 1 | A.2.4.1            | 1 70599              | 0.82 | 0.05 | 0.82 | 0.03 |        | 0.00 | 0.48 | -0.21          | 0.48  | -0.20 | -0.35 -0.9442                  | 0.0108 | 3 -9.9 0.           |        | 0.8 A+     | A-             | A-     |
| ELA                | 4 528286             | 1 | A.2.3.1            | 2 70599              | 0.84 | 0.08 | 0.05 | 0.03 |        | 0.00 | 0.44 | -0.28          | -0.21 | -0.23 | 0.44 -1.0841                   | 0.0112 | 2 -9.9 0.           |        | 0.8 A+     | A-             | A-     |
| ELA                | 4 618002             | 1 | A.2.3.1            | 2 70599              | 0.64 | 0.13 | 0.64 | 0.12 |        | 0.00 | 0.42 | -0.28          | 0.42  | -0.14 | -0.19 0.2171                   | 0.0088 | 0.2 1.              |        | 1.0 A-     | A-             | A-     |
| ELA                | 4 578503             | 1 | A.2.6.1            | 2 70599              | 0.62 | 0.12 | 0.10 | 0.62 | 0.16   | 0.00 | 0.46 | -0.25          | -0.24 | 0.46  | -0.20 0.3190                   | 0.0088 | 3 -9.9 1.           | 0 -9.9 | 0.9 A-     | A-             | A-     |
| ELA                | 4 369749             | 1 | A.2.3.1            | 2 70599              | 0.53 | 0.20 | 0.05 | 0.53 | 0.22   | 0.00 | 0.21 | -0.14          | -0.23 | 0.21  | 0.01 0.8178                    | 0.0085 | 9.9 1.              | 2 9.9  | 1.3 A+     | A+             | A-     |
| ELA                | 4 133219             | 1 | A.2.2.1            | 2 70599              | 0.81 | 0.81 | 0.09 | 0.06 | 0.03   | 0.00 | 0.47 | 0.47           | -0.24 | -0.27 | -0.27 -0.8728                  | 0.0106 | -9.9 0.             | 9 -9.9 | 0.8 A+     | A-             | A-     |
| ELA                | 4 936696             | 1 | B.3.2.1            | 2 70599              | 0.55 | 0.15 | 0.05 | 0.24 | 0.55   | 0.00 | 0.36 | -0.18          | -0.29 | -0.10 | 0.36 0.6903                    | 0.0085 | 9.9 1.              | 1 9.9  | 1.1 A-     | A-             | A-     |
| ELA                | 4 537274             | 1 | A-K.1.1.2          | 3 14428              | 0.45 | 0.28 | 0.15 | 0.11 | 0.45   | 0.00 | 0.33 | -0.08          | -0.15 | -0.23 | 0.33 1.1578                    | 0.0188 | 9.9 1.              | 1 9.9  | 1.2 A+     | A-             | A-     |
| ELA                | 4 439880             | 1 | A-K.1.1.3          | 2 14428              | 0.81 | 0.03 | 0.08 | 0.07 | 0.81   | 0.00 | 0.53 | -0.28          | -0.32 | -0.26 | 0.53 -0.9417                   | 0.0236 | 9.9 0.              | 8 -9.9 | 0.7 A-     | A-             | B-     |
| ELA                | 4 702874             | 1 | A-K.1.1.1          | 2 14428              | 0.64 | 0.11 | 0.13 | 0.64 |        | 0.00 | 0.46 | -0.26          | -0.24 | 0.46  | -0.17 0.1644                   | 0.0196 |                     |        | 0.9 A-     | A-             | A-     |
| ELA                | 4 995706             | 1 | A-K.1.1.3          | 2 14428              | 0.84 | 0.84 | 0.07 | 0.04 |        | 0.00 | 0.48 | 0.48           | -0.29 | -0.25 | -0.24 -1.2149                  | 0.0251 |                     |        | 0.7 A+     | A-             | A-     |
| ELA                | 4 832833             | 1 | A-V.4.1.1          | 2 14428              | 0.44 | 0.42 | 0.44 | 0.10 |        | 0.00 | 0.05 | 0.13           | 0.05  | -0.16 | -0.21 1.2274                   | 0.0189 |                     | 4 9.9  | 1.7 A-     | A+             | A+     |
| ELA                | 4 468511             | 1 | A-V.4.1.1          | 1 14428              | 0.88 | 0.06 | 0.03 | 0.88 |        | 0.00 | 0.46 | -0.25          | -0.26 | 0.46  | -0.27 -1.5624                  | 0.0276 |                     |        | 0.7 A+     | A-             | B-     |
| ELA                | 4 311393             | 1 | A-V.4.1.2          | 2 14428              | 0.81 | 0.07 | 0.81 | 0.09 |        | 0.00 | 0.42 | -0.27          | 0.42  | -0.20 | -0.22 -0.9064                  | 0.0234 | -3.5 1.             |        | 1.0 A-     | A-             | A-     |
| ELA                | 4 978841             | 1 | A-V.4.1.2          | 1 14428              | 0.28 | 0.28 | 0.38 | 0.19 | 0.15   |      | 0.10 | 0.10           | 0.05  | -0.08 | -0.10 2.0771                   | 0.0204 |                     |        | 1.9 A+     | A+             | A+     |
| ELA                | 4 496694             | 2 | A-C.3.1.1          | 3 14024              | 0.54 | 0.23 | 0.54 | 0.15 |        | 0.00 | 0.40 | -0.17          | 0.40  | -0.15 | -0.25 0.7776                   | 0.0191 | 1.0 1.              |        | 1.0 A+     | A-             | A-     |
| ELA                | 4 692344             | 2 | A-V.4.1.2          | 1 14024              | 0.72 | 0.72 | 0.09 | 0.11 |        | 0.00 | 0.46 | 0.46           | -0.29 | -0.22 | -0.19 -0.2523                  | 0.0211 | -5.0 1.             |        | 0.9 A-     | B-             | A-     |
| ELA                | 4 267749             | 2 | A-K.1.1.3          | 2 14024              | 0.75 | 0.07 | 0.11 | 0.75 |        | 0.00 | 0.50 | -0.23          | -0.26 | 0.50  | -0.29 -0.4430                  | 0.0218 | 9.9 0.              |        | 0.8 A-     | B-             | B-     |
| ELA                | 4 434844             | 2 | A-K.1.1.1          | 2 14024              | 0.63 | 0.10 | 0.12 | 0.15 | 0.00   | 0.00 | 0.45 | -0.26          | -0.22 | -0.18 | 0.45 0.2716                    | 0.0197 | -3.7 1.             |        | 1.0 A-     | B-             | A-     |
| ELA                | 4 865642             | 2 | A-V.4.1.2          | 2 14024              | 0.64 | 0.16 | 0.64 | 0.11 |        | 0.00 | 0.43 | -0.25          | 0.43  | -0.14 | -0.25 0.2133                   | 0.0198 |                     |        | 1.0 A+     | A-             | A-     |
| ELA                | 4 738372             | 2 | A-V.4.1.2          | 1 14024              | 0.42 | 0.24 | 0.24 | 0.42 | 0.09   | 0.00 | 0.38 | -0.19          | -0.16 | 0.38  | -0.12 1.3557                   | 0.0192 | -0.6 1.             | 0 6.4  | 1.1 A-     | A-             | B-     |

| ELA        | 4 236232             | 2 | A-K.1.1.2 | 2 3 | 14024          | 0.62 | 0.62 | 0.12 | 0.19 | 0.06 0.            | .00 | 0.40 | 0.40  | -0.20          | -0.15 | -0.28          | 0.3206            | 0.0196 | 2.7          | 1.0 3.0            | 1.0 A+           | A-       | A-       |
|------------|----------------------|---|-----------|-----|----------------|------|------|------|------|--------------------|-----|------|-------|----------------|-------|----------------|-------------------|--------|--------------|--------------------|------------------|----------|----------|
| ELA        | 4 827857             | 2 | A-K.1.1.3 |     | 14024          | 0.78 | 0.10 | 0.08 | 0.04 | 0.78 0.            | .00 | 0.54 | -0.29 | -0.30          | -0.26 | 0.54           | -0.6037           | 0.0224 | -9.9         | 0.8 -9.9           | 0.8 A+           | A-       | A-       |
| ELA        | 4 113229             | 3 | A-K.1.1.  | 1 2 | 14061          | 0.63 | 0.25 | 0.63 | 0.06 | 0.06 0.            | .01 | 0.38 | -0.15 | 0.38           | -0.25 | -0.24          | 0.3101            | 0.0195 | 1.9          | 1.0 1.7            | 1.0 A+           | A-       | A-       |
| ELA        | 4 353390             | 3 | A-K.1.1.3 | 3 2 | 14061          | 0.58 | 0.08 | 0.24 | 0.58 | 0.09 0.            | .00 | 0.33 | -0.28 | -0.06          | 0.33  | -0.20          | 0.5416            | 0.0191 | 9.9          | 1.1 9.6            | 1.1 A+           | A-       | A-       |
| ELA        | 4 615675             | 3 | A-K.1.1.3 | 3 2 | 14061          | 0.64 | 0.64 | 0.18 | 0.08 | 0.09 0.            | .00 | 0.38 | 0.38  | -0.07          | -0.24 | -0.29          | 0.2570            | 0.0196 | 3.1          | 1.0 2.6            | 1.0 A-           | A+       | A-       |
| ELA        | 4 753015             | 3 | A-V.4.1.  | 1 2 | 14061          | 0.64 | 0.06 | 0.64 | 0.11 | 0.18 0.            | .00 | 0.34 | -0.22 | 0.34           | -0.19 | -0.12          | 0.2494            | 0.0196 | 8.1          | 1.1 5.0            | 1.1 A+           | A+       | A-       |
| ELA        | 4 870447             | 3 | A-V.4.1.  | 1 2 | 14061          | 0.78 | 0.78 | 0.08 | 0.08 | 0.06 0.            | .00 | 0.36 | 0.36  | -0.14          | -0.18 | -0.26          | -0.6207           | 0.0225 | 0.9          | 1.0 3.6            | 1.1 A+           | A-       | A-       |
| ELA        | 4 236306             | 3 | A-V.4.1.2 | 2 2 | 14061          | 0.54 | 0.15 | 0.16 | 0.54 | 0.15 0.            | .00 | 0.40 | -0.18 | -0.17          | 0.40  | -0.19          | 0.7754            | 0.0189 | -2.6         | 1.0 -1.2           | 1.0 A-           | C-       | C-       |
| ELA        | 4 910545             | 3 | A-K.1.1.  | 1 2 | 14061          | 0.52 | 0.13 | 0.28 | 0.07 | 0.52 0.            | .01 | 0.39 | -0.22 | -0.09          | -0.30 | 0.39           | 0.8548            | 0.0188 | -1.0         | 1.0 1.6            | 1.0 A-           | A-       | A-       |
| ELA        | 4 900285             | 3 | A-K.1.1.  | 1 2 | 14061          | 0.32 | 0.15 | 0.26 | 0.26 | 0.32 0.            | .00 | 0.16 | -0.12 | 0.04           | -0.11 | 0.16           | 1.8679            | 0.0198 | 9.9          | 1.2 9.9            | 1.4 A+           | A-       | A-       |
| ELA        | 4 278602             | 4 | A-V.4.1.2 |     | 14050          | 0.71 | 0.13 | 0.08 | 0.71 | 0.07 0.            | .00 | 0.41 | -0.12 | -0.30          | 0.41  | -0.24          | -0.1878           | 0.0209 | 0.2          | 1.0 -0.4           | 1.0 A-           | C-       | C-       |
| ELA        | 4 516158             | 4 | A-V.4.1.1 |     | 14050          | 0.78 | 0.06 | 0.09 | 0.06 | 0.78 0.            |     | 0.54 | -0.30 | -0.31          | -0.24 | 0.54           | -0.6614           | 0.0228 | -9.9         | 0.8 -9.9           | 0.7 A-           | C-       | C-       |
| ELA        | 4 452279             | 4 | A-V.4.1.2 |     | 14050          | 0.82 | 0.82 | 0.04 | 0.05 | 0.09 0.            |     | 0.49 | 0.49  | -0.28          | -0.31 | -0.23          | -0.9482           | 0.0242 | -9.4         | 0.9 -9.9           | 0.7 A+           | B-       | C-       |
| ELA        | 4 503942             | 4 | A-K.1.1.  |     | 14050          | 0.46 | 0.21 | 0.16 | 0.17 |                    | .01 | 0.33 | -0.08 | -0.18          | -0.16 | 0.33           | 1.1995            | 0.0191 | 7.1          | 1.1 9.9            | 1.2 A-           | A-       | A-       |
| ELA        | 4 348590             | 4 |           |     | 14050          | 0.55 | 0.21 | 0.55 | 0.10 |                    | .00 | 0.44 | -0.25 | 0.44           | -0.25 | -0.11          | 0.7185            |        | -5.1         | 1.0 -2.6           | 1.0 A-           | A-       | A-       |
| ELA        | 4 563651             | 4 | A-K.1.1.  |     | 14050          | 0.49 | 0.17 | 0.29 | 0.49 |                    | .00 | 0.27 | -0.20 | -0.01          | 0.27  | -0.23          | 1.0462            | 0.0190 | 9.9          | 1.2 9.9            | 1.3 A-           | A-       | A-       |
| ELA        | 4 116338             | 4 | A-K.1.1.2 |     | 14050          | 0.61 | 0.14 | 0.61 | 0.15 | 0.07               | .01 | 0.51 | -0.24 | 0.51           | -0.25 | -0.25          | 0.3799            | 0.0196 | -9.9         | 0.9 -9.9           | 0.8 A-           | A-       | A-       |
| ELA        | 4 714390             | 4 | A-V.4.1.1 |     | 14050          | 0.83 | 0.83 | 0.08 | 0.04 | 0.06 0.            |     | 0.52 | 0.52  | -0.27          | -0.30 | -0.29          | -0.9752           | 0.0244 | -9.9         | 0.8 -9.9           | 0.7 A-           | B-       | A-       |
| ELA        | 4 858852             | 5 |           | _   | 14036          | 0.69 | 0.16 | 0.07 | 0.07 | 0.69 0.            |     | 0.55 | -0.34 | -0.26          | -0.23 | 0.55           | -0.0133           | 0.0206 | -9.9         | 0.9 -9.9           | 0.8 A-           | B-       | B-       |
| ELA        | 4 584869             | 5 | B-C.3.1.1 |     | 14036          | 0.77 | 0.07 | 0.77 | 0.10 | 0.0.               | .00 | 0.48 | -0.29 | 0.48           | -0.19 | -0.29          | -0.5037           | 0.0223 | -8.5         | 0.9 -9.4           | 0.8 A-           | B-       | A-       |
| ELA        | 4 597411             | 5 |           |     | 14036          | 0.69 | 0.69 | 0.10 | 0.13 |                    | .00 | 0.49 | 0.49  | -0.30          | -0.20 | -0.26          | -0.0213           | 0.0206 | -9.6         | 0.9 -7.7           | 0.9 A-           | A-       | A-       |
| ELA        | 4 957832             | 5 |           | _   | 14036          | 0.75 | 0.04 | 0.11 | 0.09 | 0110 01            | .00 | 0.50 | -0.28 | -0.31          | -0.21 | 0.50           | -0.3794           | 0.0218 | -9.1         | 0.9 -8.0           | 0.9 A+           | A-       | A-       |
| ELA        | 4 205985             | 5 |           |     | 14036          | 0.88 | 0.04 | 0.88 | 0.04 |                    | .00 | 0.51 | -0.30 | 0.51           | -0.25 | -0.28          | -1.4161           | 0.0277 | -9.9         | 0.8 -9.9           | 0.6 A-           | A-       | A-       |
| ELA        | 4 725583             | 5 | B-V.4.1.2 | _   | 14036          | 0.78 | 0.07 | 0.12 | 0.78 |                    | .00 | 0.50 | -0.27 | -0.30          | 0.50  | -0.23          | -0.6121           | 0.0228 | -9.6         | 0.9 -9.9           | 0.8 A-           | B-       | B-       |
| ELA        | 4 716767             | 5 |           |     | 14036          | 0.72 | 0.72 | 0.10 | 0.05 |                    | .00 | 0.43 | 0.43  | -0.21          | -0.27 | -0.21          | -0.1800           | 0.0211 | -1.4         | 1.0 -3.0           | 1.0 A-           | C-       | C-       |
| ELA        | 4 346289             | 5 |           |     | 14036          | 0.61 | 0.12 | 0.17 | 0.61 | 0.09 0.<br>0.07 0. | -   | 0.41 | -0.23 | -0.11          | -0.08 | -0.27<br>-0.19 | 0.4575            | 0.0195 | 1.7<br>9.9   | 1.0 0.7<br>1.1 9.9 | 1.0 A-           | A-       | A-       |
| ELA<br>ELA | 4 238608<br>4 300963 | 6 |           |     | 55966<br>55966 | 0.57 | 0.57 | 0.18 | 0.18 | 0.07 0.            |     | 0.35 | -0.23 | -0.24<br>-0.33 | -0.08 | 0.19           | 0.6678<br>-0.6270 |        | -9.9<br>-9.9 | 0.8 -9.9           | 1.1 A+<br>0.7 A- | A-<br>B- | A-<br>B- |
| ELA        | 4 460994             | 6 |           |     | 55966          | 0.79 | 0.10 | 0.00 | 0.66 |                    | .00 | 0.33 | -0.26 | -0.24          | 0.47  | -0.28          | 0.1463            | 0.0114 | -9.9         | 0.8 -9.9           | 0.7 A-           | A-       | A-       |
| ELA        | 4 344704             | 6 |           | _   | 55966          | 0.86 | 0.23 | 0.86 | 0.04 |                    | .00 | 0.41 | -0.23 | 0.41           | -0.22 | -0.24          | -1.2563           |        | -9.9         | 0.9 -9.7           | 0.9 A+           | A-       | A-       |
| ELA        | 4 648875             | 6 |           | _   | 55966          | 0.81 | 0.81 | 0.05 | 0.05 | 0.00               | .00 | 0.41 | 0.48  | -0.26          | -0.29 | -0.23          | -0.7958           | 0.0133 | -9.9         | 0.9 -9.9           | 0.8 A-           | A-       | A-       |
| ELA        | 4 271213             | 6 |           |     | 55966          | 0.79 | 0.79 | 0.06 | 0.09 |                    | .00 | 0.44 | 0.44  | -0.21          | -0.19 | -0.33          | -0.6548           | 0.0115 | -9.7         | 0.9 -9.9           | 0.9 A+           | A-       | A-       |
| ELA        | 4 592663             | 6 |           |     | 55966          | 0.83 | 0.07 | 0.83 | 0.05 |                    | .00 | 0.40 | -0.21 | 0.40           | -0.19 | -0.25          | -0.9833           | 0.0124 | -7.4         | 1.0 -4.2           | 0.9 A-           | B-       | B-       |
| ELA        | 4 123022             | 6 |           | _   | 55966          | 0.46 | 0.19 | 0.31 | 0.46 |                    | .00 | 0.35 | -0.33 | -0.03          | 0.35  | -0.17          | 1.2015            | 0.0095 | 9.9          | 1.1 9.9            | 1.1 A+           | A-       | A-       |
| ELA        | 4 849769             | 6 |           |     | 14040          | 0.71 | 0.08 | 0.09 | 0.71 | 0.11 0.            |     | 0.48 | -0.21 | -0.30          | 0.48  | -0.23          | -0.1444           | 0.0209 | -7.8         | 0.9 -9.9           | 0.8 A+           | B-       | A-       |
| ELA        | 4 197018             | 6 |           |     | 14040          | 0.57 | 0.21 | 0.10 | 0.12 |                    | .00 | 0.44 | -0.20 | -0.25          | -0.19 | 0.44           | 0.6742            | 0.0192 | -4.3         | 1.0 -4.8           | 0.9 A+           | A-       | A-       |
| ELA        | 4 536207             | 6 |           |     | 14040          | 0.70 | 0.13 | 0.70 | 0.08 | 0.07 0.            |     | 0.44 | -0.17 | 0.44           | -0.24 | -0.28          | -0.0634           | 0.0207 | -2.2         | 1.0 -4.2           | 0.9 A+           | A-       | A-       |
| ELA        | 4 951190             | 6 | B-V.4.1.1 | 1 2 | 14040          | 0.90 | 0.02 | 0.04 | 0.90 | 0.04 0.            | .00 | 0.49 | -0.27 | -0.28          | 0.49  | -0.27          | -1.6576           | 0.0298 | -9.4         | 0.8 -9.9           | 0.6 A+           | A-       | A-       |
| ELA        | 4 745048             | 6 | B-V.4.1.2 | 2 2 | 14040          | 0.83 | 0.83 | 0.07 | 0.08 | 0.02 0.            | .00 | 0.44 | 0.44  | -0.22          | -0.29 | -0.22          | -0.9573           | 0.0246 | -5.1         | 0.9 -8.5           | 0.8 A+           | B-       | C-       |
| ELA        | 4 253362             | 6 | B-K.1.1.1 |     | 14040          | 0.48 | 0.24 | 0.12 | 0.15 | 0.48 0.            | .00 | 0.41 | -0.20 | -0.21          | -0.13 | 0.41           | 1.1085            | 0.0190 | -4.9         | 1.0 1.6            | 1.0 A+           | A-       | A-       |
| ELA        | 4 598821             | 6 | B-C.3.1.1 | 1 2 | 14040          | 0.83 | 0.83 | 0.06 | 0.06 | 0.04 0.            | .01 | 0.50 | 0.50  | -0.27          | -0.28 | -0.28          | -1.0123           | 0.0249 | -9.9         | 0.9 -9.9           | 0.7 A+           | A-       | A-       |
| ELA        | 4 315533             | 6 | B-K.1.1.2 | 2 3 | 14040          | 0.63 | 0.16 | 0.63 | 0.10 | 0.12 0.            | _   | 0.46 | -0.26 | 0.46           | -0.26 | -0.15          | 0.3676            | 0.0197 | -5.1         | 1.0 -5.6           | 0.9 A+           | A-       | A-       |
| ELA        | 4 986344             | 7 | B-C.3.1.2 | 2 3 | 14009          | 0.73 | 0.09 | 0.06 | 0.73 | 0.12 0.            | .00 | 0.50 | -0.31 | -0.26          | 0.50  | -0.22          | -0.3018           | 0.0214 | -9.9         | 0.9 -9.9           | 0.8 A+           | A-       | A-       |
| ELA        | 4 532331             | 7 | B-V.4.1.2 | 2 2 | 14009          | 0.66 | 0.24 | 0.07 | 0.66 | 0.04 0.            | .00 | 0.48 | -0.30 | -0.21          | 0.48  | -0.23          | 0.1693            | 0.0200 | -8.8         | 0.9 -9.2           | 0.9 A+           | A-       | B-       |
| ELA        | 4 257371             | 7 | B-C.2.1.2 | 2 2 | 14009          | 0.45 | 0.16 | 0.45 | 0.27 | 0.12 0.            | .00 | 0.25 | -0.19 | 0.25           | 0.02  | -0.19          | 1.2301            | 0.0191 | 9.9          | 1.2 9.9            | 1.3 A-           | A-       | A-       |
| ELA        | 4 173201             | 7 | B-K.1.1.3 | 3 2 | 14009          | 0.85 | 0.85 | 0.06 | 0.04 | 0.04 0.            | .01 | 0.55 | 0.55  | -0.31          | -0.30 | -0.31          | -1.1898           | 0.0259 | -9.9         | 0.8 -9.9           | 0.6 A+           | A-       | B-       |
| ELA        | 4 974547             | 7 | B-K.1.1.2 | 2 3 | 14009          | 0.73 | 0.07 | 0.11 | 0.10 | 0.73 0.            | .00 | 0.44 | -0.33 | -0.15          | -0.22 | 0.44           | -0.2533           | 0.0212 | -3.9         | 1.0 -1.5           | 1.0 A+           | A-       | A-       |
| ELA        | 4 638588             | 7 | B-K.1.1.1 | 1 2 | 14009          | 0.75 | 0.09 | 0.11 | 0.75 | 0.06 0.            | .00 | 0.54 | -0.29 | -0.32          | 0.54  | -0.24          | -0.3720           | 0.0216 | -9.9         | 0.8 -9.9           | 0.7 A+           | A-       | A-       |
| ELA        | 4 331789             | 7 | B-C.2.1.1 | 1 3 | 14009          | 0.56 | 0.12 | 0.19 | 0.12 | 0.56 0.            | .00 | 0.42 | -0.19 | -0.18          | -0.22 | 0.42           | 0.6595            | 0.0192 | -2.2         | 1.0 -2.0           | 1.0 A+           | A-       | A-       |
| ELA        | 4 456481             | 7 | B-C.2.1.1 | 1 3 | 14009          | 0.45 | 0.20 | 0.45 | 0.18 | 0.16 0.            | .01 | 0.34 | -0.15 | 0.34           | -0.14 | -0.14          | 1.2133            | 0.0191 | 4.8          | 1.0 9.9            | 1.1 A+           | A+       | A-       |
| ELA        | 4 534698             | 8 | B-C.3.1.1 | 1 2 | 13958          | 0.68 | 0.19 | 0.06 | 0.07 | 0.68 0.            | .00 | 0.42 | -0.14 | -0.32          | -0.25 | 0.42           | 0.0634            | 0.0203 | -1.2         | 1.0 0.2            | 1.0 A+           | A-       | A-       |

| ELA     | 4 | 145863 | 8 | B-V.4.1.2 | 1 | 13958  | 0.92 | 0.92 | 0.02 | 0.03 | 0.03 0. | .00 | 0.38 | 0.38  | -0.25 | -0.20 | -0.20 | -1.9831 | 0.0334 | -4.8 | 0.9 -5.8 | 0.7 A+ | A- | A- |
|---------|---|--------|---|-----------|---|--------|------|------|------|------|---------|-----|------|-------|-------|-------|-------|---------|--------|------|----------|--------|----|----|
| ELA     | 4 | 511897 | 8 | B-C.3.1.3 | 2 | 13958  | 0.59 | 0.18 | 0.10 | 0.12 | 0.59 0. | .00 | 0.45 | -0.13 | -0.28 | -0.26 | 0.45  | 0.5400  | 0.0193 | -6.3 | 1.0 -6.8 | 0.9 A+ | A- | A- |
| ELA     | 4 | 811805 | 8 | B-C.2.1.1 | 3 | 13958  | 0.36 | 0.40 | 0.10 | 0.36 | 0.13 0. | .01 | 0.20 | 0.09  | -0.29 | 0.20  | -0.13 | 1.7354  | 0.0196 | 9.9  | 1.2 9.9  | 1.4 A+ | A- | A- |
| ELA     | 4 | 525907 | 8 | B-C.3.1.1 | 2 | 13958  | 0.68 | 0.06 | 0.16 | 0.68 | 0.10 0. | .00 | 0.43 | -0.23 | -0.22 | 0.43  | -0.20 | 0.0539  | 0.0203 | -2.9 | 1.0 -5.2 | 0.9 A+ | A- | A- |
| ELA     | 4 | 828772 | 8 | B-C.3.1.2 | 3 | 13958  | 0.51 | 0.21 | 0.51 | 0.11 | 0.16 0. | .00 | 0.35 | -0.10 | 0.35  | -0.19 | -0.19 | 0.9669  | 0.0190 | 4.9  | 1.0 7.3  | 1.1 A- | A- | A+ |
| ELA     | 4 | 723630 | 8 | B-V.4.1.1 | 2 | 13958  | 0.82 | 0.82 | 0.07 | 0.08 | 0.03 0. | .00 | 0.44 | 0.44  | -0.23 | -0.28 | -0.21 | -0.9072 | 0.0243 | -5.2 | 0.9 -7.9 | 0.8 A- | A+ | A- |
| ELA     | 4 | 361588 | 8 | B-C.2.1.2 | 2 | 13958  | 0.55 | 0.17 | 0.55 | 0.11 | 0.17 0. | .00 | 0.38 | -0.20 | 0.38  | -0.22 | -0.12 | 0.7608  | 0.0191 | 1.0  | 1.0 1.7  | 1.0 A- | A- | A- |
| ELA     | 4 | 845561 | 9 | B-V.4.1.2 | 2 | 13959  | 0.68 | 0.15 | 0.09 | 0.68 | 0.07 0. | .00 | 0.52 | -0.28 | -0.26 | 0.52  | -0.25 | 0.0516  | 0.0204 | -9.9 | 0.9 -9.9 | 0.8 A+ | B- | C- |
| ELA     | 4 | 809314 | 9 | B-K.1.1.3 | 3 | 13959  | 0.76 | 0.76 | 0.10 | 0.09 | 0.05 0. | .00 | 0.39 | 0.39  | -0.17 | -0.21 | -0.26 | -0.4075 | 0.0220 | 1.1  | 1.0 -1.5 | 1.0 A- | A- | A- |
| ELA     | 4 | 535883 | 9 | B-C.2.1.2 | 3 | 13959  | 0.63 | 0.13 | 0.08 | 0.16 | 0.63 0. | .01 | 0.50 | -0.16 | -0.28 | -0.30 | 0.50  | 0.3511  | 0.0197 | -9.9 | 0.9 -9.9 | 0.8 A- | A- | A- |
| ELA     | 4 | 353067 | 9 | B-K.1.1.1 | 2 | 13959  | 0.74 | 0.19 | 0.74 | 0.03 | 0.03 0. | .00 | 0.45 | -0.29 | 0.45  | -0.23 | -0.21 | -0.2684 | 0.0214 | -4.4 | 1.0 -4.0 | 0.9 A+ | A- | A- |
| ELA     | 4 | 383599 | 9 | B-C.3.1.1 | 2 | 13959  | 0.68 | 0.68 | 0.16 | 0.09 | 0.06 0. | .00 | 0.45 | 0.45  | -0.18 | -0.27 | -0.26 | 0.0633  | 0.0204 | -5.3 | 1.0 -7.8 | 0.9 A- | A- | A- |
| ELA     | 4 | 887916 | 9 | A-V.4.1.2 | 1 | 13959  | 0.95 | 0.02 | 0.02 | 0.95 | 0.01 0. | .00 | 0.35 | -0.19 | -0.21 | 0.35  | -0.19 | -2.4992 | 0.0404 | -3.9 | 0.9 -6.3 | 0.6 A+ | B- | B- |
| ELA     | 4 | 687574 | 9 | B-V.4.1.1 | 2 | 13959  | 0.88 | 0.06 | 0.03 | 0.03 | 0.88 0. | .00 | 0.34 | -0.12 | -0.25 | -0.22 | 0.34  | -1.4462 | 0.0281 | -2.6 | 1.0 7.1  | 1.3 A+ | A- | A- |
| ELA     | 4 | 387409 | 9 | B-C.3.1.3 | 3 | 13959  | 0.46 | 0.14 | 0.46 | 0.27 | 0.12 0. | .00 | 0.26 | -0.27 | 0.26  | 0.02  | -0.14 | 1.2327  | 0.0191 | 9.9  | 1.2 9.9  | 1.3 A- | A- | A- |
| READING | 5 | 682227 | 0 | A.1.3.1   | 3 | 126213 | 0.68 | 0.68 | 0.08 | 0.06 | 0.18 0. | .00 | 0.42 | 0.42  | -0.28 | -0.29 | -0.13 | 0.1754  | 0.0067 | -3.1 | 1.0 -0.5 | 1.0    |    |    |
| READING | 5 | 332538 | 0 | B.2.1.2   | 2 | 126213 | 0.58 | 0.30 | 0.58 | 0.06 | 0.06 0. | .00 | 0.28 | -0.09 | 0.28  | -0.21 | -0.19 | 0.7540  | 0.0064 | 9.9  | 1.1 9.9  | 1.2    |    |    |
| READING | 5 | 118204 | 0 | B.1.1.1   | 2 | 126213 | 0.90 | 0.02 | 0.03 | 0.90 | 0.04 0. | .00 | 0.42 | -0.26 | -0.19 | 0.42  | -0.25 | -1.4498 | 0.0098 | -9.9 | 0.8 -9.9 | 0.8    |    |    |
| READING | 5 | 101865 | 0 | B.1.1.1   | 2 | 126213 | 0.69 | 0.05 | 0.69 | 0.21 | 0.05 0. | .00 | 0.45 | -0.21 | 0.45  | -0.29 | -0.20 | 0.2208  | 0.0067 | -9.9 | 0.9 -9.9 | 0.9    |    |    |
| READING | 5 | 268619 | 0 | A.1.3.1   | 2 | 126213 | 0.75 | 0.75 | 0.07 | 0.06 | 0.11 0. | .00 | 0.31 | 0.31  | -0.24 | -0.17 | -0.09 | -0.1410 | 0.0071 | 9.9  | 1.1 9.9  | 1.1    |    |    |
| READING | 5 | 635347 | 0 | A.1.4.1   | 1 | 126213 | 0.79 | 0.08 | 0.79 | 0.04 | 0.09 0. | .00 | 0.52 | -0.31 | 0.52  | -0.26 | -0.26 | -0.5037 | 0.0076 | -9.9 | 0.9 -9.9 | 0.7    |    |    |
| READING | 5 | 325098 | 0 | B.1.1.1   | 2 | 126213 | 0.79 | 0.04 | 0.09 | 0.79 | 0.08 0. | .00 | 0.46 | -0.31 | -0.29 | 0.46  | -0.14 | -0.6003 | 0.0078 | -5.6 | 1.0 -0.7 | 1.0    |    |    |
| READING | 5 | 535902 | 0 | A.1.3.1   | 2 | 126213 | 0.88 | 0.03 | 0.88 | 0.03 | 0.05 0. | .00 | 0.50 | -0.28 | 0.50  | -0.26 | -0.27 | -1.0668 | 0.0087 | -9.9 | 0.7 -9.9 | 0.6    |    |    |
| READING | 5 | 193815 | 0 | A.1.6.2   | 3 | 126213 | 0.47 | 0.08 | 0.29 | 0.47 | 0.16 0. | .00 | 0.28 | -0.20 | -0.05 | 0.28  | -0.15 | 1.2156  | 0.0063 | 9.9  | 1.1 9.9  | 1.2    |    |    |
| READING | 5 | 609030 | 0 | B.2.1.1   | 2 | 126213 | 0.72 | 0.08 | 0.72 | 0.11 | 0.09 0. | .01 | 0.48 | -0.28 | 0.48  | -0.22 | -0.24 | -0.0017 | 0.0069 | -9.9 | 0.9 -9.9 | 0.9    |    |    |
| READING | 5 | 476551 | 0 | B.1.1.1   | 3 | 126213 | 0.80 | 0.80 | 0.08 | 0.04 | 0.08 0. | .00 | 0.44 | 0.44  | -0.17 | -0.31 | -0.25 | -0.5065 | 0.0076 | -9.9 | 0.9 -9.9 | 0.9    |    |    |
| READING | 5 | 949759 | 0 | A.1.4.1   | 1 | 126213 | 0.65 | 0.17 | 0.13 | 0.65 | 0.05 0. | .00 | 0.38 | -0.28 | -0.12 | 0.38  | -0.17 | 0.2401  | 0.0067 | 9.9  | 1.1 5.0  | 1.0    |    |    |
| READING | 5 | 991301 | 0 | A.1.4.1   | 1 | 126213 | 0.93 | 0.03 | 0.02 | 0.02 | 0.93 0. | .00 | 0.40 | -0.24 | -0.24 | -0.21 | 0.40  | -2.0460 | 0.0120 | 0.5  | 1.0 -9.9 | 0.7    |    |    |
| READING | 5 | 333336 | 0 | A.1.4.1   | 1 | 126213 | 0.64 | 0.64 | 0.06 | 0.06 | 0.24 0. | .00 | 0.36 | 0.36  | -0.24 | -0.29 | -0.09 | 0.5710  | 0.0065 | 9.9  | 1.0 9.9  | 1.1    |    |    |
| READING | 5 | 668391 | 0 | B.1.1.1   | 2 | 126213 | 0.61 | 0.61 | 0.13 | 0.07 | 0.19 0. | .00 | 0.32 | 0.32  | -0.17 | -0.19 | -0.10 | 0.5844  | 0.0064 | 9.9  | 1.1 9.9  | 1.1    |    |    |
| READING | 5 | 838111 | 0 | A.1.3.1   | 2 | 126213 | 0.68 | 0.10 | 0.19 | 0.68 | 0.02 0. | .00 | 0.28 | -0.17 | -0.14 | 0.28  | -0.15 | 0.2703  | 0.0067 | 9.9  | 1.1 9.9  | 1.1    |    |    |
| READING | 5 | 316373 | 0 | A.1.2.1   | 1 | 126213 | 0.69 | 0.09 | 0.16 | 0.69 | 0.05 0. | .00 | 0.42 | -0.23 | -0.21 | 0.42  | -0.21 | -0.0274 | 0.0070 | 9.9  | 1.0 -2.2 | 1.0    |    |    |
| READING | 5 | 275811 | 0 | B.1.1.1   | 2 | 126213 | 0.76 | 0.08 | 0.10 | 0.76 | 0.07 0. | .00 | 0.48 | -0.31 | -0.25 | 0.48  | -0.18 | -0.3649 | 0.0074 | -9.9 | 1.0 -9.9 | 0.9    |    |    |
| READING | 5 | 734964 | 0 | A.1.2.2   | 2 | 126213 | 0.85 | 0.05 | 0.06 | 0.85 | 0.04 0. | .00 | 0.50 | -0.31 | -0.26 | 0.50  | -0.25 | -0.9116 | 0.0084 | -9.9 | 0.8 -9.9 | 0.6    |    |    |
| READING | 5 | 768330 | 0 | B.1.1.1   | 2 | 126213 | 0.52 | 0.17 | 0.09 | 0.52 | 0.21 0. | .01 | 0.30 | -0.08 | -0.19 | 0.30  | -0.16 | 0.9970  | 0.0063 | 9.9  | 1.1 9.9  | 1.2    |    |    |
| READING | 5 | 552586 | 0 | A.1.4.1   | 1 | 126213 | 0.82 | 0.82 | 0.04 | 0.05 | 0.09 0. | .00 | 0.49 | 0.49  | -0.27 | -0.30 | -0.24 | -0.7185 | 0.0080 | -9.9 | 0.9 -9.9 | 0.8    |    |    |
| READING | 5 | 832201 | 0 | A.1.1.1   | 2 | 126213 | 0.77 | 0.07 | 0.11 | 0.05 | 0.77 0. | .00 | 0.41 | -0.24 | -0.19 | -0.23 | 0.41  | -0.3250 | 0.0073 | -7.9 | 1.0 -2.0 | 1.0    |    |    |
| READING | 5 | 853310 | 0 | B.2.1.1   | 2 | 126213 | 0.69 | 0.69 | 0.11 | 0.12 | 0.08 0. | .00 | 0.45 | 0.45  | -0.24 | -0.23 | -0.21 | 0.1746  | 0.0067 | -9.9 | 0.9 -9.9 | 0.9    |    |    |
| READING | 5 | 200556 | 0 | A.1.4.1   |   | 126213 | 0.77 | 0.04 | 0.77 | 0.13 |         | .00 | 0.46 | -0.27 | 0.46  | -0.23 | -0.26 | -0.3884 | 0.0074 | -9.9 | 0.9 -9.9 | 0.9    |    |    |
| READING | 5 | 644413 | 0 | B.1.1.1   | 2 | 126213 | 0.72 | 0.13 | 0.72 | 0.10 | 0.04 0. | .00 | 0.30 | -0.06 | 0.30  | -0.26 | -0.17 | -0.0250 | 0.0069 | 9.9  | 1.1 9.9  | 1.2    |    |    |
| READING | 5 | 243200 | 0 | A.2.1.2   |   | 126213 | 0.84 | 0.06 | 0.02 | 0.07 |         | .00 | 0.43 | -0.23 | -0.24 | -0.24 | 0.43  | -0.8114 | 0.0082 | -9.9 | 0.9 -9.9 | 0.8    |    |    |
| READING | 5 | 902691 | 0 | A.2.3.2   | 3 | 126213 | 0.63 | 0.21 | 0.10 | 0.63 | 0.05 0. | .00 | 0.40 | -0.15 | -0.24 | 0.40  | -0.24 | 0.4508  | 0.0065 | 5.0  | 1.0 7.1  | 1.0    |    |    |
| READING | 5 | 464639 | 0 | A.2.4.1   | 1 | 126213 | 0.43 | 0.43 | 0.29 | 0.19 | 0.08 0. | .00 | 0.32 | 0.32  | -0.01 | -0.18 | -0.28 | 1.5145  | 0.0063 | 9.9  | 1.1 9.9  | 1.1    |    |    |
| READING | 5 | 287990 | 0 | A.2.4.1   | 2 | 126213 | 0.46 | 0.05 | 0.12 | 0.46 | 0.37 0. | .00 | 0.29 | -0.28 | -0.20 | 0.29  | -0.03 | 1.1938  | 0.0063 | 9.9  | 1.1 9.9  | 1.2    |    |    |
| READING | 5 | 693619 | 0 | B.3.1.1   | 2 | 126213 | 0.79 | 0.04 | 0.05 | 0.11 | 0.79 0. | .00 | 0.50 | -0.30 | -0.26 | -0.26 | 0.50  | -0.5183 | 0.0076 | -9.9 | 0.9 -9.9 | 0.8    |    |    |
| READING | 5 | 227701 | 0 | A.2.3.1   |   |        | 0.75 | 0.07 | 0.11 | 0.06 | 0.75 0. | .00 | 0.30 | -0.15 | -0.17 | -0.14 | 0.30  | -0.0473 | 0.0070 | 9.9  | 1.0 9.9  | 1.1    |    |    |
| READING | 5 | 975221 | 0 | A.2.2.1   | 2 | 126213 | 0.76 | 0.08 | 0.09 | 0.76 |         | .00 | 0.51 | -0.26 | -0.22 | 0.51  | -0.30 | -0.3080 | 0.0073 | -9.9 | 0.9 -9.9 | 0.8    |    |    |
| READING | 5 | 419875 | 0 | A.2.3.2   | 3 | 126213 | 0.55 | 0.17 | 0.20 | 0.55 | 0.08 0. | .01 | 0.35 | -0.06 | -0.25 | 0.35  | -0.17 | 0.8727  | 0.0063 | 9.9  | 1.1 9.9  | 1.1    |    |    |
| READING | 5 | ,01000 | 0 | A.2.3.1   |   | 126213 | 0.64 | 0.12 | 0.12 | 0.64 | 0       | .01 | 0.38 | -0.25 | -0.10 | 0.38  | -0.20 | 0.4189  | 0.0066 | 9.2  | 1.0 2.5  | 1.0    |    |    |
| READING | 5 | 537149 | 0 | B.1.2.1   |   | 126213 | 0.69 | 0.10 | 0.15 | 0.05 | 0.07    | .01 | 0.45 | -0.21 | -0.24 | -0.22 | 0.45  | 0.1279  | 0.0068 | -9.9 | 1.0 -9.9 | 0.9    |    |    |
| READING | 5 | 548528 | 0 | A.2.2.2   | 2 | 126213 | 0.73 | 0.73 | 0.14 | 0.07 | 0.06 0. | .00 | 0.42 | 0.42  | -0.20 | -0.22 | -0.25 | 0.1746  | 0.0067 | -9.9 | 0.9 -9.9 | 0.9    |    |    |

| READING    | 5        | 216472           | 0 | A.2.3.1                | 2 | 126213         | 0.66 | 0.20 | 0.66 | 0.08 | 0.05 | 0.00 | 0.36 | -0.11         | 0.36           | -0.24          | -0.24 | 0.2585            | 0.0067 | 9.9  | 1.1 9.9  | 1.1    |            | T        |
|------------|----------|------------------|---|------------------------|---|----------------|------|------|------|------|------|------|------|---------------|----------------|----------------|-------|-------------------|--------|------|----------|--------|------------|----------|
| READING    | 5        | 574862           | 0 | A.2.6.2                | 3 | 126213         | 0.68 | 0.68 | 0.12 | 0.07 | 0.12 | 0.00 | 0.39 | 0.39          | -0.27          | -0.26          | -0.07 | 0.2526            | 0.0067 | -1.0 | 1.0 0.8  | 1.0    |            |          |
| READING    | 5        | 655072           | 0 | A.2.4.1                | 2 | 126213         | 0.82 | 0.06 | 0.07 | 0.04 | 0.82 | 0.00 | 0.50 | -0.26         | -0.28          | -0.27          | 0.50  | -0.7555           | 0.0081 | -9.9 | 0.9 -9.9 | 0.7    |            |          |
| READING    | 5        | 542019           | 0 | A.1.2.2                | 2 | 126213         | 0.62 | 0.19 | 0.62 | 0.15 | 0.04 | 0.01 | 0.35 | -0.13         | 0.35           | -0.21          | -0.20 | 0.5374            | 0.0065 | 9.9  | 1.1 9.9  | 1.1    |            |          |
| ELA        | 5        | 897782           | 1 | A.1.3.1                | 2 | 70391          | 0.75 | 0.04 | 0.19 | 0.03 | 0.75 | 0.00 | 0.33 | -0.31         | -0.10          | -0.25          | 0.33  | -0.1990           | 0.0096 | 9.9  | 1.1 9.9  | 1.2 A- | - A-       | A-       |
| ELA        | 5        | 874871           | 1 | A.2.3.2                | 2 | 70391          | 0.74 | 0.07 | 0.08 | 0.11 | 0.74 | 0.00 | 0.56 | -0.29         | -0.30          | -0.28          | 0.56  | -0.1337           | 0.0095 | -9.9 | 0.8 -9.9 | 0.7 A- | A-         | A-       |
| ELA        | 5        | 497968           | 1 | A.1.6.1                | 3 | 70391          | 0.73 | 0.73 | 0.06 | 0.06 | 0.14 | 0.00 | 0.46 | 0.46          | -0.25          | -0.26          | -0.23 | -0.1114           | 0.0094 | -9.9 | 0.9 -9.9 | 0.8 A- | - A-       | A-       |
| ELA        | 5        | 802898           | 1 | A.1.4.1                | 1 | 70391          | 0.81 | 0.14 | 0.02 | 0.81 | 0.03 | 0.00 | 0.43 | -0.28         | -0.24          | 0.43           | -0.23 | -0.6253           | 0.0104 | -9.8 | 0.9 -9.9 | 0.9 A- | - A-       | A-       |
| ELA        | 5        | 880493           | 1 | B.2.2.2                | 3 | 70391          | 0.49 | 0.32 | 0.06 | 0.49 | 0.13 | 0.00 | 0.32 | -0.01         | -0.27          | 0.32           | -0.28 | 1.1878            | 0.0084 | 9.9  | 1.1 9.9  | 1.1 A- | - A-       | A-       |
| ELA        | 5        | 391700           | 1 | A.1.5.1                | 2 | 70391          | 0.65 | 0.20 | 0.65 | 0.09 | 0.05 | 0.00 | 0.42 | -0.18         | 0.42           | -0.25          | -0.24 | 0.3627            | 0.0088 | -5.7 | 1.0 -6.5 | 1.0 A- | - A-       | A-       |
| ELA        | 5        | 998708           | 1 | A.1.2.1                | 2 | 70391          | 0.89 | 0.89 | 0.03 | 0.03 | 0.05 | 0.00 | 0.44 | 0.44          | -0.26          | -0.26          | -0.23 | -1.4189           | 0.0129 | -9.9 | 0.9 -9.9 | 0.7 A- | - A-       | A-       |
| ELA        | 5        | 411647           | 1 | B.1.1.1                | 2 | 70391          | 0.65 | 0.18 | 0.65 | 0.03 | 0.14 | 0.00 | 0.40 | -0.23         | 0.40           | -0.23          | -0.18 | 0.3744            | 0.0088 | -2.9 | 1.0 -4.8 | 1.0 A- | - A-       | A-       |
| ELA        | 5        | 504896           | 1 | B-K.1.1.2              | 3 | 14378          | 0.49 | 0.23 | 0.15 | 0.49 | 0.12 | 0.00 | 0.40 | -0.23         | -0.15          | 0.40           | -0.14 | 1.1335            | 0.0187 | -3.3 | 1.0 -0.4 | 1.0 A- | - A-       | A-       |
| ELA        | 5        | 350361           | 1 | B-K.1.1.3              | 3 | 14378          | 0.44 | 0.24 | 0.44 | 0.14 | 0.18 | 0.00 | 0.31 | -0.18         | 0.31           | -0.09          | -0.11 | 1.3860            | 0.0187 | 8.2  | 1.1 9.9  | 1.2 A- | A-         | A-       |
| ELA        | 5        | 732411           | 1 | B-C.3.1.1              | 3 | 14378          | 0.47 | 0.47 | 0.09 | 0.25 | 0.19 | 0.00 | 0.35 | 0.35          | -0.29          | -0.13          | -0.09 | 1.2393            | 0.0187 | 3.7  | 1.0 6.4  | 1.1 A- | A-         | A+       |
| ELA        | 5        | 245996           | 1 | B-C.3.1.3              | 2 | 14378          | 0.49 | 0.15 | 0.13 | 0.22 | 0.49 | 0.01 | 0.31 | -0.19         | -0.18          | -0.06          | 0.31  | 1.1419            | 0.0187 | 9.9  | 1.1 9.9  | 1.1 A- | - A-       | A-       |
| ELA        | 5        | 379301           | 1 | B-C.3.1.3              | 2 | 14378          | 0.61 | 0.20 | 0.61 | 0.09 | 0.10 | 0.00 | 0.40 | -0.20         | 0.40           | -0.23          | -0.16 | 0.5593            | 0.0191 | 1.2  | 1.0 0.4  | 1.0 A- | - A-       | A-       |
| ELA        | 5        | 570518           | 1 | B-V.4.1.2              | 2 | 14378          | 0.36 | 0.36 | 0.15 | 0.15 | 0.00 | 0.00 | 0.21 | 0.21          | -0.16          | -0.23          | 0.08  | 1.8278            | 0.0192 |      | 1.1 9.9  | 1.4 A- |            | A-       |
| ELA        | 5        | 536593           | 1 | B-V.4.1.2              | 2 | 14378          | 0.38 | 0.14 | 0.23 | 0.38 | 0.25 |      | 0.09 | -0.21         | 0.05           | 0.09           | 0.02  | 1.6942            | 0.0190 |      | 1.3 9.9  | 1.6 A- |            | A+       |
| ELA        | 5        | 527846           | 1 | B-V.4.1.2              | 1 | 14378          | 0.65 | 0.10 | 0.08 | 0.17 | 0.65 |      | 0.41 | -0.20         | -0.18          | -0.23          | 0.41  | 0.3147            | 0.0196 |      | 1.0 -3.5 | 1.0 A- |            | A-       |
| ELA        | 5        | 213711           | 2 | B-V.4.1.1              | 2 | 14008          | 0.66 | 0.22 | 0.05 | 0.06 |      | 0.01 | 0.47 | -0.30         | -0.21          | -0.20          | 0.47  | 0.3230            | 0.0198 |      | 0.9 -9.9 | 0.9 A- | A-         | A-       |
| ELA        | 5        | 392015           | 2 | B-V.4.1.2              | 2 | 14008          | 0.34 | 0.40 | 0.10 | 0.15 |      | 0.01 | 0.18 | 0.00          | -0.13          | -0.12          | 0.18  | 1.9272            | 0.0196 |      | 1.2 9.9  | 1.4 A- | A-         | A-       |
| ELA        | 5        | 883509           | 2 | B-C.3.1.1              | 3 | 14008          | 0.40 | 0.36 | 0.18 | 0.40 | 0.06 |      | 0.37 | -0.20         | -0.11          | 0.37           | -0.19 | 1.6164            | 0.0191 |      | 0.9 4.7  | 1.1 A- | A-         | A-       |
| ELA        | 5        | 224966           | 2 | B-C.3.1.3              | 2 | 14008          | 0.49 | 0.49 | 0.17 | 0.11 |      | 0.00 | 0.30 | 0.30          | -0.19          | -0.14          | -0.08 | 1.1919            | 0.0188 |      | 1.1 9.9  | 1.1 A- | A-         | A-       |
| ELA        | 5        | 896122           | 2 | B-V.4.1.1              | 2 | 14008          | 0.55 | 0.55 | 0.11 | 0.13 |      | 0.00 | 0.26 | 0.26          | -0.17          | -0.20          | -0.01 | 0.8635            | 0.0190 |      | 1.2 9.9  | 1.2 A- | A+         | A+       |
| ELA        | 5        | 733324           | 2 | B-C.2.1.1              | 3 | 14008          | 0.38 | 0.18 | 0.38 | 0.17 | 0.26 |      | 0.25 | -0.12         | 0.25           | -0.18          | -0.02 | 1.7048            | 0.0192 |      | 1.1 9.9  | 1.3 A- |            | A-       |
| ELA        | 5        | 143102           | 2 | B-C.2.1.2              | 3 | 14008          | 0.39 | 0.23 | 0.39 | 0.17 | 0.21 |      | 0.20 | -0.15         | 0.20           | -0.10          | 0.01  | 1.6732            | 0.0192 |      | 1.2 9.9  | 1.4 A- | A-         | A-       |
| ELA        |          | 484807           | 2 | B-C.3.1.2              | 3 | 14008          | 0.72 | 0.15 | 0.06 | 0.72 |      | 0.01 | 0.47 | -0.19         | -0.28          | 0.47           | -0.31 | -0.0693           | 0.0209 |      | 0.9 -8.4 | 0.9 A- | B-         | A-       |
| ELA        | 5        | 369795           | 3 | B-C.3.1.3              | 2 | 14016          | 0.46 | 0.17 | 0.46 | 0.22 |      | 0.00 | 0.35 | -0.15         | 0.35           | -0.15          | -0.15 | 1.3499            | 0.0189 | 4.1  | 1.0 9.9  | 1.1 A- |            | A-       |
| ELA        |          | 214353           | 3 | B-C.3.1.3              | 2 | 14016          | 0.75 | 0.10 | 0.08 | 0.75 |      | 0.00 | 0.53 | -0.27         | -0.29          | 0.53           | -0.27 | -0.2365           | 0.0218 | _    | 0.9 -9.9 | 0.7 A- |            | A-       |
| ELA        |          | 912734           | 3 | B-K.1.1.3              | 1 | 14016          | 0.74 | 0.13 | 0.06 | 0.74 |      | 0.00 | 0.43 | -0.26         | -0.26          | 0.43           | -0.15 | -0.1336           | 0.0214 | _    | 1.0 -5.2 | 0.9 A- |            | A-       |
| ELA        |          | 556770           | 3 | B-K.1.1.2              | 3 | 14016          | 0.67 | 0.11 | 0.67 | 0.08 |      | 0.00 | 0.43 | -0.28         | 0.43           | -0.26          | -0.12 | 0.2945            | 0.0201 |      | 1.0 -4.6 | 0.9 A- |            | A-       |
| ELA<br>ELA |          | 256797           | 3 | B-V.4.1.1              | 2 | 14016          | 0.55 | 0.22 | 0.20 | 0.03 | 0.00 | 0.00 | 0.31 | -0.23<br>0.48 | -0.05<br>-0.29 | -0.23<br>-0.25 | -0.23 | 0.9321<br>-0.4566 | 0.0191 | 9.9  | 1.1 9.9  | 0.9 A- |            | A-       |
| ELA        | 5        | 614868<br>575411 | 3 | B-V.4.1.1<br>B-V.4.1.2 | 2 | 14016<br>14016 | 0.78 | 0.78 | 0.06 | 0.11 |      | 0.00 | 0.48 | -0.28         | -0.29          | -0.23          | 0.50  | -0.4366           | 0.0227 |      | 0.9 -6.6 | 0.9 A- | A-<br>- A- | A-<br>A+ |
| ELA        | 5        | 197489           | 3 | B-V.4.1.2<br>B-V.4.1.2 | 1 | 14016          | 0.73 | 0.04 | 0.13 | 0.08 |      | 0.00 | 0.30 | 0.49          | -0.28          | -0.31          | -0.29 | -1.5001           | 0.0211 |      | 0.9 -9.9 | 0.6 A  |            | A+<br>A- |
| ELA        | <u>5</u> | 584424           | 4 | B-V.4.1.2<br>B-K.1.1.3 | 2 | 14010          | 0.90 | 0.90 | 0.03 | 0.04 | 0.04 |      | 0.49 | 0.49          | -0.28          | -0.23          | -0.29 | -0.9757           | 0.0256 |      | 0.8 -9.9 | 0.0 A- |            | A-       |
| ELA        | 5        | 893247           | 1 | B-V.4.1.1              | 2 | 14022          | 0.68 | 0.08 | 0.08 | 0.02 |      | 0.00 | 0.49 | -0.29         | -0.24          | -0.23          | 0.49  | 0.2209            | 0.0230 |      | 0.9 -9.9 | 0.7 A- | A-         | B-       |
| ELA        | 5        |                  | 4 | B-K.1.1.2              | 3 | 14022          | 0.33 | 0.08 | 0.08 | 0.33 |      | 0.00 | 0.19 | -0.25         | 0.00           | 0.19           | -0.06 | 1.9778            | 0.0200 |      | 1.1 9.9  | 1.4 A- | _          | A-       |
| ELA        | 5        | 170308           | 4 | B-C.3.1.1              | 3 | 14022          | 0.52 | 0.14 | 0.25 | 0.08 |      | 0.00 | 0.12 | -0.15         | -0.07          | -0.26          | 0.32  | 1.0245            | 0.0193 | 9.3  | 1.1 9.9  | 1.1 A- |            | A-       |
| ELA        | 5        | 284702           | 4 | B-C.3.1.1              | 2 | 14022          | 0.53 | 0.04 | 0.53 | 0.27 | 0.15 |      | 0.30 | -0.13         | 0.30           | -0.10          | -0.15 | 0.9947            | 0.0188 | 9.9  | 1.1 9.9  | 1.1 A  |            | A+       |
| ELA        | 5        | 405227           | 4 | B-C.3.1.3              | 3 | 14022          | 0.59 | 0.17 | 0.59 | 0.13 | 0.10 |      | 0.42 | -0.19         | 0.42           | -0.20          | -0.21 | 0.6712            | 0.0100 | -4.6 | 1.0 -4.5 | 1.0 A- | A-         | A-       |
| ELA        | 5        |                  | 4 | B-V.4.1.2              | 2 | 14022          | 0.62 | 0.23 | 0.08 | 0.62 |      | 0.00 | 0.32 | -0.06         | -0.26          | 0.32           | -0.23 | 0.5494            | 0.0191 |      | 1.1 9.9  | 1.1 A- | _          | A-       |
| ELA        | 5        | 203525           | 4 | B-K.1.1.3              | 2 | 14022          | 0.38 | 0.38 | 0.43 | 0.09 | 0.09 |      | 0.22 | 0.22          | 0.04           | -0.22          | -0.20 | 1.7118            | 0.0190 |      | 1.1 9.9  | 1.3 A- | _          | A-       |
| ELA        | <u> </u> | 266442           | 5 | B-V.4.1.2              | 1 | 13967          | 0.68 | 0.11 | 0.12 | 0.09 |      | 0.00 | 0.53 | -0.21         | -0.26          | -0.33          | 0.53  | 0.2081            | 0.0202 | _    | 0.9 -9.9 | 0.8 A- | A-         | A-       |
| ELA        | <u> </u> | 672291           | 5 | B-C.3.1.3              | 2 | 13967          | 0.28 | 0.16 | 0.46 | 0.03 | 0.00 | 0.00 | 0.18 | -0.21         | 0.08           | 0.18           | -0.14 | 2.3231            | 0.0206 |      | 1.1 9.9  | 1.4 A- |            | A-       |
| ELA        | 5        |                  | 5 | B-K.1.1.3              | 2 | 13967          | 0.51 | 0.51 | 0.31 | 0.06 | 00   | 0.00 | 0.30 | 0.30          | -0.06          | -0.25          | -0.17 | 1.1304            | 0.0200 | _    | 1.1 9.9  | 1.1 A- |            | A-       |
| ELA        | <u> </u> | 277226           | 5 | B-K.1.1.3              | 2 | 13967          | 0.56 | 0.27 | 0.56 | 0.08 |      | 0.00 | 0.44 | -0.20         | 0.44           | -0.28          | -0.19 | 0.8338            | 0.0190 |      | 0.9 -7.5 | 0.9 A- |            | A-       |
| ELA        | <u> </u> | 981465           | 5 | B-C.2.1.2              | 3 | 13967          | 0.49 | 0.33 | 0.49 | 0.06 |      | 0.01 | 0.33 | -0.09         | 0.33           | -0.28          | -0.15 | 1.1952            | 0.0130 | 5.7  | 1.0 8.9  | 1.1 A- |            | A-       |
| ELA        | <u> </u> | 903999           | 5 | B-C.3.1.3              | 2 | 13967          | 0.45 | 0.15 | 0.09 | 0.00 |      | 0.00 | 0.49 | -0.22         | -0.24          | -0.29          | 0.19  | 0.3156            | 0.0100 |      | 0.9 -9.9 | 0.8 A- |            | A-       |
| ELA        | 5        |                  | 5 | B-V.4.1.1              | 2 | 13967          | 0.78 | 0.78 | 0.05 | 0.05 | 0.00 | 0.00 | 0.46 | 0.46          | -0.25          | -0.26          | -0.24 | -0.4120           | 0.0225 |      | 0.9 -8.5 | 0.8 A- | A-         | B-       |
|            |          | .5 1205          |   | 2 7.1.1.1              | - | 13701          | 3.70 | 5.75 | 5.05 | 3.03 | 0.12 | 0.00 | 0.10 | 0.10          | 0.23           | 0.20           | 0.27  | 5.1125            | 0.0223 | ,.2  | 3.7 3.3  | 3.0 71 | 1 1        |          |

| ELA     | 5 239760 | 5 | B-V.4.1.1          | 2  | 13967  | 0.41 | 0.05 | 0.05 | 0.41 | 0.50 | 0.00 | 0.11 | -0.26 | -0.28 | 0.11  | 0.13 1    | .6246 | 0.0190 | 9.9 1 | .3 9.9  | 1.5 | 5 A- | A-   | A-  |
|---------|----------|---|--------------------|----|--------|------|------|------|------|------|------|------|-------|-------|-------|-----------|-------|--------|-------|---------|-----|------|--|-----|
| ELA     | 5 240596 | 6 | A.2.1.1            | 2  | 55796  | 0.71 | 0.14 | 0.71 | 0.10 |      | 0.00 | 0.43 | -0.19 | 0.43  | -0.22 |           | .0166 | 0.0104 |       | .0 -9.6 |     | 9 A+ | B-   | B-  |
| ELA     | 5 316080 | 6 | A.2.2.2            | 2  | 55796  | 0.74 | 0.03 | 0.20 | 0.74 | 0.03 | 0.00 | 0.29 | -0.22 | -0.16 | 0.29  | -0.17 -0. | .1467 | 0.0107 | 9.9 1 | .1 9.9  | 1.2 | 2 B- | B-   | Α-  |
| ELA     | 5 211022 | 6 | A.2.4.1            | 2  | 55796  | 0.47 | 0.11 | 0.14 | 0.47 |      | 0.00 | 0.32 | -0.18 | -0.18 | 0.32  | -0.09 1   | .3042 | 0.0095 | 9.9 1 | .1 9.9  | 1.  | 1 A- | Α-   | Α-  |
| ELA     | 5 413897 | 6 | A.2.1.1            | 1  | 55796  | 0.68 | 0.07 | 0.20 | 0.05 |      | 0.00 | 0.49 | -0.32 | -0.22 | -0.28 |           | .2252 | 0.0101 | -9.9  | .9 -9.9 | 0.9 | 9 A+ | A-   | A-  |
| ELA     | 5 893276 | 6 | B.3.1.1            | 2  | 55796  | 0.86 | 0.86 | 0.04 | 0.06 |      | 0.00 | 0.44 | 0.44  | -0.24 | -0.25 |           | .0580 | 0.0131 |       | .9 -9.9 |     | 8 A+ | A-   | A-  |
| ELA     | 5 944661 | 6 | A.2.3.1            | 3  | 55796  | 0.73 | 0.03 | 0.16 | 0.73 |      |      | 0.49 | -0.23 | -0.31 | 0.49  |           | .1003 | 0.0106 |       | .9 -9.9 | _   | 8 A- | A-   | A-  |
| ELA     | 5 762101 | 6 |                    | 2  | 55796  | 0.57 | 0.23 | 0.57 | 0.09 |      |      | 0.40 | -0.22 | 0.40  | -0.25 |           | .8246 | 0.0095 |       | .0 0.3  |     | 0 A- | A-   | A-  |
| ELA     | 5 414008 | 6 | A.2.4.1            | 3  | 55796  | 0.54 | 0.10 | 0.15 | 0.54 | 0.20 |      | 0.35 | -0.14 | -0.21 | 0.35  |           | .9447 | 0.0095 |       | .1 9.9  |     | 1 A- | A-   | A-  |
| ELA     | 5 764059 | 6 | A-K.1.1.1          | 2. | 13935  | 0.70 | 0.06 | 0.13 | 0.70 | 0.11 | 0.00 | 0.45 | -0.23 | -0.27 | 0.45  |           | .1322 | 0.0205 |       | .9 -6.9 | _   | 9 A- | A-   | A-  |
| ELA     | 5 608362 | 6 | A-K.1.1.1          | 2  | 13935  | 0.72 | 0.72 | 0.04 | 0.07 |      | 0.00 | 0.33 | 0.33  | -0.27 | -0.22 |           | .0019 | 0.0210 | 7.0 1 | .1 4.7  | _   |      | A-   | A-  |
| ELA     | 5 162647 | 6 | A-V.4.1.2          | 1  | 13935  | 0.79 | 0.10 | 0.06 | 0.06 | 0.79 | 0.00 | 0.50 | -0.25 | -0.25 | -0.30 | 0.07      | .4626 | 0.0228 |       | .9 -9.9 |     | 7 A+ | A-   | A-  |
| ELA     | 5 711824 | 6 | A-V.4.1.1          | 2  | 13935  | 0.83 | 0.83 | 0.09 | 0.04 |      | 0.00 | 0.39 | 0.39  | -0.15 | -0.28 |           | .8043 | 0.0247 | 7     | .0 -0.4 |     | 0 A+ | A-   | B-  |
| ELA     | 5 220532 | 6 | A-V.4.1.2          | 2  | 13935  | 0.68 | 0.10 | 0.13 | 0.09 |      | 0.00 | 0.48 | -0.29 | -0.20 | -0.24 |           | .2480 | 0.0202 |       | .9 -9.9 |     | 8 A- | A-   | B-  |
| ELA     | 5 638365 | 6 | A-C.2.1.1          | 2  | 13935  | 0.38 | 0.29 | 0.38 | 0.16 |      | 0.00 | 0.21 | -0.03 | 0.21  | -0.19 |           | .8034 | 0.0193 | 9.9 1 | .2 9.9  |     |      | A-   | A-  |
| ELA     | 5 736680 | 6 |                    | 2  | 13935  | 0.76 | 0.08 | 0.76 | 0.08 |      | 0.00 | 0.47 | -0.25 | 0.47  | -0.26 |           | .2875 | 0.0221 |       | .9 -9.9 |     | 8 A+ | A-   | A-  |
| ELA     | 5 945582 | 6 | A-K.1.1.3          | 2  | 13935  | 0.45 | 0.03 | 0.70 | 0.45 |      | 0.00 | 0.47 | -0.23 | -0.12 | 0.23  |           | .4118 | 0.0221 | 9.9 1 | .2 9.9  | _   | 3 A+ | A-   | A-  |
| ELA     | 5 328206 | 7 | A-K.1.1.2          | 3  | 13980  | 0.43 | 0.23 | 0.22 | 0.08 |      | 0.00 | 0.23 | -0.23 | 0.10  | -0.15 |           | .4903 | 0.0189 | 9.9 1 | .2 9.9  |     | 4 A+ | A-   | A-  |
| ELA     | 5 748990 | 7 | A-K.1.1.3          | 3  | 13980  | 0.66 | 0.08 | 0.66 | 0.18 | 0.08 | 0.00 | 0.47 | -0.20 | 0.47  | -0.21 |           | .3447 | 0.0199 |       | .9 -9.9 |     | 9 A- | A+   | A-  |
| ELA     | 5 986315 | 7 | A-C.2.1.1          | 3  | 13980  | 0.59 | 0.14 | 0.59 | 0.19 | 0.08 | 0.00 | 0.47 | -0.11 | 0.29  | -0.15 |           | .7047 | 0.0192 | 9.9 1 | .1 9.9  |     |      | A+   | A-  |
| ELA     | 5 271393 | 7 | A-V.4.1.1          | 2  | 13980  | 0.90 | 0.03 | 0.05 | 0.90 |      | 0.00 | 0.45 | -0.24 | -0.30 | 0.45  |           | .5080 | 0.0301 |       | .9 -9.9 | _   | 6 A+ | A-   | A-  |
| ELA     | 5 971791 | 7 | A-V.4.1.1          | 2  | 13980  | 0.88 | 0.05 | 0.03 | 0.03 |      | 0.00 | 0.48 | -0.26 | -0.27 | -0.27 |           | .2614 | 0.0301 |       | .8 -9.9 | _   | 6 A+ | A-   | A-  |
| ELA     | 5 812699 | 7 | A-V.4.1.1          | 2  | 13980  | 0.85 | 0.85 | 0.07 | 0.03 |      | 0.00 | 0.42 | 0.42  | -0.21 | -0.27 |           | .9788 | 0.0277 | 7.0   | .9 -7.1 |     | 8 A+ | A-   | A+  |
| ELA     | 5 383587 | 7 | A-V.4.1.2          | 1  | 13980  | 0.95 | 0.85 | 0.07 | 0.04 |      | 0.00 | 0.42 | 0.42  | -0.21 | -0.13 |           | .2239 | 0.0237 |       | .0 -1.9 | _   | 9 A- | A-   | A-  |
| ELA     | 5 303929 | 7 | A-C.2.1.1          | 2  | 13980  | 0.64 | 0.05 | 0.01 | 0.64 |      |      | 0.28 | -0.30 | -0.21 | 0.38  |           | .4225 | 0.0387 |       | .0 2.1  |     | 0 A+ | A-   | A-  |
| ELA     | 5 192138 | 8 |                    | 1  | 13888  | 0.44 | 0.03 | 0.11 | 0.26 | 0.07 |      | 0.30 | -0.14 | -0.11 | -0.13 |           | .4661 | 0.0191 |       | .1 9.9  | _   | 2 A- | A-   | A-  |
| ELA     | 5 689276 | 8 | A-V.4.1.2          | 1  | 13888  | 0.67 | 0.67 | 0.09 | 0.09 | 0.15 |      | 0.25 | 0.25  | -0.15 | -0.12 |           | .2830 | 0.0201 |       | .2 9.9  | _   | 2 A+ | A-   | A+  |
| ELA     | 5 752013 | 8 | A-V.4.1.2          | 1  | 13888  | 0.48 | 0.17 | 0.07 | 0.24 |      | 0.00 | 0.29 | -0.09 | -0.18 | -0.13 |           | .2762 | 0.0201 |       | .1 9.9  |     | 2 A- | A-   | A-  |
| ELA     | 5 784960 | 8 | A-C.2.1.1          | 3  | 13888  | 0.56 | 0.14 | 0.11 | 0.56 |      |      | 0.39 | -0.17 | -0.19 | 0.39  |           | .8618 | 0.0191 |       | .0 1.9  |     | 0 A- | A+   | A-  |
| ELA     | 5 339415 | 8 | A-K.1.1.2          | 3  | 13888  | 0.51 | 0.14 | 0.17 | 0.51 |      |      | 0.37 | -0.17 | -0.17 | 0.37  |           | .0982 | 0.0192 |       | .0 -3.9 |     | 0 A- | A-   | A-  |
| ELA     | 5 180171 | 8 | A-K.1.1.1          | 2  | 13888  | 0.66 | 0.23 | 0.66 | 0.07 |      |      | 0.46 | -0.13 | 0.46  | -0.30 |           | .3482 | 0.0200 |       | .9 -8.6 | _   | 9 A- | A-   | A-  |
| ELA     | 5 740793 | 8 | A-C.2.1.1          | 3  | 13888  | 0.74 | 0.74 | 0.12 | 0.07 |      | 0.00 | 0.48 | 0.48  | -0.22 | -0.26 |           | .1220 | 0.0213 |       | .9 -9.9 |     | 8 A+ | A-   | A-  |
| ELA     | 5 237720 | 8 |                    | 3  | 13888  | 0.64 | 0.06 | 0.64 | 0.03 |      |      | 0.38 | -0.20 | 0.38  | -0.20 |           | .4104 | 0.0213 |       | .0 2.3  | _   | 0 A- | A-   | A-  |
| ELA     | 5 615249 | 9 |                    | 2  | 13993  | 0.35 | 0.41 | 0.11 | 0.13 |      |      | 0.05 | 0.14  | -0.11 | -0.17 |           | .8996 | 0.0195 |       | .3 9.9  | +   | 6 A+ | A+   | A+  |
| ELA     | 5 221160 | 9 |                    | 2  | 13993  | 0.72 | 0.41 | 0.11 | 0.72 |      | 0.00 | 0.05 | -0.31 | -0.11 | 0.45  |           | .0117 | 0.0207 |       | .9 -7.9 | _   | 9 A- | A-   | A-  |
| ELA     | 5 648802 | 9 |                    | 2  | 13993  | 0.72 | 0.67 | 0.12 | 0.16 | 0.07 |      | 0.45 | 0.35  | -0.16 | -0.20 |           | .2380 | 0.0207 |       | .1 5.4  |     | _    | A-   | A-  |
| ELA     | 5 256095 | 9 | A-K.1.1.1          | 2  | 13993  | 0.51 | 0.07 | 0.17 | 0.10 | 0.04 | 0.00 | 0.35 | -0.14 | -0.12 | 0.35  |           | .0964 | 0.0200 |       | .0 5.8  |     | 1 A+ | A+   | A-  |
| ELA     | 5 442908 | 9 | A-C.2.1.1          | 3  | 13993  | 0.70 | 0.08 | 0.70 | 0.12 |      | 0.00 | 0.50 | -0.23 | 0.50  | -0.28 |           | .0966 | 0.0204 |       | .9 -9.9 | _   | 8 A+ | A+   | A-  |
| ELA     | 5 188357 | 9 | A-K.1.1.2          | 3  | 13993  | 0.70 | 0.03 | 0.70 | 0.12 | 0.07 | 0.00 | 0.22 | -0.23 | 0.22  | -0.28 |           | .1002 | 0.0200 |       | .1 9.9  |     | 3 A+ | A+   | A-  |
| ELA     | 5 396964 | 9 | A-V.4.1.1          | 2  | 13993  | 0.84 | 0.23 | 0.08 | 0.03 |      | 0.00 | 0.22 | 0.41  | -0.18 | -0.28 |           | .9241 | 0.0251 |       | .9 -3.0 |     | 9 A+ | A-   | A-  |
| ELA     | 5 497098 | 9 | A-K.1.1.3          | 3  | 13993  | 0.52 | 0.15 | 0.19 | 0.03 |      | 0.00 | 0.33 | -0.17 | -0.15 | -0.12 |           | .0342 | 0.0231 |       | .1 8.2  |     |      | A+   | A+  |
| READING | 6 242399 | 0 | A.2.3.1            |    | 124788 | 0.59 | 0.59 | 0.08 | 0.19 |      | 0.00 | 0.39 | 0.39  | -0.25 | -0.14 |           | .5817 | 0.0065 |       | .0 9.9  |     |      | 2 1 1  |     |
| READING | 6 410966 | 0 |                    | +  | 124788 | 0.78 | 0.78 | 0.03 | 0.19 |      |      | 0.35 | 0.39  | -0.23 | -0.14 |           | .6407 | 0.0003 |       | .9 3.7  | _   |      | <b> </b>   | +-+ |
| READING | 6 730274 | 0 |                    |    | 124788 | 0.79 | 0.78 | 0.79 | 0.05 |      | 0.00 | 0.43 | -0.27 | 0.47  | -0.29 |           | .8066 | 0.0070 |       | .0 -9.9 | _   | ~    | 1  | +-+ |
| READING | 6 915381 | 0 | A.2.3.2<br>A.2.4.1 |    | 124788 | 0.79 | 0.00 | 0.19 | 0.03 | 0.09 |      | 0.47 | -0.27 | -0.29 | 0.54  |           | .3595 | 0.0079 |       | .0 -9.9 |     |      | <b> </b>   | +-+ |
| READING | 6 121596 | 0 | A.2.3.1            |    | 124788 | 0.73 | 0.10 | 0.10 | 0.73 |      |      | 0.40 | 0.40  | -0.22 | -0.19 |           | .3950 | 0.0072 |       | .0 8.6  | _   |      |  | +-  |
| READING | 6 120427 | 0 | B.1.2.1            |    | 124788 | 0.01 | 0.01 | 0.13 | 0.11 |      |      | 0.40 | -0.29 | -0.22 | -0.19 |           | .4682 | 0.0074 | 9.9 1 | .1 9.9  |     | ~    | 1  | +-+ |
| READING | 6 815163 | 0 | A.1.4.1            |    | 124788 | 0.76 | 0.03 | 0.12 | 0.08 |      |      | 0.28 | -0.23 | 0.39  | -0.19 |           | .1409 | 0.0074 |       | .0 -6.7 | _   | -    | <b>-</b>   | +-  |
| READING | 6 796952 | 0 | A.1.4.1<br>A.1.4.1 |    | 124788 | 0.46 | 0.03 | 0.04 | 0.10 |      | 0.00 | 0.39 | -0.23 | -0.17 | 0.29  |           | .1536 | 0.0063 | 9.9 1 | .2 9.9  |     |      | 1  | +-  |
| READING | 6 922509 | 0 | B.3.3.4            |    | 124788 | 0.46 | 0.30 | 0.11 | 0.46 | 0.07 | 0.00 | 0.29 | -0.01 | 0.34  | -0.27 |           | .9548 | 0.0081 |       | .1 9.9  |     |      | <del>                                     </del> | +-  |
| READING | 6 909043 | 0 |                    |    | 124788 | 0.64 | 0.04 | 0.81 | 0.64 |      | 0.00 | 0.34 | -0.25 | -0.15 | 0.37  |           | .2230 | 0.0067 | 9.9 1 | .1 9.9  |     |      | <u> </u>   | +   |
| KEADING | 0 303043 | U | D.3.3.4            | 7  | 124/00 | 0.04 | 0.00 | 0.23 | 0.04 | 0.03 | 0.00 | 0.57 | -0.20 | -0.13 | 0.57  | -0.20 0.  | .4430 | 0.0007 | 7.7 I | .1 9.5  | 1   | 1    | 1  |     |

| READING | 6   | 272064 | 0 | A.2.3.1   | 2 | 124788 | 0.73 | 0.07 | 0.05 | 0.15 | 0.73 | 0.00 | 0.46  | -0.20 | -0.24 | -0.28 | 0.46  | -0.4314 | 0.0073 | 0.1  | 1.0 -6.6 | 1.0   |      | $\overline{}$ |
|---------|-----|--------|---|-----------|---|--------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|----------|-------|------|---------------|
| READING |     | 420028 | 0 | A.2.4.1   |   | 124788 | 0.73 | 0.56 | 0.05 | 0.13 | 0.73 |      | 0.40  | 0.32  | -0.24 | -0.28 | -0.18 | 0.7269  | 0.0073 | 9.9  | 1.1 9.9  |       |      | +             |
| READING |     | 231121 | 0 | A.2.3.1   |   | 124788 | 0.61 | 0.61 | 0.03 | 0.12 |      | 0.00 | 0.47  | 0.32  | -0.23 | -0.12 | -0.10 | 0.4273  | 0.0065 | _    | 0.9 -9.9 |       |      | +             |
| READING |     | 439265 | 0 | A.2.3.1   |   | 124788 | 0.65 | 0.15 | 0.13 | 0.12 |      | 0.00 | 0.35  | -0.22 | -0.23 | -0.24 | 0.35  | 0.2606  | 0.0066 | 9.9  | 1.1 9.9  |       |      | +             |
| READING |     | 329529 | 0 | B.3.3.2   |   | 124788 | 0.57 | 0.15 | 0.13 | 0.12 |      | 0.00 | 0.35  | -0.22 | 0.35  | -0.10 | -0.23 | 0.5586  | 0.0065 | 9.9  | 1.1 9.9  |       |      | +             |
| READING |     | 179259 | 0 | B.3.3.3   |   | 124788 | 0.84 | 0.84 | 0.06 | 0.12 | 0.04 |      | 0.42  | 0.42  | -0.23 | -0.26 | -0.23 | -1.1198 | 0.0085 | -9.9 | 1.0 -9.9 |       |      | +             |
| READING |     | 194915 | 0 | B.3.1.1   |   | 124788 | 0.53 | 0.14 | 0.13 | 0.53 |      | 0.00 | 0.42  | -0.13 | -0.23 | 0.35  | -0.12 | 0.9232  | 0.0064 | 9.9  | 1.1 9.9  |       |      | +             |
| READING |     | 781196 | 0 | A.2.4.1   |   | 124788 | 0.71 | 0.14 | 0.13 | 0.71 |      | 0.00 | 0.48  | -0.13 | -0.25 | 0.33  | -0.12 | -0.4831 | 0.0004 | 9.9  | 1.1 1.9  |       |      | +             |
| READING |     | 402108 | 0 | A.2.1.1   |   | 124788 | 0.71 | 0.12 | 0.05 | 0.81 |      | 0.00 | 0.45  | -0.29 | -0.22 | 0.45  | -0.22 | -0.7237 | 0.0074 |      | 0.9 -9.9 |       |      | +             |
| READING |     | 728061 | 0 | A.2.3.1   | 2 |        | 0.76 | 0.12 | 0.03 | 0.02 |      | 0.00 | 0.45  | -0.30 | -0.26 | -0.20 | 0.45  | -0.6199 | 0.0077 | -0.4 | 1.0 -7.8 |       |      | +             |
| READING |     | 562530 | 0 | A.2.3.1   | 2 |        | 0.76 | 0.16 | 0.86 | 0.02 |      | 0.00 | 0.48  | -0.27 | 0.48  | -0.26 | -0.27 | -1.1804 | 0.0076 |      | 0.8 -9.9 |       |      | +             |
| READING |     | 655934 | 0 | A.2.4.1   |   | 124788 | 0.70 | 0.70 | 0.12 | 0.10 |      | 0.00 | 0.33  | 0.33  | -0.19 | -0.20 | -0.13 | -0.1092 | 0.0069 | 9.9  | 1.1 9.9  |       |      | +             |
| READING |     | 456400 | 0 | B.3.1.1   |   | 124788 | 0.70 | 0.04 | 0.12 | 0.10 |      | 0.00 | 0.47  | -0.25 | -0.17 | 0.47  | -0.15 | -1.5843 | 0.0007 | -9.9 | 0.9 -9.9 |       |      | +             |
| READING |     | 594273 | 0 | A.2.4.1   |   | 124788 | 0.85 | 0.85 | 0.07 | 0.04 |      | 0.00 | 0.45  | 0.45  | -0.25 | -0.28 | -0.21 | -1.2216 | 0.0097 | -9.9 | 0.9 -9.9 |       |      | +             |
| READING |     | 757922 | 0 | A.2.3.1   |   | 124788 | 0.78 | 0.04 | 0.78 | 0.13 |      | 0.00 | 0.51  | -0.27 | 0.51  | -0.29 | -0.30 | -0.5898 | 0.0075 | -9.9 | 0.9 -9.9 |       |      | +             |
| READING |     | 309585 | 0 | B.3.1.1   |   | 124788 | 0.72 | 0.12 | 0.04 | 0.12 |      | 0.00 | 0.43  | -0.18 | -0.19 | -0.31 | 0.43  | -0.2956 | 0.0073 | 1.6  | 1.0 -0.2 |       |      | +             |
| READING |     | 485256 | 0 | B.1.1.1   |   | 124788 | 0.72 | 0.07 | 0.77 | 0.12 |      | 0.00 | 0.32  | -0.14 | 0.32  | -0.18 | -0.17 | -0.4105 | 0.0071 | 9.9  | 1.0 9.9  |       |      | +             |
| READING |     | 653212 | 0 | B.2.2.2   |   | 124788 | 0.75 | 0.11 | 0.07 | 0.06 |      | 0.00 | 0.52  | -0.29 | -0.30 | -0.21 | 0.52  | -0.4184 | 0.0073 | _    | 0.9 -9.9 |       |      | +             |
| READING |     | 742861 | 0 | A.1.4.1   |   | 124788 | 0.69 | 0.69 | 0.11 | 0.11 |      | 0.00 | 0.55  | 0.55  | -0.29 | -0.25 | -0.29 | -0.0446 | 0.0073 | _    | 0.9 -9.9 |       |      | -             |
| READING |     | 296977 | 0 | B.1.1.1   |   | 124788 | 0.71 | 0.08 | 0.71 | 0.09 |      | 0.00 | 0.55  | -0.29 | 0.55  | -0.29 | -0.27 | -0.1702 | 0.0070 |      | 0.9 -9.9 |       |      | +             |
| READING |     | 739315 | 0 | B.2.1.2   |   | 124788 | 0.71 | 0.06 | 0.10 | 0.55 |      | 0.00 | 0.29  | -0.30 | -0.21 | 0.29  | -0.01 | 0.7570  | 0.0076 | 9.9  | 1.2 9.9  |       |      | +             |
| READING |     | 859839 | 0 | B.2.2.2   |   | 124788 | 0.50 | 0.14 | 0.09 | 0.26 |      | 0.00 | 0.39  | -0.19 | -0.29 | -0.09 | 0.39  | 1.0996  | 0.0064 | 9.9  | 1.0 9.9  |       |      | +             |
| READING |     | 156314 | 0 | A.1.2.2   | 2 |        | 0.78 | 0.07 | 0.78 | 0.11 |      | 0.00 | 0.51  | -0.30 | 0.51  | -0.26 | -0.26 | -0.5505 | 0.0075 |      | 0.9 -9.9 |       |      | +             |
| READING |     | 530717 | 0 | B.1.1.1   |   | 124788 | 0.70 | 0.12 | 0.08 | 0.70 | 0.10 |      | 0.56  | -0.33 | -0.30 | 0.56  | -0.22 | 0.0107  | 0.0068 | -9.9 | 0.8 -9.9 |       |      | +             |
| READING |     | 951500 | 0 | A.1.3.1   |   | 124788 | 0.66 | 0.66 | 0.05 | 0.23 |      | 0.01 | 0.54  | 0.54  | -0.31 | -0.30 | -0.25 | 0.1824  | 0.0067 | -9.9 | 0.9 -9.9 |       |      | +             |
| READING |     | 682170 | 0 | A.1.4.1   |   | 124788 | 0.62 | 0.62 | 0.03 | 0.24 |      | 0.00 | 0.53  | 0.53  | -0.20 | -0.36 | -0.21 | 0.2900  | 0.0066 |      | 0.9 -9.9 |       |      | +             |
| READING |     | 601787 | 0 | B.1.1.1   |   | 124788 | 0.60 | 0.08 | 0.12 | 0.60 |      | 0.00 | 0.44  | -0.28 | -0.22 | 0.44  | -0.15 | 0.4690  | 0.0065 |      | 1.0 4.4  | 1.0   |      | +             |
| READING |     | 676693 | 0 | B.2.1.2   |   | 124788 | 0.54 | 0.06 | 0.54 | 0.32 |      | 0.00 | 0.43  | -0.25 | 0.43  | -0.21 | -0.19 | 0.8525  | 0.0064 | _    | 1.0 -2.9 |       |      | + 1           |
| READING |     | 622705 | 0 | A.1.1.1   |   | 124788 | 0.44 | 0.12 | 0.18 | 0.44 |      | 0.00 | 0.37  | -0.10 | -0.05 | 0.37  | -0.29 | 1.3584  | 0.0064 | 9.9  | 1.0 9.9  |       |      | +             |
| READING |     | 592774 | 0 | A.2.3.2   |   | 124788 | 0.56 | 0.37 | 0.02 | 0.56 | 0.05 |      | 0.47  | -0.35 | -0.18 | 0.47  | -0.18 | 0.6940  | 0.0064 | -9.9 | 0.9 -9.9 |       |      | +             |
| ELA     | 6   | 736776 | 1 | A.2.2.2   | 2 | 62534  | 0.43 | 0.14 | 0.07 | 0.43 |      | 0.00 | 0.45  | -0.01 | -0.18 | 0.45  | -0.36 | 1.3788  | 0.0091 | -9.9 | 0.9 -2.1 | 1.0 A | A+   | A-            |
| ELA     |     | 918673 | 1 | A.2.3.1   | 2 | 62534  | 0.71 | 0.71 | 0.08 | 0.03 | 0.17 | 0.00 | 0.45  | 0.45  | -0.24 | -0.25 | -0.24 | -0.2111 | 0.0100 | -5.8 | 1.0 -8.8 |       |      | A-            |
| ELA     | 6   | 214360 | 1 | A.2.3.2   | 2 | 62534  | 0.73 | 0.14 | 0.05 | 0.09 | 0.73 | 0.00 | 0.53  | -0.24 | -0.29 | -0.33 | 0.53  | -0.3198 | 0.0102 | -9.9 | 0.9 -9.9 | 0.8 A | - A- | A-            |
| ELA     | 6   | 271402 | 1 | A.2.4.1   | 1 | 62534  | 0.77 | 0.13 | 0.77 | 0.05 |      | 0.00 | 0.42  | -0.20 | 0.42  | -0.26 | -0.25 | -0.6087 | 0.0107 | -3.2 | 1.0 -1.0 | 1.0 A | ⊦ B- | A-            |
| ELA     | 6   | 729246 | 1 | A.2.4.1   | 3 | 62534  | 0.81 | 0.06 | 0.05 | 0.81 | 0.08 | 0.00 | 0.41  | -0.27 | -0.27 | 0.41  | -0.14 | -0.8703 | 0.0113 | _    | 1.0 0.0  | 1.0 A | + A- | A-            |
| ELA     | 6   | 226511 | 1 | B.3.1.1   | 1 | 62534  | 0.91 | 0.03 | 0.91 | 0.04 | 0.03 | 0.00 | 0.43  | -0.25 | 0.43  | -0.23 | -0.24 | -1.8771 | 0.0149 | -9.9 | 0.9 -9.9 | 0.7 A | + B- | B-            |
| ELA     |     | 800769 | 1 | B.3.3.1   | 3 | 62534  | 0.75 | 0.13 | 0.05 | 0.75 | 0.06 | 0.00 | 0.41  | -0.15 | -0.28 | 0.41  | -0.25 | -0.4668 | 0.0104 | 1.1  | 1.0 2.7  | 1.0 A | + A- | A-            |
| ELA     | 6   | 164014 | 1 | A.2.3.1   | 2 | 62534  | 0.87 | 0.87 | 0.04 | 0.03 | 0.07 | 0.00 | 0.43  | 0.43  | -0.22 | -0.26 | -0.24 | -1.4106 | 0.0129 | -9.5 | 0.9 -9.9 | 0.7 A | + A- | A-            |
| ELA     | 6   | 976617 | 1 | A-V.4.1.2 | 2 | 6628   | 0.74 | 0.74 | 0.08 | 0.07 | 0.12 | 0.00 | 0.50  | 0.50  | -0.24 | -0.28 | -0.27 | -0.4886 | 0.0315 | -5.4 | 0.9 -3.8 | 0.9 A | - A- | A-            |
| ELA     | 6   | 691978 | 1 | A-K.1.1.1 | 2 | 6628   | 0.63 | 0.09 | 0.06 | 0.63 | 0.21 | 0.00 | 0.30  | -0.27 | -0.26 | 0.30  | -0.01 | 0.1260  | 0.0292 | 9.9  | 1.2 9.9  | 1.3 A | + A- | A-            |
| ELA     | 6   | 306700 | 1 | A-C.2.1.1 | 3 | 6628   | 0.69 | 0.69 | 0.13 | 0.08 | 0.09 | 0.00 | 0.45  | 0.45  | -0.28 | -0.25 | -0.15 | -0.2231 | 0.0303 | -1.1 | 1.0 -0.8 | 1.0 A | + A- | A-            |
| ELA     | 6   | 506456 | 1 | A-C.2.1.2 | 2 | 6628   | 0.33 | 0.21 | 0.33 | 0.13 | 0.33 | 0.00 | 0.36  | -0.35 | 0.08  | -0.20 | 0.36  | 1.7768  | 0.0294 | 1.0  | 1.0 6.1  | 1.2 A | + A- | A+            |
| ELA     | 6   | 585631 | 1 | A-C.2.1.2 | 2 | 6628   | 0.23 | 0.40 | 0.25 | 0.12 | 0.23 | 0.00 | -0.01 | 0.21  | -0.01 | -0.29 | -0.01 | 2.3681  | 0.0321 | 9.9  | 1.4 9.9  | 2.5 A | A-   | A-            |
| ELA     | 6   | 929313 | 1 | A-V.4.1.1 | 2 | 6628   | 0.64 | 0.16 | 0.64 | 0.07 | 0.13 | 0.01 | 0.41  | -0.08 | 0.41  | -0.27 | -0.28 | 0.1080  | 0.0292 | 4.2  | 1.1 3.4  | 1.1 A | - A- | A-            |
| ELA     | 6 : | 254148 | 1 | A-V.4.1.2 | 2 | 6628   | 0.63 | 0.05 | 0.14 | 0.63 | 0.17 | 0.00 | 0.43  | -0.31 | -0.25 | 0.43  | -0.14 | 0.1379  | 0.0292 | 2.8  | 1.0 0.9  | 1.0 A | + A- | A-            |
| ELA     | 6   | 305352 | 1 | A-C.2.1.3 | 2 | 6628   | 0.60 | 0.13 | 0.60 | 0.16 | 0.11 | 0.00 | 0.44  | -0.20 | 0.44  | -0.21 | -0.23 | 0.3279  | 0.0287 | 0.8  | 1.0 -0.4 | 1.0 A | A-   | A-            |
| ELA     | 6   | 486799 | 2 | A-C.3.1.1 | 3 | 6197   | 0.34 | 0.25 | 0.13 | 0.28 | 0.34 | 0.00 | 0.25  | -0.17 | -0.15 | 0.02  | 0.25  | 1.7896  | 0.0298 | 7.6  | 1.1 9.9  | 1.4 A | + A- | A+            |
| ELA     | 6   | 300608 | 2 | A-C.2.1.3 | 2 | 6197   | 0.28 | 0.28 | 0.18 | 0.20 | 0.33 | 0.00 | 0.09  | 0.09  | -0.16 | -0.03 | 0.08  | 2.1293  | 0.0311 | 9.9  | 1.2 9.9  | 1.9 A | + A- | A-            |
| ELA     | 6   | 286476 | 2 | A-V.4.1.1 | 2 | 6197   | 0.56 | 0.06 | 0.32 | 0.56 | 0.06 | 0.00 | 0.43  | -0.31 | -0.22 | 0.43  | -0.15 | 0.6554  | 0.0289 | -0.9 | 1.0 -0.9 | 1.0 A | + A- | A-            |
| ELA     | 6 : | 254276 | 2 | A-V.4.1.2 | 2 | 6197   | 0.34 | 0.15 | 0.23 | 0.27 | 0.34 | 0.01 | 0.16  | -0.21 | 0.13  | -0.13 | 0.16  | 1.7665  | 0.0297 | 9.9  | 1.2 9.9  | 1.5 A | A-   | A-            |
| ELA     | 6   | 202490 | 2 | A-C.2.1.1 | 3 | 6197   | 0.74 | 0.74 | 0.11 | 0.08 | 0.07 | 0.00 | 0.51  | 0.51  | -0.27 | -0.26 | -0.27 | -0.3557 | 0.0322 | -7.0 | 0.9 -7.2 | 0.8 A | + A+ | A-            |

| ELA | 6 986989 | 2   | A-C.2.1.2              | 2 | 6197 | 0.55 | 0.15 | 0.55 | 0.11 | 0.19 | 0.00 | 0.40 | -0.18 | 0.40  | -0.26 | -0.14 | 0.7078  | 0.0288 | 0.4  | 1.0 | 1.0  | 1.0 | Α.       | A-       | A-       |
|-----|----------|-----|------------------------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|---------|--------|------|-----|------|-----|----------|----------|----------|
| ELA | 6 116116 | 2   | A-C.2.1.2              | 2 | 6197 | 0.29 | 0.13 | 0.29 | 0.11 | 0.19 |      | 0.40 | -0.18 | 0.40  | 0.13  | -0.14 | 2.0850  | 0.0288 | 9.9  | 1.2 |      | 1.7 |          | A+       | A+       |
| ELA | 6 275281 | 2   | A-V.4.1.2              | 2 | 6197 | 0.58 | 0.27 | 0.58 | 0.12 |      |      | 0.13 | -0.03 | 0.43  | -0.20 | -0.20 | 0.5126  | 0.0307 | -0.8 | 1.0 |      | 1.0 |          | A-       | A-       |
| ELA | 6 541837 | 3   | A-C.2.1.1              | 2 | 6202 | 0.72 | 0.17 | 0.72 | 0.12 | 0.05 | 0.00 | 0.43 | -0.24 | 0.43  | -0.28 | -0.20 | -0.2493 | 0.0271 | -7.2 | 0.9 |      | 0.8 |          | A-       | A-       |
| ELA | 6 491646 | 3   | A-V.4.1.1              | 2 | 6202 | 0.76 | 0.13 | 0.72 | 0.76 | 0.03 | 0.00 | 0.40 | -0.24 | -0.21 | 0.40  | -0.32 | -0.5070 | 0.0313 | -0.3 | 1.0 | _    |     | A+       | A-       | A-       |
| ELA | 6 638370 | 3   | A-V.4.1.1<br>A-K.1.1.2 | 3 | 6202 | 0.70 | 0.12 | 0.10 | 0.70 | 0.04 | 0.00 | 0.45 | -0.24 | -0.21 | 0.45  | -0.14 | -0.1256 | 0.0333 | -1.7 | 1.0 |      | 0.9 |          | A+       | A-       |
| ELA | 6 661440 | 3   | A-C.2.1.2              | 2 | 6202 | 0.76 | 0.16 | 0.17 | 0.70 | 0.03 | 0.00 | 0.43 | 0.17  | -0.21 | -0.16 | 0.02  | 1.7116  | 0.0313 |      | 1.3 |      | 1.6 |          | A-       | A+       |
| ELA | 6 839294 | 3   | A-K.1.1.3              | 2 | 6202 | 0.82 | 0.06 | 0.17 | 0.25 | 0.19 | 0.00 | 0.17 | -0.28 | -0.34 | -0.10 | 0.02  | -0.9327 | 0.0290 | -9.9 | 0.8 |      | 0.6 |          | A-       | A-       |
| ELA | 6 648732 | 3   | A-V.4.1.2              | 2 | 6202 | 0.64 | 0.64 | 0.09 | 0.03 | 0.05 | 0.00 | 0.37 | 0.41  | -0.26 | -0.29 | -0.29 | 0.2319  | 0.0304 |      | 1.0 |      |     | A-       | A-       | A-       |
| ELA | 6 785745 | 2   | A-V.4.1.2<br>A-C.2.1.3 | 2 | 6202 | 0.42 | 0.04 | 0.09 | 0.22 | 0.03 | 0.00 | 0.41 | -0.26 | -0.20 | 0.02  | 0.19  | 1.4132  | 0.0300 |      | 1.0 |      | 1.5 |          | A-       | A-       |
| ELA | 6 738640 | 2   | A-V.4.1.1              | 2 | 6202 | 0.42 | 0.09 | 0.20 | 0.28 | 0.42 | 0.00 | 0.19 | -0.20 | 0.46  | -0.17 | -0.23 | -0.1730 | 0.0290 | -3.2 | 1.0 |      | 0.9 |          | C-       | C-       |
| ELA | 6 983782 | 1   | A-V.4.1.1<br>A-C.2.1.1 | 2 | 6194 | 0.71 | 0.12 | 0.71 | 0.12 | 0.03 | 0.00 | 0.40 | 0.13  | -0.16 | 0.10  | -0.23 | 1.9127  | 0.0313 | 9.9  | 1.3 |      | 1.6 |          | A-       | A-       |
| ELA | 6 833459 | 4   | A-C.2.1.1<br>A-C.2.1.2 | 2 | 6194 | 0.58 | 0.33 | 0.14 | 0.43 | 0.08 | 0.00 | 0.13 | -0.17 | 0.40  | -0.18 | -0.21 | 0.5540  | 0.0302 | 3.0  | 1.0 |      |     | A-<br>A+ | A-       | A-       |
| ELA | 6 700501 | 4   | A-C.2.1.2<br>A-C.2.1.3 | 2 | 6194 | 0.38 | 0.14 | 0.07 | 0.19 | 0.09 | 0.00 | 0.40 | -0.17 | -0.30 | -0.18 | 0.52  | -0.5206 | 0.0293 | -7.8 | 0.9 |      |     |          | A-       | A+       |
| ELA | 6 160169 | 4   | A-V.4.1.1              | 2 | 6194 | 0.77 | 0.09 | 0.07 | 0.07 | 0.77 | 0.00 | 0.32 | 0.45  | -0.29 | -0.24 | -0.24 | -1.7829 | 0.0333 | -4.9 | 0.9 |      | 0.7 |          | A-       | _        |
| ELA | 6 567028 | 4   | A-V.4.1.1<br>A-V.4.1.2 | 2 | 6194 | 0.90 | 0.90 | 0.04 | 0.03 | 0.03 | 0.00 | 0.45 | -0.25 | -0.29 | -0.22 | 0.41  | 0.1573  | 0.0460 | 2.4  | 1.0 |      | 1.0 |          | A-<br>A- | A-<br>A- |
| ELA | 6 137618 | 4   | A-V.4.1.2<br>A-K.1.1.1 | 2 | 6194 | 0.85 | 0.07 | 0.06 | 0.22 | 0.00 | 0.00 | 0.41 | -0.23 | 0.42  | -0.19 | -0.23 | -1.1550 | 0.0303 | -2.6 | 0.9 |      | 0.9 |          | A+       | A-       |
| ELA | 6 250734 | 4   |                        | 3 | 6194 | 0.83 | 0.07 | 0.83 | 0.07 | 0.02 | 0.00 | 0.42 | -0.23 | -0.25 | 0.48  | -0.23 | -0.6189 | 0.0383 | -5.7 | 0.9 |      | 0.9 |          | A-       | A-       |
| ELA | 6 680031 | 4   | A-K.1.1.2<br>A-C.2.1.1 | 2 | 6194 | 0.78 | 0.07 | 0.07 | 0.78 | 0.08 | 0.00 | 0.48 | -0.31 | -0.25 | 0.48  | -0.21 | 0.8957  | 0.0341 | 9.9  | 1.1 | 9.9  |     |          | A-<br>A- | A-       |
| ELA | 6 133354 | - 4 | A-C.2.1.1              | 2 | 6264 | 0.32 | 0.29 | 0.11 | 0.32 | 0.08 | 0.00 | 0.31 | -0.10 | 0.15  | 0.07  | -0.17 | 1.8881  | 0.0289 | 9.9  | 1.3 | 9.9  | 1.6 |          |          | _        |
| ELA | 6 288657 | 5   | A-C.2.1.1<br>A-C.2.1.2 | 2 | 6264 | 0.55 | 0.17 | 0.33 | 0.33 | 0.16 | 0.00 | 0.13 | 0.21  | -0.13 | -0.22 | -0.03 | 0.7127  | 0.0301 | 9.9  | 1.3 |      | 1.3 |          | A+<br>A+ | A-<br>A+ |
| ELA | 6 675225 | 5   | A-C.2.1.2<br>A-C.2.1.2 | 2 | 6264 | 0.53 | 0.33 | 0.09 | 0.12 | 0.24 | 0.00 | 0.29 | -0.31 | -0.21 | 0.44  | -0.03 | 0.7127  | 0.0288 | -1.5 | 1.0 |      | 1.0 |          | A+       | A+       |
| ELA | 6 697585 | 5   | A-C.2.1.2<br>A-C.2.1.3 | 2 | 6264 | 0.64 | 0.13 | 0.09 | 0.08 | 0.64 | 0.00 | 0.44 | -0.31 | -0.24 | -0.28 | 0.43  | 0.0308  | 0.0303 | 0.4  | 1.0 |      | 1.0 |          | A+       | A+       |
| ELA | 6 883071 | 5   | A-U.4.1.1              | 2 | 6264 | 0.64 | 0.18 | 0.11 | 0.07 | 0.04 | 0.00 | 0.43 | 0.32  | -0.24 | -0.28 | -0.14 | 0.2321  | 0.0298 | 9.9  | 1.0 | 9.7  |     |          | A+       | A+       |
| ELA | 6 949349 | 5   | A-V.4.1.1<br>A-V.4.1.1 | 2 | 6264 | 0.37 | 0.06 | 0.17 | 0.07 | 0.19 |      | 0.32 | -0.27 | 0.48  | -0.19 | -0.14 | -0.6056 | 0.0290 | -4.9 | 0.9 |      | 0.8 |          | A+       | A-       |
| ELA | 6 809446 | 5   | A-V.4.1.1<br>A-V.4.1.2 | 2 | 6264 | 0.78 | 0.00 | 0.78 | 0.00 | 0.10 | 0.00 | 0.48 | -0.27 | -0.23 | 0.41  | -0.24 | 0.6007  | 0.0337 | 1.9  | 1.0 |      | 1.0 |          | A-       | A-       |
| ELA | 6 844910 | 5   | A-V.4.1.2<br>A-K.1.1.2 | 2 | 6264 | 0.37 | 0.12 | 0.21 | 0.37 | 0.09 | 0.01 | 0.40 | -0.18 | -0.23 | -0.14 | 0.40  | 1.1125  | 0.0290 | 0.9  | 1.0 | _    |     | A-       | A-       | A-       |
| ELA | 6 364267 | 5   | A-K.1.1.2<br>A-K.1.1.3 | 2 | 6196 | 0.47 | 0.14 | 0.17 | 0.21 | 0.47 | 0.00 | 0.40 | -0.18 | -0.21 | -0.14 | 0.40  | -0.3593 | 0.0287 | -7.8 | 0.9 |      | 0.8 |          | A-       | B-       |
| ELA | 6 793928 | 6   | A-K.1.1.3<br>A-C.2.1.2 | 2 | 6196 | 0.73 | 0.10 | 0.00 | 0.09 | 0.73 | 0.00 | 0.32 | 0.47  | -0.28 | -0.32 | -0.22 | -0.5682 | 0.0329 | -3.8 | 0.9 |      | 0.8 |          | A-       | A-       |
| ELA | 6 185348 | 6   | A-C.2.1.2<br>A-C.2.1.2 | 2 | 6196 | 0.78 | 0.78 | 0.51 | 0.10 | 0.00 | 0.00 | 0.47 | 0.47  | 0.19  | -0.23 | -0.22 | 0.9891  | 0.0342 | 9.9  | 1.3 |      | 1.4 |          | A+       | A-       |
| ELA | 6 696070 | 6   | A-C.2.1.2<br>A-C.2.1.3 | 2 | 6196 | 0.79 | 0.24 | 0.07 | 0.18 | 0.07 | 0.00 | 0.19 | -0.26 | -0.29 | 0.45  | -0.20 | -0.6404 | 0.0288 | -3.0 | 0.9 |      | 0.9 |          | A-       | A-       |
| ELA | 6 604044 | 6   |                        | 2 | 6196 | 0.79 | 0.04 | 0.07 | 0.79 | 0.08 | 0.00 | 0.43 | -0.20 | -0.29 | -0.24 | 0.41  | -0.9890 | 0.0347 | -1.8 | 1.0 |      | 1.0 |          | A-       | A-       |
| ELA | 6 512901 | 6   |                        | 2 | 6196 | 0.89 | 0.04 | 0.03 | 0.03 | 0.03 | 0.00 | 0.41 | 0.49  | -0.23 | -0.29 | -0.25 | -1.6269 | 0.0374 | -6.2 | 0.8 |      | 0.6 |          | A-       | B-       |
| ELA | 6 131530 | 6   |                        | 2 | 6196 | 0.89 | 0.03 | 0.04 | 0.03 | 0.03 |      | 0.49 | -0.27 | -0.28 | 0.46  | -0.23 | -0.1848 | 0.0320 |      | 1.0 | _    | 0.0 |          | A-       | В-       |
| ELA | 6 391992 | 6   | A-V.4.1.2<br>A-K.1.1.1 | 2 | 6196 | 0.72 | 0.03 | 0.17 | 0.72 | 0.08 | 0.00 | 0.46 | -0.27 | 0.55  | -0.33 | -0.10 | -0.1848 | 0.0320 |      | 0.8 | _    | 0.9 |          | A-       | A-       |
| ELA | 6 420671 | 7   | A-K.1.1.1<br>A-C.2.1.1 | 3 | 6214 | 0.62 | 0.00 | 0.62 | 0.10 | 0.03 | 0.00 | 0.33 | -0.23 | 0.33  | -0.33 | -0.23 | 0.3218  | 0.0336 | -4.3 | 0.8 | _    | 0.7 |          | A-       | +        |
| ELA | 6 662800 | 7   | A-C.2.1.1<br>A-K.1.1.2 | 3 | 6214 | 0.62 | 0.17 | 0.02 | 0.10 | 0.10 | 0.00 | 0.48 | 0.32  | -0.16 | -0.29 | -0.23 | 0.3218  | 0.0296 | 9.9  | 1.1 | _    | 1.2 |          | A-       | A+<br>A+ |
| ELA | 6 134605 | 7   | A-K.1.1.2<br>A-V.4.1.1 | 2 | 6214 | 0.50 | 0.30 | 0.20 | 0.12 | 0.18 | 0.00 | 0.32 | -0.24 | -0.10 | -0.27 | 0.48  | -0.0084 | 0.0287 | -4.7 | 0.9 |      | 0.9 |          | C-       | C-       |
| ELA | 6 730591 | 7   | A-V.4.1.1<br>A-V.4.1.1 | 2 | 6214 | 0.63 | 0.11 | 0.12 | 0.09 | 0.63 | 0.00 | 0.48 | -0.24 | -0.30 | -0.18 | 0.48  | 0.2901  | 0.0307 | -4.7 | 1.0 |      | 0.9 |          | С-<br>В- | C-       |
| ELA | 6 500510 | 7   | A-V.4.1.1<br>A-K.1.1.3 | 2 | 6214 | 0.62 | 0.10 | 0.16 | 0.03 | 0.03 | 0.00 | 0.43 | 0.41  | -0.17 | -0.24 | -0.10 | 0.2901  | 0.0297 | 1.6  | 1.0 | _    | 1.0 |          | Б-<br>А+ | A+       |
| ELA | 6 581833 | 7   | A-K.1.1.3<br>A-V.4.1.2 | 2 | 6214 | 0.62 | 0.02 | 0.19 | 0.11 | 0.11 | 0.00 | 0.41 | -0.23 | -0.20 | 0.39  | -0.10 | 0.3358  | 0.0296 | 3.6  | 1.1 | 3.3  |     | A+       | A-       | A+       |
| ELA | 6 588157 | 7   | A-V.4.1.2<br>A-K.1.1.1 | 2 | 6214 | 0.62 | 0.11 | 0.19 | 0.02 | 0.07 | 0.01 | 0.39 | -0.23 | 0.12  | -0.21 | -0.27 | 0.3338  | 0.0296 | -2.7 | 1.0 | _    | 0.9 |          | A-       | A+       |
| ELA | 6 932910 | 7   | A-K.1.1.1<br>A-C.2.1.2 | 2 | 6214 | 0.00 | 0.13 | 0.66 | 0.10 | 0.03 |      | 0.40 | -0.27 | 0.40  | 0.04  | -0.24 | 1.8411  | 0.0303 | 9.9  | 1.4 | 9.9  | 1.8 |          | A-       | A+       |
| ELA | 6 933993 | 9   | A-C.2.1.2<br>A-C.2.1.1 | 3 | 6188 | 0.53 | 0.09 | 0.43 | 0.33 | 0.14 | 0.00 | 0.04 | -0.17 | -0.29 | -0.24 | 0.50  | 0.0660  | 0.0299 | -6.3 | 0.9 |      | 0.9 |          | A-       | A+       |
| ELA | 6 940539 | 0   | A-C.2.1.1<br>A-C.2.1.2 | 2 | 6188 | 0.82 | 0.11 | 0.07 | 0.14 | 0.08 | 0.00 | 0.30 | -0.23 | -0.29 | 0.48  | -0.26 | -0.9116 | 0.0366 | -5.5 | 0.9 |      | 0.9 |          | A-       | A-       |
| ELA | 6 940539 | 8   |                        | 2 | 6188 | 0.82 | 0.07 | 0.03 | 0.82 | 0.05 | 0.00 | 0.48 | 0.30  | -0.27 | -0.10 | -0.26 | 0.9591  | 0.0366 | 9.9  | 1.2 |      | 1.3 |          | A-<br>A- | A-       |
| ELA | 6 773066 | 0   | A-C.2.1.2<br>A-C.2.1.3 | 2 | 6188 | 0.51 | 0.51 | 0.21 | 0.18 | 0.10 | 0.00 | 0.54 | -0.29 | 0.54  | -0.10 | -0.03 | 0.9391  | 0.0290 | -9.1 | 0.9 | _    | 0.8 |          | A-<br>A- | A-       |
| ELA | 6 833856 | 8   |                        | 2 | 6188 | 0.08 | 0.20 | 0.08 | 0.07 | 0.04 | 0.00 | 0.34 | -0.29 | -0.28 | 0.46  | -0.26 | -0.4327 | 0.0310 | -9.1 | 1.0 |      | 0.8 |          | A-<br>B- | A-<br>B- |
| ELA | 6 861828 | 8   |                        | 2 | 6188 | 0.76 | 0.12 | 0.07 | 0.76 | 0.03 | 0.00 | 0.46 | -0.25 | -0.28 | -0.28 | 0.19  | -0.4327 | 0.0332 | -6.0 | 0.9 | _    |     | A-<br>A+ | В-<br>А- | В-<br>А- |
|     |          | _   |                        | 2 |      |      |      |      |      |      |      |      |       |       |       |       |         |        |      |     |      |     |          |          | _        |
| ELA | 6 211067 | 8   |                        | 2 | 6188 | 0.57 | 0.57 | 0.15 | 0.21 | 0.06 | 0.00 | 0.26 | 0.26  | -0.18 | -0.02 | -0.23 | 0.6446  | 0.0293 | 9.9  | 1.2 |      |     |          | A-       | A-       |
| ELA | 6 374874 | 8   | A-K.1.1.1              | 2 | 6188 | 0.86 | 0.08 | 0.86 | 0.03 | 0.03 | 0.00 | 0.43 | -0.23 | 0.43  | -0.27 | -0.23 | -1.2305 | 0.0396 | -4.1 | 0.9 | -2.7 | 0.9 | A+       | A-       | A-       |

| ELA        | 6 176338             | 9        | A-C.2.1.2              | 2 | 6227         | 0.47 | 0.19 | 0.23 | 0.47 | 0.11 0. | .00 | 0.27  | -0.10          | -0.11         | 0.27          | -0.15 | 1.1162           | 0.0285 | 9.9        | 1.1 9.9            | 1.2 A+           | A+       | A-       |
|------------|----------------------|----------|------------------------|---|--------------|------|------|------|------|---------|-----|-------|----------------|---------------|---------------|-------|------------------|--------|------------|--------------------|------------------|----------|----------|
| ELA        | 6 279312             | 9        | A-K.1.1.3              | 3 | 6227         | 0.18 | 0.13 | 0.18 | 0.37 | 0.33 0. | .00 | -0.12 | -0.05          | -0.12         | 0.02          | 0.12  | 2.8686           | 0.0359 | 9.9        | 1.3 9.9            | 2.9 A-           | A+       | A+       |
| ELA        | 6 525066             | 9        | A-C.2.1.1              | 3 | 6227         | 0.57 | 0.18 | 0.57 | 0.17 | 0.06 0. | .01 | 0.17  | -0.03          | 0.17          | 0.00          | -0.29 | 0.5978           | 0.0289 | 9.9        | 1.3 9.9            | 1.5 A-           | A-       | A-       |
| ELA        | 6 202599             | 9        | A-C.2.1.2              | 2 | 6227         | 0.54 | 0.54 | 0.13 | 0.16 | 0.17 0. | .00 | 0.31  | 0.31           | -0.30         | -0.17         | 0.03  | 0.7681           | 0.0287 | 9.9        | 1.1 9.1            | 1.2 A-           | A+       | A+       |
| ELA        | 6 347384             | 9        | A-V.4.1.2              | 2 | 6227         | 0.74 | 0.10 | 0.09 | 0.08 | 0.74 0. | .00 | 0.47  | -0.36          | -0.23         | -0.13         | 0.47  | -0.3422          | 0.0321 | -5.3       | 0.9 -6.4           | 0.8 A-           | A-       | A-       |
| ELA        | 6 354283             | 9        | A-V.4.1.1              | 2 | 6227         | 0.40 | 0.09 | 0.26 | 0.40 | 0.25 0. | .00 | 0.29  | -0.24          | -0.13         | 0.29          | -0.04 | 1.4929           | 0.0289 | 8.0        | 1.1 9.9            | 1.2 A-           | A+       | A-       |
| ELA        | 6 947832             | 9        | A-C.2.1.3              | 2 | 6227         | 0.56 | 0.14 | 0.19 | 0.11 | 0.56 0. | .00 | 0.46  | -0.21          | -0.20         | -0.24         | 0.46  | 0.6833           | 0.0287 | -4.3       | 1.0 -2.9           | 1.0 A-           | A-       | A-       |
| ELA        | 6 336504             | 9        | A-V.4.1.2              | 2 | 6227         | 0.67 | 0.67 | 0.05 | 0.18 | 0.11 0. | .00 | 0.41  | 0.41           | -0.24         | -0.27         | -0.12 | 0.1089           | 0.0301 | 0.5        | 1.0 -0.2           | 1.0 A-           | A-       | A-       |
| ELA        | 6 599715             | 10       | A-C.3.1.1              | 3 | 6224         | 0.69 | 0.05 | 0.69 | 0.12 | 0.14 0. | .00 | 0.40  | -0.25          | 0.40          | -0.22         | -0.16 | -0.0276          | 0.0309 | 1.8        | 1.0 1.6            | 1.0 A-           | A-       | A-       |
| ELA        | 6 482543             | 10       | A-C.2.1.3              | 2 | 6224         | 0.79 | 0.12 | 0.05 | 0.04 | 0.79 0. | .01 | 0.52  | -0.28          | -0.28         | -0.29         | 0.52  | -0.6934          | 0.0346 | -7.9       | 0.9 -8.8           | 0.7 A+           | B-       | A-       |
| ELA        | 6 174950             | 10       | A-V.4.1.1              | 2 | 6224         | 0.63 | 0.63 | 0.21 | 0.07 | 0.09 0. | .00 | 0.49  | 0.49           | -0.30         | -0.25         | -0.18 | 0.3329           | 0.0296 | -5.9       | 0.9 -5.5           | 0.9 A+           | A-       | A-       |
| ELA        | 6 306811             | 10       | A-K.1.1.3              | 2 | 6224         | 0.67 | 0.06 | 0.08 | 0.67 |         | .00 | 0.49  | -0.24          | -0.23         | 0.49          | -0.28 | 0.0703           | 0.0305 | -5.0       | 0.9 -5.3           | 0.9 A-           | A-       | A-       |
| ELA        | 6 625233             | 10       | A-K.1.1.2              | 3 | 6224         | 0.76 | 0.06 | 0.14 | 0.76 |         | .00 | 0.41  | -0.27          | -0.16         | 0.41          | -0.28 | -0.4501          | 0.0330 | -0.6       | 1.0 3.4            | 1.1 A+           | A-       | A-       |
| ELA        | 6 218293             | 10       | A-C.2.1.1              | 3 | 6224         | 0.55 | 0.55 | 0.20 | 0.07 |         | .00 | 0.26  | 0.26           | 0.02          | -0.26         | -0.18 | 0.7480           | 0.0288 | 9.9        | 1.2 9.9            | 1.3 A-           | A+       | A+       |
| ELA        | 6 919706             | 10       | A-C.2.1.2              | 2 | 6224         | 0.69 | 0.09 | 0.05 | 0.16 |         | .00 | 0.49  | -0.28          | -0.26         | -0.23         | 0.49  | -0.0467          | 0.0310 |            | 0.9 -4.7           | 0.9 A+           | A-       | A-       |
| ELA        | 6 122700             | 10       |                        | 2 | 6224         | 0.76 | 0.04 | 0.76 | 0.16 |         | .00 | 0.39  | -0.25          | 0.39          | -0.20         | -0.22 | -0.5041          | 0.0334 | 0.5        | 1.0 1.4            | 1.1 A+           | B-       | A-       |
| ELA        | 6 545467             | 11       | B.1.1.1                | 2 | 62223        | 0.81 | 0.10 | 0.04 | 0.81 |         | .00 | 0.24  | -0.17          | -0.08         | 0.24          | -0.12 | -0.8381          | 0.0112 | 9.9        | 1.1 9.9            | 1.3 A+           | A-       | A-       |
| ELA        | 6 643441             | 11       | A.1.3.1                | 2 | 62223        | 0.57 | 0.20 | 0.57 | 0.12 | 0       | .00 | 0.37  | -0.21          | 0.37          | -0.16         | -0.14 | 0.6367           | 0.0091 | 9.9        | 1.1 9.9            | 1.1 A-           | A-       | Α-       |
| ELA        | 6 310909             | 11       | A.1.1.1                | 2 | 62223        | 0.82 | 0.82 | 0.02 | 0.08 |         | .00 | 0.30  | 0.30           | -0.24         | -0.11         | -0.18 | -0.9072          | 0.0114 | 8.3        | 1.1 9.9            | 1.2 A+           | A-       | A-       |
| ELA        | 6 685349             | 11       | A.1.3.2                | 2 | 62223        | 0.74 | 0.04 | 0.06 | 0.16 |         | .00 | 0.52  | -0.29          | -0.32         | -0.26         | 0.52  | -0.3420          | 0.0102 | -9.9       | 0.9 -9.9           | 0.8 A-           | A-       | A-       |
| ELA        | 6 785357             | 11       | B.1.1.1                | 3 | 62223        | 0.73 | 0.08 | 0.13 | 0.05 |         | .00 | 0.49  | -0.25          | -0.30         | -0.20         | 0.49  | -0.3008          | 0.0101 | -9.9       |                    | 0.8 A+           | A-       | Α-       |
| ELA        | 6 592058             | 11       | B.1.1.1                | 2 | 62223        | 0.64 | 0.13 | 0.08 | 0.15 |         | .00 | 0.24  | -0.05          | -0.16         | -0.15         | 0.24  | 0.2547           | 0.0094 | 9.9        | 1.2 9.9            | 1.4 A+           | A-       | A-       |
| ELA        | 6 903416             | 11       | B.1.1.1                | 2 | 62223        | 0.56 | 0.03 | 0.39 | 0.56 | 0.02 0. |     | 0.36  | -0.23          | -0.20         | 0.36          | -0.24 | 0.7135           | 0.0091 | 9.9        |                    | 1.1 A+           | A-       | A-       |
| ELA        | 6 854740             | 11       | B.1.1.1                | 2 | 62223        | 0.74 | 0.05 | 0.04 | 0.74 |         | .00 | 0.29  | -0.20          | -0.16         | 0.29          | -0.15 | -0.3099          | 0.0101 | 9.9        |                    | 1.2 A+           | A-       | A-       |
| ELA        | 6 509453             | 11       | B-C.2.1.2              | 2 | 6191         | 0.69 | 0.69 | 0.07 | 0.04 | 0.20 0. |     | 0.34  | 0.34           | -0.23         | -0.28         | -0.11 | -0.0342          | 0.0306 | 3.8        |                    | 1.1 A+           | A+       | Α-       |
| ELA        | 6 113430<br>6 488797 | 11<br>11 | B-C.2.1.3              | 2 | 6191         | 0.50 | 0.50 | 0.16 | 0.10 |         | .00 | 0.28  | 0.28           | -0.25         | -0.24         | 0.06  | 0.9772           | 0.0284 | 9.9        |                    | 1.2 A-           | A-       | A+       |
| ELA<br>ELA | 6 488797<br>6 570330 | 11       | B-V.4.1.1<br>B-V.4.1.1 | 2 | 6191<br>6191 | 0.36 | 0.10 | 0.15 | 0.19 | 0.56 0. | .00 | 0.39  | -0.17<br>-0.26 | -0.18<br>0.17 | -0.19<br>0.13 | -0.20 | 0.6647<br>1.1598 | 0.0286 | 1.1<br>9.9 | 1.0 0.6<br>1.3 9.9 | 1.0 A-<br>1.4 A+ | A+<br>A- | A+<br>A+ |
| ELA        | 6 488038             | 11       | B-V.4.1.2              | 2 | 6191         | 0.53 | 0.13 | 0.53 | 0.10 |         | .00 | 0.18  | 0.06           | 0.17          | -0.28         | -0.10 | 0.8345           | 0.0284 | 9.9        | 1.3 9.9            | 1.4 A-           | A-       | A-       |
| ELA        | 6 850686             | 11       | B-K.1.1.1              | 2 | 6191         | 0.61 | 0.14 | 0.05 | 0.20 |         | .00 | 0.42  | -0.26          | -0.27         | -0.13         | 0.42  | 0.4239           | 0.0291 | -1.9       |                    | 1.0 A-           | A-       | A-       |
| ELA        | 6 350319             | 11       | B-K.1.1.1              | 2 | 6191         | 0.56 | 0.10 | 0.22 | 0.56 |         | .01 | 0.42  | -0.24          | -0.16         | 0.42          | -0.22 | 0.6900           | 0.0286 | -2.6       | 1.0 -2.3           | 1.0 A-           | A-       | A-       |
| ELA        | 6 735473             | 11       | B-C.2.1.1              | 2 | 6191         | 0.60 | 0.10 | 0.16 | 0.60 |         | .00 | 0.38  | -0.27          | -0.11         | 0.38          | -0.17 | 0.4668           | 0.0290 |            | 1.0 1.1            | 1.0 A+           | A-       | A-       |
| ELA        | 6 215865             | 12       | B-V.4.1.2              | 2 | 6209         | 0.64 | 0.64 | 0.15 | 0.06 | 0.15 0. |     | 0.40  | 0.40           | -0.22         | -0.18         | -0.19 | 0.2507           | 0.0298 | 1.7        | 1.0 0.8            | 1.0 A-           | A-       | A-       |
| ELA        | 6 354533             | 12       | B-C.3.1.1              | 3 | 6209         | 0.41 | 0.31 | 0.18 | 0.10 | 0.41 0. |     | 0.25  | -0.06          | -0.07         | -0.21         | 0.25  | 1.4467           | 0.0290 | 9.9        | 1.2 9.9            | 1.3 A-           | A-       | A-       |
| ELA        | 6 161336             | 12       | B-C.3.1.1              | 2 | 6209         | 0.33 | 0.11 | 0.48 | 0.33 |         | .00 | 0.34  | -0.18          | -0.12         | 0.34          | -0.15 | 1.8954           | 0.0301 | 0.5        | 1.0 6.0            | 1.2 B-           | A-       | A-       |
| ELA        | 6 458961             | 12       | B-V.4.1.1              | 2 | 6209         | 0.80 | 0.80 | 0.04 | 0.11 | 0.05 0. | .00 | 0.45  | 0.45           | -0.27         | -0.25         | -0.21 | -0.7472          | 0.0348 | -4.3       | 0.9 -3.9           | 0.9 A-           | A-       | A-       |
| ELA        | 6 710299             | 12       | B-K.1.1.2              | 3 | 6209         | 0.65 | 0.05 | 0.65 | 0.17 | 0.13 0. | .00 | 0.48  | -0.26          | 0.48          | -0.25         | -0.24 | 0.2008           | 0.0299 | -5.7       | 0.9 -6.7           | 0.9 A-           | A-       | A-       |
| ELA        | 6 648522             | 12       | B-C.2.1.2              | 2 | 6209         | 0.76 | 0.14 | 0.05 | 0.04 | 0.76 0. | .01 | 0.44  | -0.22          | -0.27         | -0.27         | 0.44  | -0.5008          | 0.0331 | -3.7       | 0.9 -2.8           | 0.9 A+           | A-       | A-       |
| ELA        | 6 377630             | 12       | B-V.4.1.2              | 2 | 6209         | 0.91 | 0.03 | 0.02 | 0.91 | 0.03 0. | .00 | 0.45  | -0.26          | -0.25         | 0.45          | -0.25 | -1.8624          | 0.0473 | -5.2       | 0.8 -7.8           | 0.6 A-           | B-       | B-       |
| ELA        | 6 196834             | 12       | B-K.1.1.1              | 2 | 6209         | 0.66 | 0.07 | 0.66 | 0.13 | 0.13 0. | .00 | 0.47  | -0.32          | 0.47          | -0.28         | -0.13 | 0.1195           | 0.0302 | -4.2       | 0.9 -3.3           | 0.9 A+           | A-       | A-       |
| ELA        | 6 162939             | 13       | B-C.3.1.1              | 2 | 6215         | 0.60 | 0.15 | 0.60 | 0.08 | 0.17 0. | .00 | 0.37  | -0.13          | 0.37          | -0.28         | -0.15 | 0.4658           | 0.0292 | 4.5        | 1.1 3.0            | 1.1 A-           | A-       | A-       |
| ELA        | 6 162785             | 13       | B-K.1.1.3              | 2 | 6215         | 0.62 | 0.62 | 0.08 | 0.07 | 0.23 0. | .00 | 0.27  | 0.27           | -0.19         | -0.23         | -0.05 | 0.3817           | 0.0294 | 9.9        | 1.2 9.9            | 1.3 A-           | A-       | A-       |
| ELA        | 6 161622             | 13       | B-K.1.1.3              | 2 | 6215         | 0.32 | 0.28 | 0.33 | 0.32 | 0.06 0. | .00 | 0.21  | -0.09          | 0.02          | 0.21          | -0.27 | 1.9360           | 0.0302 | 9.0        | 1.1 9.9            | 1.5 A-           | A+       | A-       |
| ELA        | 6 118628             | 13       | B-C.3.1.1              | 2 | 6215         | 0.49 | 0.49 | 0.21 | 0.14 | 0.16 0. | .00 | 0.48  | 0.48           | -0.31         | -0.26         | -0.07 | 1.0287           | 0.0286 | -9.8       | 0.9 -6.0           | 0.9 A-           | A-       | A-       |
| ELA        | 6 834109             | 13       | B-C.2.1.2              | 3 | 6215         | 0.30 | 0.30 | 0.20 | 0.30 | 0.21 0. | .00 | 0.19  | 0.11           | -0.22         | 0.19          | -0.12 | 2.0765           | 0.0308 | 9.7        | 1.1 9.9            | 1.5 A+           | A-       | A-       |
| ELA        | 6 344990             | 13       | B-V.4.1.2              | 2 | 6215         | 0.74 | 0.15 | 0.05 | 0.06 | 0.74 0. | .00 | 0.51  | -0.23          | -0.29         | -0.31         | 0.51  | -0.2973          | 0.0320 | -7.8       | 0.9 -7.2           | 0.8 A-           | A-       | A-       |
| ELA        | 6 685982             | 13       | B-K.1.1.2              | 3 | 6215         | 0.59 | 0.12 | 0.59 | 0.07 | 0.21 0. | .01 | 0.41  | -0.15          | 0.41          | -0.26         | -0.20 | 0.5109           | 0.0291 | 1.6        | 1.0 3.0            | 1.1 A+           | A+       | A+       |
| ELA        | 6 751816             | 13       | B-C.2.1.3              | 2 | 6215         | 0.37 | 0.24 | 0.24 | 0.15 | 0.37 0. | .00 | 0.39  | -0.10          | -0.21         | -0.16         | 0.39  | 1.6725           | 0.0294 | -6.0       | 0.9 2.7            | 1.1 A-           | A-       | A-       |
| ELA        | 6 514877             | 14       | B-K.1.1.2              | 3 | 6241         | 0.71 | 0.11 | 0.71 | 0.09 | 0.07    | .00 | 0.52  | -0.26          | 0.52          | -0.28         | -0.26 | -0.1748          | 0.0313 | -8.3       | 0.9 -9.4           | 0.8 A+           | A-       | A-       |
| ELA        | 6 105943             | 14       | B-K.1.1.3              | 2 | 6241         | 0.68 | 0.09 | 0.11 | 0.12 | 0.00    | .00 | 0.52  | -0.26          | -0.23         | -0.28         | 0.52  | 0.0373           | 0.0304 | -8.3       | 0.9 -7.1           | 0.8 A+           | A-       | A-       |
| ELA        | 6 335872             | 14       | B-C.2.1.1              | 3 | 6241         | 0.76 | 0.76 | 0.11 | 0.06 | 0.06 0. | .01 | 0.50  | 0.50           | -0.24         | -0.29         | -0.27 | -0.4682          | 0.0328 | -6.6       | 0.9 -7.2           | 0.8 A+           | A-       | A-       |

| ELA        | 6 251141             | 14       | B-C.2.1.2              | 2 | 6241         | 0.56 | 0.56 | 0.18 | 0.15 | 0.10 ( | 0.00 | 0.35  | 0.35  | -0.16          | -0.17          | -0.17         | 0.6492  | 0.0289 | 6.4          | 1.1 5.8              | 1.1 A-           | A-       | A-       |
|------------|----------------------|----------|------------------------|---|--------------|------|------|------|------|--------|------|-------|-------|----------------|----------------|---------------|---------|--------|--------------|----------------------|------------------|----------|----------|
| ELA        | 6 450704             | 14       | B-C.2.1.3              | 2 | 6241         | 0.55 | 0.13 | 0.55 | 0.15 | 0.16   | 0.01 | 0.47  | -0.22 | 0.47           | -0.22          | -0.20         | 0.7223  | 0.0288 | -5.1         | 0.9 -4.6             | 0.9 A-           | A-       | A-       |
| ELA        | 6 633049             | 14       | B-V.4.1.1              | 1 | 6241         | 0.45 | 0.08 | 0.23 | 0.24 | 0.45   | 0.00 | 0.31  | -0.14 | -0.23          | -0.04          | 0.31          | 1.2496  | 0.0287 | 9.5          | 1.1 9.3              | 1.2 A-           | A-       | A-       |
| ELA        | 6 116752             | 14       | B-V.4.1.1              | 2 | 6241         | 0.72 | 0.07 | 0.17 | 0.72 | 0.04   | 0.00 | 0.36  | -0.20 | -0.15          | 0.36           | -0.28         | -0.2172 | 0.0315 | 3.7          | 1.1 4.3              | 1.1 A-           | A-       | A-       |
| ELA        | 6 701601             | 14       | A-V.4.1.1              | 2 | 6241         | 0.44 | 0.26 | 0.13 | 0.44 | 0.17   | 0.00 | 0.24  | -0.05 | -0.17          | 0.24           | -0.10         | 1.2818  | 0.0287 | 9.9          | 1.2 9.9              | 1.3 A-           | A-       | A-       |
| ELA        | 6 944000             | 15       | B-C.2.1.1              | 2 | 6224         | 0.45 | 0.31 | 0.15 | 0.08 | 0.45   | 00.0 | 0.24  | 0.00  | -0.12          | -0.27          | 0.24          | 1.2248  | 0.0283 | 9.9          | 1.2 9.9              | 1.3 A+           | A-       | A+       |
| ELA        | 6 912671             | 15       | B-C.2.1.2              | 2 | 6224         | 0.26 | 0.26 | 0.26 | 0.10 | 0.38   | 0.00 | 0.01  | -0.18 | 0.01           | -0.13          | 0.23          | 2.2539  | 0.0313 | 9.9          | 1.3 9.9              | 1.9 A-           | A+       | A-       |
| ELA        | 6 291224             | 15       | B-K.1.1.2              | 3 | 6224         | 0.40 | 0.24 | 0.16 | 0.40 | 0.19   | 0.00 | 0.21  | -0.11 | -0.14          | 0.21           | -0.01         | 1.4809  | 0.0286 | 9.9          | 1.2 9.9              | 1.3 A+           | A-       | A+       |
| ELA        | 6 684391             | 15       | B-K.1.1.3              | 2 | 6224         | 0.43 | 0.43 | 0.22 | 0.19 | 0.15   | 00.0 | 0.33  | 0.33  | -0.16          | -0.08          | -0.17         | 1.3227  | 0.0284 | 4.3          | 1.1 6.0              | 1.1 A+           | A+       | A+       |
| ELA        | 6 364739             | 15       | B-V.4.1.1              | 2 | 6224         | 0.92 | 0.03 | 0.04 | 0.92 | 0.01   |      | 0.43  | -0.27 | -0.26          | 0.43           | -0.18         | -1.8563 | 0.0481 | -4.3         | 0.9 -7.9             | 0.6 A-           | A-       | B-       |
| ELA        | 6 775702             | 15       | B-V.4.1.2              | 1 | 6224         | 0.63 | 0.11 | 0.20 | 0.07 | 0.63   |      | 0.42  | -0.26 | -0.14          | -0.26          | 0.42          | 0.3617  | 0.0292 | -1.8         | 1.0 -2.8             | 1.0 B-           | C-       | B-       |
| ELA        | 6 288292             | 15       | B-C.2.1.3              | 2 | 6224         | 0.24 | 0.26 | 0.24 | 0.13 | 0.36   |      | 0.06  | -0.15 | 0.06           | -0.16          | 0.21          | 2.3943  | 0.0321 | 9.9          | 1.2 9.9              | 1.8 A-           | A+       | A+       |
| ELA        | 6 997935             | 15       | B-K.1.1.2              | 2 | 6224         | 0.35 | 0.35 | 0.51 | 0.08 | 0.06   |      | 0.15  | 0.15  | 0.11           | -0.22          | -0.27         | 1.7656  | 0.0293 | 9.9          | 1.2 9.9              | 1.5 A-           | A-       | A-       |
| ELA        | 6 590572             | 16       | B-V.4.1.1              | 2 | 6244         | 0.41 | 0.41 | 0.07 | 0.11 |        | 0.00 | 0.18  | 0.08  | -0.24          | -0.23          | 0.18          | 1.4495  | 0.0290 | 9.9          |                      | 1.5 A-           | A+       | A-       |
| ELA        | 6 518733             | 16       | B-K.1.1.2              | 2 | 6244         | 0.61 | 0.14 | 0.15 | 0.61 | 0.10   |      | 0.40  | -0.16 | -0.14          | 0.40           | -0.30         | 0.4112  | 0.0295 | 3.0          |                      | 1.1 A+           | A-       | A-       |
| ELA        | 6 428338             | 16       | B-K.1.1.3              | 3 | 6244         | 0.68 | 0.08 | 0.11 | 0.12 | 0.68   |      | 0.40  | -0.23 | -0.16          | -0.21          | 0.40          | 0.0600  | 0.0305 | 1.7          | 1.0 3.1              | 1.1 A-           | A-       | A-       |
| ELA        | 6 535012             | 16       | B-C.3.1.1              | 2 | 6244         | 0.73 | 0.73 | 0.08 | 0.13 |        | 0.00 | 0.54  | 0.54  | -0.26          | -0.30          | -0.28         | -0.2411 | 0.0318 | -9.6         | 0.9 -9.9             | 0.7 A-           | A-       | A-       |
| ELA        | 6 267013             | 16       | B-C.2.1.3              | 2 | 6244         | 0.73 | 0.73 | 0.10 | 0.06 | 0      | 0.00 | 0.40  | 0.40  | -0.23          | -0.29          | -0.12         | -0.2665 | 0.0319 | -0.1         | 1.0 0.9              | 1.0 A-           | A-       | A-       |
| ELA        | 6 921319             | 16       | B-V.4.1.2              | 2 | 6244         | 0.82 | 0.10 | 0.82 | 0.04 |        | 0.00 | 0.49  | -0.29 | 0.49           | -0.25          | -0.26         | -0.9073 | 0.0362 | -6.5         | 0.9 -6.7             | 0.7 A-           | C-       | C-       |
| ELA        | 6 868301             | 16       | B-V.4.1.1              | 2 | 6244         | 0.77 | 0.05 | 0.11 | 0.77 | 0.07   |      | 0.48  | -0.29 | -0.26          | 0.48           | -0.22         | -0.5609 | 0.0336 | -5.6         | 0.9 -6.0             | 0.8 B-           | A-       | A-       |
| ELA        | 6 561935             | 16       | B-C.2.1.2              | 2 | 6244         | 0.69 | 0.07 | 0.69 | 0.16 |        | 0.00 | 0.41  | -0.22 | 0.41           | -0.17          | -0.27         | -0.0342 | 0.0309 | 1.1          | 1.0 0.2              | 1.0 A+           | A-       | A+       |
| ELA        | 6 871011             | 17       | B-K.1.1.3              | 2 | 6257         | 0.70 | 0.70 | 0.10 | 0.11 |        | 0.00 | 0.50  | 0.50  | -0.28          | -0.27          | -0.21         | -0.0855 | 0.0311 | -7.2         | 0.9 -7.0             | 0.8 A+           | A+       | A-       |
| ELA        | 6 768334             | 17       | B-C.2.1.3              | 2 | 6257         | 0.55 | 0.12 | 0.55 | 0.21 | 0.11 ( |      | 0.33  | -0.27 | 0.33           | 0.00           | -0.25         | 0.7261  | 0.0288 | 9.3          | 1.1 9.9              |                  | A+       | A-       |
| ELA        | 6 983928             | 17       | B-V.4.1.2              | 1 | 6257         | 0.72 | 0.19 | 0.05 | 0.72 |        | 0.00 | 0.32  | -0.12 | -0.24          | 0.32           | -0.22         | -0.2061 | 0.0316 | 6.7          | 1.1 7.4              | 1.2 A-           | A-       | A-       |
| ELA        | 6 357401<br>6 772677 | 17<br>17 | B-C.3.1.1<br>B-C.2.1.2 | 3 | 6257         | 0.56 | 0.56 | 0.14 | 0.19 |        | 0.00 | 0.46  | -0.23 | -0.35<br>-0.30 | -0.08<br>-0.21 | -0.25<br>0.47 | 0.6962  | 0.0289 | -4.5<br>-4.9 | 1.0 -4.2<br>0.9 -4.5 | 0.9 A-<br>0.9 A+ | A-       | Α-       |
| ELA<br>ELA | 6 712964             | 17       | B-V.4.1.1              | 2 | 6257<br>6257 | 0.58 | 0.29 | 0.07 | 0.06 | 0.38 ( |      | 0.47  | -0.23 | 0.48           | -0.21          | -0.18         | -0.3179 | 0.0290 | -4.9         | 0.9 -4.5<br>0.9 -5.3 | 0.9 A+           | A-<br>A- | A-<br>B- |
| ELA        | 6 715954             | 17       | B-V.4.1.1              | 2 | 6257         | 0.74 | 0.16 | 0.74 | 0.75 |        | 0.00 | 0.48  | -0.27 | -0.30          | 0.42           | -0.15         | -0.3179 | 0.0322 | -4.9         | 1.0 -2.3             | 0.9 A+           | A-       | A-       |
| ELA        | 6 416867             | 17       | B-K.1.1.2              | 3 | 6257         | 0.75 | 0.09 | 0.06 | 0.08 |        | 0.00 | 0.50  | -0.27 | -0.29          | -0.23          | 0.50          | -0.3691 | 0.0325 | -7.0         | 0.9 -8.0             | 0.8 A+           | A-       | A-       |
| ELA        | 6 313995             | 18       | B-C.2.1.1              | 2 | 6217         | 0.71 | 0.71 | 0.07 | 0.16 | 0.06   |      | 0.40  | 0.40  | -0.25          | -0.16          | -0.24         | -0.1653 | 0.0314 | 0.8          | 1.0 1.7              | 1.1 A+           | A-       | A-       |
| ELA        | 6 396502             | 18       | B-C.2.1.3              | 2 | 6217         | 0.50 | 0.05 | 0.08 | 0.37 | 0.50   |      | 0.31  | -0.27 | -0.34          | -0.01          | 0.31          | 0.9947  | 0.0286 | 9.9          | 1.1 9.9              | 1.2 A+           | A+       | A+       |
| ELA        | 6 819823             | 18       | B-V.4.1.1              | 2 | 6217         | 0.53 | 0.20 | 0.53 | 0.14 |        | 0.00 | 0.26  | -0.10 | 0.26           | -0.09          | -0.18         | 0.8360  | 0.0287 | 9.9          | 1.2 9.9              | 1.3 A-           | A-       | A-       |
| ELA        | 6 503874             | 18       | B-V.4.1.2              | 2 | 6217         | 0.81 | 0.81 | 0.05 | 0.07 | 0.08   |      | 0.38  | 0.38  | -0.26          | -0.19          | -0.17         | -0.8274 | 0.0354 | -1.2         | 1.0 2.6              | 1.1 A+           | A-       | A-       |
| ELA        | 6 193341             | 18       | B-C.2.1.2              | 2 | 6217         | 0.71 | 0.12 | 0.09 | 0.71 | 0.08   | 0.01 | 0.52  | -0.24 | -0.27          | 0.52           | -0.28         | -0.1272 | 0.0312 | -8.1         | 0.9 -8.5             | 0.8 A+           | A+       | A-       |
| ELA        | 6 683285             | 18       | B-K.1.1.3              | 2 | 6217         | 0.53 | 0.22 | 0.16 | 0.53 | 0.09 ( | 0.00 | 0.37  | -0.12 | -0.17          | 0.37           | -0.25         | 0.8508  | 0.0287 | 5.1          | 1.1 4.9              | 1.1 A+           | A-       | A-       |
| ELA        | 6 669522             | 18       | B-C.3.1.2              | 3 | 6217         | 0.65 | 0.06 | 0.20 | 0.09 | 0.65   | 0.00 | 0.52  | -0.31 | -0.26          | -0.24          | 0.52          | 0.1837  | 0.0300 | -8.7         | 0.9 -8.9             | 0.8 A+           | A-       | A-       |
| ELA        | 6 872165             | 18       | B-C.3.1.2              | 3 | 6217         | 0.50 | 0.21 | 0.50 | 0.21 | 0.08   | 0.00 | 0.37  | -0.11 | 0.37           | -0.17          | -0.27         | 0.9808  | 0.0286 | 3.1          | 1.0 4.5              | 1.1 A+           | A-       | A-       |
| ELA        | 6 128420             | 19       | B-K.1.1.3              | 2 | 6231         | 0.58 | 0.58 | 0.16 | 0.12 | 0.13   | 0.01 | 0.36  | 0.36  | -0.16          | -0.18          | -0.17         | 0.5435  | 0.0287 | 3.7          | 1.0 2.6              | 1.0 A-           | A-       | A-       |
| ELA        | 6 954539             | 19       | B-C.2.1.2              | 2 | 6231         | 0.49 | 0.21 | 0.49 | 0.22 | 0.08   | 0.00 | 0.27  | -0.06 | 0.27           | -0.10          | -0.24         | 1.0168  | 0.0283 | 9.9          | 1.1 9.9              | 1.2 A-           | A-       | A-       |
| ELA        | 6 523250             | 19       | B-C.2.1.3              | 2 | 6231         | 0.31 | 0.14 | 0.31 | 0.45 | 0.10   | 0.00 | 0.12  | -0.23 | 0.12           | 0.13           | -0.14         | 1.9444  | 0.0300 | 9.9          | 1.2 9.9              | 1.6 A-           | A-       | A+       |
| ELA        | 6 118307             | 19       | B-C.3.1.1              | 3 | 6231         | 0.25 | 0.25 | 0.22 | 0.15 | 0.38   | 0.00 | -0.12 | -0.12 | 0.06           | -0.20          | 0.21          | 2.3164  | 0.0319 | 9.9          | 1.5 9.9              | 2.3 A-           | A+       | A+       |
| ELA        | 6 663675             | 19       | B-C.2.1.1              | 3 | 6231         | 0.70 | 0.09 | 0.13 | 0.70 | 0.07   | 0.00 | 0.46  | -0.23 | -0.29          | 0.46           | -0.19         | -0.1009 | 0.0307 | -5.5         | 0.9 -6.7             | 0.9 A-           | A-       | A+       |
| ELA        | 6 453381             | 19       | B-V.4.1.1              | 2 | 6231         | 0.74 | 0.16 | 0.06 | 0.74 | 0.04   | 0.00 | 0.52  | -0.31 | -0.28          | 0.52           | -0.24         | -0.2960 | 0.0317 | -8.9         | 0.9 -9.9             | 0.8 A-           | A-       | A-       |
| ELA        | 6 605495             | 19       | B-V.4.1.2              | 2 | 6231         | 0.33 | 0.24 | 0.27 | 0.15 | 0.33 ( | 0.00 | 0.18  | -0.02 | -0.06          | -0.13          | 0.18          | 1.8288  | 0.0296 | 9.9          | 1.2 9.9              | 1.4 A-           | A-       | A-       |
| ELA        | 6 466430             | 19       | B-C.3.1.2              | 3 | 6231         | 0.35 | 0.15 | 0.36 | 0.13 | 0.00   | 00.0 | 0.22  | -0.21 | 0.03           | -0.13          | 0.22          | 1.7316  | 0.0293 | 9.9          | 1.1 9.9              | 1.3 A-           | A-       | A-       |
| ELA        | 6 733087             | 20       | B-V.4.1.2              | 1 | 6194         | 0.41 | 0.05 | 0.45 | 0.41 | 0.00   | 00.0 | 0.11  | -0.26 | 0.11           | 0.11           | -0.17         | 1.4097  | 0.0286 | 9.9          |                      |                  | A+       | A-       |
| ELA        | 6 506395             | 20       | B-K.1.1.3              | 2 | 6194         | 0.47 | 0.08 | 0.24 | 0.20 | 0.47   | 00.0 | 0.29  | -0.23 | -0.14          | -0.05          | 0.29          | 1.1201  | 0.0284 | 9.8          | 1.1 9.9              | 1.2 A-           | A+       | A-       |
| ELA        | 6 591787             | 20       | B-C.2.1.1              | 3 | 6194         | 0.74 | 0.74 | 0.10 | 0.09 | 0.07   | 00.0 | 0.47  | 0.47  | -0.23          | -0.26          | -0.24         | -0.3036 | 0.0319 | -5.5         | 0.9 -8.1             | 0.8 A-           | A+       | A-       |
| ELA        | 6 246977             | 20       | B-C.2.1.2              | 2 | 6194         | 0.39 | 0.18 | 0.08 | 0.39 | 0.00   | 00.0 | 0.25  | -0.17 | -0.27          | 0.25           | 0.04          | 1.5461  | 0.0289 | 8.6          | 1.1 9.9              | 1.3 A-           | A-       | A-       |
| ELA        | 6 436366             | 20       | B-C.3.1.1              | 2 | 6194         | 0.24 | 0.13 | 0.18 | 0.45 |        | 0.00 | 0.05  | -0.20 | -0.11          | 0.18           | 0.05          | 2.3991  | 0.0324 | 9.9          | 1.3 9.9              | 1.9 A-           | A-       | A-       |
| ELA        | 6 551424             | 20       | B-C.3.1.2              | 3 | 6194         | 0.65 | 0.11 | 0.65 | 0.11 | 0.13   | 0.01 | 0.47  | -0.19 | 0.47           | -0.27          | -0.23         | 0.2249  | 0.0296 | -5.8         | 0.9 -7.4             | 0.9 A-           | A-       | A+       |

| READING 7 74994 0 A.1.1.2 128162 0.61 0.27 0.06 0.61 0.05 0.01 0.36 -0.19 -0.17 0.36 -0.19 0.4698 0.0064 9.9 1.1 9.9 1.1 PREADING 7 738425 0 A.1.2.2 128162 0.74 0.74 0.12 0.04 0.09 0.01 0.48 0.48 -0.26 -0.26 -0.23 -0.2572 0.0071 -9.9 0.9 -9.9 0.8 PREADING 7 883245 0 A.1.3.1 128162 0.72 0.17 0.03 0.72 0.07 0.01 0.45 -0.22 -0.21 0.45 -0.30 -0.2408 0.0070 -0.8 1.0 -9.7 0.9 PREADING 7 317278 0 B.2.1.1 128162 0.73 0.73 0.13 0.07 0.06 0.01 0.50 0.50 -0.32 -0.23 -0.18 -0.1649 0.0069 -9.9 0.9 -9.9 0.8 PREADING 7 796610 0 B.1.1.1 128162 0.67 0.67 0.09 0.04 0.18 0.01 0.33 0.33 -0.20 -0.24 -0.09 0.1084 0.0067 9.9 1.1 9.9 1.1 PREADING 7 327074 0 B.2.1.1 128162 0.48 0.19 0.22 0.10 0.48 0.01 0.34 -0.09 -0.18 -0.17 0.34 1.0225 0.0062 9.9 1.1 9.9 1.1 PREADING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.23 -0.23 -0.23 -1.2130 0.0089 -9.9 0.8 PREADING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.2 PREADING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0063 -9.9 0.9 0.9 0.9 0.9 0.9 0.8 PREADING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 0.9 0.9 0.9   | A- A- |
|---|-------|
| READING 7 738425 0 A.1.2.2 128162 0.74 0.74 0.12 0.04 0.09 0.01 0.48 0.48 -0.26 -0.26 -0.23 -0.2572 0.0071 -9.9 0.9 -9.9 0.8 READING 7 883245 0 A.1.3.1 128162 0.72 0.17 0.03 0.72 0.07 0.01 0.45 -0.22 -0.21 0.45 -0.30 -0.2408 0.0070 -0.8 1.0 -9.7 0.9 READING 7 317278 0 B.2.1.1 128162 0.73 0.73 0.13 0.07 0.06 0.01 0.50 0.50 -0.32 -0.23 -0.18 -0.1649 0.0069 -9.9 0.9 -9.9 0.8 READING 7 796610 0 B.1.1.1 128162 0.67 0.67 0.09 0.04 0.18 0.01 0.33 0.33 -0.20 -0.24 -0.09 0.1084 0.0067 9.9 1.1 9.9 1.2 READING 7 790625 0 B.1.1.1 128162 0.48 0.19 0.22 0.10 0.48 0.01 0.34 -0.09 -0.18 -0.17 0.34 1.0225 0.0062 9.9 1.1 9.9 1.1 READING 7 327074 0 B.2.1.1 128162 0.88 0.04 0.88 0.06 0.02 0.01 0.45 -0.28 0.45 -0.23 -0.23 -1.2130 0.0089 -9.9 0.8 -9.9 0.7 READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8 READING 7 182302 0 A.2.3.1 2 128162 0.70 0.70 0.71 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 -9.9 0.8  |       |
| READING 7 883245 0 A.1.3.1 128162 0.72 0.17 0.03 0.72 0.07 0.01 0.45 -0.22 -0.21 0.45 -0.30 -0.2408 0.0070 -0.8 1.0 -9.7 0.9 READING 7 317278 0 B.2.1.1 128162 0.73 0.73 0.13 0.07 0.06 0.01 0.50 0.50 -0.32 -0.23 -0.18 -0.1649 0.0069 -9.9 0.9 -9.9 0.8 READING 7 796610 0 B.1.1.1 128162 0.67 0.67 0.09 0.04 0.18 0.01 0.33 0.33 -0.20 -0.24 -0.09 0.1084 0.0067 9.9 1.1 9.9 1.2 READING 7 790625 0 B.1.1.1 128162 0.48 0.19 0.22 0.10 0.48 0.01 0.34 -0.09 -0.18 -0.17 0.34 1.0225 0.0062 9.9 1.1 9.9 1.1 READING 7 327074 0 B.2.1.1 128162 0.88 0.04 0.88 0.06 0.02 0.01 0.45 -0.28 0.45 -0.23 -0.23 -1.2130 0.0089 -9.9 0.8 -9.9 0.7 READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8 READING 7 182302 0 A.2.3.1 2 128162 0.70 0.70 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.00 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 -9.9 0.8  |       |
| READING 7 317278 0 B.2.1.1 128162 0.73 0.73 0.13 0.07 0.06 0.01 0.50 0.50 -0.32 -0.23 -0.18 -0.1649 0.0069 -9.9 0.9 -9.9 0.8 READING 7 796610 0 B.1.1.1 128162 0.67 0.67 0.09 0.04 0.18 0.01 0.33 0.33 -0.20 -0.24 -0.09 0.1084 0.0067 9.9 1.1 9.9 1.2 READING 7 790625 0 B.1.1.1 128162 0.48 0.19 0.22 0.10 0.48 0.01 0.34 -0.09 -0.18 -0.17 0.34 1.0225 0.0062 9.9 1.1 9.9 1.1 READING 7 327074 0 B.2.1.1 128162 0.88 0.04 0.88 0.06 0.02 0.01 0.45 -0.28 0.45 -0.23 -0.23 -1.2130 0.0089 -9.9 0.8 -9.9 0.7 READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8 READING 7 421896 0 A.2.3.1 2 128162 0.70 0.70 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 0.9 0.8  |       |
| READING 7 796610 0 B.1.1.1 128162 0.67 0.67 0.09 0.04 0.18 0.01 0.33 0.33 -0.20 -0.24 -0.09 0.1084 0.0067 9.9 1.1 9.9 1.2 READING 7 790625 0 B.1.1.1 128162 0.48 0.19 0.22 0.10 0.48 0.01 0.34 -0.09 -0.18 -0.17 0.34 1.0225 0.0062 9.9 1.1 9.9 1.1 READING 7 327074 0 B.2.1.1 128162 0.88 0.04 0.88 0.06 0.02 0.01 0.45 -0.28 0.45 -0.23 -0.23 -1.2130 0.0089 -9.9 0.8 -9.9 0.7 READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8 READING 7 421896 0 A.2.3.1 2 128162 0.70 0.70 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9 READING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.2 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 0.9 0.8   |       |
| READING 7 790625 0 B.1.1.1 128162 0.48 0.19 0.22 0.10 0.48 0.01 0.34 -0.09 -0.18 -0.17 0.34 1.0225 0.0062 9.9 1.1 9.9 1.1 READING 7 327074 0 B.2.1.1 128162 0.88 0.04 0.88 0.06 0.02 0.01 0.45 -0.28 0.45 -0.23 -0.23 -1.2130 0.0089 -9.9 0.8 -9.9 0.7 READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8 READING 7 421896 0 A.2.3.1 2 128162 0.70 0.70 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9 READING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.1 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 -9.9 0.8  |       |
| READING 7 327074 0 B.2.1.1 128162 0.88 0.04 0.88 0.06 0.02 0.01 0.45 -0.28 0.45 -0.23 -0.23 -1.2130 0.0089 -9.9 0.8 -9.9 0.7   READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8   READING 7 421896 0 A.2.3.1 2 128162 0.70 0.70 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9   READING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.2   READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1   READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 -9.9 0.8  |       |
| READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8 READING 7 421896 0 A.2.3.1 2 128162 0.70 0.70 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9 READING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.2 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.05 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 -9.9 0.8   |       |
| READING 7 425483 0 A.2.2.2 2 128162 0.84 0.84 0.09 0.04 0.03 0.00 0.43 0.43 -0.22 -0.27 -0.24 -1.0583 0.0085 -8.5 1.0 -9.9 0.8 READING 7 421896 0 A.2.3.1 2 128162 0.70 0.70 0.21 0.03 0.05 0.00 0.47 0.47 -0.28 -0.23 -0.25 0.0761 0.0067 -9.9 0.9 -9.9 0.9 READING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.2 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 -9.9 0.8   |       |
| READING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.2 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 9.9 0.8   |       |
| READING 7 182302 0 A.2.3.1 2 128162 0.47 0.16 0.23 0.14 0.47 0.00 0.28 -0.13 -0.09 -0.15 0.28 1.2973 0.0062 9.9 1.1 9.9 1.2 READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 9.9 0.8   |       |
| READING 7 643922 0 B.3.3.1 3 128162 0.54 0.12 0.54 0.14 0.19 0.00 0.35 -0.22 0.35 -0.15 -0.10 0.9696 0.0062 9.9 1.1 9.9 1.1 READING 7 471381 0 A.2.4.1 1 128162 0.82 0.10 0.82 0.05 0.02 0.00 0.50 -0.34 0.50 -0.24 -0.21 -0.9632 0.0083 -9.9 0.9 -9.9 0.8  |       |
|   |       |
| PEADNIC 7 559621 0 P 2 1 1 2 120162 0 67 0 02 0 67 0 02 0 02 0 02 0 02 0  |       |
| READING   7 558631 0  B.2.1.1 2   128162   0.67   0.03   0.67   0.25   0.04   0.00   0.33   -0.23   0.33   -0.17   -0.20   0.1932   0.0066   9.9   1.1   9.9   1.1  |       |
| READING 7 526169 0 A.1.3.1 2 128162 0.73 0.02 0.08 0.73 0.17 0.00 0.27 -0.21 -0.15 0.27 -0.13 -0.2814 0.0071 9.9 1.2 9.9 1.3  |       |
| READING 7 900308 0 A.1.4.1 2 128162 0.93 0.93 0.02 0.03 0.02 0.00 0.36 0.36 -0.19 -0.21 -0.22 -1.8796 0.0110 -9.9 0.9 -9.9 0.7  |       |
| READING 7 572561 0 A.2.3.1 2 128162 0.82 0.09 0.82 0.05 0.03 0.00 0.46 -0.29 0.46 -0.26 -0.18 -0.7471 0.0078 -9.9 0.9 -9.9 0.8  |       |
| READING 7 225227 0 B.2.1.1 2 128162 0.63 0.02 0.05 0.30 0.63 0.00 0.32 -0.22 -0.30 -0.13 0.32 0.4314 0.0064 9.9 1.1 9.9 1.1   |       |
| READING 7 342449 0 A.1.6.2 2 128162 0.84 0.11 0.03 0.84 0.02 0.00 0.35 -0.19 -0.25 0.35 -0.19 -0.9988 0.0083 -0.1 1.0 2.1 1.0   |       |
| READING 7 825972 0 B.1.2.1 3 128162 0.68 0.68 0.04 0.09 0.18 0.01 0.35 0.35 -0.25 -0.19 -0.14 0.1216 0.0067 9.9 1.1 9.9 1.1   |       |
| READING 7 392347 0 B.3.3.4 2 128162 0.60 0.12 0.60 0.15 0.12 0.00 0.37 -0.15 0.37 -0.22 -0.17 0.6238 0.0063 6.6 1.0 5.3 1.0   |       |
| READING 7 7 7 4 4 0 3 5 0 A 2 6 .2 2 1 2 8 1 6 2 0 6 3 0 .1 2 0 .0 5 0 .1 9 0 6 3 0 .0 0 0 .4 9 -0 .2 1 -0 .2 1 -0 .3 0 0 .4 9 0 .3 6 5 1 0 .0 0 6 5 -9 9 0 .9 -9 9 0 .9 1  |       |
| READING 7 738834 0 A.1.3.1 2 128162 0.71 0.71 0.14 0.07 0.08 0.01 0.34 0.34 -0.17 -0.26 -0.09 -0.0252 0.0068 9.9 1.1 9.9 1.1  |       |
| READING 7 271336 0 A.1.1.2 1 128162 0.88 0.04 0.03 0.04 0.88 0.01 0.48 -0.25 -0.28 -0.24 0.48 -1.3729 0.0093 -9.9 0.8 -9.9 0.6  |       |
| READING 7 574582 0 B.1.1.1 2 128162 0.52 0.07 0.05 0.34 0.52 0.01 0.39 -0.25 -0.24 -0.14 0.39 1.0707 0.0062 4.3 1.0 8.0 1.0   |       |
| READING 7 751432 0 A.1.4.1 1 128162 0.59 0.15 0.59 0.23 0.02 0.01 0.43 -0.25 0.43 -0.20 -0.21 0.5241 0.0064 -3.3 1.0 -4.5 1.0   |       |
| READING 7 744377 0 B.1.2.1 3 128162 0.66 0.08 0.10 0.16 0.66 0.01 0.48 -0.25 -0.26 -0.22 0.48 0.2876 0.0065 -9.9 0.9 -9.9 0.9   |       |
| READING 7 835943 0 B.2.1.1 2 128162 0.68 0.68 0.11 0.08 0.12 0.01 0.41 0.41 -0.16 -0.23 -0.22 0.2239 0.0066 -9.9 1.0 -9.4 1.0   |       |
| READING 7 185394 0 A.2.1.2 2 128162 0.65 0.65 0.10 0.16 0.09 0.00 0.30 0.30 -0.14 -0.21 -0.07 0.2893 0.0065 9.9 1.1 9.9 1.1   |       |
| READING 7 492898 0 A.2.2.2 2 128162 0.61 0.07 0.61 0.27 0.05 0.00 0.34 -0.28 0.34 -0.08 -0.27 0.5139 0.0064 9.9 1.1 9.9 1.1   |       |
| READING 7 190974 0 A.2.4.1 1 128162 0.69 0.22 0.05 0.69 0.05 0.00 0.36 -0.20 -0.22 0.36 -0.19 0.0051 0.0068 9.9 1.1 9.9 1.1   |       |
| READING 7 118710 0 A.2.4.1 2 128162 0.85 0.05 0.85 0.04 0.06 0.00 0.43 -0.27 0.43 -0.25 -0.19 -1.0865 0.0085 -9.9 0.9 -9.9 0.8  |       |
| READING 7 719128 0 B.2.1.1 2 128162 0.59 0.15 0.59 0.21 0.05 0.01 0.33 -0.25 0.33 -0.05 -0.21 0.5773 0.0063 9.9 1.1 9.9 1.1   |       |
| READING 7 568446 0 B.1.1.1 2 128162 0.83 0.08 0.83 0.02 0.07 0.00 0.52 -0.33 0.52 -0.21 -0.29 -0.8907 0.0081 -9.9 0.9 -9.9 0.7  |       |
| READING 7 635822 0 B.1.1.1 2 128162 0.69 0.69 0.06 0.09 0.16 0.00 0.30 0.30 -0.26 -0.23 -0.03 0.1132 0.0067 9.9 1.1 9.9 1.2   |       |
| READING 7 520684 0 A.2.2.2 2 128162 0.69 0.19 0.04 0.07 0.69 0.00 0.49 -0.26 -0.29 -0.24 0.49 0.1309 0.0066 -9.9 0.9 -9.9 0.8   |       |
| READING 7 881302 0 A.2.3.1 2 128162 0.84 0.08 0.06 0.84 0.02 0.00 0.39 -0.21 -0.23 0.39 -0.21 -0.9501 0.0082 -9.9 0.9 1.0 1.0 1.0   |       |
| READING 7 417288 0 A.2.3.2 2 128162 0.58 0.26 0.58 0.11 0.05 0.00 0.38 -0.12 0.38 -0.29 -0.21 0.6093 0.0063 8.5 1.0 4.8 1.0   |       |
| READING 7 140255 0 A.2.5.1 3 128162 0.55 0.16 0.07 0.21 0.55 0.00 0.35 -0.06 -0.27 -0.20 0.35 0.9666 0.0062 9.9 1.1 9.9 1.1   |       |
| READING 7 923405 0 A.2.4.1 1 128162 0.78 0.09 0.09 0.78 0.03 0.00 0.40 -0.19 -0.24 0.40 -0.24 -0.3754 0.0072 -9.9 0.9 -9.9 0.9  |       |
| READING 7 100589 0 B.2.1.2 2 128162 0.76 0.09 0.76 0.06 0.09 0.00 0.40 -0.14 0.40 -0.27 -0.23 -0.3693 0.0072 -4.4 1.0 6.5 1.0   |       |
| ELA 7 145769 1 A.2.2.2 2 64383 0.72 0.72 0.04 0.16 0.08 0.00 0.33 0.33 -0.25 -0.08 -0.25 -0.0964 0.0097 9.9 1.1 9.9 1.1 A-  | A+ A- |
|   | A- A- |
| ELA 7 457503 1 A.2.6.2 3 64383 0.79 0.79 0.08 0.04 0.08 0.00 0.37 0.37 -0.17 -0.30 -0.16 -0.5678 0.0106 -3.2 1.0 3.1 1.0 A+ 1.0 | A+ A- |
| ELA 7 751921 1 A.2.1.2 2 64383 0.88 0.88 0.04 0.04 0.04 0.00 0.37 0.37 -0.17 -0.21 -0.23 -1.3622 0.0130 -9.9 0.9 -2.8 1.0 A-  | A- B- |
|   | A- A- |
|   | A- A+ |
|   | A+ A+ |
| ELA 7 765209 1 A.2.1.2 2 64383 0.93 0.03 0.93 0.03 0.01 0.00 0.36 -0.23 0.36 -0.22 -0.15 -2.0903 0.0167 -9.3 0.9 -9.9 0.7 A+ 1  | A- A- |
| ELA 7 384178 1 A-K.1.1.2 3 6800 0.49 0.28 0.08 0.49 0.14 0.00 0.30 -0.05 -0.28 0.30 -0.13 1.0306 0.0273 9.9 1.1 9.9 1.2 A+ 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  | A- A- |

| ELA        | 7 726652             | 1 | A-K.1          | .1.3  | 3 | 6800         | 0.68 | 0.13 | 0.10 | 0.09 | 0.68 | 0.00 | 0.49 | -0.22         | -0.27          | -0.25 | 0.49           | 0.0232            | 0.0291 | -6.1        | 0.9 -5.3            | 0.9 A+           | A- | A-       |
|------------|----------------------|---|----------------|-------|---|--------------|------|------|------|------|------|------|------|---------------|----------------|-------|----------------|-------------------|--------|-------------|---------------------|------------------|----|----------|
| ELA        | 7 567849             | 1 | A-C.2          |       | 3 | 6800         | 0.28 | 0.19 | 0.08 | 0.28 | 0.44 | 0.00 | 0.14 | -0.09         | -0.26          | 0.14  | 0.10           | 2.1119            | 0.0296 | 9.9         | 1.2 9.9             | 1.7 A+           | A- | A-       |
| ELA        | 7 108090             | 1 | A-C.2          | .1.3  | 2 | 6800         | 0.65 | 0.24 | 0.65 | 0.06 | 0.05 | 0.00 | 0.37 | -0.17         | 0.37           | -0.27 | -0.18          | 0.1755            | 0.0286 | 4.8         | 1.1 4.0             | 1.1 A+           | A- | A-       |
| ELA        | 7 498672             | 1 | A-V.4          | .1.1  | 2 | 6800         | 0.61 | 0.61 | 0.04 | 0.18 | 0.16 | 0.00 | 0.37 | 0.37          | -0.25          | -0.17 | -0.16          | 0.4135            | 0.0280 | 5.7         | 1.1 5.6             | 1.1 A-           | A- | B-       |
| ELA        | 7 105274             | 1 | A-V.4          | .1.2  | 1 | 6800         | 0.48 | 0.09 | 0.29 | 0.14 | 0.48 | 0.00 | 0.40 | -0.29         | -0.09          | -0.22 | 0.40           | 1.0611            | 0.0273 | 0.3         | 1.0 3.5             | 1.1 A-           | A- | B-       |
| ELA        | 7 682887             | 1 | A-K.1          | .1.1  | 2 | 6800         | 0.64 | 0.11 | 0.64 | 0.10 | 0.16 | 0.00 | 0.26 | -0.29         | 0.26           | -0.13 | 0.02           | 0.2582            | 0.0284 | 9.9         | 1.2 9.9             | 1.3 A+           | A- | A-       |
| ELA        | 7 907461             | 1 | A-K.1          | .1.2  | 3 | 6800         | 0.74 | 0.74 | 0.14 | 0.07 | 0.05 | 0.00 | 0.40 | 0.40          | -0.13          | -0.31 | -0.22          | -0.3239           | 0.0306 | -0.4        | 1.0 3.0             | 1.1 A+           | A- | A-       |
| ELA        | 7 150140             | 2 | A-K.1          | .1.3  | 3 | 6405         | 0.48 | 0.48 | 0.20 | 0.22 | 0.09 | 0.00 | 0.31 | 0.31          | -0.11          | -0.11 | -0.22          | 1.1352            | 0.0279 | 6.9         | 1.1 7.6             | 1.1 A-           | A- | A-       |
| ELA        | 7 659024             | 2 | A-C.2          | .1.1  | 2 | 6405         | 0.57 | 0.18 | 0.57 | 0.13 | 0.11 | 0.00 | 0.37 | -0.19         | 0.37           | -0.26 | -0.06          | 0.6893            | 0.0282 | 1.7         | 1.0 1.0             | 1.0 A-           | A- | A-       |
| ELA        | 7 539293             | 2 | A-C.2          | .1.3  | 2 | 6405         | 0.47 | 0.08 | 0.31 | 0.15 | 0.47 | 0.00 | 0.35 | -0.26         | -0.09          | -0.17 | 0.35           | 1.1977            | 0.0280 | 3.8         | 1.0 5.7             | 1.1 A+           | A- | A-       |
| ELA        | 7 661320             | 2 | A-C.2          | .1.1  | 3 | 6405         | 0.35 | 0.16 | 0.21 | 0.35 | 0.27 | 0.01 | 0.28 | -0.26         | -0.08          | 0.28  | -0.01          | 1.8030            | 0.0290 | 4.3         | 1.1 9.1             | 1.2 A+           | A+ | A-       |
| ELA        | 7 812509             | 2 |                |       | 2 | 6405         | 0.59 | 0.11 | 0.16 | 0.59 |      | 0.01 | 0.46 | -0.22         | -0.22          | 0.46  | -0.22          | 0.5701            | 0.0284 | -6.5        | 0.9 -6.9            | 0.9 A-           | A- | A-       |
| ELA        | 7 480720             | 2 | A-V.4          |       | 2 | 6405         | 0.50 | 0.13 | 0.05 | 0.50 |      | 0.00 | 0.20 | -0.18         | -0.23          | 0.20  | 0.03           | 1.0596            | 0.0279 | 9.9         | 1.2 9.9             | 1.4 A-           | A- | A-       |
| ELA        | 7 944066             | 2 | A-C.2          |       | 2 | 6405         | 0.63 | 0.63 | 0.12 | 0.13 |      | 0.00 | 0.36 | 0.36          | -0.11          | -0.28 | -0.13          | 0.3671            | 0.0289 | 3.5         | 1.0 4.5             | 1.1 A+           | A- | A+       |
| ELA        | 7 525515             | 2 | 12 11          |       | 2 | 6405         | 0.77 | 0.07 | 0.14 | 0.02 |      | 0.00 | 0.44 | -0.35         | -0.20          | -0.19 | 0.44           | -0.4240           | 0.0324 | -4.1        | 0.9 -4.2            | 0.9 A+           | A+ | A+       |
| ELA        | 7 173593             | 3 | A-K.1          |       | 3 | 6373         | 0.59 | 0.20 | 0.10 | 0.59 | 0.11 |      | 0.44 | -0.16         | -0.28          | 0.44  | -0.22          | 0.6503            | 0.0284 | -5.2        | 0.9 -5.0            | 0.9 A-           | A- | A-       |
| ELA        | 7 558016             | 3 | A-C.2          |       | 2 | 6373         | 0.39 | 0.07 | 0.39 | 0.34 | 0.20 |      | 0.29 | -0.26         | 0.29           | -0.12 | -0.04          | 1.6525            | 0.0284 | 5.3         | 1.1 9.3             | 1.2 A+           | A- | A-       |
| ELA        | 7 520602             | 3 | A-C.2          |       | 3 | 6373         | 0.49 | 0.49 | 0.16 | 0.30 | 0.00 | 0.00 | 0.24 | 0.24          | -0.17          | -0.01 | -0.22          | 1.1716            | 0.0279 | 9.9         | 1.2 9.9             | 1.3 A+           | A+ | A-       |
| ELA        | 7 859552             | 3 | A-C.2          |       | 2 | 6373         | 0.69 | 0.08 | 0.06 | 0.17 | 0.69 |      | 0.46 | -0.25         | -0.24          | -0.23 | 0.46           | 0.1392            | 0.0299 | -5.8        | 0.9 -5.0            | 0.9 A+           | A+ | A-       |
| ELA        | 7 663744             | 3 | A-V.4          |       | 2 | 6373         | 0.84 | 0.05 | 0.84 | 0.05 | 0.05 |      | 0.50 | -0.28         | 0.50           | -0.26 | -0.27          | -0.9187           | 0.0371 | -7.5        | 0.8 -9.9            | 0.6 A+           | B- | A-       |
| ELA        | 7 154302             | 3 |                |       | 1 | 6373         | 0.43 | 0.26 | 0.09 | 0.43 |      | 0.00 | 0.12 | 0.02          | -0.15          | 0.12  | -0.06          | 1.4467            | 0.0280 | 9.9         | 1.3 9.9             | 1.5 A-           | A- | A-       |
| ELA        | 7 818646             | 3 |                |       | 2 | 6373         | 0.57 | 0.09 | 0.25 | 0.09 |      | 0.00 | 0.38 | -0.22         | -0.17          | -0.18 | 0.38           | 0.7478            | 0.0282 | 0.8         | 1.0 1.4             | 1.0 A+           | A- | A-       |
| ELA        | 7 482747             | 3 |                |       | 2 | 6373         | 0.86 | 0.86 | 0.05 | 0.06 |      | 0.00 | 0.49 | 0.49          | -0.28          | -0.27 | -0.26          | -1.0689           | 0.0386 | -7.4        | 0.8 -9.6            | 0.6 A+           | A- | A-       |
| ELA        | 7 900720             | 4 | A-K.1          |       | 3 | 6365         | 0.56 | 0.56 | 0.11 | 0.06 |      | 0.01 | 0.31 | 0.31          | -0.31          | -0.23 | 0.01           | 0.7640            | 0.0282 | 7.6         | 1.1 6.7             | 1.1 A-           | A- | A-       |
| ELA        | 7 211296             | 4 | A-K.1<br>A-C.2 |       | 2 | 6365         | 0.58 | 0.25 | 0.58 | 0.09 | 0.09 |      | 0.29 | -0.16         | 0.29           | -0.13 | -0.13          | 0.6828            | 0.0283 | 9.5         | 1.1 9.9             | 1.2 A+           | A+ | A+       |
| ELA<br>ELA | 7 326843<br>7 606783 | 4 | A-U.2          |       | 2 | 6365<br>6365 | 0.60 | 0.11 | 0.08 | 0.60 | 0.20 |      | 0.37 | -0.25<br>0.43 | -0.19<br>-0.18 | -0.22 | -0.13<br>-0.28 | 0.5691<br>-0.4148 | 0.0285 | 1.8<br>-3.6 | 1.0 1.6<br>0.9 -4.9 | 1.0 A+<br>0.9 A- | A- | A-       |
| ELA        | 7 292306             | 4 | A-V.4          |       | 2 | 6365         | 0.77 | 0.77 | 0.03 | 0.80 |      | 0.00 | 0.43 | -0.30         | -0.18          | 0.44  | -0.28          | -0.4148           | 0.0327 | -5.1        | 0.9 -4.9            | 1.0 A-           | A- | A-<br>A- |
| ELA        | 7 147457             | 4 | A-C.2          |       | 2 | 6365         | 0.41 | 0.13 | 0.16 | 0.10 |      | 0.00 | 0.20 | -0.16         | 0.05           | -0.22 | 0.20           | 1.5265            | 0.0342 | 9.9         | 1.2 9.9             | 1.0 A-           | A- | A+       |
| ELA        | 7 335499             | 4 | A-C.2          |       | 3 | 6365         | 0.41 | 0.13 | 0.11 | 0.10 |      | 0.00 | 0.53 | -0.10         | -0.35          | -0.24 | 0.20           | 0.1772            | 0.0282 | -9.9        | 0.9 -9.9            | 0.8 A-           | A- | A-       |
| ELA        | 7 216742             | 4 | +              |       | 2 | 6365         | 0.58 | 0.18 | 0.58 | 0.04 |      | 0.00 | 0.40 | -0.24         | 0.40           | -0.26 | -0.14          | 0.6788            | 0.0283 | -1.6        | 1.0 -1.4            | 1.0 A-           | B- | A-       |
| ELA        | 7 370207             | 5 | A-C.2          |       | 2 | 6398         | 0.40 | 0.15 | 0.20 | 0.40 |      | 0.00 | 0.26 | -0.15         | -0.18          | 0.26  | 0.00           | 1.5907            | 0.0284 | 6.2         | 1.1 9.9             | 1.3 A-           | A+ | A-       |
| ELA        | 7 365688             | 5 |                |       | 2 | 6398         | 0.62 | 0.20 | 0.62 | 0.07 | 0.11 |      | 0.30 | -0.09         | 0.30           | -0.21 | -0.17          | 0.4505            | 0.0287 | 8.1         | 1.1 9.1             | 1.2 A-           | A- | A-       |
| ELA        | 7 557243             | 5 |                |       | 3 | 6398         | 0.69 | 0.12 | 0.69 | 0.10 | 0.10 |      | 0.41 | -0.29         | 0.41           | -0.19 | -0.12          | 0.1059            | 0.0298 | -1.9        | 1.0 -2.7            | 0.9 A-           | A- | A-       |
| ELA        | 7 302543             | 5 |                |       | 2 | 6398         | 0.56 | 0.21 | 0.18 | 0.56 |      | 0.00 | 0.27 | -0.07         | -0.14          | 0.27  | -0.22          | 0.7602            | 0.0281 | 9.9         | 1.1 9.9             | 1.2 A-           | A- | A-       |
| ELA        | 7 919087             | 5 | A-K.1          | .1.2  | 3 | 6398         | 0.40 | 0.32 | 0.06 | 0.40 | 0.21 | 0.01 | 0.24 | -0.04         | -0.28          | 0.24  | -0.06          | 1.5843            | 0.0283 | 9.9         | 1.1 9.9             | 1.3 A-           | A+ | A+       |
| ELA        | 7 766162             | 5 | A-C.2          | .1.1  | 2 | 6398         | 0.47 | 0.19 | 0.14 | 0.19 | 0.47 | 0.00 | 0.33 | -0.12         | -0.20          | -0.12 | 0.33           | 1.1947            | 0.0279 | 3.9         | 1.0 5.0             | 1.1 A-           | A- | A+       |
| ELA        | 7 552518             | 5 | A-V.4          | .1.2  | 2 | 6398         | 0.72 | 0.72 | 0.10 | 0.06 | 0.12 | 0.00 | 0.39 | 0.39          | -0.21          | -0.22 | -0.19          | -0.0967           | 0.0307 | -1.2        | 1.0 -1.3            | 1.0 A-           | A- | A-       |
| ELA        | 7 579114             | 5 | A-K.1          | .1.2  | 3 | 6398         | 0.67 | 0.67 | 0.13 | 0.10 | 0.10 | 0.00 | 0.47 | 0.47          | -0.23          | -0.28 | -0.19          | 0.2135            | 0.0294 | -7.0        | 0.9 -7.4            | 0.9 A+           | A+ | A+       |
| ELA        | 7 648416             | 6 | A-K.1          | .1.3  | 3 | 6402         | 0.49 | 0.21 | 0.11 | 0.20 | 0.49 | 0.00 | 0.33 | -0.15         | -0.21          | -0.10 | 0.33           | 1.1548            | 0.0279 | 6.5         | 1.1 6.7             | 1.1 A+           | A- | A-       |
| ELA        | 7 489494             | 6 | A-C.2          | .1.1  | 2 | 6402         | 0.73 | 0.73 | 0.05 | 0.15 | 0.07 | 0.00 | 0.46 | 0.46          | -0.29          | -0.25 | -0.20          | -0.1332           | 0.0311 | -5.8        | 0.9 -6.0            | 0.9 A+           | A- | A-       |
| ELA        | 7 787781             | 6 | A-C.2          | 2.1.1 | 2 | 6402         | 0.46 | 0.18 | 0.29 | 0.46 | 0.07 | 0.00 | 0.20 | -0.04         | -0.09          | 0.20  | -0.16          | 1.3088            | 0.0279 | 9.9         | 1.2 9.9             | 1.3 A+           | A+ | A+       |
| ELA        | 7 270024             | 6 | A-C.2          | .1.3  | 2 | 6402         | 0.47 | 0.32 | 0.13 | 0.47 | 0.07 | 0.00 | 0.32 | -0.09         | -0.19          | 0.32  | -0.20          | 1.2177            | 0.0279 | 6.7         | 1.1 9.6             | 1.2 A+           | A+ | A-       |
| ELA        | 7 610002             | 6 | A-K.1          | .1.1  | 2 | 6402         | 0.77 | 0.77 | 0.05 | 0.07 | 0.11 | 0.00 | 0.54 | 0.54          | -0.28          | -0.30 | -0.28          | -0.3832           | 0.0325 | -9.9        | 0.8 -9.9            | 0.7 A+           | A- | A-       |
| ELA        | 7 698740             | 6 | A-V.4          | .1.1  | 2 | 6402         | 0.79 | 0.14 | 0.79 | 0.05 | 0.02 | 0.00 | 0.54 | -0.35         | 0.54           | -0.29 | -0.24          | -0.5562           | 0.0337 | -9.9        | 0.8 -9.9            | 0.7 A-           | B- | C-       |
| ELA        | 7 808111             | 6 | A-V.4          | .1.2  | 2 | 6402         | 0.83 | 0.06 | 0.04 | 0.06 |      | 0.00 | 0.52 | -0.29         | -0.29          | -0.26 | 0.52           | -0.8561           | 0.0362 | -9.1        | 0.8 -9.9            | 0.7 A+           | A- | A-       |
| ELA        | 7 712563             | 6 |                |       | 3 | 6402         | 0.54 | 0.23 | 0.54 | 0.10 |      | 0.01 | 0.23 | 0.00          | 0.23           | -0.19 | -0.15          | 0.9028            | 0.0280 | 9.9         | 1.2 9.9             | 1.2 A+           | A- | A-       |
| ELA        | 7 723333             | 7 | A-C.2          | .1.2  | 2 | 6418         | 0.47 | 0.47 | 0.16 | 0.17 | 0.19 | 0.00 | 0.10 | 0.10          | 0.00           | -0.10 | -0.03          | 1.1800            | 0.0276 | 9.9         | 1.3 9.9             | 1.4 A+           | A- | A-       |
| ELA        | 7 290456             | 7 | A-K.1          |       | 3 | 6418         | 0.53 | 0.10 | 0.14 | 0.22 | 0.00 | 0.00 | 0.50 | -0.25         | -0.25          | -0.20 | 0.50           | 0.8904            | 0.0277 | -9.9        | 0.9 -9.9            | 0.8 A-           | A- | A-       |
| ELA        | 7 725159             | 7 | A-V.4          |       | 2 | 6418         | 0.66 | 0.19 | 0.10 | 0.66 | 0.00 | 0.00 | 0.34 | -0.14         | -0.25          | 0.34  | -0.15          | 0.2242            | 0.0292 | 3.2         | 1.0 2.7             | 1.1 B-           | A- | A-       |
| ELA        | 7 355679             | 7 | A-V.4          | .1.1  | 2 | 6418         | 0.79 | 0.09 | 0.79 | 0.07 | 0.05 | 0.00 | 0.39 | -0.24         | 0.39           | -0.18 | -0.19          | -0.5388           | 0.0333 | -2.0        | 1.0 -1.9            | 0.9 A+           | A- | A-       |

| ELA        | 7 899607             | 7        | A-V.4.1.2              | 2 | 6418         | 0.55 | 0.55 | 0.06 | 0.11 | 0.27 0.            | .00 | 0.32  | 0.32          | -0.16          | -0.16          | -0.16 | 0.7965             | 0.0278 | 5.7          | 1.1 5.5              | 1.1 A+           | A- | A- |
|------------|----------------------|----------|------------------------|---|--------------|------|------|------|------|--------------------|-----|-------|---------------|----------------|----------------|-------|--------------------|--------|--------------|----------------------|------------------|----|----|
| ELA        | 7 335769             | 7        | A-C.3.1.1              | 2 | 6418         | 0.31 | 0.13 | 0.31 | 0.31 |                    | .00 | -0.04 | -0.06         | -0.04          | 0.06           | 0.02  | 2.0190             | 0.0294 | 9.9          | 1.4 9.9              | 1.9 A-           | A- | A+ |
| ELA        | 7 952825             | 7        | A-C.2.1.3              | 2 | 6418         | 0.66 | 0.11 | 0.11 | 0.66 | 0.13 0.            | .00 | 0.49  | -0.28         | -0.21          | 0.49           | -0.25 | 0.2699             | 0.0290 | -9.4         | 0.9 -9.9             | 0.8 A-           | A- | A- |
| ELA        | 7 406061             | 7        | A-K.1.1.3              | 3 | 6418         | 0.67 | 0.15 | 0.10 | 0.09 | 0.67 0.            | .00 | 0.49  | -0.22         | -0.28          | -0.24          | 0.49  | 0.2140             | 0.0292 | -9.1         | 0.9 -8.5             | 0.8 A+           | A- | A- |
| ELA        | 7 638763             | 8        | A-K.1.1.3              | 2 | 6412         | 0.65 | 0.14 | 0.65 | 0.14 | 0.07 0.            | .00 | 0.39  | -0.24         | 0.39           | -0.16          | -0.20 | 0.3138             | 0.0292 | 0.4          | 1.0 -0.8             | 1.0 A-           | A- | A- |
| ELA        | 7 920939             | 8        | A-V.4.1.1              | 2 | 6412         | 0.78 | 0.09 | 0.11 | 0.78 | 0.03 0.            | .00 | 0.44  | -0.22         | -0.30          | 0.44           | -0.18 | -0.4659            | 0.0331 | -4.0         | 0.9 -5.1             | 0.8 A-           | A- | A- |
| ELA        | 7 583634             | 8        | A-V.4.1.2              | 2 | 6412         | 0.65 | 0.17 | 0.10 | 0.08 | 0.65 0.            | .00 | 0.47  | -0.26         | -0.22          | -0.22          | 0.47  | 0.3198             | 0.0292 | -5.9         | 0.9 -6.4             | 0.9 A-           | A- | B- |
| ELA        | 7 685953             | 8        | A-C.3.1.1              | 3 | 6412         | 0.47 | 0.47 | 0.17 | 0.18 | 0.17 0.            | .00 | 0.27  | 0.27          | -0.07          | -0.15          | -0.14 | 1.2477             | 0.0279 | 9.9          | 1.1 9.9              | 1.2 A+           | A- | A- |
| ELA        | 7 712992             | 8        | A-C.3.1.1              | 3 | 6412         | 0.26 | 0.26 | 0.18 | 0.50 | 0.07 0.            | .00 | 0.09  | 0.09          | -0.09          | 0.13           | -0.26 | 2.3912             | 0.0312 | 9.9          | 1.2 9.9              | 1.8 A-           | A- | A- |
| ELA        | 7 664387             | 8        | A-K.1.1.1              | 3 | 6412         | 0.61 | 0.13 | 0.14 | 0.61 | 0                  | .00 | 0.53  | -0.33         | -0.27          | 0.53           | -0.16 | 0.5614             | 0.0285 | -9.9         | 0.9 -9.9             | 0.8 A-           | A- | A- |
| ELA        | 7 302615             | 8        | A-K.1.1.2              | 3 | 6412         | 0.64 | 0.10 | 0.12 | 0.13 |                    | .00 | 0.48  | -0.27         | -0.25          | -0.19          | 0.48  | 0.3545             | 0.0291 | -7.8         | 0.9 -6.5             | 0.9 A-           | A- | A- |
| ELA        | 7 301834             | 8        | A-V.4.1.1              | 2 | 6412         | 0.75 | 0.05 | 0.75 | 0.12 |                    | .00 | 0.32  | -0.23         | 0.32           | -0.06          | -0.25 | -0.2552            | 0.0318 | 3.6          | 1.1 6.1              | 1.2 A-           | A- | A- |
| ELA        | 7 273757             | 9        | A-K.1.1.2              | 2 | 6408         | 0.76 | 0.76 | 0.07 | 0.12 |                    | .00 | 0.46  | 0.46          | -0.24          | -0.26          | -0.24 | -0.3579            | 0.0325 | -5.3         | 0.9 -4.3             | 0.9 A+           | A- | A- |
| ELA        | 7 133424             | 9        | A-C.2.1.3              | 2 | 6408         | 0.86 | 0.08 | 0.86 | 0.04 |                    | .00 | 0.48  | -0.33         | 0.48           | -0.27          | -0.20 | -1.1223            | 0.0389 | -6.8         | 0.8 -7.6             | 0.7 A-           | A- | Α- |
| ELA        | 7 115387             | 9        | A-V.4.1.1              | 2 | 6408         | 0.46 | 0.11 | 0.39 | 0.46 |                    | .01 | 0.35  | -0.25         | -0.10          | 0.35           | -0.22 | 1.3297             | 0.0281 | 3.0          |                      | 1.1 A-           | A- | A- |
| ELA        | 7 472716             | 9        | A-V.4.1.1              | 2 | 6408         | 0.57 | 0.24 | 0.06 | 0.13 | 0.57 0.            |     | 0.39  | -0.21         | -0.30          | -0.10          | 0.39  | 0.7293             | 0.0284 | 1.3          | 1.0 1.8              | 1.0 A+           | A- | Α- |
| ELA        | 7 416428             | 9        | A-V.4.1.2              | 2 | 6408         | 0.78 | 0.78 | 0.10 | 0.06 | 0.06 0.            |     | 0.50  | 0.50          | -0.27          | -0.25          | -0.27 | -0.4637            | 0.0332 | -7.3         | 0.9 -8.0             | 0.8 A+           | A- | A- |
| ELA        | 7 437892             | 9        | A-C.3.1.1              | 3 | 6408         | 0.23 | 0.09 | 0.23 | 0.33 | 0.00               | .00 | 0.06  | -0.18         | 0.06           | -0.01          | 0.06  | 2.5982             | 0.0324 | 9.9          | 1.3 9.9              | 2.0 A+           | A- | A- |
| ELA        | 7 242281             | 9        | A-C.3.1.1              | 2 | 6408         | 0.58 | 0.11 | 0.16 | 0.58 | 0.14 0.            |     | 0.43  | -0.19         | -0.21          | 0.43           | -0.22 | 0.6776             | 0.0285 | -3.5         |                      | 0.9 A+           | A+ | A- |
| ELA        | 7 307300             | 9        | A-K.1.1.1              | 2 | 6408         | 0.78 | 0.10 | 0.07 | 0.04 | 0.78 0.            |     | 0.44  | -0.23         | -0.19          | -0.31          | 0.44  | -0.4714            | 0.0333 | -4.0         |                      | 0.9 A+           | B- | A- |
| ELA        | 7 247414             | 10       | A-C.2.1.1              | 3 | 6402         | 0.53 | 0.06 | 0.53 | 0.12 | 0.29 0.            |     | 0.33  | -0.23         | 0.33           | -0.21          | -0.09 | 0.9437             | 0.0281 | 6.8          | 1.1 9.2              | 1.2 A+           | A- | A- |
| ELA        | 7 488110             | 10       | A-V.4.1.2              | 2 | 6402         | 0.51 | 0.17 | 0.28 | 0.51 | 0.00               | .00 | 0.32  | -0.07         | -0.22          | 0.32           | -0.20 | 1.0223             | 0.0280 | 8.0          | 1.1 7.9              | 1.1 A+           | A- | A- |
| ELA        | 7 385406             | 10       | A-C.2.1.3              | 2 | 6402         | 0.79 | 0.79 | 0.09 | 0.10 | 0.03 0.            |     | 0.38  | 0.38          | -0.20          | -0.23          | -0.19 |                    | 0.0337 | -0.2         | 1.0 0.4              | 1.0 A+           | A- | A+ |
| ELA        | 7 356262             | 10       | A-V.4.1.2              | 2 | 6402         | 0.71 | 0.14 | 0.71 | 0.10 |                    | .00 | 0.47  | -0.28         | 0.47           | -0.22          | -0.22 | -0.0453            | 0.0308 | -5.6         | 0.9 -2.9             | 0.9 A-           | B- | A- |
| ELA<br>ELA | 7 862070<br>7 153171 | 10<br>10 | A-K.1.1.1              | 2 | 6402<br>6402 | 0.66 | 0.08 | 0.18 | 0.07 | 0.66 0.<br>0.03 0. | .00 | 0.48  | -0.28<br>0.43 | -0.19<br>-0.22 | -0.28<br>-0.24 | -0.27 | 0.2334             | 0.0296 | -7.0<br>-4.8 | 0.9 -6.8<br>0.9 -2.2 | 0.9 A+<br>0.9 A+ | Α- | Α- |
| ELA        | 7 320079             | 10       | A-K.1.1.1<br>A-K.1.1.2 | 3 | 6402         | 0.83 | 0.83 | 0.07 | 0.08 | 0.03 0.            |     | 0.43  | -0.27         | -0.22          | -0.24          | 0.49  | -0.8507<br>-0.3483 | 0.0361 | -6.8         | 0.9 -2.2             | 0.9 A+<br>0.8 B+ | A- | A- |
| ELA        | 7 806905             | 10       | A-K.1.1.2<br>A-K.1.1.1 | 3 | 6402         | 0.76 | 0.07 | 0.07 | 0.10 |                    | .00 | 0.49  | -0.27         | -0.27          | 0.46           | -0.26 | -1.0012            | 0.0324 | -6.3         | 0.9 -7.8             | 0.8 A-           | B- | A- |
| ELA        | 7 178148             | 11       | A.1.1.1                | 2 | 63752        | 0.75 | 0.06 | 0.07 | 0.12 |                    | .00 | 0.32  | -0.19         | -0.17          | -0.16          | 0.32  | -0.2590            | 0.0100 | 9.5          | 1.1 9.9              | 1.1 B+           | A+ | A+ |
| ELA        | 7 324863             | 11       | A.1.2.2                | 2 | 63752        | 0.85 | 0.03 | 0.10 | 0.85 |                    | .00 | 0.46  | -0.25         | -0.30          | 0.46           | -0.21 | -1.0093            | 0.0119 |              | 0.9 -9.9             | 0.7 A-           | B- | B- |
| ELA        | 7 256893             | 11       | B.2.1.2                | 2 | 63752        | 0.68 | 0.20 | 0.68 | 0.09 | 0.00               | .00 | 0.25  | -0.06         | 0.25           | -0.17          | -0.25 | 0.1403             | 0.0094 | 9.9          | 1.2 9.9              | 1.3 A+           | A+ | A+ |
| ELA        | 7 747544             | 11       | B.1.1.1                | 3 | 63752        | 0.62 | 0.18 | 0.13 | 0.08 |                    | .00 | 0.26  | -0.05         | -0.10          | -0.27          | 0.26  | 0.4773             | 0.0090 | 9.9          | 1.2 9.9              | 1.2 A+           | A- | A- |
| ELA        | 7 426783             | 11       | B.1.1.1                | 2 | 63752        | 0.77 | 0.77 | 0.06 | 0.09 |                    | .00 | 0.43  | 0.43          | -0.23          | -0.18          | -0.28 | -0.4234            | 0.0103 | -9.9         | 0.9 -9.9             | 0.9 A-           | A- | B- |
| ELA        | 7 160367             | 11       | A.1.4.1                | 3 | 63752        | 0.55 | 0.11 | 0.22 | 0.55 | 0.12 0.            | .00 | 0.30  | -0.21         | -0.07          | 0.30           | -0.17 | 0.8142             | 0.0088 | 9.9          | 1.1 9.9              | 1.1 A+           | A- | A- |
| ELA        | 7 979903             | 11       | A.1.3.1                | 2 | 63752        | 0.65 | 0.21 | 0.04 | 0.65 | 0.09 0.            | .00 | 0.31  | -0.06         | -0.26          | 0.31           | -0.24 | 0.2979             | 0.0092 | 9.9          | 1.1 9.9              | 1.2 A+           | A+ | A- |
| ELA        | 7 249512             | 11       | A.1.3.1                | 2 | 63752        | 0.78 | 0.15 | 0.78 | 0.05 | 0.02 0.            | .00 | 0.30  | -0.10         | 0.30           | -0.26          | -0.23 | -0.4841            | 0.0105 | 8.0          | 1.1 9.9              | 1.2 A+           | A- | A- |
| ELA        | 7 351613             | 11       | B-K.1.1.2              | 3 | 6379         | 0.66 | 0.09 | 0.08 | 0.66 | 0.17 0.            | .00 | 0.38  | -0.24         | -0.24          | 0.38           | -0.12 | 0.2424             | 0.0293 | 0.8          | 1.0 0.4              | 1.0 A+           | A- | A- |
| ELA        | 7 743629             | 11       | B-K.1.1.3              | 2 | 6379         | 0.40 | 0.25 | 0.26 | 0.08 | 0.40 0.            | .01 | 0.20  | -0.02         | -0.04          | -0.26          | 0.20  | 1.5445             | 0.0282 | 9.9          | 1.2 9.9              | 1.3 A+           | A+ | A+ |
| ELA        | 7 188087             | 11       | B-C.2.1.1              | 3 | 6379         | 0.55 | 0.55 | 0.13 | 0.14 | 0.18 0.            | .00 | 0.25  | 0.25          | -0.14          | -0.19          | -0.02 | 0.8392             | 0.0279 | 9.9          | 1.2 9.9              | 1.2 A-           | A+ | A- |
| ELA        | 7 367681             | 11       | B-C.2.1.2              | 3 | 6379         | 0.51 | 0.21 | 0.14 | 0.51 | 0.14 0.            | .00 | 0.34  | -0.17         | -0.16          | 0.34           | -0.13 | 1.0253             | 0.0278 | 3.4          | 1.0 4.5              | 1.1 A+           | A+ | A- |
| ELA        | 7 743945             | 11       | B-C.2.1.3              | 2 | 6379         | 0.69 | 0.10 | 0.69 | 0.12 | 0.09 0.            | .00 | 0.41  | -0.27         | 0.41           | -0.15          | -0.20 | 0.0729             | 0.0300 | -2.0         | 1.0 -1.1             | 1.0 A-           | A+ | A- |
| ELA        | 7 725845             | 11       | B-C.3.1.1              | 2 | 6379         | 0.77 | 0.10 | 0.77 | 0.09 | 0.03 0.            | .00 | 0.48  | -0.31         | 0.48           | -0.22          | -0.24 | -0.4207            | 0.0327 | -7.3         | 0.9 -7.4             | 0.8 A+           | A- | A- |
| ELA        | 7 230081             | 11       | B-V.4.1.1              | 2 | 6379         | 0.72 | 0.72 | 0.12 | 0.08 | 0.08 0.            | .01 | 0.34  | 0.34          | -0.16          | -0.23          | -0.12 | -0.1006            | 0.0308 | 2.9          | 1.0 3.2              | 1.1 A+           | A- | A- |
| ELA        | 7 444451             | 11       | B-V.4.1.1              | 2 | 6379         | 0.82 | 0.05 | 0.06 | 0.07 | 0.82 0.            | .00 | 0.49  | -0.28         | -0.30          | -0.23          | 0.49  | -0.7380            | 0.0350 | -7.1         | 0.9 -8.4             | 0.7 A-           | A- | A- |
| ELA        | 7 947586             | 12       | B-V.4.1.1              | 2 | 6401         | 0.64 | 0.13 | 0.11 | 0.64 | 0                  | .01 | 0.45  | -0.24         | -0.21          | 0.45           | -0.21 | 0.3778             | 0.0289 | -5.1         | 0.9 -6.0             | 0.9 A+           | A+ | A+ |
| ELA        | 7 635997             | 12       | B-K.1.1.3              | 2 | 6401         | 0.57 | 0.13 | 0.57 | 0.19 | 0.07               | .01 | 0.40  | -0.22         | 0.40           | -0.15          | -0.21 | 0.7026             | 0.0282 | -0.4         | 1.0 0.1              | 1.0 A-           | A- | A- |
| ELA        | 7 972206             | 12       | B-K.1.1.3              | 2 | 6401         | 0.55 | 0.15 | 0.14 | 0.55 | 0.15 0.            | .00 | 0.41  | -0.13         | -0.28          | 0.41           | -0.17 | 0.8308             | 0.0281 | -1.6         | 1.0 -0.7             | 1.0 A-           | A- | A+ |
| ELA        | 7 346786             | 12       | B-C.2.1.1              | 3 | 6401         | 0.78 | 0.06 | 0.06 | 0.10 |                    | .00 | 0.52  | -0.31         | -0.29          | -0.26          | 0.52  | -0.4910            | 0.0331 | -9.5         | 0.8 -9.9             | 0.7 A-           | A- | A- |
| ELA        | 7 175759             | 12       | B-C.2.1.2              | 2 | 6401         | 0.61 | 0.16 | 0.12 | 0.11 | 0.00               | .00 | 0.45  | -0.21         | -0.20          | -0.24          | 0.45  | 0.5174             | 0.0286 | -5.2         | 0.9 -4.3             | 0.9 A+           | A+ | A+ |
| ELA        | 7 809352             | 12       | B-K.1.1.1              | 2 | 6401         | 0.67 | 0.67 | 0.10 | 0.10 | 0                  | .00 | 0.45  | 0.45          | -0.18          | -0.29          | -0.20 | 0.1987             | 0.0295 | -5.0         | 0.9 -4.3             | 0.9 A-           | A- | A+ |
| ELA        | 7 746092             | 12       | B-V.4.1.2              | 2 | 6401         | 0.76 | 0.13 | 0.76 | 0.04 | 0.07 0.            | .00 | 0.39  | -0.33         | 0.39           | -0.14          | -0.11 | -0.3396            | 0.0321 | -0.9         | 1.0 -1.4             | 1.0 A-           | A- | A- |

| ELA        | 7 175920             | 12       | B-V.4.1            | 1.1 | 2 | 6401         | 0.32 | 0.32 | 0.16 | 0.29 | 0.23   | 0.00 | 0.25 | 0.25  | -0.10 | -0.08          | -0.10          | 2.0167           | 0.0296 | 6.9         | 1.1 9.9             | 1.3 A+           | A+       | A+ |
|------------|----------------------|----------|--------------------|-----|---|--------------|------|------|------|------|--------|------|------|-------|-------|----------------|----------------|------------------|--------|-------------|---------------------|------------------|----------|----|
| ELA        | 7 564767             | 13       | B-K.1.1            |     | 2 | 6337         | 0.76 | 0.08 | 0.07 | 0.09 | 0.76   |      | 0.51 | -0.29 | -0.26 | -0.25          | 0.51           | -0.3622          | 0.0322 | -8.9        | 0.9 -9.7            | 0.7 A-           | A-       | A- |
| ELA        | 7 351489             | 13       | B-K.1.1            | 1.2 | 3 | 6337         | 0.63 | 0.63 | 0.05 | 0.09 | 0.22   | 0.00 | 0.26 | 0.26  | -0.29 | -0.24          | 0.02           | 0.3896           | 0.0288 | 9.9         | 1.1 9.9             | 1.2 A-           | A-       | A- |
| ELA        | 7 534826             | 13       | B-K.1.1            | 1.3 | 2 | 6337         | 0.65 | 0.08 | 0.16 | 0.11 | 0.65   | 0.00 | 0.46 | -0.17 | -0.22 | -0.29          | 0.46           | 0.2897           | 0.0291 | -5.9        | 0.9 -6.2            | 0.9 A+           | A-       | A- |
| ELA        | 7 768319             | 13       | B-C.2.1            | 1.2 | 2 | 6337         | 0.49 | 0.14 | 0.23 | 0.49 | 0.14   | 0.00 | 0.26 | -0.12 | -0.08 | 0.26           | -0.16          | 1.1002           | 0.0278 | 9.9         | 1.1 9.9             | 1.2 A+           | A+       | A+ |
| ELA        | 7 583231             | 13       | B-C.2.1            | 1.3 | 2 | 6337         | 0.89 | 0.04 | 0.89 | 0.03 | 0.04   | 0.00 | 0.46 | -0.31 | 0.46  | -0.22          | -0.23          | -1.4402          | 0.0426 | -5.8        | 0.8 -7.4            | 0.7 A+           | B-       | A- |
| ELA        | 7 389899             | 13       | B-C.3.1            | 1.1 | 3 | 6337         | 0.64 | 0.07 | 0.19 | 0.64 | 0.10   | 0.00 | 0.40 | -0.34 | -0.12 | 0.40           | -0.18          | 0.3487           | 0.0289 | -0.4        | 1.0 0.1             | 1.0 A-           | A-       | A- |
| ELA        | 7 666989             | 13       | B-V.4.1            | 1.2 | 2 | 6337         | 0.74 | 0.13 | 0.74 | 0.09 | 0.03   | 0.00 | 0.43 | -0.31 | 0.43  | -0.19          | -0.17          | -0.2563          | 0.0316 | -3.1        | 1.0 -4.2            | 0.9 A-           | A-       | A- |
| ELA        | 7 565703             | 13       | B-V.4.1            | 1.2 | 2 | 6337         | 0.53 | 0.53 | 0.08 | 0.15 | 0.24   | 0.00 | 0.38 | 0.38  | -0.20 | -0.24          | -0.12          | 0.8910           | 0.0279 | -0.3        | 1.0 0.5             | 1.0 A+           | A+       | A- |
| ELA        | 7 739173             | 14       | B-C.2.1            | 1.1 | 2 | 6389         | 0.46 | 0.22 | 0.46 | 0.25 | 0.07   | 0.00 | 0.30 | -0.16 | 0.30  | -0.07          | -0.20          | 1.2457           | 0.0278 | 7.4         | 1.1 8.8             | 1.1 A+           | A-       | A+ |
| ELA        | 7 172086             | 14       | B-C.2.1            | 1.2 | 2 | 6389         | 0.58 | 0.15 | 0.13 | 0.14 | 0.58   | 0.00 | 0.51 | -0.29 | -0.14 | -0.29          | 0.51           | 0.6308           | 0.0282 | -9.9        | 0.9 -9.9            | 0.8 A-           | A-       | A- |
| ELA        | 7 570444             | 14       | B-C.2.1            | 1.3 | 2 | 6389         | 0.68 | 0.16 | 0.09 | 0.68 | 0.07   | 0.00 | 0.42 | -0.24 | -0.18 | 0.42           | -0.21          | 0.1391           | 0.0296 | -2.6        | 1.0 -1.7            | 1.0 A+           | A-       | A- |
| ELA        | 7 878402             | 14       | B-V.4.1            | 1.1 | 2 | 6389         | 0.70 | 0.18 | 0.04 | 0.70 | 0.08   | 0.01 | 0.44 | -0.26 | -0.19 | 0.44           | -0.22          | 0.0319           | 0.0300 | -4.2        | 0.9 -5.2            | 0.9 A-           | A-       | A- |
| ELA        | 7 121454             | 14       | B-V.4.1            | 1.1 | 2 | 6389         | 0.65 | 0.17 | 0.65 | 0.03 | 0.15   | 0.00 | 0.46 | -0.29 | 0.46  | -0.22          | -0.20          | 0.3052           | 0.0290 | -6.0        | 0.9 -6.9            | 0.9 A-           | A-       | C- |
| ELA        | 7 740350             | 14       | B-K.1.1            | 1.1 | 2 | 6389         | 0.44 | 0.44 | 0.26 | 0.10 | 0.19   | 0.00 | 0.28 | 0.28  | -0.09 | -0.22          | -0.09          | 1.3308           | 0.0279 | 9.6         | 1.1 9.9             | 1.2 A-           | A-       | A+ |
| ELA        | 7 118728             | 14       | B-K.1.1            | 1.3 | 2 | 6389         | 0.71 | 0.11 | 0.11 | 0.07 | 0.71   | 0.00 | 0.46 | -0.23 | -0.25 | -0.22          | 0.46           | -0.0520          | 0.0304 | -5.4        | 0.9 -7.4            | 0.8 A+           | A+       | A- |
| ELA        | 7 987739             | 14       | B-V.4.1            |     | 2 | 6389         | 0.46 | 0.46 | 0.05 | 0.16 | 0.31   |      | 0.14 | 0.14  | -0.24 | 0.00           | -0.02          | 1.2294           | 0.0278 | 9.9         | 1.3 9.9             | 1.4 A-           | A-       | B- |
| ELA        | 7 362754             | 15       | B-C.2.1            |     | 3 | 6384         | 0.63 | 0.17 | 0.13 | 0.63 | 0.06   |      | 0.37 | -0.09 | -0.22 | 0.37           | -0.28          | 0.3978           | 0.0288 | 2.3         | 1.0 2.2             | 1.0 A+           | A-       | A- |
| ELA        | 7 198742             | 15       | B-V.4.1            | 1.1 | 2 | 6384         | 0.37 | 0.37 | 0.28 | 0.18 | 0.17   |      | 0.19 | 0.19  | -0.03 | -0.12          | -0.08          | 1.7195           | 0.0286 | 9.9         | 1.2 9.9             | 1.4 A-           | A-       | A+ |
| ELA        | 7 584738             | 15       | B-K.1.1            |     | 2 | 6384         | 0.55 | 0.09 | 0.24 | 0.11 | 0.55   |      | 0.43 | -0.22 | -0.12 | -0.31          | 0.43           | 0.8104           | 0.0280 | -4.7        | 1.0 -3.8            | 0.9 A+           | A-       | A+ |
| ELA        | 7 760136             | 15       | B-C.2.1            |     | 2 | 6384         | 0.62 | 0.18 | 0.62 | 0.12 | 0.08   |      | 0.41 | -0.19 | 0.41  | -0.21          | -0.21          | 0.4565           | 0.0287 | -2.0        |                     | 1.0 A+           | A-       | A- |
| ELA        | 7 215708             | 15       | B-V.4.1            |     | 2 | 6384         | 0.77 | 0.06 | 0.05 | 0.77 |        | 0.01 | 0.53 | -0.33 | -0.31 | 0.53           | -0.22          | -0.4024          | 0.0325 | -9.7        | 0.8 -9.9            | 0.7 A+           | B-       | A- |
| ELA        | 7 864505             | 15       | B-C.3.1            | _   | 3 | 6384         | 0.35 | 0.17 | 0.19 | 0.29 | 0.35   |      | 0.28 | -0.13 | -0.19 | -0.02          | 0.28           | 1.8425           | 0.0289 |             | 1.0 9.9             | 1.2 A-           | A-       | A- |
| ELA        | 7 407532             | 15       | B-C.3.1            | _   | 3 | 6384         | 0.47 | 0.47 | 0.15 | 0.20 |        | 0.00 | 0.27 | 0.27  | -0.15 | -0.08          | -0.12          | 1.2391           | 0.0279 | 9.9         | 1.1 9.9             | 1.2 A-           | A-       | A- |
| ELA        | 7 154014             | 15       | B-C.2.1            |     | 2 | 6384         | 0.52 | 0.24 | 0.52 | 0.21 |        | 0.00 | 0.25 | -0.10 | 0.25  | -0.12          | -0.17          | 0.9835           | 0.0279 | 9.9         | 1.2 9.9             | 1.2 A-           | A-       | Α- |
| ELA        | 7 739653             | 16       | B-C.2.1            |     | 2 | 6376         | 0.57 | 0.15 | 0.14 | 0.13 | 0.57   |      | 0.48 | -0.23 | -0.26 | -0.19          | 0.48           | 0.7123           | 0.0280 |             | 0.9 -7.8            | 0.9 A+           | A-       | A- |
| ELA        | 7 177633             | 16       | B-V.4.1            |     | 2 | 6376         | 0.85 | 0.05 | 0.85 | 0.06 | 0.04   |      | 0.41 | -0.24 | 0.41  | -0.17          | -0.27          | -1.0436          | 0.0378 | -4.0        | 0.9 -4.7            | 0.8 B-           | B-       | В- |
| ELA        | 7 603714             | 16       | B-K.1.1            |     | 2 | 6376         | 0.55 | 0.22 | 0.08 | 0.15 |        | 0.00 | 0.47 | -0.15 | -0.23 | -0.30          | 0.47           | 0.8122           | 0.0279 |             | 0.9 -8.5            | 0.9 A-           | A-       | A- |
| ELA        | 7 111394             | 16       | B-C.2.1            |     | 2 | 6376         | 0.67 | 0.67 | 0.08 | 0.08 |        | 0.00 | 0.51 | 0.51  | -0.31 | -0.29          | -0.21          | 0.1767           | 0.0294 | -9.8        | 0.9 -9.9            | 0.8 A-           | A-       | A- |
| ELA        | 7 877392<br>7 934810 | 16<br>16 | B-C.3.1<br>B-C.3.1 |     | 3 | 6376<br>6376 | 0.34 | 0.39 | 0.34 | 0.11 | 0.17 ( | 0.00 | 0.17 | 0.04  | -0.29 | -0.20<br>-0.30 | -0.09<br>-0.21 | 1.8793<br>0.1767 | 0.0290 |             | 1.2 9.9<br>0.8 -9.9 | 1.4 A-           | A-       | A- |
| ELA<br>ELA | 7 952129             | 16       | B-C.3.1            | _   | 3 | 6376         | 0.67 | 0.07 | 0.12 | 0.11 |        | 0.00 | 0.33 | -0.05 | -0.29 | 0.22           | -0.21          | 1.6501           | 0.0294 | -9.9<br>9.9 | 0.8 -9.9<br>1.1 9.9 | 0.8 A-<br>1.3 A- | A-       | A- |
| ELA        | 7 157361             | 16       |                    |     | 3 | 6376         | 0.38 | 0.24 | 0.23 | 0.58 | 0.15 ( |      | 0.22 | -0.03 | -0.02 | 0.22           | -0.21          | 0.6714           | 0.0284 | -2.1        | 1.0 -2.0            | 1.0 A-           | A-<br>A- | A- |
| ELA        | 7 628454             | 17       | B-K.1.1            |     | 2 | 6393         | 0.73 | 0.14 | 0.15 | 0.06 | 0.15 ( |      | 0.40 | 0.39  | -0.24 | -0.24          | -0.08          | -0.1181          | 0.0281 | -0.6        | 1.0 -2.0            | 0.9 A-           | A-       | A- |
| ELA        | 7 794071             | 17       | B-V.4.1            |     | 2 | 6393         | 0.73 | 0.73 | 0.13 | 0.36 | 0.06 ( |      | 0.39 | -0.17 | 0.20  | 0.04           | -0.21          | 1.7798           | 0.0309 | 9.9         | 1.3 9.9             | 1.6 A-           | A+       | A- |
| ELA        | 7 434085             | 17       | B-K.1.1            |     | 2 | 6393         | 0.26 | 0.08 | 0.26 | 0.33 | 0.10 ( |      | 0.04 | -0.17 | 0.20  | 0.04           | -0.14          | 2.3425           | 0.0280 | 9.9         | 1.3 9.9             | 1.8 A-           | A-       | A- |
| ELA        | 7 762250             | 17       | B-K.1.1            | _   | 2 | 6393         | 0.66 | 0.22 | 0.09 | 0.66 | 0.19 ( |      | 0.03 | -0.07 | -0.27 | 0.14           | -0.15          | 0.2491           | 0.0310 | -2.8        | 1.0 -4.1            | 0.9 A-           | A-       | A- |
| ELA        | 7 652443             | 17       | B-K.1.1            | _   | 2 | 6393         | 0.63 | 0.03 | 0.63 | 0.00 |        | 0.00 | 0.42 | -0.20 | 0.38  | -0.20          | -0.19          | 0.4031           | 0.0293 | 0.2         | 1.0 -4.1            | 1.0 B-           | A-       | A- |
| ELA        | 7 506222             | 17       | B-C.2.1            |     | 2 | 6393         | 0.63 | 0.09 | 0.06 | 0.22 | 0.63   |      | 0.45 | -0.29 | -0.25 | -0.18          | 0.45           | 0.4345           | 0.0287 | -5.5        | 0.9 -6.4            | 0.9 A-           | A-       | A- |
| ELA        | 7 661582             | 17       | B-C.3.1            |     | 2 | 6393         | 0.69 | 0.09 | 0.09 | 0.13 | 0.69 ( |      | 0.54 | -0.29 | -0.29 | -0.25          | 0.54           | 0.0766           | 0.0299 | -9.9        | 0.8 -9.9            | 0.8 A-           | A-       | A- |
| ELA        | 7 997058             | 17       | B-C.2.1            |     | 2 | 6393         | 0.65 | 0.65 | 0.14 | 0.09 | 0.12   |      | 0.41 | 0.41  | -0.22 | -0.25          | -0.16          | 0.3272           | 0.0290 |             | 1.0 -3.8            | 0.9 A-           | A-       | A- |
| ELA        | 7 593274             | 18       | B-K.1.1            |     | 2 | 6337         | 0.83 | 0.11 | 0.83 | 0.03 |        | 0.00 | 0.48 | -0.31 | 0.48  | -0.24          | -0.24          | -0.8251          | 0.0363 | -6.5        | 0.9 -7.3            | 0.7 A+           | A-       | A- |
| ELA        | 7 628106             | 18       | B-C.2.1            |     | 2 | 6337         | 0.40 | 0.21 | 0.29 | 0.09 | 0.40   |      | 0.25 | -0.24 | 0.14  | -0.30          | 0.25           | 1.5957           | 0.0282 | 9.3         | 1.1 9.9             | 1.2 A+           | A-       | A- |
| ELA        | 7 820131             | 18       | B-C.2.1            |     | 2 | 6337         | 0.57 | 0.25 | 0.57 | 0.10 | 0.09 ( |      | 0.28 | -0.05 | 0.28  | -0.21          | -0.19          | 0.7761           | 0.0281 | 9.9         | 1.1 9.5             | 1.2 A+           | A-       | A- |
| ELA        | 7 823267             | 18       | B-C.3.1            |     | 3 | 6337         | 0.52 | 0.52 | 0.05 | 0.36 |        | 0.00 | 0.25 | 0.25  | -0.24 | -0.03          | -0.22          | 0.9955           | 0.0279 | 9.9         | 1.2 9.9             | 1.2 A-           | B-       | A- |
| ELA        | 7 578673             | 18       | B-V.4.1            |     | 2 | 6337         | 0.74 | 0.06 | 0.04 | 0.74 |        | 0.01 | 0.42 | -0.21 | -0.19 | 0.42           | -0.26          | -0.1871          | 0.0316 |             | 1.0 -3.1            | 0.9 A+           | A-       | A- |
| ELA        | 7 258523             | 18       | B-V.4.1            |     | 2 | 6337         | 0.87 | 0.03 | 0.03 | 0.87 |        | 0.00 | 0.45 | -0.26 | -0.26 | 0.45           | -0.25          | -1.2389          | 0.0406 | -5.8        | 0.9 -6.7            | 0.7 A+           | A-       | A- |
| ELA        | 7 718105             | 18       | B-C.2.1            |     | 2 | 6337         | 0.51 | 0.23 | 0.14 | 0.12 |        | 0.00 | 0.33 | -0.04 | -0.25 | -0.19          | 0.33           | 1.0405           | 0.0279 | 5.0         | 1.1 5.2             | 1.1 A-           | A-       | A- |
| ELA        | 7 299591             | 18       | B-K.1.1            |     | 2 | 6337         | 0.36 | 0.36 | 0.29 | 0.22 |        | 0.00 | 0.19 | 0.19  | 0.05  | -0.22          | -0.09          | 1.7818           | 0.0287 | 9.9         | 1.1 9.9             | 1.4 A-           | A-       | A- |
| ELA        | 7 532169             | 19       | B-K.1.1            | _   | 3 | 6399         | 0.64 | 0.64 | 0.14 | 0.09 | 0.11   | 0.00 | 0.38 | 0.38  | -0.18 | -0.22          | -0.17          | 0.3239           | 0.0289 | 0.6         | 1.0 0.3             | 1.0 A+           | A-       | A+ |
| ELA        | 7 257407             | 19       | B-K.1.1            |     | 2 | 6399         | 0.71 | 0.09 | 0.13 | 0.06 | 0.71   | 0.00 | 0.38 | -0.17 | -0.21 | -0.22          | 0.38           | -0.0529          | 0.0304 | -0.5        | 1.0 -1.4            | 1.0 A+           | A-       | A+ |
|            |                      |          |                    |     |   |              |      |      |      |      |        |      |      |       |       |                |                |                  |        |             |                     |                  |          |    |

| ELA     | 7 | 906618 | 19 | B-C.2.1.3 | 2 | 6399   | 0.40 | 0.22 | 0.23 | 0.40 | 0.15 0 | 0.00 | 0.12 | 0.00  | -0.10 | 0.12  | -0.04 | 1.5388  | 0.0281 | 9.9  | 1.3 9.9  | 1.5 A- | A+   | A+ |
|---------|---|--------|----|-----------|---|--------|------|------|------|------|--------|------|------|-------|-------|-------|-------|---------|--------|------|----------|--------|------|----|
| ELA     | 7 | 221692 | 19 | B-C.3.1.1 | 2 | 6399   | 0.70 | 0.70 | 0.04 | 0.16 | 0.10 0 | 0.00 | 0.41 | 0.41  | -0.28 | -0.16 | -0.24 | 0.0201  | 0.0300 | -2.0 | 1.0 0.1  | 1.0 A  | - A- | A- |
| ELA     | 7 | 469347 | 19 | B-C.3.1.1 | 3 | 6399   | 0.47 | 0.25 | 0.47 | 0.08 | 0.19 0 | 0.01 | 0.19 | -0.06 | 0.19  | -0.26 | 0.00  | 1.1843  | 0.0277 | 9.9  | 1.2 9.9  | 1.3 A- | A-   | A- |
| ELA     | 7 | 969224 | 19 | B-V.4.1.1 | 2 | 6399   | 0.80 | 0.06 | 0.03 | 0.11 | 0.80 0 |      | 0.50 | -0.29 | -0.27 | -0.26 | 0.50  | -0.6265 | 0.0340 | -7.6 | 0.9 -9.6 | 0.7 A- | A-   | A- |
| ELA     | 7 | 826756 | 19 | B-V.4.1.2 | 2 | 6399   | 0.40 | 0.47 | 0.40 | 0.10 | 0.03 0 | 0.00 | 0.18 | 0.06  | 0.18  | -0.27 | -0.21 | 1.5428  | 0.0281 | 9.9  | 1.2 9.9  | 1.3 A- | A-   | A- |
| ELA     | 7 | 828969 | 19 | B-V.4.1.2 | 2 | 6399   | 0.50 | 0.16 | 0.30 | 0.50 | 0.04 0 | 0.00 | 0.38 | -0.13 | -0.22 | 0.38  | -0.20 | 1.0695  | 0.0277 | -0.9 | 1.0 1.6  | 1.0 B- | A+   | A- |
| ELA     | 7 | 374873 | 20 | B-V.4.1.2 | 2 | 6357   | 0.68 | 0.68 | 0.04 | 0.22 | 0.06 0 | 0.00 | 0.41 | 0.41  | -0.22 | -0.23 | -0.22 | 0.1451  | 0.0296 | -1.5 | 1.0 -2.3 | 1.0 A- | A-   | A- |
| ELA     | 7 | 741780 | 20 | B-C.2.1.3 | 2 | 6357   | 0.80 | 0.80 | 0.06 | 0.08 | 0.06 0 | 0.01 | 0.47 | 0.47  | -0.26 | -0.26 | -0.22 | -0.5918 | 0.0338 | -5.9 | 0.9 -8.5 | 0.7 A- | B-   | A- |
| ELA     | 7 | 891799 | 20 | B-C.2.1.2 | 2 | 6357   | 0.76 | 0.07 | 0.08 | 0.09 | 0.76 0 | 0.00 | 0.57 | -0.32 | -0.31 | -0.27 | 0.57  | -0.3245 | 0.0320 | -9.9 | 0.8 -9.9 | 0.7 A  | + A- | A- |
| ELA     | 7 | 323399 | 20 | B-C.3.1.2 | 3 | 6357   | 0.45 | 0.27 | 0.45 | 0.10 | 0.18 0 | 0.00 | 0.32 | -0.08 | 0.32  | -0.21 | -0.16 | 1.3125  | 0.0279 | 3.8  | 1.0 6.5  | 1.1 A- | A-   | A- |
| ELA     | 7 | 913447 | 20 | B-C.3.1.1 | 3 | 6357   | 0.44 | 0.26 | 0.21 | 0.44 | 0.09 0 | 0.00 | 0.33 | -0.06 | -0.21 | 0.33  | -0.17 | 1.3523  | 0.0279 | 3.6  | 1.0 6.0  | 1.1 A- | A-   | A- |
| ELA     | 7 | 279453 | 20 | B-C.3.1.2 | 3 | 6357   | 0.24 | 0.15 | 0.24 | 0.31 | 0.29 0 | 0.00 | 0.03 | -0.13 | 0.03  | -0.06 | 0.13  | 2.4463  | 0.0318 | 9.9  | 1.3 9.9  | 1.8 A- | A-   | A+ |
| ELA     | 7 | 545944 | 20 | B-V.4.1.2 | 1 | 6357   | 0.90 | 0.03 | 0.05 | 0.90 | 0.02 0 | 0.00 | 0.36 | -0.26 | -0.18 | 0.36  | -0.17 | -1.5031 | 0.0435 | -3.0 | 0.9 -1.1 | 0.9 A- | - A- | A- |
| ELA     | 7 | 751779 | 20 | B-C.2.1.1 | 2 | 6357   | 0.45 | 0.10 | 0.19 | 0.27 | 0.45 0 | 0.00 | 0.34 | -0.25 | -0.22 | -0.02 | 0.34  | 1.3157  | 0.0279 | 2.7  | 1.0 5.8  | 1.1 A- | - A- | A- |
| READING | 8 | 198106 | 0  | B.1.1.1   |   | 128535 | 0.74 | 0.74 | 0.05 | 0.11 | 0.10 0 | 0.00 | 0.41 | 0.41  | -0.28 | -0.14 | -0.24 | 0.3517  | 0.0070 | -8.8 | 1.0 -7.3 | 1.0    |      |    |
| READING | 8 | 536311 | 0  | A.2.3.1   |   | 128535 | 0.79 | 0.79 | 0.05 | 0.12 | 0.03 0 | 0.00 | 0.38 | 0.38  | -0.27 | -0.17 | -0.20 | -0.1125 | 0.0077 | 7.7  | 1.0 6.2  | 1.1    |      |    |
| READING | 8 | 351014 | 0  | A.2.3.1   |   | 128535 | 0.75 | 0.09 | 0.75 | 0.09 | 0.06 0 | 0.00 | 0.49 | -0.28 | 0.49  | -0.24 | -0.22 | 0.3189  | 0.0070 | -9.9 | 0.9 -9.9 | 0.8    |      |    |
| READING | 8 | 988764 | 0  | A.2.2.1   |   | 128535 | 0.82 | 0.06 | 0.82 | 0.09 | 0.04 0 | 0.00 | 0.43 | -0.25 | 0.43  | -0.20 | -0.25 | -0.3118 | 0.0081 | -3.0 | 1.0 -9.7 | 0.9    |      |    |
| READING | 8 | 655303 | 0  | A.2.1.1   |   | 128535 | 0.82 | 0.06 | 0.05 | 0.07 | 0.82 0 | 0.00 | 0.46 | -0.24 | -0.30 | -0.20 | 0.46  | -0.2114 | 0.0079 | -9.9 | 0.9 -9.9 | 0.8    |      |    |
| READING | 8 | 761475 | 0  | B.2.1.2   | 3 | 128535 | 0.90 | 0.03 | 0.90 | 0.04 | 0.03 0 | 0.00 | 0.44 | -0.27 | 0.44  | -0.25 | -0.22 | -1.0042 | 0.0099 | -9.9 | 0.9 -9.9 | 0.6    |      |    |
| READING | 8 | 686884 | 0  | B.1.1.1   | 2 | 128535 | 0.62 | 0.13 | 0.62 | 0.15 | 0.10 0 | 0.00 | 0.38 | -0.26 | 0.38  | -0.23 | -0.05 | 1.1567  | 0.0063 | -0.2 | 1.0 -1.3 | 1.0    |      |    |
| READING | 8 | 217296 | 0  | B.1.1.1   | 2 | 128535 | 0.66 | 0.13 | 0.06 | 0.15 | 0.66 0 | 0.00 | 0.25 | -0.03 | -0.23 | -0.15 | 0.25  | 0.7653  | 0.0066 | 9.9  | 1.2 9.9  | 1.2    |      |    |
| READING | 8 | 837247 | 0  | B.1.1.1   | 2 | 128535 | 0.68 | 0.18 | 0.11 | 0.68 | 0.03 0 | 0.00 | 0.33 | -0.21 | -0.15 | 0.33  | -0.15 | 0.6903  | 0.0066 | 9.9  | 1.1 9.9  | 1.1    |      |    |
| READING | 8 | 490058 | 0  | B.2.1.1   | 3 | 128535 | 0.76 | 0.06 | 0.76 | 0.10 | 0.07 0 | 0.00 | 0.44 | -0.26 | 0.44  | -0.28 | -0.14 | 0.2014  | 0.0072 | -9.9 | 1.0 -9.9 | 0.9    |      |    |
| READING | 8 | 741839 | 0  | A.1.3.1   | 2 | 128535 | 0.77 | 0.77 | 0.09 | 0.08 | 0.06 0 | 0.00 | 0.44 | 0.44  | -0.17 | -0.29 | -0.24 | 0.0501  | 0.0074 | -7.4 | 1.0 -9.9 | 0.9    |      |    |
| READING | 8 | 233947 | 0  | B.1.1.1   | 1 | 128535 | 0.82 | 0.09 | 0.05 | 0.03 | 0.82 0 | 0.00 | 0.49 | -0.31 | -0.28 | -0.19 | 0.49  | -0.2170 | 0.0079 | -9.9 | 0.9 -9.9 | 0.7    |      |    |
| READING | 8 | 543804 | 0  | B.2.1.1   | 3 | 128535 | 0.77 | 0.05 | 0.06 | 0.77 | 0.12 0 | 0.00 | 0.50 | -0.30 | -0.32 | 0.50  | -0.20 | 0.1900  | 0.0072 | -9.9 | 0.9 -9.9 | 0.8    |      |    |
| READING | 8 | 433712 | 0  | A.2.3.1   | 2 | 128535 | 0.72 | 0.06 | 0.72 | 0.10 | 0.11 0 | 0.00 | 0.40 | -0.24 | 0.40  | -0.21 | -0.16 | 0.4794  | 0.0068 | -1.4 | 1.0 -3.2 | 1.0    |      |    |
| READING | 8 | 834538 | 0  | A.2.4.1   | 2 | 128535 | 0.75 | 0.04 | 0.11 | 0.75 | 0.09 0 | 0.00 | 0.43 | -0.30 | -0.18 | 0.43  | -0.21 | 0.2287  | 0.0072 | -5.2 | 1.0 -1.8 | 1.0    |      |    |
| READING | 8 | 974364 | 0  | A.2.4.1   | 1 | 128535 | 0.88 | 0.88 | 0.05 | 0.03 | 0.03 0 | 0.00 | 0.51 | 0.51  | -0.29 | -0.29 | -0.25 | -0.8474 | 0.0094 | -9.9 | 0.8 -9.9 | 0.5    |      |    |
| READING | 8 | 307964 | 0  | B.1.2.1   | 3 | 128535 | 0.75 | 0.04 | 0.13 | 0.07 | 0.75 0 | 0.01 | 0.46 | -0.30 | -0.20 | -0.25 | 0.46  | 0.2418  | 0.0071 | -9.9 | 0.9 -9.9 | 0.9    |      |    |
| READING | 8 | 704916 | 0  | B.3.1.1   | 2 | 128535 | 0.45 | 0.45 | 0.07 | 0.36 | 0.12 0 | 0.00 | 0.39 | 0.39  | -0.28 | -0.13 | -0.17 | 1.8622  | 0.0062 | -9.9 | 1.0 6.4  | 1.0    |      |    |
| READING | 8 | 907745 | 0  | B.3.3.2   | 2 | 128535 | 0.39 | 0.32 | 0.10 | 0.20 | 0.39 0 | 0.01 | 0.30 | -0.04 | -0.21 | -0.15 | 0.30  | 2.1812  | 0.0063 | 9.9  | 1.0 9.9  | 1.2    |      |    |
| READING | 8 | 608950 | 0  | A.2.1.2   | 2 | 128535 | 0.72 | 0.06 | 0.72 | 0.15 | 0.06 0 | 0.00 | 0.43 | -0.22 | 0.43  | -0.21 | -0.24 | 0.4940  | 0.0068 | -9.9 | 1.0 -9.9 | 0.9    |      |    |
| READING | 8 | 535153 | 0  | A.1.3.1   | 2 | 128535 | 0.50 | 0.24 | 0.10 | 0.16 | 0.50 0 | 0.00 | 0.37 | -0.15 | -0.18 | -0.18 | 0.37  | 1.8279  | 0.0062 | 1.5  | 1.0 9.9  | 1.1    |      |    |
| READING | 8 | 576562 | 0  | A.1.3.1   | 2 | 128535 | 0.59 | 0.20 | 0.08 | 0.12 | 0.59 0 | 0.00 | 0.32 | -0.15 | -0.18 | -0.14 | 0.32  | 1.4120  | 0.0062 | 9.9  | 1.1 9.9  | 1.1    |      |    |
| READING | 8 | 789958 | 0  | A.1.3.2   | 2 | 128535 | 0.61 | 0.19 | 0.61 | 0.12 | 0.08 0 | 0.00 | 0.20 | -0.06 | 0.20  | -0.11 | -0.13 | 0.8071  | 0.0065 | 9.9  | 1.3 9.9  | 1.5    |      |    |
| READING | 8 | 661243 | 0  | B.1.1.1   | 2 | 128535 | 0.54 | 0.07 | 0.33 | 0.54 | 0.05 0 | 0.00 | 0.27 | -0.17 | -0.12 | 0.27  | -0.14 | 1.2936  | 0.0063 | 9.9  | 1.2 9.9  | 1.2    |      |    |
| READING | 8 | 755603 | 0  | B.1.1.1   | 2 | 128535 | 0.54 | 0.08 | 0.14 | 0.54 | 0.23 0 | 0.00 | 0.26 | -0.13 | -0.19 | 0.26  | -0.06 | 1.0732  | 0.0064 | 9.9  | 1.2 9.9  | 1.3    |      |    |
| READING | 8 | 205065 | 0  | B.2.2.2   | 2 | 128535 | 0.47 | 0.34 | 0.10 | 0.47 | 0.09 0 | 0.00 | 0.20 | 0.03  | -0.20 | 0.20  | -0.19 | 1.8562  | 0.0062 | 9.9  | 1.2 9.9  | 1.3    |      |    |
| READING | 8 | 899053 | 0  | A.1.1.2   | 1 | 128535 | 0.66 | 0.19 | 0.66 | 0.05 | 0.10 0 | 0.00 | 0.31 | -0.09 | 0.31  | -0.23 | -0.21 | 0.8530  | 0.0065 | 9.9  | 1.1 9.9  | 1.1    |      |    |
| READING | 8 | 870546 | 0  | B.1.1.1   | 2 | 128535 | 0.69 | 0.06 | 0.17 | 0.08 | 0.69 0 | 0.00 | 0.37 | -0.21 | -0.13 | -0.27 | 0.37  | 0.6256  | 0.0067 | 6.5  | 1.0 9.9  | 1.1    |      |    |
| READING | 8 | 107467 | 0  | B.1.1.1   | 3 | 128535 | 0.77 | 0.06 | 0.14 | 0.77 | 0.03 0 | 0.00 | 0.45 | -0.29 | -0.22 | 0.45  | -0.26 | 0.1566  | 0.0073 | -9.9 | 0.9 -9.9 | 0.9    |      |    |
| READING | 8 | 516540 | 0  | B.1.1.1   | 3 | 128535 | 0.66 | 0.66 | 0.13 | 0.15 | 0.05 0 | 0.00 | 0.44 | 0.44  | -0.19 | -0.28 | -0.18 | 1.0450  | 0.0064 | -9.9 | 0.9 -9.9 | 0.9    |      |    |
| READING | 8 | 636450 | 0  | B.2.1.2   | 2 | 128535 | 0.86 | 0.86 | 0.05 | 0.07 | 0.02 0 | 0.00 | 0.45 | 0.45  | -0.22 | -0.29 | -0.23 | -0.5525 | 0.0086 | -9.9 | 0.9 -9.9 | 0.8    |      |    |
| READING | 8 | 524754 | 0  | A.1.3.1   | 2 | 128535 | 0.62 | 0.14 | 0.14 | 0.10 | 0.62 0 | 0.00 | 0.36 | -0.22 | -0.17 | -0.13 | 0.36  | 0.9300  | 0.0064 | 9.9  | 1.1 9.9  | 1.1    |      |    |
| READING | 8 | 906965 | 0  | A.2.4.1   | 3 | 128535 | 0.54 | 0.28 | 0.03 | 0.54 | 0.15 0 | 00.0 | 0.17 | -0.08 | -0.27 | 0.17  | 0.01  | 1.4117  | 0.0062 | 9.9  | 1.2 9.9  | 1.3    |      |    |
| READING | 8 | 414679 | 0  | B.2.1.1   | 2 | 128535 | 0.80 | 0.04 | 0.08 | 0.08 | 0.80 0 | 0.00 | 0.49 | -0.31 | -0.26 | -0.24 | 0.49  | -0.0963 | 0.0077 | -9.9 | 0.9 -9.9 | 0.8    |      |    |
| READING | 8 | 493998 | 0  | B.3.2.1   | 2 | 128535 | 0.71 | 0.71 | 0.15 | 0.07 | 0.07 0 | 0.00 | 0.52 | 0.52  | -0.28 | -0.29 | -0.24 | 0.4198  | 0.0069 | -9.9 | 0.9 -9.9 | 0.8    |      |    |
| READING | 8 | 854037 | 0  | B.3.3.3   | 3 | 128535 | 0.71 | 0.13 | 0.71 | 0.13 | 0.03 0 | 0.00 | 0.46 | -0.26 | 0.46  | -0.22 | -0.27 | 0.5861  | 0.0067 | -9.9 | 0.9 -9.9 | 0.9    |      |    |
| READING | 8 | 392894 | 0  | A.2.2.1   | 2 | 128535 | 0.64 | 0.14 | 0.12 | 0.64 | 0.11 0 | 0.00 | 0.34 | -0.10 | -0.24 | 0.34  | -0.17 | 1.0349  | 0.0064 | 9.9  | 1.0 9.9  | 1.1    |      |    |

| READING    | 8 6 | 76311 | 0 | A.2.3.1                | 3 | 128535       | 0.76 | 0.76 | 0.07 | 0.08 | 0.09 | 0.00 | 0.47 | 0.47           | -0.24          | -0.26 | -0.23          | 0.3095  | 0.0071 | -9.9        | 0.9 -9.9            | 0.8              |          |          |
|------------|-----|-------|---|------------------------|---|--------------|------|------|------|------|------|------|------|----------------|----------------|-------|----------------|---------|--------|-------------|---------------------|------------------|----------|----------|
| READING    | 8 8 | 25998 | 0 | A.2.4.1                | 2 | 128535       | 0.71 | 0.18 | 0.71 | 0.03 | 0.07 | 0.00 | 0.46 | -0.27          | 0.46           | -0.26 | -0.22          | 0.4779  | 0.0068 | -9.9        | 0.9 -9.9            | 0.9              |          |          |
| READING    | 8 4 | 07026 | 0 | B.1.1.1                | 3 | 128535       | 0.69 | 0.13 | 0.69 | 0.08 | 0.10 | 0.00 | 0.37 | -0.15          | 0.37           | -0.17 | -0.25          | 0.7251  | 0.0066 | 2.0         | 1.0 8.1             | 1.0              |          |          |
| ELA        | 8 9 | 30586 | 1 | A.2.1.2                | 2 | 64480        | 0.67 | 0.15 | 0.09 | 0.09 | 0.67 | 0.00 | 0.44 | -0.20          | -0.21          | -0.25 | 0.44           | 0.7499  | 0.0093 | -9.9        | 1.0 -9.9            | 0.9 A-           | A-       | A-       |
| ELA        | 8 4 | 03700 | 1 | A.2.3.2                | 3 | 64480        | 0.83 | 0.12 | 0.83 | 0.03 | 0.03 | 0.00 | 0.43 | -0.27          | 0.43           | -0.24 | -0.22          | -0.2759 | 0.0113 | -9.9        | 0.9 -9.9            | 0.8 A-           | A-       | A-       |
| ELA        | 8 2 | 76204 | 1 | A.2.3.1                | 2 | 64480        | 0.69 | 0.69 | 0.06 | 0.19 | 0.06 | 0.00 | 0.27 | 0.27           | -0.23          | -0.01 | -0.29          | 0.6334  | 0.0095 | 9.9         | 1.1 9.9             | 1.3 A+           | A+       | A-       |
| ELA        | 8 6 | 20506 | 1 | A.2.5.1                | 3 | 64480        | 0.70 | 0.07 | 0.12 | 0.70 | 0.11 | 0.00 | 0.40 | -0.19          | -0.22          | 0.40  | -0.19          | 0.5950  | 0.0095 | -1.2        | 1.0 -2.9            | 1.0 A+           | A-       | A-       |
| ELA        | 8 9 | 02533 | 1 | A.2.4.1                | 1 | 64480        | 0.77 | 0.06 | 0.77 | 0.07 | 0.09 | 0.00 | 0.47 | -0.25          | 0.47           | -0.26 | -0.23          | 0.1219  | 0.0103 | -9.9        | 0.9 -9.9            | 0.8 A-           | B-       | B-       |
| ELA        | 8 3 | 17932 | 1 | B.3.1.1                | 2 | 64480        | 0.53 | 0.23 | 0.53 | 0.20 | 0.05 | 0.00 | 0.38 | -0.18          | 0.38           | -0.13 | -0.29          | 1.4970  | 0.0088 | 1.2         | 1.0 5.5             | 1.0 A-           | A-       | A-       |
| ELA        | 8 1 | 65705 | 1 | B.3.2.1                | 2 | 64480        | 0.52 | 0.13 | 0.25 | 0.52 |      | 0.00 | 0.38 | -0.28          | -0.22          | 0.38  | -0.01          | 1.5153  | 0.0088 | 1.6         | 1.0 6.1             | 1.0 A-           | A-       | A-       |
| ELA        | 8 4 | 93358 | 1 | A.2.4.1                | 1 | 64480        | 0.79 | 0.07 | 0.09 | 0.05 | 0.79 | 0.00 | 0.47 | -0.23          | -0.25          | -0.26 | 0.47           | -0.0306 | 0.0107 | -9.9        | 0.9 -9.9            | 0.8 A-           | A-       | A-       |
| ELA        |     | 45996 | 1 | A-K.1.1.3              | 2 | 6795         | 0.72 | 0.72 | 0.18 | 0.05 |      | 0.00 | 0.37 | 0.37           | -0.14          | -0.26 | -0.26          | 0.3603  | 0.0303 | 3.7         | 1.1 4.4             | 1.1 A+           | _        | A-       |
| ELA        |     | 86875 | 1 | A-C.2.1.1              | 3 | 6795         | 0.77 | 0.77 | 0.11 | 0.09 |      | 0.00 | 0.51 | 0.51           | -0.28          | -0.31 | -0.23          | 0.0308  | 0.0320 | -7.2        | 0.9 -8.1            | 0.8 A+           | A-       | A-       |
| ELA        |     | 06048 | 1 | A-V.4.1.1              | 2 | 6795         | 0.73 | 0.07 | 0.16 | 0.73 |      | 0.00 | 0.44 | -0.28          | -0.22          | 0.44  | -0.22          | 0.2824  | 0.0306 | -1.6        | 1.0 -3.5            | 0.9 A-           | A-       | A-       |
| ELA        |     | 58410 | 1 | A-C.2.1.3              | 2 | 6795         | 0.70 | 0.11 | 0.15 | 0.70 |      | 0.00 | 0.39 | -0.14          | -0.22          | 0.39  | -0.28          | 0.4454  | 0.0299 | 2.7         | 1.0 3.5             | 1.1 A+           | _        | B-       |
| ELA        |     | 48688 | 1 | A-C.3.1.1              | 3 | 6795         | 0.81 | 0.09 | 0.81 | 0.05 |      | 0.00 | 0.47 | -0.26          | 0.47           | -0.26 | -0.22          | -0.2697 | 0.0340 |             | 0.9 -4.8            | 0.8 A+           |          | A-       |
| ELA        |     | 42317 | 1 | A-V.4.1.2              | 2 | 6795         | 0.74 | 0.10 | 0.08 | 0.08 |      | 0.00 | 0.48 | -0.19          | -0.24          | -0.30 | 0.48           | 0.2332  | 0.0309 | -4.5        | 0.9 -5.4            | 0.9 A+           |          | B-       |
| ELA        |     | 38672 | 1 | A-V.4.1.2              | 2 | 6795         | 0.69 | 0.23 | 0.04 | 0.04 | 0.07 | 0.00 | 0.53 | -0.32          | -0.31          | -0.26 | 0.53           | 0.5030  | 0.0297 | -9.2        | 0.9 -8.8            | 0.8 A+           |          | B-       |
| ELA        |     | 12938 | 1 | A-V.4.1.1              | 2 | 6795         | 0.84 | 0.02 | 0.84 | 0.11 |      | 0.00 | 0.48 | -0.25          | 0.48           | -0.29 | -0.27          | -0.5279 | 0.0361 | -6.4        | 0.9 -7.1            | 0.7 A-           | B-       | C-       |
| ELA        |     | 96131 | 2 | A-K.1.1.2              | 2 | 6387         | 0.73 | 0.05 | 0.11 | 0.11 |      | 0.00 | 0.57 | -0.28          | -0.29          | -0.31 | 0.57           | 0.4249  | 0.0311 | -9.9        | 0.8 -9.9            | 0.7 A+           | _        | A-       |
| ELA        |     | 67965 | 2 | A-V.4.1.1              | 2 | 6387         | 0.93 | 0.93 | 0.02 | 0.03 |      | 0.00 | 0.42 | 0.42           | -0.23          | -0.28 | -0.20          | -1.5378 | 0.0530 | -4.1        | 0.8 -7.4            | 0.5 A+           |          | A-       |
| ELA        |     | 61963 | 2 | A-V.4.1.2              | 2 | 6387         | 0.52 | 0.11 | 0.52 | 0.10 |      | 0.01 | 0.32 | -0.16          | 0.32           | -0.26 | -0.06          | 1.5307  | 0.0280 | 6.9         | 1.1 6.7             | 1.1 A-           | A+       | A+       |
| ELA        |     | 50019 | 2 | A-C.2.1.3              | 2 | 6387         | 0.60 | 0.10 | 0.24 | 0.60 | 0.06 |      | 0.33 | -0.21          | -0.14          | 0.33  | -0.17          | 1.1579  | 0.0285 | 6.6         | 1.1 8.3             | 1.2 A-           | A-       | A-       |
| ELA        |     | 33851 | 2 | A-K.1.1.1              | 2 | 6387         | 0.71 | 0.08 | 0.15 | 0.06 |      | 0.00 | 0.51 | -0.30          | -0.22          | -0.28 | 0.51           | 0.5296  | 0.0306 | -8.4        | 0.9 -7.8            | 0.8 A-           | A-       | B-       |
| ELA        |     | 02232 | 2 | A-V.4.1.1              | 2 | 6387         | 0.52 | 0.17 | 0.11 | 0.19 |      | 0.00 | 0.34 | -0.17          | -0.14          | -0.14 | 0.34           | 1.5417  | 0.0280 | 5.6         | 1.1 5.8             | 1.1 B-           | A-       | A-       |
| ELA        |     | 01970 | 2 | A-K.1.1.2              | 3 | 6387         | 0.72 | 0.72 | 0.17 | 0.06 | 0.05 |      | 0.39 | 0.39           | -0.11          | -0.26 | -0.29<br>-0.25 | 0.4882  | 0.0308 | 0.2         | 1.0 1.1             | 1.0 A+           | _        | A+       |
| ELA<br>ELA |     | 44601 | 3 | A-C.2.1.2<br>A-C.2.1.1 | 2 | 6387<br>6413 | 0.74 | 0.08 | 0.10 | 0.74 | 0.07 | 0.00 | 0.48 | -0.24<br>-0.21 | -0.26<br>-0.20 | -0.17 | 0.25           | 0.5545  | 0.0317 | -6.2<br>1.9 | 0.9 -6.4<br>1.0 0.7 | 0.8 A+<br>1.0 A- | A+<br>A- | A+<br>A- |
| ELA        | 0 0 | 11767 | 3 | A-C.2.1.1<br>A-K.1.1.2 | 3 | 6413         | 0.71 | 0.07 | 0.14 | 0.08 | 0.71 |      | 0.37 | -0.21          | -0.20          | 0.44  | -0.12          | 0.3343  | 0.0303 | -2.9        | 1.0 -3.2            | 0.9 A+           |          | A+       |
| ELA        |     | 44867 | 3 | A-K.1.1.2<br>A-K.1.1.1 | 2 | 6413         | 0.73 | 0.10 | 0.07 | 0.73 | 0.10 |      | 0.44 | -0.23          | -0.32          | 0.44  | -0.12          | 1.2749  | 0.0312 | -3.1        | 1.0 -3.2            | 1.0 A-           | A-       | A-       |
| ELA        |     | 66900 | 3 | A-V.4.1.2              | 1 | 6413         | 0.87 | 0.12 | 0.04 | 0.05 |      | 0.00 | 0.49 | 0.49           | -0.21          | -0.26 | -0.26          | -0.6792 | 0.0283 | -6.7        | 0.8 -9.2            | 0.6 A+           |          | A-       |
| ELA        |     | 58113 | 3 | A-V.4.1.2              | 2 | 6413         | 0.87 | 0.04 | 0.87 | 0.05 | -    | 0.00 | 0.45 | -0.27          | 0.45           | -0.25 | -0.23          | -0.6823 | 0.0377 | -5.1        | 0.9 -5.8            | 0.0 A            | A-       | A-       |
| ELA        |     | 88960 | 3 | A-C.3.1.1              | 2 | 6413         | 0.69 | 0.69 | 0.06 | 0.09 | 0.16 |      | 0.48 | 0.48           | -0.24          | -0.26 | -0.23          | 0.6736  | 0.0300 | -5.7        | 0.9 -6.1            | 0.9 A-           | A+       | A-       |
| ELA        | 0 0 | 12694 | 3 | A-C.2.1.2              | 3 | 6413         | 0.59 | 0.18 | 0.59 | 0.09 |      | 0.00 | 0.35 | -0.03          | 0.35           | -0.33 | -0.18          | 1.2161  | 0.0284 | 6.2         | 1.1 7.4             | 1.1 A+           |          | A-       |
| ELA        |     | 45363 | 3 | A-K.1.1.3              | 2 | 6413         | 0.69 | 0.23 | 0.69 | 0.04 |      | 0.00 | 0.42 | -0.22          | 0.42           | -0.25 | -0.24          | 0.6646  | 0.0301 | -1.1        | 1.0 -2.5            | 0.9 A-           | A-       | A-       |
| ELA        |     | 41240 | 4 | A-C.3.1.1              | 3 | 6419         | 0.61 | 0.61 | 0.23 | 0.12 |      | 0.00 | 0.33 | 0.33           | -0.14          | -0.19 | -0.23          | 1.0671  | 0.0288 | 6.5         | 1.1 4.1             | 1.1 A+           | _        | A-       |
| ELA        |     | 74904 | 4 | A-V.4.1.1              | 2 | 6419         | 0.69 | 0.14 | 0.69 | 0.09 |      | 0.00 | 0.40 | -0.17          | 0.40           | -0.25 | -0.20          | 0.6678  | 0.0301 | 0.0         | 1.0 -2.6            | 0.9 A+           | _        | A-       |
| ELA        | 8 7 | 35275 | 4 | A-V.4.1.2              | 2 | 6419         | 0.68 | 0.16 | 0.11 | 0.68 | 0.04 | 0.00 | 0.47 | -0.21          | -0.27          | 0.47  | -0.27          | 0.6804  | 0.0300 | -5.4        | 0.9 -6.8            | 0.9 A+           | A-       | A+       |
| ELA        | 8 6 | 79427 | 4 | A-V.4.1.2              | 2 | 6419         | 0.81 | 0.06 | 0.06 | 0.08 | 0.81 | 0.00 | 0.46 | -0.30          | -0.30          | -0.14 | 0.46           | -0.1224 | 0.0347 | -5.3        | 0.9 -4.0            | 0.9 A+           | A-       | A-       |
| ELA        | 8 7 | 87789 | 4 | A-K.1.1.1              | 2 | 6419         | 0.71 | 0.08 | 0.10 | 0.11 | 0.71 |      | 0.50 | -0.25          | -0.30          | -0.22 | 0.50           | 0.5020  | 0.0308 | -7.9        | 0.9 -7.5            | 0.8 A+           |          | A-       |
| ELA        | 8 8 | 77304 | 4 | A-K.1.1.3              | 2 | 6419         | 0.86 | 0.03 | 0.86 | 0.05 | 0.06 | 0.00 | 0.51 | -0.25          | 0.51           | -0.31 | -0.29          | -0.5855 | 0.0389 | -7.9        | 0.8 -9.8            | 0.6 A+           | A-       | A+       |
| ELA        |     | 50679 | 4 | A-K.1.1.3              | 2 | 6419         | 0.67 | 0.67 | 0.17 | 0.08 | 0.07 | 0.00 | 0.49 | 0.49           | -0.20          | -0.31 | -0.25          | 0.7377  | 0.0298 | -6.9        | 0.9 -6.8            | 0.9 A+           | A-       | A-       |
| ELA        | 8 3 | 07443 | 4 | A-C.2.1.3              | 2 | 6419         | 0.65 | 0.19 | 0.08 | 0.65 | 0.08 | 0.00 | 0.44 | -0.22          | -0.29          | 0.44  | -0.17          | 0.8937  | 0.0293 | -3.2        | 1.0 -4.8            | 0.9 A+           | A-       | A+       |
| ELA        | 8 9 | 34365 | 5 | A-K.1.1.3              | 2 | 6418         | 0.71 | 0.04 | 0.07 | 0.71 | 0.17 | 0.00 | 0.30 | -0.29          | -0.26          | 0.30  | -0.02          | 0.5287  | 0.0306 | 6.5         | 1.1 7.4             | 1.2 A-           | A-       | A-       |
| ELA        | 8 5 | 31417 | 5 | A-V.4.1.1              | 2 | 6418         | 0.64 | 0.08 | 0.07 | 0.20 | 0.64 | 0.00 | 0.45 | -0.25          | -0.25          | -0.20 | 0.45           | 0.9209  | 0.0290 | -5.4        | 0.9 -7.1            | 0.9 A+           | A-       | A-       |
| ELA        | 8 3 | 51316 | 5 | A-V.4.1.1              | 2 | 6418         | 0.24 | 0.24 | 0.52 | 0.06 | 0.17 | 0.01 | 0.06 | 0.06           | 0.29           | -0.25 | -0.29          | 3.0304  | 0.0316 | 9.9         | 1.2 9.9             | 1.9 A-           | A-       | A+       |
| ELA        | 8 6 | 69749 | 5 | A-V.4.1.2              | 2 | 6418         | 0.63 | 0.16 | 0.14 | 0.63 | 0.07 | 0.00 | 0.35 | -0.21          | -0.17          | 0.35  | -0.12          | 1.0187  | 0.0288 | 3.7         | 1.1 1.5             | 1.0 A-           | A-       | A-       |
| ELA        | 8 4 | 98299 | 5 | A-K.1.1.1              | 2 | 6418         | 0.74 | 0.07 | 0.74 | 0.06 | 0.12 | 0.00 | 0.51 | -0.31          | 0.51           | -0.31 | -0.20          | 0.3575  | 0.0315 | -9.3        | 0.9 -9.9            | 0.7 B-           | B-       | B-       |
| ELA        | 8 1 | 92241 | 5 | A-K.1.1.1              | 2 | 6418         | 0.71 | 0.09 | 0.11 | 0.08 | 0.71 | 0.00 | 0.56 | -0.32          | -0.28          | -0.25 | 0.56           | 0.5641  | 0.0304 | -9.9        | 0.8 -9.9            | 0.7 B-           | A-       | A-       |
| ELA        | 8 6 | 42298 | 5 | A-K.1.1.2              | 3 | 6418         | 0.42 | 0.17 | 0.42 | 0.19 | 0.21 | 0.00 | 0.21 | -0.08          | 0.21           | -0.11 | -0.07          | 2.0436  | 0.0280 | 9.9         | 1.2 9.9             | 1.3 A+           | A+       | A+       |
| ELA        | 8 9 | 75292 | 5 | A-K.1.1.3              | 3 | 6418         | 0.72 | 0.72 | 0.06 | 0.17 | 0.04 | 0.00 | 0.45 | 0.45           | -0.30          | -0.25 | -0.18          | 0.4539  | 0.0310 | -5.1        | 0.9 -7.0            | 0.8 A-           | A-       | A-       |

| ELA | 8 402281 | 6  | A-K.1.1.3 | 2 | 6375  | 0.37 | 0.35 | 0.37 | 0.19 | 0.08 0. | .00 | 0.19 | 0.03  | 0.19  | -0.09 | -0.24 | 2.3176  | 0.0286 | 9.9  | 1.2 9.9  | 1.4 A- | A- | A+ |
|-----|----------|----|-----------|---|-------|------|------|------|------|---------|-----|------|-------|-------|-------|-------|---------|--------|------|----------|--------|----|----|
| ELA | 8 908503 | 6  | A-C.3.1.1 | 2 | 6375  | 0.79 | 0.11 | 0.79 | 0.05 | 0.05 0. | .00 | 0.45 | -0.21 | 0.45  | -0.25 | -0.29 | 0.0579  |        | -5.1 | 0.9 -4.8 | 0.9 A- | A- | A- |
| ELA | 8 604429 | 6  | A-V.4.1.1 | 2 | 6375  | 0.74 | 0.74 | 0.07 | 0.09 | 0.09 0. | .00 | 0.36 | 0.36  | -0.27 | -0.18 | -0.13 | 0.3584  | 0.0317 | 1.9  | 1.0 -1.1 | 1.0 A+ | A- | A+ |
| ELA | 8 779360 | 6  | A-K.1.1.1 | 2 | 6375  | 0.76 | 0.09 | 0.08 | 0.76 | 0.07 0. | .00 | 0.43 | -0.26 | -0.25 | 0.43  | -0.17 | 0.2526  | 0.0323 | -3.5 | 0.9 -2.5 | 0.9 A+ | A- | A- |
| ELA | 8 660576 | 6  | A-C.2.1.1 | 3 | 6375  | 0.77 | 0.04 | 0.15 | 0.04 | 0.77 0. | .00 | 0.39 | -0.25 | -0.16 | -0.28 | 0.39  | 0.1848  | 0.0328 | -1.1 | 1.0 -0.3 | 1.0 A+ | A- | A- |
| ELA | 8 172621 | 6  | A-C.2.1.3 | 2 | 6375  | 0.83 | 0.83 | 0.05 | 0.07 | 0.06 0. | .00 | 0.51 | 0.51  | -0.25 | -0.27 | -0.30 | -0.2448 | 0.0361 | -8.1 | 0.8 -9.2 | 0.7 A+ | A- | A- |
| ELA | 8 722796 | 6  | A-V.4.1.2 | 2 | 6375  | 0.81 | 0.05 | 0.06 | 0.08 | 0.81 0. | .00 | 0.52 | -0.26 | -0.29 | -0.29 | 0.52  | -0.1321 | 0.0351 | -8.6 | 0.8 -9.3 | 0.7 A+ | A- | A- |
| ELA | 8 419317 | 6  | A-V.4.1.2 | 2 | 6375  | 0.61 | 0.29 | 0.07 | 0.61 | 0.03 0. | .00 | 0.33 | -0.11 | -0.28 | 0.33  | -0.20 | 1.1279  | 0.0286 | 6.5  | 1.1 5.0  | 1.1 A+ | A+ | A+ |
| ELA | 8 725032 | 7  | A-C.2.1.1 | 2 | 6400  | 0.47 | 0.13 | 0.47 | 0.28 | 0.11 0. | .00 | 0.19 | -0.13 | 0.19  | -0.03 | -0.13 | 1.7815  | 0.0277 | 9.9  | 1.2 9.9  | 1.3 A+ | A- | A- |
| ELA | 8 843212 | 7  | A-C.2.1.3 | 2 | 6400  | 0.29 | 0.11 | 0.29 | 0.20 | 0.40 0. | .00 | 0.10 | -0.19 | 0.10  | -0.16 | 0.15  | 2.7353  | 0.0299 | 9.9  | 1.2 9.9  | 1.6 A- | A+ | A- |
| ELA | 8 963439 | 7  | A-V.4.1.1 | 2 | 6400  | 0.87 | 0.87 | 0.04 | 0.05 | 0.04 0. | .00 | 0.39 | 0.39  | -0.24 | -0.20 | -0.20 | -0.6628 | 0.0401 | -3.1 | 0.9 -3.3 | 0.9 A+ | B- | A- |
| ELA | 8 498393 | 7  | A-V.4.1.2 | 2 | 6400  | 0.92 | 0.92 | 0.03 | 0.03 | 0.02 0. | .00 | 0.41 | 0.41  | -0.23 | -0.26 | -0.20 | -1.1849 | 0.0474 | -4.3 | 0.9 -5.9 | 0.7 A+ | B- | A- |
| ELA | 8 590496 | 7  | A-V.4.1.2 | 3 | 6400  | 0.78 | 0.05 | 0.13 | 0.03 | 0.78 0. | .00 | 0.41 | -0.21 | -0.23 | -0.26 | 0.41  | 0.1136  | 0.0330 | -2.9 | 1.0 -2.1 | 0.9 A- | B- | B- |
| ELA | 8 446105 | 7  | A-K.1.1.1 | 2 | 6400  | 0.72 | 0.06 | 0.18 | 0.72 | 0.03 0. | .00 | 0.45 | -0.28 | -0.23 | 0.45  | -0.25 | 0.4940  | 0.0307 | -5.0 | 0.9 -5.8 | 0.9 A- | A+ | A- |
| ELA | 8 728268 | 7  | A-K.1.1.2 | 3 | 6400  | 0.43 | 0.15 | 0.27 | 0.15 | 0.43 0. | .00 | 0.25 | -0.18 | -0.04 | -0.10 | 0.25  | 2.0106  | 0.0279 | 9.9  | 1.1 9.9  | 1.2 A+ | A- | A- |
| ELA | 8 694393 | 7  | A-K.1.1.3 | 2 | 6400  | 0.81 | 0.05 | 0.05 | 0.81 | 0.08 0. | .00 | 0.44 | -0.22 | -0.27 | 0.44  | -0.22 | -0.1392 | 0.0349 | -4.5 | 0.9 -5.0 | 0.8 A+ | A- | A- |
| ELA | 8 939798 | 8  | A-K.1.1.2 | 3 | 6447  | 0.77 | 0.04 | 0.13 | 0.05 | 0.77 0. | .00 | 0.33 | -0.27 | -0.10 | -0.22 | 0.33  | 0.1473  | 0.0322 | 0.8  | 1.0 2.5  | 1.1 A+ | A- | A- |
| ELA | 8 959283 | 8  | A-K.1.1.3 | 2 | 6447  | 0.76 | 0.06 | 0.76 | 0.06 | 0.12 0. | .00 | 0.44 | -0.23 | 0.44  | -0.30 | -0.19 | 0.2238  | 0.0317 | -4.8 | 0.9 -4.8 | 0.9 A- | B- | A- |
| ELA | 8 402744 | 8  | A-C.2.1.3 | 2 | 6447  | 0.32 | 0.22 | 0.09 | 0.32 | 0.37 0. | .00 | 0.10 | -0.01 | -0.20 | 0.10  | 0.03  | 2.5329  | 0.0291 | 9.9  | 1.2 9.9  | 1.5 A- | A+ | A+ |
| ELA | 8 562792 | 8  | A-C.2.1.3 | 2 | 6447  | 0.78 | 0.03 | 0.78 | 0.11 | 0.07 0. | .00 | 0.41 | -0.26 | 0.41  | -0.22 | -0.21 | 0.0541  | 0.0329 | -3.8 | 0.9 -3.4 | 0.9 A+ | A- | A- |
| ELA | 8 542045 | 8  | A-V.4.1.1 | 2 | 6447  | 0.54 | 0.54 | 0.22 | 0.07 | 0.17 0. | .00 | 0.29 | 0.29  | -0.14 | -0.17 | -0.12 | 1.4321  | 0.0275 | 6.3  | 1.1 6.3  | 1.1 A+ | A- | A+ |
| ELA | 8 193536 | 8  | A-V.4.1.2 | 2 | 6447  | 0.59 | 0.59 | 0.12 | 0.20 | 0.09 0. | .00 | 0.23 | 0.23  | -0.21 | 0.04  | -0.21 | 1.1811  | 0.0279 | 9.9  | 1.2 9.9  | 1.2 A- | A+ | A- |
| ELA | 8 300948 | 8  | A-V.4.1.2 | 2 | 6447  | 0.61 | 0.14 | 0.08 | 0.61 | 0.17 0. | .00 | 0.33 | -0.22 | -0.24 | 0.33  | -0.05 | 1.0879  | 0.0281 | 3.8  | 1.0 2.4  | 1.0 A- | A+ | A- |
| ELA | 8 421990 | 8  | A-V.4.1.2 | 2 | 6447  | 0.44 | 0.25 | 0.10 | 0.20 | 0.44 0. | .00 | 0.33 | -0.18 | -0.18 | -0.07 | 0.33  | 1.8908  | 0.0275 | 1.0  | 1.0 3.8  | 1.1 A- | A- | A- |
| ELA | 8 336088 | 9  | A-K.1.1.3 | 2 | 6407  | 0.57 | 0.57 | 0.08 | 0.18 | 0.17 0. | .00 | 0.40 | 0.40  | -0.28 | -0.16 | -0.18 | 1.2731  | 0.0280 | -1.9 | 1.0 -1.3 | 1.0 A- | A+ | A- |
| ELA | 8 431354 | 9  | A-C.2.1.1 | 3 | 6407  | 0.44 | 0.29 | 0.44 | 0.12 | 0.14 0. | .00 | 0.17 | 0.02  | 0.17  | -0.23 | -0.05 | 1.9279  | 0.0278 | 9.9  | 1.2 9.9  | 1.3 A+ | A+ | A+ |
| ELA | 8 663128 | 9  | A-V.4.1.1 | 2 | 6407  | 0.79 | 0.12 | 0.79 | 0.05 | 0.03 0. | .00 | 0.33 | -0.12 | 0.33  | -0.25 | -0.23 | -0.0141 | 0.0337 | 1.1  | 1.0 1.3  | 1.0 B- | A- | A- |
| ELA | 8 296613 | 9  | A-V.4.1.2 | 2 | 6407  | 0.70 | 0.70 | 0.19 | 0.06 | 0.05 0. | .00 | 0.38 | 0.38  | -0.14 | -0.32 | -0.20 | 0.5881  | 0.0301 | 0.4  | 1.0 -0.4 | 1.0 A- | B- | A- |
| ELA | 8 336290 | 9  | A-V.4.1.2 | 2 | 6407  | 0.62 | 0.28 | 0.07 | 0.62 | 0.02 0. | .00 | 0.41 | -0.26 | -0.21 | 0.41  | -0.19 | 1.0302  | 0.0285 | -2.2 | 1.0 -3.1 | 1.0 B- | A- | C- |
| ELA | 8 978148 | 9  | A-K.1.1.1 | 2 | 6407  | 0.60 | 0.18 | 0.17 | 0.05 | 0.60 0. | .01 | 0.21 | -0.06 | -0.03 | -0.29 | 0.21  | 1.1372  | 0.0282 | 9.9  | 1.2 9.9  | 1.3 A- | A- | A- |
| ELA | 8 384291 | 9  | A-K.1.1.1 | 2 | 6407  | 0.38 | 0.25 | 0.20 | 0.16 | 0.38 0. | .00 | 0.24 | -0.11 | -0.06 | -0.12 | 0.24  | 2.2156  | 0.0282 | 7.0  | 1.1 9.9  | 1.2 A- | A- | A- |
| ELA | 8 938727 | 9  | A-K.1.1.2 | 3 | 6407  | 0.63 | 0.29 | 0.05 | 0.63 | 0.03 0. | .00 | 0.24 | -0.02 | -0.31 | 0.24  | -0.25 | 0.9549  | 0.0287 | 9.9  | 1.2 9.9  | 1.2 A+ | A+ | A+ |
| ELA | 8 461454 | 10 | A-K.1.1.2 | 3 | 6419  | 0.69 | 0.12 | 0.10 | 0.09 |         | .00 | 0.46 | -0.22 | -0.25 | -0.23 | 0.46  | 0.6488  |        | -5.7 | 0.9 -6.7 | 0.9 A+ | A- | A- |
| ELA | 8 198489 | 10 | A-V.4.1.2 | 2 | 6419  | 0.77 | 0.05 | 0.05 | 0.77 | 0.00    | .00 | 0.42 | -0.28 | -0.26 | 0.42  | -0.17 | 0.1442  |        | -3.0 | 1.0 -4.0 | 0.9 A- | A- | A- |
| ELA | 8 569419 | 10 | A-C.3.1.1 | 3 | 6419  | 0.50 | 0.19 | 0.10 | 0.21 | 0.50 0. |     | 0.28 | -0.10 | -0.25 | -0.06 | 0.28  | 1.6338  | 0.0276 | 9.2  | 1.1 9.9  | 1.2 A+ | A- | A+ |
| ELA | 8 695950 | 10 | A-V.4.1.1 | 2 | 6419  | 0.56 | 0.56 | 0.25 | 0.12 |         | .00 | 0.33 | 0.33  | -0.18 | -0.11 | -0.20 | 1.3288  | 0.0279 | 4.8  | 1.1 3.6  | 1.1 A- | A- | A- |
| ELA | 8 414292 | 10 | A-C.2.1.1 | 3 | 6419  | 0.68 | 0.68 | 0.16 | 0.07 | 0.09 0. |     | 0.35 | 0.35  | -0.18 | -0.18 | -0.18 | 0.7256  | 0.0296 | 2.3  | 1.0 2.6  | 1.1 A+ | A- | A- |
| ELA | 8 428432 | 10 | A-C.2.1.3 | 2 | 6419  | 0.62 | 0.15 | 0.62 | 0.07 |         | .00 | 0.36 | -0.22 | 0.36  | -0.29 | -0.06 | 1.0627  | 0.0284 | 2.1  | 1.0 0.9  | 1.0 A- | A+ | A- |
| ELA | 8 437283 | 10 | A-V.4.1.2 | 2 | 6419  | 0.70 | 0.11 | 0.04 | 0.70 |         | .00 | 0.31 | -0.18 | -0.28 | 0.31  | -0.08 | 0.6112  |        | 5.5  | 1.1 3.8  | 1.1 A- | A- | A- |
| ELA | 8 735658 | 10 | A-V.4.1.1 | 2 | 6419  | 0.80 | 0.06 | 0.80 | 0.08 |         | .00 | 0.44 | -0.26 | 0.44  | -0.24 | -0.21 | -0.0144 |        | -4.1 | 0.9 -6.0 | 0.8 A- | A- | B- |
| ELA | 8 163020 | 11 | A.1.1.2   | 1 | 64027 | 0.81 | 0.12 | 0.81 | 0.04 |         | .00 | 0.48 | -0.32 | 0.48  | -0.24 | -0.20 | -0.1312 |        | -9.9 | 0.9 -9.9 | 0.7 A+ | A+ | A- |
| ELA | 8 799707 | 11 | A.1.4.1   | 1 | 64027 | 0.78 | 0.78 | 0.06 | 0.12 |         | .00 | 0.34 | 0.34  | -0.17 | -0.19 | -0.19 | 0.1014  | 0.0104 | 1.7  | 1.0 9.9  | 1.1 A+ | A+ | A+ |
| ELA | 8 281704 | 11 | A.1.3.1   | 2 | 64027 | 0.80 | 0.02 | 0.05 | 0.80 | 0.13 0. | _   | 0.41 | -0.26 | -0.27 | 0.41  | -0.20 | -0.0429 |        | -9.7 | 0.9 -9.4 | 0.9 A- | A+ | A- |
| ELA | 8 543473 | 11 | A.1.4.1   | 3 | 64027 | 0.61 | 0.27 | 0.61 | 0.05 |         | .00 | 0.22 | -0.10 | 0.22  | -0.16 | -0.11 | 1.0668  |        | 9.9  | 1.2 9.9  | 1.3 A+ | A+ | A+ |
| ELA | 8 169939 | 11 | B.1.1.1   | 2 | 64027 | 0.77 | 0.05 | 0.13 | 0.05 |         | .00 | 0.39 | -0.34 | -0.17 | -0.16 | 0.39  | 0.1216  |        | -4.2 | 1.0 -5.5 | 1.0 A+ | A+ | A- |
| ELA | 8 233686 | 11 | B.1.1.1   | 3 | 64027 | 0.65 | 0.17 | 0.12 | 0.06 |         | .00 | 0.38 | -0.21 | -0.10 | -0.28 | 0.38  | 0.8825  | 0.0091 | 1.7  | 1.0 1.7  | 1.0 A+ | A- | A- |
| ELA | 8 226587 | 11 | A.1.3.1   | 2 | 64027 | 0.78 | 0.15 | 0.05 | 0.78 |         | .00 | 0.39 | -0.24 | -0.22 | 0.39  | -0.19 | 0.1201  |        | -4.6 | 1.0 -6.1 | 0.9 A+ | A+ | A- |
| ELA | 8 849389 | 11 | B.2.2.1   | 2 | 64027 | 0.61 | 0.61 | 0.08 | 0.23 |         | .00 | 0.29 | 0.29  | -0.23 | -0.04 | -0.22 | 1.0616  | 0.0090 | 9.9  | 1.1 9.9  | 1.2 A+ | A+ | A- |
| ELA | 8 331486 | 11 | B-V.4.1.1 | 2 | 6432  | 0.29 | 0.29 | 0.29 | 0.20 | 0       | .00 | 0.14 | -0.06 | 0.14  | -0.13 | 0.05  | 2.7022  | 0.0298 | 9.9  | 1.1 9.9  | 1.5 A- | A+ | A- |
| ELA | 8 853724 | 11 | B-K.1.1.3 | 2 | 6432  | 0.74 | 0.74 | 0.04 | 0.08 |         | .00 | 0.46 | 0.46  | -0.26 | -0.22 | -0.25 | 0.3391  | 0.0312 | -5.3 | 0.9 -6.5 | 0.8 A- | A- | A- |
| ELA | 8 181062 | 11 | B-C.2.1.1 | 3 | 6432  | 0.46 | 0.28 | 0.20 | 0.46 | 0.05 0. | .00 | 0.33 | -0.15 | -0.09 | 0.33  | -0.27 | 1.7986  | 0.0276 | 1.5  | 1.0 5.6  | 1.1 A- | A- | A+ |

| ELA        | 8 107310             | 11 B-C.2.1.2                 | 2 | 6432 0.43 | 0.06 0. | 43 0.1           | 6 0.35 0.00 | 0.25 | -0.23          | 0.25          | -0.18          | -0.01          | 1.9741           | 0.0277    | 6.6 1.1 9.            | 9 1.2 A- | A- | A-       |
|------------|----------------------|------------------------------|---|-----------|---------|------------------|-------------|------|----------------|---------------|----------------|----------------|------------------|-----------|-----------------------|----------|----|----------|
| ELA        | 8 398818             | 11 B-V.4.1.2                 | 2 |           |         | 05 0.1           |             |      | 0.34           | -0.19         | -0.25          | -0.07          | 0.3893           |           | .8 1.0 2              |          | B- | A-       |
| ELA        | 8 223530             | 11 B-K.1.1.1                 | 2 | 6432 0.73 | 0.15 0. | 08 0.7           | 3 0.04 0.00 | 0.45 | -0.23          | -0.28         | 0.45           | -0.20          | 0.4273           | 0.0307 -: | .4 0.9 -6             | 9 0.8 A- | A- | A-       |
| ELA        | 8 621238             | 11 B-V.4.1.1                 | 2 | 6432 0.68 | 0.14 0. | 10 0.0           | 7 0.68 0.00 | 0.44 | -0.22          | -0.20         | -0.26          | 0.44           | 0.6714           | 0.0296    | .6 0.9 -5.            | 9 0.9 B- | A- | A-       |
| ELA        | 8 171636             | 11 B-C.2.1.3                 | 2 | 6432 0.29 | 0.14 0. | 11 0.4           | 5 0.29 0.01 | 0.09 | -0.09          | -0.27         | 0.16           | 0.09           | 2.6853           | 0.0298    | .9 1.2 9.             | 9 1.6 A+ | A- | A-       |
| ELA        | 8 107287             | 12 B-V.4.1.1                 | 2 | 6414 0.80 | 0.02 0. | 06 0.8           | 0.12 0.00   | 0.49 | -0.26          | -0.31         | 0.49           | -0.26          | -0.0358          | 0.0339 -  | .2 0.9 -8             | 7 0.8 B- | A- | B-       |
| ELA        | 8 945997             | 12 B-V.4.1.2                 | 2 | 6414 0.59 | 0.27 0. | 0.0              | 5 0.59 0.00 | 0.48 | -0.21          | -0.27         | -0.28          | 0.48           | 1.1944           | 0.0281 -  | .3 0.9 -8.            | 8 0.9 B- | A- | A-       |
| ELA        | 8 923988             | 12 B-V.4.1.2                 | 2 | 6414 0.34 | 0.45 0. | 14 0.3           | 4 0.07 0.00 | 0.25 | -0.02          | -0.12         | 0.25           | -0.25          | 2.4353           | 0.0288    | .5 1.1 9.             | 9 1.3 A- | B- | A-       |
| ELA        | 8 165742             | 12 B-C.2.1.3                 | 2 | 6414 0.70 | 0.70 0. | 19 0.0           | 6 0.05 0.00 | 0.47 | 0.47           | -0.21         | -0.32          | -0.25          | 0.5995           | 0.0301 -  | 0.9 -7                | 3 0.9 A+ | A- | A-       |
| ELA        | 8 131057             | 12 B-K.1.1.2                 | 2 | 6414 0.66 | 0.08    | 05 0.2           | 0.66 0.00   | 0.37 | -0.16          | -0.27         | -0.16          | 0.37           | 0.7973           | 0.0293    | .5 1.0 2.             | 7 1.1 A+ | A+ | A+       |
| ELA        | 8 130748             | 12 B-K.1.1.2                 | 2 | 6414 0.65 | 0.07 0. | 65 0.1           | 2 0.16 0.00 | 0.46 | -0.27          | 0.46          | -0.26          | -0.18          | 0.8433           | 0.0291 -  | 0.9 -6                | 6 0.9 A- | A+ | A-       |
| ELA        | 8 217285             | 12 B-C.2.1.2                 | 2 |           |         | 20 0.0           |             |      | 0.41           | -0.23         | -0.27          | -0.12          | 1.1451           |           | .2 1.0 -2.            |          | A- | A-       |
| ELA        | 8 341066             | 12 B-C.2.1.1                 | 3 |           |         | 58 0.1           |             |      | -0.17          | 0.24          | 0.01           | -0.22          | 1.2457           |           | .9 1.2 9.             |          | A+ | A+       |
| ELA        | 8 898747             | 13 B-C.2.1.1                 | 2 |           |         | 50 0.0           |             |      | -0.04          | 0.25          | -0.25          | -0.13          | 1.6251           |           | .9 1.1 9.             |          | A- | A-       |
| ELA        | 8 148973             | 13 B-V.4.1.2                 | 2 |           |         | 16 0.1           |             |      | -0.24          | -0.08         | -0.09          | 0.27           | 1.2640           |           | .6 1.1 9.             |          | A- | A+       |
| ELA        | 8 432043             | 13 B-C.2.1.3                 | 2 |           |         | 17 0.1           |             |      | 0.17           | -0.09         | -0.17          | 0.03           | 1.9811           |           | .9 1.2 9.             |          | A+ | A+       |
| ELA        | 8 304889             | 13 B-K.1.1.2                 | 2 |           |         | 13 0.3           |             |      | -0.01          | -0.07         | 0.23           | -0.26          | 2.3691           |           | 0.0 1.1 9.            |          | B- | A-       |
| ELA        | 8 234976             | 13 B-V.4.1.1                 | 2 |           |         | 10 0.0           | 0.00        | 0.00 | 0.51           | -0.24         | -0.26          | -0.29          | 0.3415           |           | .8 0.9 -9.            |          | C- | B-       |
| ELA        | 8 696881             | 13 B-V.4.1.1                 | 2 |           |         | 27 0.1           |             |      | -0.02          | -0.07         | -0.11          | 0.17           | 2.0799           |           | .9 1.2 9              |          | A- | A+       |
| ELA        | 8 926534             | 13 B-C.2.1.2                 | 2 |           |         | 11 0.6           |             |      | -0.10          | -0.22         | 0.31           | -0.16          | 1.0459           |           | .5 1.1 4.             |          | A- | Α-       |
| ELA        | 8 516208             | 13 B-K.1.1.1                 | 2 |           |         | 47 0.1           |             |      | -0.14          | 0.23          | -0.21          | 0.01           | 1.7574           |           | .9 1.1 9.             |          | A- | Α-       |
| ELA        | 8 631490             | 14 B-C.2.1.2                 | 3 |           | 0.64 0. |                  |             |      | 0.36           | -0.20         | -0.28          | -0.08          | 0.9292           |           | .3 1.0 5.             |          | A- | Α-       |
| ELA        | 8 397076             | 14 B-K.1.1.1                 | 3 |           |         | 09 0.1           |             |      | 0.12           | -0.24         | -0.19          | 0.15           | 2.2839           |           | .9 1.2 9.             |          | A- | A-       |
| ELA        | 8 546386             | 14 B-V.4.1.1                 | 2 |           |         | 20 0.2           |             |      | -0.20          | -0.13         | -0.06          | 0.26           | 1.8165           |           | .9 1.1 9.             |          | B- | A-       |
| ELA        | 8 977768<br>8 624501 | 14 B-V.4.1.1                 | 2 |           |         | 22 0.5<br>59 0.2 |             |      | -0.23          | -0.24<br>0.33 | 0.40           | -0.12          | 1.3322           |           | .0 1.0 -2.            |          | A- | B-       |
| ELA<br>ELA | 8 624501<br>8 586707 | 14 B-K.1.1.1<br>14 B-K.1.1.2 | 2 |           |         | 59 0.2<br>71 0.0 |             |      | -0.26<br>-0.22 | 0.33          | -0.09<br>-0.23 | -0.16<br>-0.20 | 1.1662<br>0.5628 |           | .6 1.1 4<br>.1 1.0 -3 |          | A+ | A-       |
| ELA        | 8 945487             | 14 B-K.1.1.2                 | 2 |           |         | 07 0.1           |             | +    | -0.22          | -0.24         | -0.23          | 0.36           | 1.2556           |           | .1 1.0 -3<br>.8 1.0 1 |          | A- | A+<br>A- |
| ELA        | 8 940928             | 14 B-K.1.1.3                 | 2 |           |         | 30 0.2           |             |      | 0.04           | -0.24         | 0.12           | -0.13          | 3.1468           |           | 6 1.1 9               |          | A- | A-       |
| ELA        | 8 349293             | 15 B-K.1.1.1                 | 2 |           |         | 30 0.2           |             |      | 0.04           | -0.10         | -0.14          | 0.04           | 3.2940           |           | .2 1.0 9.             |          | A- | A-       |
| ELA        | 8 457706             | 15 B-K.1.1.2                 | 2 |           |         | 12 0.6           |             |      | -0.25          | -0.19         | 0.34           | -0.10          | 0.8544           |           | 1.0 3.                |          | A- | A-       |
| ELA        | 8 901618             | 15 B-C.2.1.1                 | 2 |           |         | 11 0.1           |             | 0.45 | -0.19          | -0.21         | -0.25          | 0.45           | 1.2009           |           | 6 0.9 -7              |          | A- | A-       |
| ELA        | 8 690765             | 15 B-C.2.1.2                 | 2 |           |         | 62 0.0           |             |      | -0.30          | 0.35          | -0.25          | -0.10          | 1.0495           |           | 4 1.0 0               |          | A- | A-       |
| ELA        | 8 691677             | 15 B-C.2.1.3                 | 2 |           |         | 46 0.2           |             |      | -0.13          | 0.29          | -0.09          | -0.16          | 1.8224           |           | .8 1.1 9              |          | A- | A-       |
| ELA        | 8 599360             | 15 B-C.3.1.1                 | 2 |           |         | 12 0.4           |             |      | -0.02          | -0.26         | 0.18           | 0.00           | 2.0532           |           | .9 1.2 9              |          | A- | A+       |
| ELA        | 8 935495             | 15 B-V.4.1.1                 | 2 |           |         | 07 0.0           |             |      | 0.41           | -0.22         | -0.24          | -0.20          | -0.2211          |           | .3 0.9 -2             |          | A- | B-       |
| ELA        | 8 988328             | 15 B-V.4.1.2                 | 2 | 6403 0.46 | 0.27 0. | 13 0.1           | 2 0.46 0.00 | 0.35 | -0.01          | -0.16         | -0.34          | 0.35           | 1.8201           | 0.0276 -  | .3 1.0 2.             | 4 1.0 A- | A- | A-       |
| ELA        | 8 133772             | 16 B-K.1.1.2                 | 2 |           |         | 15 0.1           | 5 0.54 0.01 |      | -0.10          | -0.24         | -0.14          | 0.36           | 1.4357           |           | .2 1.0 1.             | 7 1.0 A+ | A+ | A+       |
| ELA        | 8 748704             | 16 B-K.1.1.3                 | 2 | 6389 0.34 | 0.30 0. | 11 0.2           | 5 0.34 0.00 | 0.13 | 0.01           | -0.19         | -0.02          | 0.13           | 2.4382           | 0.0289    | .9 1.2 9.             | 9 1.4 A+ | A- | A+       |
| ELA        | 8 384522             | 16 B-C.2.1.1                 | 2 | 6389 0.29 | 0.54 0. | 13 0.2           | 0.03 0.00   | 0.21 | 0.02           | -0.16         | 0.21           | -0.25          | 2.7151           | 0.0301    | .3 1.1 9.             | 9 1.4 A- | A- | A-       |
| ELA        | 8 944914             | 16 B-C.2.1.2                 | 2 | 6389 0.65 | 0.11 0. | 65 0.1           | 4 0.11 0.00 | 0.33 | -0.14          | 0.33          | -0.27          | -0.06          | 0.8641           | 0.0289    | .8 1.1 3.             | 7 1.1 A- | A+ | A+       |
| ELA        | 8 256840             | 16 B-C.2.1.3                 | 3 | 6389 0.34 | 0.34 0. | 28 0.1           | 4 0.23 0.00 | 0.35 | 0.35           | -0.23         | -0.19          | 0.01           | 2.4207           | 0.0289    | .1 1.0 3.             | 0 1.1 A- | A+ | A-       |
| ELA        | 8 176390             | 16 B-V.4.1.2                 | 2 | 6389 0.63 | 0.63 0. | 18 0.0           | 7 0.13 0.00 | 0.27 | 0.27           | -0.14         | -0.22          | -0.07          | 0.9731           | 0.0286    | 0.0 1.1 7.            | 4 1.1 B- | A- | A-       |
| ELA        | 8 591173             | 16 B-V.4.1.1                 | 2 | 6389 0.58 | 0.14 0. | 04 0.5           | 3 0.24 0.00 | 0.26 | -0.16          | -0.25         | 0.26           | -0.05          | 1.2208           | 0.0280    | .9 1.1 8.             | 8 1.1 A- | A- | A-       |
| ELA        | 8 410203             | 16 B-V.4.1.2                 | 2 | 6389 0.43 | 0.06 0. | 43 0.0           | 7 0.44 0.00 | 0.18 | -0.33          | 0.18          | -0.24          | 0.10           | 1.9690           | 0.0278    | .9 1.2 9.             | 9 1.3 A+ | A- | A-       |
| ELA        | 8 562603             | 17 B-C.2.1.2                 | 2 | 6382 0.60 | 0.60 0. | 10 0.1           | 4 0.16 0.00 | 0.36 | 0.36           | -0.24         | -0.20          | -0.09          | 1.1427           | 0.0283    | .5 1.0 1.             | 9 1.0 A- | A- | A-       |
| ELA        | 8 866979             | 17 B-C.2.1.3                 | 2 | 6382 0.53 |         | 13 0.5           | 3 0.11 0.01 | 0.39 | -0.13          | -0.21         | 0.39           | -0.21          | 1.4793           |           | .6 1.0 -1.            |          | A- | A-       |
| ELA        | 8 877689             | 17 B-C.3.1.1                 | 2 | 6382 0.58 | 0.58 0. | 27 0.0           | 5 0.09 0.00 | 0.41 | 0.41           | -0.15         | -0.27          | -0.24          | 1.2661           | 0.0281 -  | .0 1.0 -2.            | 0 1.0 A- | A+ | A+       |
| ELA        | 8 669149             | 17 B-C.3.1.2                 | 3 | 6382 0.42 | 0.17 0. | 06 0.3           | 5 0.42 0.01 | 0.29 | -0.27          | -0.24         | 0.03           | 0.29           | 2.0422           | 0.0280    | .4 1.1 9.             | 1 1.2 A- | A- | A-       |
| ELA        | 8 676568             | 17 B-V.4.1.1                 | 2 |           |         | 88 0.0           | 0.00        |      | -0.27          | 0.47          | -0.23          | -0.28          | -0.7191          |           | .8 0.9 -7             | 0        | A- | A-       |
| ELA        | 8 861722             | 17 B-K.1.1.1                 | 2 | 6382 0.55 | 0.11 0. | 16 0.1           | 7 0.55 0.00 | 0.39 | -0.26          | -0.19         | -0.10          | 0.39           | 1.3798           | 0.0279 -  | .9 1.0 -1.            | 4 1.0 A- | A- | A-       |

| ELA                | 8 6 | 83726  | 17 | B-K.1.1.3          | 2 | 6382             | 0.56 | 0.30 | 0.10 | 0.56 | 0.04 0 | .00  | 0.36 | -0.17          | -0.19         | 0.36  | -0.24          | 1.3361             | 0.0280 | 1.0          | 1.0 1.6             | 1.0 A-     | A- | A-     |
|--------------------|-----|--------|----|--------------------|---|------------------|------|------|------|------|--------|------|------|----------------|---------------|-------|----------------|--------------------|--------|--------------|---------------------|------------|----|--------|
| ELA                |     | 22472  | 17 | B-C.2.1.1          | 2 | 6382             | 0.73 | 0.07 | 0.73 | 0.16 |        | .00  | 0.30 | -0.24          | 0.30          | -0.06 | -0.26          | 0.4161             | 0.0310 |              | 1.1 7.6             | 1.2 A+     | A- | A-     |
| ELA                | 8 8 | 16859  | 18 | B-C.3.1.1          | 3 | 6419             | 0.29 | 0.19 | 0.29 | 0.34 | 0.18 0 | .00  | 0.11 | -0.08          | 0.11          | 0.05  | -0.11          | 2.6741             | 0.0298 | 9.9          | 1.2 9.9             | 1.6 A-     | A- | A+     |
| ELA                | 8 4 | 76821  | 18 | B-K.1.1.2          | 2 | 6419             | 0.74 | 0.07 | 0.74 | 0.10 | 0.09 0 | .00  | 0.45 | -0.27          | 0.45          | -0.30 | -0.13          | 0.3613             | 0.0310 | -5.3         | 0.9 -5.8            | 0.9 A-     | A- | A-     |
| ELA                | 8 5 | 21797  | 18 | B-C.2.1.3          | 2 | 6419             | 0.37 | 0.29 | 0.15 | 0.37 | 0.19 0 | .00  | 0.23 | -0.05          | -0.17         | 0.23  | -0.06          | 2.2457             | 0.0283 | 8.9          | 1.1 9.9             | 1.2 A-     | A+ | A-     |
| ELA                | 8 8 | 11561  | 18 | B-V.4.1.2          | 1 | 6419             | 0.61 | 0.04 | 0.04 | 0.30 | 0.61 0 | .00  | 0.50 | -0.29          | -0.30         | -0.27 | 0.50           | 1.0731             | 0.0282 | -9.9         | 0.9 -9.9            | 0.8 A-     | A- | A-     |
| ELA                | 8 1 | 62610  | 18 | B-C.2.1.2          | 2 | 6419             | 0.57 | 0.57 | 0.15 | 0.17 | 0.12 0 | .00  | 0.32 | 0.32           | -0.16         | -0.19 | -0.08          | 1.2896             | 0.0278 | 5.2          | 1.1 4.3             | 1.1 A-     | A- | A-     |
| ELA                | 8 8 | 38246  | 18 | B-C.3.1.2          | 3 | 6419             | 0.43 | 0.18 | 0.22 | 0.43 | 0.17 0 | .00  | 0.28 | -0.12          | -0.07         | 0.28  | -0.16          | 1.9420             | 0.0277 | 5.7          | 1.1 9.2             | 1.2 A-     | A- | A-     |
| ELA                | 8 3 | 63683  | 18 | B-V.4.1.1          | 2 | 6419             | 0.74 | 0.10 | 0.07 | 0.09 | 0.74 0 | .00  | 0.44 | -0.23          | -0.24         | -0.22 | 0.44           | 0.3699             | 0.0310 | -4.7         | 0.9 -6.4            | 0.9 A-     | A- | A-     |
| ELA                | 8 1 | 18510  | 18 | B-K.1.1.3          | 2 | 6419             | 0.65 | 0.65 | 0.10 | 0.09 | 0.16 0 | .00  | 0.29 | 0.29           | -0.20         | -0.20 | -0.07          | 0.8342             | 0.0289 | 7.2          | 1.1 6.6             | 1.1 A-     | A- | A+     |
| ELA                | 8 2 | 07284  | 19 | B-V.4.1.1          | 2 | 6383             | 0.48 | 0.20 | 0.26 | 0.48 | 0.06 0 | .00  | 0.31 | -0.13          | -0.16         | 0.31  | -0.14          | 1.7393             | 0.0277 | 5.0          | 1.1 6.3             | 1.1 A+     | A- | A+     |
| ELA                | 8 7 | 88646  | 19 | B-C.3.1.1          | 3 | 6383             | 0.67 | 0.67 | 0.13 | 0.13 | 0.06 0 | .00  | 0.46 | 0.46           | -0.22         | -0.25 | -0.24          | 0.7889             | 0.0293 | -6.9         | 0.9 -7.6            | 0.9 A-     | A+ | A-     |
| ELA                | 8 9 | 94245  | 19 | B-K.1.1.3          | 2 | 6383             | 0.53 | 0.20 | 0.53 | 0.15 | 0.12 0 | .00  | 0.34 | -0.09          | 0.34          | -0.21 | -0.16          | 1.5099             | 0.0277 | 2.9          | 1.0 3.0             | 1.0 A-     | A- | A+     |
| ELA                | 8 1 | 96772  | 19 | B-C.2.1.1          | 2 | 6383             | 0.48 | 0.10 | 0.20 | 0.48 | 0.21 0 | .00  | 0.29 | -0.22          | -0.17         | 0.29  | -0.02          | 1.7239             | 0.0277 | 6.4          | 1.1 8.0             | 1.1 A+     | A+ | A+     |
| ELA                |     | 38700  | 19 | B-C.2.1.3          | 2 | 6383             | 0.66 | 0.07 | 0.16 | 0.10 |        | .00  | 0.42 | -0.27          | -0.17         | -0.22 | 0.42           | 0.8291             | 0.0292 | -3.4         | 1.0 -4.0            | 0.9 A-     | A- | A+     |
| ELA                |     | 19983  | 19 | B-C.3.1.2          | 3 | 6383             | 0.55 | 0.55 | 0.24 | 0.13 |        | .00  | 0.39 | 0.39           | -0.13         | -0.21 | -0.25          | 1.4274             | 0.0278 | -2.0         |                     | 1.0 A+     | A+ | A+     |
| ELA                |     | 91771  | 19 | B-C.2.1.2          | 2 | 6383             | 0.48 | 0.15 | 0.48 | 0.20 |        | .00  | 0.21 | -0.29          | 0.21          | -0.02 | 0.02           | 1.7400             | 0.0277 | 9.9          |                     | 1.3 A-     | A- | A-     |
| ELA                |     | 43703  | 19 | B-V.4.1.2          | 2 | 6383             | 0.55 | 0.06 | 0.13 | 0.26 | 0.00   | .00  | 0.38 | -0.22          | -0.20         | -0.15 | 0.38           | 1.4127             | 0.0278 | 0.0          | 1.0 0.4             | 1.0 A-     | A- | A-     |
| ELA                |     | 75894  | 20 | B-C.2.1.1          | 2 | 6383             | 0.78 | 0.04 | 0.78 | 0.10 |        | .00  | 0.45 | -0.25          | 0.45          | -0.26 | -0.21          | 0.1207             | 0.0330 | _            | 0.9 -6.1            | 0.8 A+     | A- | A-     |
| ELA                |     | 55148  | 20 | B-C.2.1.2          | 2 | 6383             | 0.49 | 0.21 | 0.13 | 0.17 | 01.17  | .00  | 0.39 | -0.18          | -0.22         | -0.12 | 0.39           | 1.7031             | 0.0277 | -0.9         | 1.0 -0.1            | 1.0 A-     | A- | A-     |
| ELA                |     | 89720  | 20 | B-C.2.1.3          | 2 | 6383             | 0.83 | 0.83 | 0.04 | 0.06 |        | .00  | 0.48 | 0.48           | -0.25         | -0.30 | -0.24          | -0.2774            | 0.0362 | -6.2         | 0.9 -8.8            | 0.7 A-     | B- | A-     |
| ELA                |     | 68233  | 20 | B-V.4.1.2          | 2 | 6383             | 0.56 | 0.19 | 0.56 | 0.12 |        | .01  | 0.34 | -0.16          | 0.34          | -0.16 | -0.16          | 1.3442             | 0.0280 |              | 1.0 3.1             | 1.1 A-     | A- | A-     |
| ELA                |     | 04546  | 20 | B-K.1.1.1          | 2 | 6383             | 0.69 | 0.10 | 0.10 | 0.69 | 0.11 0 |      | 0.49 | -0.29          | -0.30         | 0.49  | -0.16          | 0.6493             | 0.0300 | _            | 0.9 -8.4            | 0.8 B-     | B- | A-     |
| ELA                |     | 80924  | 20 | B-V.4.1.1          | 2 | 6383             | 0.80 | 0.04 | 0.07 | 0.80 |        | .00  | 0.40 | -0.20          | -0.21         | 0.40  | -0.22          | -0.0685            | 0.0344 | _            | -                   | 0.9 A-     | B- | B-     |
| ELA                |     | 44418  | 20 | B-C.3.1.2          | 3 | 6383             | 0.67 | 0.67 | 0.10 | 0.07 |        | 00.0 | 0.41 | 0.41           | -0.27         | -0.27 | -0.11          | 0.7913             | 0.0294 | -2.5         |                     | 0.9 A-     | A- | A+     |
| ELA                |     | 64466  | 20 | B-C.3.1.2          | 3 | 6383             | 0.17 | 0.58 | 0.06 | 0.18 | 0.17 0 |      | 0.06 | 0.20           | -0.26         | -0.14 | 0.06           | 3.5340             | 0.0355 | 5.2          |                     | 2.2 A-     | A- | A-     |
| SCIENCE            |     | 73117  | 0  | D.1.1.3            |   | 126348           | 0.72 | 0.04 | 0.15 | 0.09 | 0.72 0 |      | 0.42 | -0.23          | -0.25         | -0.18 | 0.42           | -0.0865            | 0.0072 | 9.9          | 1.1 7.3             | 1.1        |    | +      |
| SCIENCE            |     | 92329  | 0  | C.2.1.4            |   | 126348           | 0.61 | 0.61 | 0.12 | 0.17 | 0.10 0 |      | 0.35 | 0.35           | -0.18         | -0.13 | -0.21          | 0.6209             | 0.0065 | 9.9          | 1.1 9.9             | 1.1        |    |        |
| SCIENCE            |     | 202096 | 0  | A.1.3.4            |   | 126348           | 0.62 | 0.20 | 0.62 | 0.13 |        | 00.0 | 0.48 | -0.25          | 0.48          | -0.19 | -0.27          | 0.6370             | 0.0065 | -9.9<br>-9.9 | 0.9 -9.9            | 0.9        |    |        |
| SCIENCE<br>SCIENCE |     | 98566  | 0  | A.3.1.3<br>A.2.1.3 |   | 126348<br>126348 | 0.94 | 0.02 | 0.02 | 0.94 |        | 0.00 | 0.32 | -0.17<br>-0.13 | -0.16<br>0.29 | -0.13 | -0.19<br>-0.19 | -1.8914<br>-0.5591 | 0.0117 | 9.9          | 0.9 -9.9<br>1.1 9.9 | 0.8<br>1.3 |    | +-+    |
| SCIENCE            |     | 84952  | 0  | A.2.1.3<br>A.2.2.1 |   | 126348           | 0.80 | 0.03 | 0.10 | 0.03 |        | .00  | 0.29 | -0.13          | -0.19         | -0.13 | 0.43           | 0.0471             | 0.0079 |              |                     | 1.0        |    | ++     |
| SCIENCE            |     | 36145  | 0  | A.1.1.2            |   | 126348           | 0.72 | 0.11 | 0.10 | 0.05 |        | .00  | 0.43 | -0.24          | -0.19         | -0.24 | 0.43           | -0.2827            | 0.0070 | 1.7          | 1.0 -7.1            | 1.0        |    | +-     |
| SCIENCE            |     | 15634  | 0  | A.1.3.2            |   | 126348           | 0.77 | 0.05 | 0.10 | 0.03 | 0.77 0 |      | 0.40 | -0.22          | -0.22         | -0.24 | 0.40           | -1.2404            | 0.0074 | -9.9         | 0.9 -9.9            | 0.7        |    | +      |
| SCIENCE            |     | 23677  | 0  | A.2.1.1            |   | 126348           | 0.58 | 0.03 | 0.58 | 0.03 |        | .00  | 0.30 | -0.29          | 0.40          | -0.24 | -0.14          | 0.9364             | 0.0094 | 3.5          |                     | 1.0        |    | +-     |
| SCIENCE            |     | 67419  | 0  | A.2.1.1<br>A.2.1.2 |   | 126348           | 0.58 | 0.10 | 0.58 | 0.18 |        | .00  | 0.40 | -0.28          | 0.40          | -0.18 | -0.14          | 0.3531             | 0.0067 | -1.0         |                     | 1.0        |    | +-     |
| SCIENCE            |     | 46127  | 0  | A.3.1.1            |   |                  | 0.67 | 0.06 | 0.07 | 0.11 |        | .00  | 0.43 | -0.28          | -0.16         | -0.19 | 0.36           | 1.2709             | 0.0067 | 9.9          | 1.0 -1.7            | 1.1        |    | +-+    |
| SCIENCE            |     | 17465  | 0  | A.3.1.1            |   | 126348           | 0.41 | 0.26 | 0.20 | 0.06 |        | .00  | 0.55 | -0.13          | 0.55          | -0.19 | -0.30          | -0.6789            | 0.0003 | -9.9         | 0.8 -9.9            | 0.6        |    | +      |
| SCIENCE            |     | 31619  | 0  | B.3.3.2            |   | 126348           | 0.80 | 0.07 | 0.06 | 0.80 |        | .00  | 0.51 | -0.26          | -0.30         | 0.51  | -0.26          | -0.6402            | 0.0081 |              | 0.9 -9.9            | 0.8        |    | +      |
| SCIENCE            |     | 81655  | 0  | B.3.2.1            |   | 126348           | 0.81 | 0.05 | 0.06 | 0.81 |        | .00  | 0.52 | -0.28          | -0.27         | 0.52  | -0.28          | -0.5837            | 0.0079 |              | 0.9 -9.9            | 0.7        | 1  | +-     |
| SCIENCE            |     | 04905  | 0  | B.3.2.3            |   | 126348           | 0.55 | 0.55 | 0.05 | 0.15 |        | 0.00 | 0.34 | 0.34           | -0.19         | -0.13 | -0.18          | 1.0190             | 0.0064 | 9.9          | 1.1 9.9             | 1.1        |    | +      |
| SCIENCE            |     | 23826  | 0  | C.1.1.1            |   | 126348           | 0.76 | 0.07 | 0.11 | 0.05 |        | .00  | 0.42 | -0.21          | -0.16         | -0.31 | 0.42           | -0.2311            | 0.0073 | 0.1          | 1.0 0.2             | 1.0        |    | +      |
| SCIENCE            |     | 66788  | 0  | B.2.2.1            |   | 126348           | 0.32 | 0.32 | 0.27 | 0.20 | 0.21 0 |      | 0.28 | 0.28           | -0.04         | -0.15 | -0.13          | 2.1914             | 0.0067 | 9.9          | 1.1 9.9             | 1.3        |    | +      |
| SCIENCE            |     | 17104  | 0  | D.1.3.3            |   | 126348           | 0.72 | 0.09 | 0.10 | 0.09 |        | 0.00 | 0.46 | -0.24          | -0.27         | -0.20 | 0.46           | 0.0265             | 0.0070 |              | 1.0 -9.9            | 0.9        |    | +      |
| SCIENCE            |     | 31407  | 0  | D.2.1.2            |   | 126348           | 0.86 | 0.03 | 0.07 | 0.86 |        | .00  | 0.43 | -0.26          | -0.23         | 0.43  | -0.22          | -0.8476            | 0.0084 | -9.9         | 0.9 -9.9            | 0.8        |    | $\Box$ |
| SCIENCE            |     | 51911  | 0  | C.3.1.2            |   |                  | 0.88 | 0.03 | 0.88 | 0.06 |        | .00  | 0.43 | -0.24          | 0.43          | -0.24 | -0.24          | -1.1898            | 0.0093 | -9.9         |                     | 0.8        |    | $\Box$ |
| SCIENCE            |     | 08218  | 0  | C.3.1.3            |   | 126348           | 0.76 | 0.07 | 0.76 | 0.06 |        | .00  | 0.35 | -0.20          | 0.35          | -0.15 | -0.20          | -0.1840            | 0.0073 | 9.8          | 1.0 9.9             | 1.1        |    |        |
| SCIENCE            |     | 59060  | 0  | A.1.3.1            | 2 |                  | 0.81 | 0.03 | 0.12 | 0.81 |        | .00  | 0.50 | -0.26          | -0.32         | 0.50  | -0.25          | -0.6652            | 0.0081 | -9.9         | 0.9 -9.9            | 0.8        |    | +      |
| SCIENCE            |     | 38478  | 0  | D.1.1.1            |   | 126348           | 0.55 | 0.55 | 0.20 | 0.13 |        | .00  | 0.35 | 0.35           | -0.11         | -0.21 | -0.18          | 0.9388             | 0.0064 | 9.9          | 1.1 9.9             | 1.1        |    | +      |
| SCIENCE            |     | 78887  | 0  | B.1.1.3            |   | 126348           | 0.89 | 0.04 | 0.03 | 0.03 |        | .00  | 0.40 | -0.25          | -0.20         | -0.21 | 0.40           | -1.2138            | 0.0093 | -9.9         | 0.8 -9.9            | 0.7        |    | +      |
| SCIENCE            |     | 55420  | 0  | D.1.2.3            |   | 126348           | 0.59 | 0.59 | 0.09 | 0.16 | 0.16 0 |      | 0.38 | 0.38           | -0.13         | -0.21 | -0.19          | 0.8231             | 0.0064 | 9.9          | 1.1 9.9             | 1.1        |    | +      |
| ~ JIII ( C L       |     | 0      | J  | 2.1.2.0            |   | -200.0           | 0.07 | 5.07 | 5.07 | 5.15 | 3.10   | .00  | 0.00 | 0.00           | 0.10          | 0.21  | 0.17           | 3.0201             | 0.0001 | 1 / . /      | /-/                 |            |    |        |

| SCIENCE            | 4 878558             | 0 | D 1 1 5            | 1 126348             | 0.02 | 0.03 | 0.02 | 0.93 | 0.02 | 0.00 | 0.40 | 0.21           | 0.25           | 0.40           | -0.20 -1.8682                 | 0.0116 -9.               | 9 0.9 -9.9 | 9 0.7    |      | $\overline{}$ |
|--------------------|----------------------|---|--------------------|----------------------|------|------|------|------|------|------|------|----------------|----------------|----------------|-------------------------------|--------------------------|------------|----------|------|---------------|
|                    | 4 844519             | 0 | B.1.1.5            |                      | 0.93 |      | 0.02 |      |      | 0.00 |      | -0.21          | -0.25          |                |                               | 0.0116 -9.               |            |          | -    | +             |
| SCIENCE            |                      | 0 | A.2.1.2            | 3 126348             | 0.54 | 0.31 | 0.54 | 0.07 |      |      | 0.32 | -0.18          | 0.32           | -0.10          |                               |                          |            |          | -    | +             |
| SCIENCE            | 4 609015             | ~ | A.1.3.3            | 2 126348             | 0.76 | 0.05 | 0.09 | 0.76 |      | 0.00 | 0.44 | -0.25          | -0.22          | 0.44           | -0.23 -0.1168                 |                          |            |          |      | +             |
| SCIENCE<br>SCIENCE | 4 126529<br>4 621121 | 0 | C.1.1.1<br>B.3.1.1 | 1 126348             | 0.85 | 0.02 | 0.85 | 0.04 |      | 0.00 | 0.39 | -0.19          | -0.23          | -0.22<br>-0.29 | -0.24 -1.0367<br>0.49 -0.4775 | 0.0089 1.<br>0.0077 -8.  |            | 7 1.0    | -    | +             |
|                    |                      | 0 |                    | 2 126348             | 0.78 |      |      |      |      | 0.00 | 0.49 | -0.28          |                |                |                               |                          |            |          | -    | +             |
| SCIENCE            | 4 637707             | 0 | A.1.1.1            | 2 126348             | 0.77 | 0.09 | 0.77 | 0.06 |      |      |      | -0.28          | 0.51           | -0.31          |                               | 0.0074 -9.<br>0.0081 -9. |            |          |      | +             |
| SCIENCE            | 4 245129             | ~ | A.3.2.1            | 1 126348             |      | 0.07 |      |      |      | 0.00 | 0.50 | -0.28          | -0.28          | 0.50           | -0.26 -0.7027                 | 0.0081 -9.<br>0.0067 -9. | / 01/ /1/  |          |      | +             |
| SCIENCE            |                      | 0 | B.3.3.3            | 2 126348             | 0.67 | 0.67 | 0.17 | 0.04 |      | 0.00 | 0.44 | 0.44           | -0.24          | -0.25          | -0.21 0.3945                  | 0.0067 -9.               |            |          |      | +             |
| SCIENCE            | 4 709678             | 0 | B.3.3.4            | 1 126348             | 0.81 | 0.05 | 0.07 | 0.81 |      | 0.00 | 0.49 | -0.27<br>0.39  | -0.27          | -0.27          | -0.26 -0.5638                 |                          |            |          |      | +             |
| SCIENCE            |                      | ~ | D.1.3.4            | 2 126348             | 0.51 | 0.51 | 0.11 | 0.15 |      |      | 0.39 |                | -0.18          |                | -0.10 1.1865                  |                          |            |          | -    | +             |
| SCIENCE            | 4 996813<br>4 277029 | 0 | A.1.3.5            | 2 126348             | 0.72 | 0.72 | 0.09 | 0.08 |      | 0.00 | 0.51 | 0.51<br>-0.21  | -0.27<br>-0.22 | -0.24          | -0.27 0.0409                  | 0.0070 -9.<br>0.0068 -9. |            |          | -    | +             |
| SCIENCE<br>SCIENCE | 4 277029             | 0 | A.2.2.1<br>A.2.1.4 | 2 126348<br>2 126348 | 0.69 | 0.10 | 0.14 | 0.69 |      | 0.00 | 0.48 | 0.53           | -0.22          | 0.48<br>-0.37  | -0.31 0.2755<br>-0.27 0.0425  | 0.0068 -9.<br>0.0070 -9. |            |          |      | +             |
| SCIENCE            | 4 403198             | 0 | A.2.1.4<br>A.1.3.4 |                      | 0.71 | 0.71 | 0.08 | 0.13 |      | 0.00 |      | -0.17          | -0.17          | 0.47           | -0.27 0.0425                  | 0.0070 -9.               |            |          | -    | +             |
|                    |                      |   |                    | 2 126348             |      |      |      |      |      |      | 0.47 |                |                |                |                               |                          |            |          | -    | +             |
| SCIENCE            | 4 250346             | 0 | A.1.1.2<br>A.1.3.1 | 2 126348             | 0.61 | 0.07 | 0.61 | 0.10 |      | 0.00 | 0.39 | -0.25<br>-0.13 | 0.39           | -0.20<br>-0.15 | -0.15 0.7568<br>-0.31 0.9884  | 0.0065 9.<br>0.0064 -9.  |            |          | -    | +-            |
| SCIENCE<br>SCIENCE | 4 748591<br>4 434653 | 0 | A.1.3.1<br>A.3.2.1 | 2 126348<br>2 126348 | 0.56 | 0.05 | 0.56 | 0.14 |      | 0.00 | 0.44 | -0.13          | 0.44           | -0.15          | -0.31 0.9884                  | 0.0064 -9.               |            |          | -    | +             |
| SCIENCE            |                      | 0 | A.3.2.1<br>A.3.2.3 | 2 126348             | 0.79 | 0.08 | 0.79 | 0.04 |      | 0.00 | 0.44 | -0.24          | -0.15          | -0.20          | 0.39 0.9029                   | 0.0075 -9.               |            |          | -    | +             |
| SCIENCE            | 4 205060             | 0 | A.3.2.3<br>A.3.1.4 | 2 126348             | 0.55 | 0.14 | 0.05 | 0.26 |      | 0.00 | 0.54 | -0.31          | -0.15          | -0.12          | 0.39 0.9029                   | 0.0064 9.                |            |          | -    | +             |
| SCIENCE            | 4 432879             | 0 |                    | 2 126348             | 0.79 | 0.09 | 0.07 | 0.06 |      | 0.00 | 0.54 |                | -0.30          | -0.26          | 0.50 -1.0867                  | 0.0076 -9.               |            |          |      | +             |
| SCIENCE            | 4 494584             | 0 | A.3.1.1<br>A.3.1.2 | 2 126348             | 0.67 | 0.03 | 0.04 | 0.03 |      | 0.00 | 0.30 | -0.28<br>-0.29 | -0.27          | -0.27          | 0.30 -1.0807                  | 0.0090 -9.               |            |          |      | +             |
| SCIENCE            | 4 708985             | 0 | A.3.2.3            | 3 126348             | 0.49 | 0.10 | 0.29 | 0.11 |      | 0.00 | 0.43 | 0.40           | -0.12          | -0.22          | -0.25 1.3664                  | 0.0064 -9.               | ,          |          |      | +             |
| SCIENCE            | 4 186276             | 0 | A.3.2.3<br>A.3.3.1 | 2 126348             | 0.30 | 0.30 | 0.12 | 0.17 |      | 0.00 | 0.40 | -0.24          | -0.13          | 0.42           | -0.23 1.3664                  | 0.0004 4.                |            | 1 1.0    |      | +             |
| SCIENCE            |                      | 0 | A.3.3.1<br>A.3.3.2 | 2 126348             | 0.77 | 0.11 | 0.00 | 0.77 |      | 0.00 | 0.42 | -0.24          | -0.23          | 0.42           | -0.19 -0.2710                 | 0.0074 -1.               |            |          |      | +             |
| SCIENCE            | 4 986166             | 0 | D.3.1.1            | 2 126348             | 0.73 | 0.02 | 0.09 | 0.73 |      | 0.00 | 0.18 | -0.13          | -0.12          | 0.18           | -0.17 0.7418                  | 0.0070 9.                |            |          |      | +             |
| SCIENCE            | 4 190692             | 0 | C.3.1.1            | 2 126348             | 0.01 | 0.10 | 0.09 | 0.01 |      | 0.00 | 0.43 | 0.40           | -0.28          | -0.15          | -0.22 0.1130                  | 0.0069 5.                |            |          |      | +             |
| SCIENCE            | 4 153783             | 0 | D.1.3.2            | 2 126348             | 0.71 | 0.71 | 0.08 | 0.14 |      | 0.00 | 0.40 | -0.29          | -0.27          | -0.13          | 0.42 0.2510                   | 0.0068 7.                |            |          |      | +             |
| SCIENCE            | 4 877187             | 0 | D.1.3.4            | 3 126348             | 0.58 | 0.58 | 0.08 | 0.10 |      | 0.00 | 0.42 | 0.34           | -0.25          | -0.13          | -0.14 0.8327                  | 0.0064 9.                |            |          |      | +             |
| SCIENCE            | 4 928433             | 0 | C.2.1.1            | 2 126348             | 0.84 | 0.84 | 0.04 | 0.09 |      | 0.00 | 0.35 | 0.35           | -0.23          | -0.13          | -0.22 -0.7813                 | 0.0083 0.                |            |          |      | +             |
| SCIENCE            | 4 243383             | 0 | B.3.3.5            | 2 126348             | 0.80 | 0.80 | 0.04 | 0.03 |      | 0.00 | 0.51 | 0.51           | -0.27          | -0.17          | -0.29 -0.4023                 | 0.0076 -9.               |            |          |      | +             |
| SCIENCE            | 4 530823             | 0 | D.1.2.2            | 2 126348             | 0.60 | 0.60 | 0.15 | 0.11 |      | 0.00 | 0.30 | 0.30           | -0.11          | -0.09          | -0.23 0.7645                  | 0.0065 9.                |            |          | +    | +             |
| SCIENCE            |                      | 0 | C.2.1.2            | 2 126348             | 0.63 | 0.09 | 0.15 | 0.11 |      | 0.00 | 0.44 | -0.26          | -0.19          | -0.22          | 0.44 0.6484                   | 0.0065 -9.               |            |          |      | +             |
| SCIENCE            | 4 969822             | 0 | C.1.1.2            | 2 126348             | 0.83 | 0.05 | 0.09 | 0.13 |      | 0.00 | 0.50 | -0.29          | -0.29          | 0.50           | -0.24 -0.7795                 | 0.0083 -9.               |            |          |      | +             |
| SCIENCE            | 4 662398             | 1 | C.2.1.2            | 2 10897              | 0.53 | 0.03 | 0.09 | 0.53 | 0.25 |      | 0.40 | -0.15          | -0.24          | 0.40           | -0.17 1.0434                  | 0.0218 2.                |            |          | A-   | A-            |
| SCIENCE            | 4 827046             | 1 | A.1.1.4            | 2 10897              | 0.74 | 0.74 | 0.07 | 0.05 |      | 0.00 | 0.52 | 0.52           | -0.26          | -0.25          | -0.30 -0.1976                 | 0.0246 -8.               |            | 1 0.8 A+ | A-   | A-            |
| SCIENCE            | 4 603810             | 1 | A.1.2.3            | 2 10897              | 0.66 | 0.09 | 0.66 | 0.06 |      | 0.00 | 0.41 | -0.21          | 0.41           | -0.27          | -0.17 0.3231                  | 0.0228 2.                |            |          | A+   | A+            |
| SCIENCE            | 4 191864             | 1 | D.1.2.1            | 2 10897              | 0.81 | 0.81 | 0.07 | 0.05 |      | 0.01 | 0.49 | 0.49           | -0.19          | -0.31          | -0.30 -0.6764                 | 0.0270 -7.               |            |          | A-   | A-            |
| SCIENCE            | 4 420181             | 1 | B.2.1.1            | 2 10897              | 0.52 | 0.04 | 0.37 | 0.07 |      | 0.00 | 0.27 | -0.29          | -0.03          | -0.24          | 0.27 1.0855                   | 0.0218 9.                |            |          | A+   | A-            |
| SCIENCE            | 4 475223             | 1 | C.3.1.2            | 2 10897              | 0.79 | 0.05 | 0.08 | 0.79 |      | 0.01 | 0.51 | -0.27          | -0.28          | 0.51           | -0.27 -0.4828                 | 0.0259 -9.               |            |          | A+   | A-            |
| SCIENCE            | 4 837668             | 1 | C.1.1.3            | 2 10897              | 0.86 | 0.86 | 0.03 | 0.03 |      | 0.00 | 0.42 | 0.42           | -0.22          | -0.23          | -0.24 -1.1260                 | 0.0302 -3.               |            |          | A-   | A-            |
| SCIENCE            | 4 927884             | 1 | D.4.1.2            | 2 10897              | 0.39 | 0.22 | 0.26 | 0.39 |      | 0.00 | 0.36 | -0.21          | -0.08          | 0.36           | -0.15 1.7601                  | 0.0222 0.                |            |          | A-   | A-            |
| SCIENCE            | 4 240355             | 1 | D.4.1.3            | 2 10897              | 0.89 | 0.04 | 0.04 | 0.89 |      | 0.00 | 0.50 | -0.30          | -0.27          | 0.50           | -0.26 -1.3941                 | 0.0326 -9.               |            |          | B-   | B-            |
| SCIENCE            | 4 140673             | 1 | D.1.1.3            | 2 10897              | 0.34 | 0.22 | 0.34 | 0.20 |      | 0.00 | 0.14 | -0.05          | 0.14           | -0.05          | -0.04 2.0104                  | 0.0227 9.                |            |          | A-   | A-            |
| SCIENCE            | 4 716558             | 2 | C.1.1.2            | 2 10404              | 0.42 | 0.17 | 0.27 | 0.42 |      | 0.00 | 0.30 | -0.13          | -0.03          | 0.30           | -0.25 1.6110                  | 0.0222 8.                |            |          | A-   | A-            |
| SCIENCE            | 4 213442             | 2 | A.1.1.1            | 2 10404              | 0.62 | 0.09 | 0.11 | 0.16 |      | 0.00 | 0.50 | -0.25          | -0.23          | -0.24          | 0.50 0.6065                   | 0.0226 -9.               |            |          | A-   | A-            |
| SCIENCE            | 4 730877             | 2 | A.3.2.1            | 2 10404              | 0.66 | 0.12 | 0.10 | 0.66 |      | 0.00 | 0.50 | -0.20          | -0.30          | 0.50           | -0.24 0.4081                  | 0.0231 -9.               |            | 212      | A-   | A-            |
| SCIENCE            | 4 781288             | 2 | C.1.2.1            | 2 10404              | 0.28 | 0.12 | 0.10 | 0.09 |      | 0.00 | 0.09 | 0.18           | 0.09           | -0.22          | -0.20 2.4239                  | 0.0241 9.                |            |          | A+   | A-            |
| SCIENCE            | 4 936606             | 2 | C.2.1.2            | 2 10404              | 0.40 | 0.14 | 0.38 | 0.40 |      | 0.00 | 0.22 | -0.21          | 0.06           | 0.22           | -0.23 1.7485                  | 0.0223 9.                |            |          | A-   | A-            |
| SCIENCE            | 4 569146             | 2 | B.3.1.3            | 2 10404              | 0.51 | 0.51 | 0.44 | 0.02 |      | 0.00 | 0.24 | 0.24           | -0.15          | -0.15          | -0.14 1.1785                  | 0.0220 9.                |            |          | A-   | A+            |
| SCIENCE            | 4 424312             | 2 | B.2.2.1            | 2 10404              | 0.74 | 0.09 | 0.74 | 0.10 |      | 0.00 | 0.24 | -0.13          | 0.13           | -0.12          | -0.19 -0.0649                 | 0.0247 9.                |            |          | A+   | A+            |
| SCIENCE            | 4 547347             | 2 | D.4.1.2            | 2 10404              | 0.45 | 0.05 | 0.15 | 0.45 |      | 0.01 | 0.29 | -0.12          | -0.12          | 0.12           | -0.14 1.4574                  | 0.0220 9.                |            |          | A-   | A+            |
| SCILITOL           | 11011041             | - | ₽. r.1.2           | 2 10-0-              | 0.73 | 0.20 | 0.13 | 0.73 | 0.13 | 5.01 | 0.27 | 0.12           | 0.12           | 0.27           | V.11 1.7J/7                   | 0.0220 ).                | / III /    |          | 14.5 | 14 2 1        |

| SCIENCE            | 4 | 394813           | 2      | B.2.1.1            | 2   | 10404          | 0.50 | 0.26 | 0.12 | 0.11 | 0.50   | 0.01 | 0.32  | -0.07          | -0.17          | -0.23          | 0.32           | 1.2094            | 0.0220 | 9.9         | 1.1 9.             | 1 2   | A-       | A-       | A-       |
|--------------------|---|------------------|--------|--------------------|-----|----------------|------|------|------|------|--------|------|-------|----------------|----------------|----------------|----------------|-------------------|--------|-------------|--------------------|-------|----------|----------|----------|
| SCIENCE            |   | 698110           | 2      | A.3.2.3            | 2   | 10404          | 0.35 | 0.35 | 0.12 | 0.11 | 0.21 ( |      | 0.32  | 0.25           | -0.17          | -0.23          | -0.15          | 1.9920            | 0.0228 | 9.9         |                    |       | A-       | A-       | A-       |
| SCIENCE            |   | 607477           | 3      | D.1.1.1            | 1   | 10404          | 0.33 | 0.07 | 0.20 | 0.70 | 0.21   |      | 0.23  | -0.25          | -0.14          | 0.36           | -0.17          | 0.1536            | 0.0228 | 4.8         |                    |       | A-       | A-       | A-       |
| SCIENCE            |   | 152659           | 3      | A.2.1.3            | 2   | 10477          | 0.70 | 0.07 | 0.03 | 0.70 |        | 0.00 | 0.34  | -0.23          | -0.13          | 0.34           | -0.17          | 1.5184            | 0.0239 | 5.9         |                    |       | A-       | ١.       | A-       |
| SCIENCE            |   | 725878           | 3      | B.1.1.2            | 2   | 10477          | 0.43 | 0.05 | 0.17 | 0.43 | 0.32 ( |      | 0.29  | -0.27          | -0.20          | -0.14          | 0.29           | 1.4086            | 0.0220 | 9.9         |                    |       | A-       | A-       | A-       |
| SCIENCE            |   | 832027           | 3      | A.1.2.3            | 2   | 10477          | 0.47 | 0.00 | 0.33 | 0.12 | 0.47   |      | 0.29  | -0.27          | -0.00          | 0.44           | -0.19          | 0.9015            | 0.0220 | -2.9        | 1.0 -2.            |       | A+       | A-       | A-       |
| SCIENCE            |   | 948109           | 3      | D.1.2.2            | 2   | 10477          | 0.37 | 0.17 | 0.00 | 0.37 |        | 0.00 | 0.30  | -0.19          | -0.27          | 0.30           | -0.19          | 1.5715            | 0.0222 | 9.9         | 1.0 -2.            |       | A+       | A-       | A-       |
| SCIENCE            |   | 153780           | 3      | D.1.2.2<br>D.2.1.2 | 2   | 10477          | 0.44 | 0.18 | 0.19 | 0.44 |        | 0.00 | 0.56  | -0.22          | 0.56           | -0.29          | -0.09          | -0.6435           | 0.0221 | -9.9        | 0.8 -9.            | _     | A+       | A-       | A-       |
| SCIENCE            |   | 784134           | 3      | D.2.1.2<br>D.3.1.1 | 2   | 10477          | 0.52 | 0.03 | 0.82 | 0.07 |        | 0.00 | 0.30  | -0.20          | -0.14          | -0.29          | 0.29           | 1.1678            | 0.0279 | 9.9         | 1.1 9.             |       | A-       | A-       | A-       |
| SCIENCE            |   | 203924           | 3      | C.3.1.1            | 2   | 10477          | 0.52 | 0.23 | 0.13 | 0.12 |        | 0.01 | 0.29  | -0.10          | 0.36           | -0.17          | -0.24          | 1.1654            | 0.0220 |             |                    |       | A-       | A+       | A+       |
| SCIENCE            |   | 489070           | 3      | C.3.1.1<br>C.1.2.1 | 2   | 10477          | 0.56 | 0.15 | 0.32 | 0.28 |        | 0.00 | 0.36  | -0.24          | -0.06          | -0.06          | 0.16           | 0.9502            | 0.0220 | 9.9         | 1.1 7.             |       | A-<br>A- | +        | t. —     |
| SCIENCE            |   | 205375           | 3      | B.3.2.3            | 3   | 10477          | 0.36 | 0.10 | 0.20 | 0.08 |        | 0.00 | 0.16  | -0.03          | -0.06          | 0.12           | -0.17          | 1.6370            | 0.0221 | 9.9         | 1.1 9.             |       | A+       | A+<br>A- | A+       |
| SCIENCE            |   | 785462           | 3      | A.2.1.1            | 3   | 10477          | 0.42 | 0.28 | 0.14 | 0.42 | 0.13 ( |      | 0.20  | -0.03          | 0.39           | -0.25          | -0.17          | 0.2887            | 0.0221 | 4.6         | 1.1 9.             |       | A+<br>A+ | A-       | A-<br>A- |
| SCIENCE            |   | 674538           | 4      | C.2.2.1            | 2   | 10460          | 0.80 | 0.13 | 0.08 | 0.10 | 0.10 ( |      | 0.39  | -0.12          | -0.28          | -0.23          | 0.48           | -0.5338           | 0.0236 | -6.8        |                    | _     | A+       | A-       | A-<br>A- |
| SCIENCE            |   | 818522           | 4      | A.1.3.1            | 2   | 10460          | 0.65 | 0.03 | 0.10 | 0.03 |        | 0.00 | 0.48  | -0.22          | 0.50           | -0.28          | -0.19          | 0.4629            | 0.0271 | -7.8        | 0.9 -0.            |       | A+<br>A+ | A-       | A-       |
| SCIENCE            |   | 710834           | 4      | C.1.2.2            | 2   | 10460          | 0.63 | 0.10 | 0.03 | 0.09 |        | 0.00 | 0.30  | 0.26           | -0.20          | -0.27          | -0.19          | 1.1117            | 0.0231 | 9.9         |                    |       | A-       |          |          |
| SCIENCE            |   | 836489           | 4      | D.3.1.2            | 2   | 10460          | 0.52 | 0.32 | 0.13 | 0.16 |        | 0.00 | 0.20  | -0.18          | -0.20          | -0.06          | 0.38           | 1.1117            | 0.0222 | 7.0         | 1.2 9.<br>1.1 8.   |       | A-       | A-<br>A- | A-<br>A- |
|                    |   |                  | 4      |                    |     |                |      |      |      | 0.10 |        |      |       |                | -0.17          | 0.45           |                | 0.6128            | 0.0222 |             |                    |       | _        | -        |          |
| SCIENCE            |   | 174520           | 4      | E.2.1.1            | 2   | 10460          | 0.62 | 0.10 | 0.13 | 0.62 |        | 0.00 | 0.45  | -0.22          |                |                | -0.19<br>-0.26 |                   |        | -2.5        | 1.0 -2.<br>0.9 -9. |       | A-       | A-       | A-       |
| SCIENCE            |   | 539328           |        | D.2.2.1            | 2   | 10460          | 0.77 | 0.10 | 0.05 |      |        | 0.01 | 0.53  | -0.31          | -0.28          | 0.53           |                | -0.3312           | 0.0260 | -9.9        |                    |       | A-       | A-       | A-       |
| SCIENCE            |   | 409005<br>878080 | 4      | D.2.2.1            | 2   | 10460          | 0.85 | 0.85 | 0.05 | 0.06 |        | 0.00 | 0.48  | 0.48           | -0.29          | -0.27          | -0.21          | -0.9632<br>0.8479 | 0.0300 | -7.4<br>9.9 |                    |       | A+<br>A- | A-       | A-       |
| SCIENCE            |   | 0.0000           |        | B.2.2.2            | _   |                | 0.57 | 0.57 | 0.34 | 0.04 | 0.00   |      | 0.33  | 0.33           | -0.21          | -0.12          | -0.20          | 0.0               |        |             | / -                | _     |          | A-       | A-       |
| SCIENCE            |   | 338594           | 4      | A.1.2.3            | 2   | 10460          | 0.56 | 0.06 | 0.23 | 0.14 | 0.00   | 0.00 | 0.43  | -0.24<br>0.35  | -0.15<br>-0.30 | -0.27<br>-0.09 | -0.14          | 0.9050            | 0.0224 | 0.3         | 1.0 -0.<br>1.1 7.  |       | A-       | A-       | A-       |
| SCIENCE            | _ | 655464           | 5      | C.2.1.3            | 3   | 10431          | 0.57 | 0.57 | 0.11 |      | 0.10 ( |      | 0.35  |                |                |                |                | 0.9483            |        | 8.5         |                    | _     | Α-       | A-       | A-       |
| SCIENCE            |   | 695038           | 5      | A.1.2.3            | 2   | 10431          | 0.61 | 0.09 | 0.08 | 0.21 |        | 0.00 | 0.39  | -0.20          | -0.30          | -0.11          | 0.39           | 0.7057            | 0.0226 | 4.3         | 1.0 2.             |       | A-       | A-       | A-       |
| SCIENCE            |   | 470077           | 5      | B.1.1.1            | 2   | 10431          | 0.87 | 0.05 | 0.04 | 0.03 |        | 0.01 | 0.51  | -0.36<br>-0.23 | -0.23<br>-0.21 | -0.25<br>0.44  | -0.24          | -1.1036           | 0.0318 | -8.4        | 0.8 -9.            |       | A+       | B-       | A-       |
| SCIENCE            |   | 702333<br>448370 | 5      | A.3.3.1            | 3   | 10431<br>10431 | 0.74 | 0.09 | 0.60 | 0.74 |        | 0.00 | 0.44  | -0.23          | 0.41           | -0.13          | -0.24          | -0.0569<br>0.7443 | 0.0249 | -2.9<br>1.9 | 1.0 -2.<br>1.0 2.  |       | A+       | A-       | A-       |
| SCIENCE<br>SCIENCE |   | 448370<br>471616 | 5      | A.2.1.1<br>E.4.1.1 | 2   |                | 0.60 | 0.06 |      | 0.20 |        | 0.00 | 0.41  | 0.13           | -0.09          | 0.02           | -0.25          | 2.4694            | 0.0223 | 9.9         |                    |       | A+       | Α-       | A-       |
| SCIENCE            |   | 500656           | 5      | D.3.1.1            | 2   | 10431<br>10431 | 0.28 | 0.28 | 0.26 | 0.31 |        | 0.00 |       | -0.24          | -0.09          | -0.17          | 0.38           | -1.3146           | 0.0241 | -3.2        | 1.2 9.<br>0.9 -2.  |       | B-<br>A+ | A-<br>B- | A+       |
|                    |   |                  |        |                    |     |                | 0.89 |      | 0.02 | 0.03 |        | 0.00 | 0.38  | -0.24          | -0.21          | -0.17          | 0.36           | 0.4239            | 0.0338 |             |                    |       |          |          | A-       |
| SCIENCE            |   | 322386<br>192176 | 5      | D.1.1.3            | 2   | 10431          |      | 0.04 | 0.20 | 0.10 |        | 0.00 | 0.36  | -0.28          | -0.03          | -0.32          | 0.36           | 2.3260            | 0.0232 | 6.3<br>9.9  |                    | _     | A+       | A-       | A+       |
| SCIENCE            |   |                  |        | A.2.1.1            |     | 10431          | 0.30 |      |      |      |        | 0.01 | 0.16  |                |                |                |                |                   |        |             |                    |       | A+       | A-       | A+       |
| SCIENCE            |   | 572938<br>170578 | 5<br>6 | C.3.1.3<br>C.2.2.2 | 2 2 | 10431<br>10429 | 0.33 | 0.38 | 0.11 | 0.18 |        | 0.00 | 0.26  | -0.07          | -0.22<br>-0.28 | -0.13<br>-0.25 | 0.26           | 2.1951<br>1.0041  | 0.0232 | 8.4         | 1.1 9.             | _     | A-<br>A+ | A-       | A-<br>A- |
| SCIENCE            |   |                  |        |                    |     |                | 0.55 |      |      |      |        |      | 0.38  |                |                |                | 0.38           |                   |        | 4.1         | 1.0 4.             |       |          | 1        | _        |
| SCIENCE            |   | 475058           | 6      | E.2.1.1            | 2   | 10429          | 0.60 | 0.10 | 0.15 | 0.60 |        | 0.01 | 0.45  | -0.24          | -0.24          | 0.45           | -0.17          | 0.7219            | 0.0224 | -4.9        |                    |       | A-       | A-       | A-       |
| SCIENCE            |   | 244439           | 6      | A.2.1.5            |     | 10429          | 0.61 | 0.08 | 0.61 | 0.13 |        | 0.00 | 0.37  | -0.27          | 0.37           | -0.16          | -0.13          | 0.6472            |        | 5.7         | 1.1 7.             | _     | A+       | A-       | A-       |
| SCIENCE            |   | 787415           | 6      | D.1.1.2            | 2   | 10429          | 0.52 | 0.52 | 0.08 | 0.21 |        | 0.01 | 0.35  | 0.35           | -0.19          | -0.20          | -0.10          | 1.1167            | 0.0220 | 6.3<br>9.9  |                    |       | A-       | Α-       | A-       |
| SCIENCE            |   | 664136           | 6      | E.3.1.3            | 2   | 10429<br>10429 | 0.39 | 0.24 | 0.18 | 0.18 | 0.39 ( | 0.00 | 0.22  | -0.04<br>-0.12 | -0.11<br>-0.21 | -0.11          | -0.25          | 1.7700<br>1.0605  | 0.0223 | 9.9<br>4.7  | / .                |       | A-       | A-       | Α-       |
| SCIENCE<br>SCIENCE |   | 664441<br>539314 | 6      | D.2.2.1<br>D.3.1.2 | 2   | 10429          | 0.53 | 0.28 | 0.10 | 0.53 |        | 0.01 | 0.37  | -0.12          | -0.21          | 0.37           | -0.23          | 1.0605            | 0.0220 | 3.3         | 1.0 4.             |       | A-<br>A- | A-       | Α-       |
|                    |   | 884578           |        | D.3.1.2<br>D.2.1.2 | 2   | 10429          | 0.34 | 0.14 | 0.18 | 0.54 |        | 0.00 | 0.37  | 0.03           | 0.30           | -0.18          | -0.23          | 2.0198            | 0.0221 | 3.9         |                    |       | A-       | A-       | A-<br>A- |
| SCIENCE<br>SCIENCE |   | 290429           | 6      | C.1.2.1            |     | 10429          | 0.35 | 0.19 | 0.35 | 0.16 |        | 0.00 | -0.03 | 0.03           | 0.30           | -0.18          | -0.19          | 2.6737            | 0.0228 | 9.9         |                    |       | A-       |          |          |
|                    |   |                  | 6      |                    | 2   |                |      |      |      |      |        |      |       |                |                |                |                |                   |        |             |                    |       |          | A-       | A+       |
| SCIENCE            |   | 892163           | 6      | D.1.1.3            | 2   | 10429          | 0.26 | 0.08 | 0.19 | 0.26 |        | 0.00 | 0.22  | -0.12          | -0.29          | 0.22           | 0.11           | 2.4937            | 0.0244 | 7.7         | 1.1 9.             |       | Α-       | A-       | A-       |
| SCIENCE            |   | 109448           | 7      | B.2.1.5            | 2   | 10458          | 0.53 | 0.15 | 0.19 | 0.53 |        | 0.00 | 0.38  | -0.15          | -0.18          | 0.38           | -0.19          | 1.1178            | 0.0220 | 2.0         |                    |       | A+       | A-       | A-       |
| SCIENCE            |   | 208030           | 7      | C.3.1.1            | 2   | 10458          | 0.83 | 0.83 | 0.07 | 0.06 |        | 0.00 | 0.50  | 0.50           | -0.27          | -0.28          | -0.25          | -0.6823           | 0.0282 | -7.8        | 0.9 -9.            |       | A+       | A-       | A-       |
| SCIENCE            |   | 745027           |        | B.3.3.2            | 1   | 10458          | 0.72 | 0.07 | 0.72 | 0.09 | 0.11 ( | _    | 0.50  | -0.27          | 0.50           | -0.25          | -0.26          | 0.0693            | 0.0242 | -8.8        | 0.9 -9.            | _     | A-       | A-       | A-       |
| SCIENCE            |   | 144577           | 7      | A.2.1.4            | 2   | 10458          | 0.59 | 0.22 | 0.59 | 0.09 |        | 0.00 | 0.46  | -0.30          | 0.46           | -0.17          | -0.16          | 0.7865            | 0.0223 | -5.4        | 1.0 -5.            | _     | A-       | A-       | A-       |
| SCIENCE            |   | 224512           | 7      | E.4.1.2            | 2   | 10458          | 0.44 | 0.16 | 0.29 | 0.11 |        | 0.00 | 0.26  | -0.27          | 0.06           | -0.18          | 0.26           | 1.5562            | 0.0220 | 9.9         | 1.1 9.             |       | A+       | A-       | A-       |
| SCIENCE            |   | 346720           | 7      | E.3.1.1            | 2   | 10458          | 0.85 | 0.85 | 0.08 | 0.03 |        | 0.01 | 0.41  | 0.41           | -0.22          | -0.25          | -0.22          | -0.8385           | 0.0293 | -3.2        | 0.9 -4.            |       | A-       | A-       | A+       |
| SCIENCE            |   | 168647           | 7      | D.1.1.3            | 1   | 10458          | 0.46 | 0.20 | 0.22 | 0.12 |        | 0.00 | 0.27  | -0.07          | -0.05          | -0.26          | 0.27           | 1.4788            | 0.0220 | 9.9         | 1.1 9.             |       | A+       | A-       | A-       |
| SCIENCE            |   | 670360           | 7      | C.1.2.1            | 2   | 10458          | 0.44 | 0.17 | 0.44 | 0.19 |        | 0.00 | 0.21  | -0.12          | 0.21           | -0.04          | -0.10          | 1.5673            | 0.0220 | 9.9         | 1.2 9.             |       | _        | A-       | A-       |
| SCIENCE            | 4 | 281277           | 7      | A.1.3.2            | 3   | 10458          | 0.36 | 0.36 | 0.32 | 0.09 | 0.23   | 0.00 | 0.18  | 0.18           | -0.01          | -0.18          | -0.07          | 1.9979            | 0.0227 | 9.9         | 1.2 9.             | 9 1.5 | A+       | A+       | A-       |

| SCIENCE | 4 | 847376 | 7  | A.2.1.1 | 2 | 10458 | 0.46 | 0.34 | 0.06 | 0.46 | 0.13 ( | 0.00 | 0.30 | -0.08 | -0.21 | 0.30  | -0.18 | 1.4402  | 0.0219 | 9.9  | 1.1 9.9  | 1.2 A+ | A- | A- |
|---------|---|--------|----|---------|---|-------|------|------|------|------|--------|------|------|-------|-------|-------|-------|---------|--------|------|----------|--------|----|----|
| SCIENCE | 4 | 662423 | 8  | D.2.2.2 | 2 | 10459 | 0.69 | 0.69 | 0.11 | 0.07 | 0.13 ( | 0.00 | 0.24 | 0.24  | -0.12 | -0.17 | -0.09 | 0.2516  | 0.0237 | 9.9  | 1.2 9.9  | 1.4 A- | A- | A- |
| SCIENCE | 4 | 966968 | 8  | D.1.1.4 | 2 | 10459 | 0.56 | 0.09 | 0.56 | 0.18 | 0.16   | 0.00 | 0.35 | -0.26 | 0.35  | -0.11 | -0.16 | 0.9548  | 0.0222 | 8.7  | 1.1 8.6  | 1.1 A- | A- | A- |
| SCIENCE | 4 | 934665 | 8  | B.3.3.1 | 2 | 10459 | 0.83 | 0.05 | 0.83 | 0.06 | 0.06   | 0.00 | 0.28 | -0.18 | 0.28  | -0.16 | -0.11 | -0.7112 | 0.0284 | 4.9  | 1.1 9.0  | 1.3 A+ | A- | A- |
| SCIENCE | 4 | 120861 | 8  | A.1.1.2 | 1 | 10459 | 0.79 | 0.07 | 0.03 | 0.10 | 0.79 ( | 0.01 | 0.46 | -0.29 | -0.27 | -0.21 | 0.46  | -0.4161 | 0.0266 | -5.0 | 0.9 -6.5 | 0.8 A+ | A- | A- |
| SCIENCE | 4 | 988169 | 8  | D.2.2.1 | 2 | 10459 | 0.40 | 0.40 | 0.24 | 0.14 | 0.21 ( | 0.01 | 0.17 | 0.17  | -0.03 | -0.16 | -0.03 | 1.7546  | 0.0223 | 9.9  | 1.3 9.9  | 1.5 A- | A- | A+ |
| SCIENCE | 4 | 451536 | 8  | E.4.1.1 | 2 | 10459 | 0.28 | 0.44 | 0.13 | 0.28 | 0.15   | 0.00 | 0.13 | -0.01 | -0.15 | 0.13  | 0.01  | 2.4635  | 0.0241 | 9.9  | 1.2 9.9  | 1.7 A- | A- | A- |
| SCIENCE | 4 | 716851 | 8  | D.4.1.1 | 1 | 10459 | 0.87 | 0.04 | 0.04 | 0.05 | 0.87   | 0.00 | 0.54 | -0.28 | -0.26 | -0.33 | 0.54  | -1.0736 | 0.0313 | -9.9 | 0.8 -9.9 | 0.6 A+ | B- | A- |
| SCIENCE | 4 | 747899 | 8  | A.1.1.3 | 2 | 10459 | 0.64 | 0.12 | 0.64 | 0.15 | 0.09 ( | 0.00 | 0.41 | -0.23 | 0.41  | -0.19 | -0.18 | 0.5204  | 0.0229 | 2.4  | 1.0 4.4  | 1.1 A- | A- | A- |
| SCIENCE | 4 | 721567 | 8  | A.1.1.1 | 2 | 10459 | 0.65 | 0.13 | 0.08 | 0.13 | 0.65 ( | 0.00 | 0.40 | -0.11 | -0.26 | -0.24 | 0.40  | 0.4627  | 0.0231 | 2.8  | 1.0 2.5  | 1.0 A+ | A- | A- |
| SCIENCE | 4 | 386797 | 8  | D.1.1.4 | 2 | 10459 | 0.63 | 0.05 | 0.63 | 0.26 | 0.06   | 0.00 | 0.45 | -0.24 | 0.45  | -0.25 | -0.23 | 0.5951  | 0.0228 | -3.2 | 1.0 -4.1 | 0.9 A+ | A- | A- |
| SCIENCE | 4 | 474520 | 9  | A.2.2.3 | 3 | 10436 | 0.43 | 0.43 | 0.19 | 0.22 | 0.16   | 0.01 | 0.30 | 0.30  | -0.05 | -0.16 | -0.17 | 1.6576  | 0.0223 | 9.9  | 1.1 9.9  | 1.3 A- | A- | A- |
| SCIENCE | 4 | 944928 | 9  | A.1.3.2 | 2 | 10436 | 0.65 | 0.17 | 0.09 | 0.65 | 0.09 ( | 0.00 | 0.47 | -0.19 | -0.24 | 0.47  | -0.27 | 0.4774  | 0.0230 | -4.9 | 1.0 -6.1 | 0.9 A+ | A- | A+ |
| SCIENCE | 4 | 180980 | 9  | A.1.2.4 | 2 | 10436 | 0.64 | 0.14 | 0.05 | 0.64 | 0.17   | 0.00 | 0.42 | -0.18 | -0.27 | 0.42  | -0.21 | 0.5027  | 0.0230 | 0.8  | 1.0 0.1  | 1.0 A+ | A- | A- |
| SCIENCE | 4 | 742130 | 9  | D.1.1.4 | 2 | 10436 | 0.28 | 0.15 | 0.28 | 0.13 | 0.44 ( | 0.00 | 0.24 | -0.21 | 0.24  | -0.19 | 0.07  | 2.4216  | 0.0241 | 7.2  | 1.1 9.9  | 1.5 A- | A- | A- |
| SCIENCE | 4 | 972462 | 9  | E.1.1.3 | 2 | 10436 | 0.63 | 0.63 | 0.15 | 0.12 | 0.10 ( | 0.00 | 0.37 | 0.37  | -0.08 | -0.24 | -0.24 | 0.5855  | 0.0228 | 6.0  | 1.1 6.0  | 1.1 A- | A- | A- |
| SCIENCE | 4 | 549254 | 9  | D.4.1.3 | 2 | 10436 | 0.37 | 0.19 | 0.27 | 0.17 | 0.37   | 0.00 | 0.35 | -0.24 | -0.01 | -0.19 | 0.35  | 1.9153  | 0.0227 | -1.0 | 1.0 9.9  | 1.2 A- | A+ | A+ |
| SCIENCE | 4 | 990137 | 9  | D.2.2.1 | 2 | 10436 | 0.66 | 0.11 | 0.10 | 0.66 | 0.13 ( | 0.00 | 0.36 | -0.18 | -0.15 | 0.36  | -0.19 | 0.4204  | 0.0232 | 7.8  | 1.1 6.3  | 1.1 A+ | A- | A+ |
| SCIENCE | 4 | 224788 | 9  | D.4.1.1 | 2 | 10436 | 0.29 | 0.05 | 0.51 | 0.15 | 0.29 ( | 0.00 | 0.11 | -0.25 | 0.14  | -0.17 | 0.11  | 2.3777  | 0.0240 | 9.9  |          | 1.7 A+ | A+ | A+ |
| SCIENCE | 4 | 855409 | 9  | A.1.3.2 | 2 | 10436 | 0.56 | 0.56 | 0.17 | 0.15 | 0.12 ( | 0.01 | 0.39 | 0.39  | -0.13 | -0.16 | -0.27 | 0.9596  | 0.0222 | 3.6  | 1.0 3.7  | 1.1 A+ | A- | A+ |
| SCIENCE | 4 | 876197 | 9  | A.1.3.1 | 1 | 10436 | 0.79 | 0.05 | 0.11 | 0.79 | 0.05 ( | 0.00 | 0.54 | -0.30 | -0.29 | 0.54  | -0.27 | -0.4087 | 0.0264 | -9.9 | 0.9 -9.9 | 0.7 A+ | A- | A- |
| SCIENCE | 4 | 923858 | 10 | A.1.3.2 | 2 | 10473 | 0.63 | 0.63 | 0.26 | 0.06 | 0.05 ( | 0.00 | 0.29 | 0.29  | -0.07 | -0.22 | -0.26 | 0.5840  | 0.0227 | 9.9  | 1.2 9.9  | 1.2 A- | A- | A- |
| SCIENCE | 4 | 135048 | 10 | A.2.1.1 | 2 | 10473 | 0.63 | 0.06 | 0.10 | 0.20 | 0.63 ( | 0.01 | 0.44 | -0.30 | -0.25 | -0.15 | 0.44  | 0.5447  | 0.0228 | -1.2 | 1.0 -1.0 | 1.0 A+ | A- | A+ |
| SCIENCE | 4 | 699174 | 10 | D.1.1.1 | 2 | 10473 | 0.82 | 0.06 | 0.04 | 0.08 | 0.82   | 0.00 | 0.45 | -0.25 | -0.28 | -0.22 | 0.45  | -0.6796 | 0.0280 | -5.3 | 0.9 -3.8 | 0.9 A- | A- | A- |
| SCIENCE | 4 | 677933 | 10 | A.3.1.4 | 2 | 10473 | 0.79 | 0.08 | 0.06 | 0.79 | 0.06   | 0.00 | 0.45 | -0.24 | -0.26 | 0.45  | -0.22 | -0.4323 | 0.0265 | -4.4 | 0.9 -2.8 | 0.9 A- | A- | A- |
| SCIENCE | 4 | 531099 | 10 | D.1.1.1 | 2 | 10473 | 0.55 | 0.55 | 0.07 | 0.10 | 0.27   | 0.00 | 0.35 | 0.35  | -0.20 | -0.18 | -0.14 | 0.9544  | 0.0222 | 9.9  | 1.1 9.9  | 1.1 A+ | A- | A- |
| SCIENCE | 4 | 120100 | 10 | A.3.1.2 | 2 | 10473 | 0.42 | 0.21 | 0.15 | 0.42 | 0.22   | 0.00 | 0.38 | -0.22 | -0.14 | 0.38  | -0.11 | 1.6363  | 0.0222 | -0.5 | 1.0 6.8  | 1.1 A- | A- | A+ |
| SCIENCE | 4 | 868538 | 10 | E.2.1.1 | 2 | 10473 | 0.61 | 0.12 | 0.61 | 0.09 | 0.18   | 0.01 | 0.41 | -0.23 | 0.41  | -0.16 | -0.21 | 0.6910  | 0.0225 | 1.6  | 1.0 0.7  | 1.0 A+ | A- | A- |
| SCIENCE | 4 | 795222 | 10 | A.1.3.1 | 2 | 10473 | 0.77 | 0.77 | 0.06 | 0.12 | 0.05   | 0.00 | 0.33 | 0.33  | -0.23 | -0.13 | -0.19 | -0.2913 | 0.0257 | 4.5  | 1.1 7.7  | 1.2 A+ | A- | A- |
| SCIENCE | 4 | 933841 | 10 | A.1.1.3 | 2 | 10473 | 0.22 | 0.32 | 0.36 | 0.22 | 0.09 ( | 00.0 | 0.21 | -0.12 | -0.02 | 0.21  | -0.06 | 2.8016  | 0.0258 | 5.4  | 1.1 9.9  | 1.7 A- | A- | A- |
| SCIENCE | 4 | 967045 | 10 | A.2.2.5 | 2 | 10473 | 0.40 | 0.23 | 0.40 | 0.23 | 0.13   | 0.00 | 0.24 | 0.04  | 0.24  | -0.19 | -0.15 | 1.7287  | 0.0224 | 9.9  | 1.2 9.9  | 1.3 A- | A- | A- |
| SCIENCE | 4 | 966923 | 11 | C.1.1.1 | 2 | 10454 | 0.87 | 0.06 | 0.03 | 0.04 | 0.87   | 0.01 | 0.38 | -0.20 | -0.23 | -0.22 | 0.38  | -1.1166 | 0.0315 | -2.8 | 1.0 0.7  | 1.0 A+ | B- | B- |
| SCIENCE | 4 | 139856 | 11 | D.2.1.1 | 2 | 10454 | 0.58 | 0.18 | 0.06 | 0.58 | 0.17   | 0.01 | 0.43 | -0.17 | -0.23 | 0.43  | -0.24 | 0.8605  | 0.0223 | -1.4 | 1.0 -0.5 | 1.0 A- | B- | A- |
| SCIENCE | 4 | 460113 | 11 | B.1.1.4 | 2 | 10454 | 0.59 | 0.25 | 0.10 | 0.59 | 0.06   | 00.0 | 0.53 | -0.31 | -0.27 | 0.53  | -0.19 | 0.8036  | 0.0224 | -9.9 | 0.9 -9.9 | 0.8 A- | A+ | A- |
| SCIENCE | 4 | 350517 | 11 | D.1.1.3 | 3 | 10454 | 0.50 | 0.50 | 0.20 | 0.16 | 0.14   | 00.0 | 0.29 | 0.29  | -0.13 | -0.15 | -0.10 | 1.2730  | 0.0221 | 9.9  | 1.1 9.9  | 1.2 A- | A- | A- |
| SCIENCE | 4 | 910321 | 11 | A.3.3.2 | 2 | 10454 | 0.36 | 0.12 | 0.34 | 0.18 |        | 00.0 | 0.21 | -0.24 | 0.12  | -0.21 | 0.21  | 1.9904  | 0.0228 | 9.9  | 1.2 9.9  | 1.4 A- | A- | A+ |
| SCIENCE | 4 | 587920 | 11 | D.2.2.1 | 2 | 10454 | 0.75 | 0.06 | 0.06 | 0.13 |        | 00.0 | 0.44 | -0.31 | -0.24 | -0.18 | 0.44  | -0.1234 | 0.0250 | -2.7 | 1.0 -3.1 | 0.9 A+ |    | A+ |
| SCIENCE | 4 | 947598 | 11 | A.2.2.4 | 1 | 10454 | 0.82 | 0.06 | 0.82 | 0.03 |        | 0.00 | 0.45 | -0.29 | 0.45  | -0.24 | -0.22 | -0.6457 | 0.0279 | -5.0 |          |        |    | A- |
| SCIENCE | 4 | 514655 | 11 | E.3.1.2 | 2 | 10454 | 0.30 | 0.47 | 0.05 | 0.18 | 0.30 ( |      | 0.21 | -0.02 | -0.23 | -0.10 | 0.21  | 2.2885  | 0.0236 | 9.9  | 1.1 9.9  |        | _  | A- |
| SCIENCE | 4 | 573253 | 11 | B.2.1.2 | 3 | 10454 | 0.31 | 0.20 | 0.14 | 0.31 |        | 0.00 | 0.07 | -0.15 | -0.12 | 0.07  | 0.15  | 2.2679  | 0.0235 | 9.9  | 1.3 9.9  |        | A- | A+ |
| SCIENCE | 4 | 662081 | 11 | A.2.1.1 | 2 | 10454 | 0.71 | 0.04 | 0.15 | 0.71 | 0.10   |      | 0.49 | -0.26 | -0.25 | 0.49  | -0.26 | 0.1378  | 0.0240 | -6.7 | 0.9 -8.4 | 0.8 A- | B- | B- |
| SCIENCE | 4 | 632478 | 12 | C.1.1.2 | 2 | 10482 | 0.60 | 0.23 | 0.07 | 0.60 |        | 0.00 | 0.40 | -0.14 | -0.25 | 0.40  | -0.24 | 0.7726  | 0.0225 | 2.0  |          | 1.0 A- | A- | A- |
| SCIENCE | 4 | 752124 | 12 | A.3.1.1 | 2 | 10482 | 0.81 | 0.05 | 0.81 | 0.08 |        | 0.00 | 0.47 | -0.27 | 0.47  | -0.25 | -0.24 | -0.5698 | 0.0274 | -6.2 | 0.9 -5.0 |        | A- | A- |
| SCIENCE | 4 | 760658 | 12 | B.1.1.1 | 2 | 10482 | 0.44 | 0.30 | 0.16 | 0.44 |        | 0.00 | 0.35 | -0.18 | -0.09 | 0.35  | -0.19 | 1.5763  | 0.0222 | 5.4  | 1.1 9.9  | 1.2 A- | A- | A- |
| SCIENCE | 4 | 129614 | 12 | D.1.1.2 | 2 | 10482 | 0.63 | 0.11 | 0.15 | 0.63 |        | 0.00 | 0.47 | -0.26 | -0.19 | 0.47  | -0.23 | 0.5884  | 0.0228 | -4.4 | 1.0 -4.5 | 0.9 A- | A- | A- |
| SCIENCE | 4 | 227108 | 12 | D.4.1.3 | 2 | 10482 | 0.49 | 0.49 | 0.25 | 0.12 |        | 0.00 | 0.26 | 0.26  | -0.07 | -0.18 | -0.11 | 1.3340  | 0.0221 | 9.9  |          |        | A- | A- |
| SCIENCE | 4 | 635165 | 12 | D.4.1.2 | 2 | 10482 | 0.78 | 0.78 | 0.05 | 0.06 |        | 0.01 | 0.41 | 0.41  | -0.22 | -0.20 | -0.24 | -0.3033 | 0.0259 | -0.5 | 1.0 -0.2 | 1.0 A+ | A- | A- |
| SCIENCE | 4 | 249215 | 12 | D.4.1.1 | 2 | 10482 | 0.68 | 0.16 | 0.68 | 0.06 |        | 0.00 | 0.48 | -0.19 | 0.48  | -0.29 | -0.28 | 0.2898  | 0.0236 | -6.3 | 0.9 -7.6 |        | A- | A- |
| SCIENCE | 4 | 787639 | 12 | B.1.1.1 | 2 | 10482 | 0.60 | 0.18 | 0.10 | 0.60 |        | 0.00 | 0.46 | -0.21 | -0.23 | 0.46  | -0.23 | 0.7494  | 0.0225 | -4.4 | 1.0 -5.8 | 0.9 A- | A- | A- |
| SCIENCE | 4 | 366554 | 12 | D.3.1.2 | 2 | 10482 | 0.58 | 0.58 | 0.10 | 0.21 |        | 0.00 | 0.42 | 0.42  | -0.22 | -0.16 | -0.23 | 0.8351  | 0.0224 | 1.4  | 1.0 2.0  | 1.0 A- | A- | A- |
| SCIENCE | 4 | 580007 | 12 | A.1.3.3 | 2 | 10482 | 0.33 | 0.34 | 0.33 | 0.11 | 0.21   | 0.00 | 0.20 | -0.05 | 0.20  | -0.16 | -0.04 | 2.1327  | 0.0231 | 9.9  | 1.2 9.9  | 1.5 A- | A- | A- |

| SCIENCE            | 8 514498 0               | B.2.2.2            | 1 127027 | 0.62 0.62              | 0.07 | 0.12 | 0.19 0.00              | 0.35 | 0.35           | -0.21 | -0.30          | -0.05 0.0153                   | 0.0065 9.9 1.1 9.9 1.1           |
|--------------------|--------------------------|--------------------|----------|------------------------|------|------|------------------------|------|----------------|-------|----------------|--------------------------------|----------------------------------|
| SCIENCE            | 8 882506 0               | C.2.1.2            |          | 0.67 0.11              |      | 0.14 | 0.67 0.00              | 0.46 | -0.23          | -0.30 | -0.18          | 0.46 -0.2283                   | 0.0067 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 644318 0               | D.1.1.4            | 2 127027 | 0.74 0.14              | 0.04 | 0.74 | 0.08 0.00              | 0.44 | -0.24          | -0.28 | 0.44           | -0.21 -0.5325                  | 0.0070 -9.9 0.9 -9.9 0.9         |
| SCIENCE            | 8 921811 0               | C.3.1.1            | 2 127027 | 0.72 0.72              | 0.10 | 0.09 | 0.09 0.00              | 0.40 | 0.40           | -0.26 | -0.28          | -0.08 -0.5455                  | 0.0070 2.3 1.0 6.2 1.0           |
| SCIENCE            | 8 555840 0               | C.2.1.3            | 2 127027 | 0.71 0.07              | 0.71 | 0.17 | 0.04 0.00              | 0.42 | -0.23          | 0.42  | -0.22          | -0.22 -0.5533                  | 0.0070 2.9 1.0 -6.7 1.0          |
| SCIENCE            | 8 838388 0               | D.1.2.2            | 2 127027 | 0.59 0.59              | 0.14 | 0.13 | 0.14 0.00              | 0.41 | 0.41           | -0.19 | -0.21          | -0.18 0.2593                   | 0.0064 0.1 1.0 -0.4 1.0          |
| SCIENCE            | 8 455280 0               | A.3.1.2            | 2 127027 | 0.75 0.75              | 0.05 | 0.13 | 0.06 0.00              | 0.54 | 0.54           | -0.31 | -0.30          | -0.26 -0.6951                  | 0.0072 -9.9 0.9 -9.9 0.7         |
| SCIENCE            | 8 819167 0               | A.3.1.4            | 3 127027 | 0.59 0.13              | 0.14 | 0.14 | 0.59 0.00              | 0.39 | -0.21          | -0.14 | -0.21          | 0.39 0.3165                    | 0.0063   6.4   1.0   7.2   1.0   |
| SCIENCE            | 8 973106 0               | D.3.1.3            | 2 127027 | 0.63 0.18              | 0.13 | 0.06 | 0.63 0.00              | 0.47 | -0.21          | -0.26 | -0.24          | 0.47 0.0125                    | 0.0065 -9.9 0.9 -9.9 0.9         |
| SCIENCE            | 8 868382 0               | D.3.1.3            | 2 127027 | 0.45 0.45              | 0.10 | 0.33 | 0.11 0.00              | 0.30 | 0.30           | -0.11 | -0.01          | -0.35 0.9003                   | 0.0063 9.9 1.1 9.9 1.2           |
| SCIENCE            | 8 357714 0               | A.3.2.2            |          | 0.79 0.06              | 0.00 | 0.09 | 0.79 0.00              | 0.55 | -0.29          | -0.32 | -0.27          | 0.55 -1.0498                   | 0.0077 -9.9 0.9 -9.9 0.7         |
| SCIENCE            | 8 788480 0               | B.1.1.1            |          | 0.59 0.15              |      | 0.07 | 0.18 0.00              | 0.46 | -0.35          | 0.46  | -0.14          | -0.17 0.1944                   | 0.0064 -9.9   1.0 -9.9   0.9     |
| SCIENCE            | 8 130392 0               | C.2.1.1            |          | 0.72 0.72              |      | 0.06 | 0.12 0.00              | 0.44 | 0.44           | -0.14 | -0.29          | -0.26 -0.4872                  | 0.0069 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 318190 0               | B.2.1.1            |          | 0.78 0.11              |      | 0.78 | 0.05 0.00              | 0.46 | -0.15          | -0.31 | 0.46           | -0.29 -0.9769                  | 0.0076 -9.9 1.0 -8.3 0.9         |
| SCIENCE            | 8 475280 0               |                    |          | 0.85 0.08              |      | 0.85 | 0.03 0.00              | 0.42 | -0.25          | -0.21 | 0.42           | -0.24 -1.4494                  | 0.0085 -9.9 0.9 -9.9 0.9         |
| SCIENCE            | 8 240709 0               | 0.11.11            |          | 0.72 0.08              |      | 0.09 | 0.11 0.00              | 0.42 | -0.22          | 0.42  | -0.23          | -0.19 -0.5238                  | 0.0070 -4.6 1.0 -7.3 1.0         |
| SCIENCE            | 8 951587 0               |                    |          | 0.70 0.10              |      | 0.16 | 0.70 0.00              | 0.46 | -0.25          | -0.29 | -0.21          | 0.46 -0.4299                   | 0.0069 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 701116 0               |                    |          | 0.61 0.61              |      | 0.13 | 0.20 0.00              | 0.46 | 0.46           | -0.30 | -0.16          | -0.24 0.0963                   | 0.0064 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 366282 0               | A.3.2.1            |          | 0.81 0.03              |      | 0.13 | 0.81 0.00              | 0.41 | -0.26          | -0.23 | -0.23          | 0.41 -1.2786                   | 0.0081 8.7 1.0 8.3 1.1           |
| SCIENCE            | 8 476982 0               | B.3.1.3            |          | 0.84 0.05              |      | 0.84 | 0.06 0.00              | 0.49 | -0.25          | -0.27 | 0.49           | -0.28 -1.4158                  | 0.0084 -9.9 0.9 -9.9 0.7         |
| SCIENCE            | 8 486390 0               | A.1.1.1            |          | 0.74 0.06              |      | 0.74 | 0.05 0.00              | 0.34 | -0.16          | -0.18 | 0.34           | -0.23 -0.7005                  | 0.0072 9.9 1.1 9.9 1.2           |
| SCIENCE            | 8 238278 0               | A.1.1.2            |          | 0.80 0.80              | _    | 0.04 | 0.10 0.00              | 0.53 | 0.53           | -0.30 | -0.31          | -0.26 -1.0078                  | 0.0076 -9.9 0.8 -9.9 0.7         |
| SCIENCE            | 8 769587 0               | A.1.2.1            |          | 0.63 0.22              |      | 0.63 | 0.09 0.00              | 0.44 | -0.18          | -0.31 | 0.44           | -0.20 0.0207                   | 0.0065 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 263931 0               |                    |          | 0.83 0.06              |      | 0.06 | 0.05 0.00              | 0.44 | -0.25          | 0.44  | -0.26          | -0.20 -1.2743                  | 0.0081 -9.9 0.9 -9.9 0.9         |
| SCIENCE            | 8 931017 0               |                    |          | 0.72 0.04              |      | 0.72 | 0.03 0.00              | 0.44 | -0.29          | -0.24 | 0.44           | -0.23 -0.4539                  | 0.0069 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 847050 0<br>8 742950 0 |                    |          | 0.74 0.09              |      | 0.09 | 0.07 0.00<br>0.06 0.00 | 0.47 | -0.21          | 0.47  | -0.27          | -0.26 -0.7346                  | 0.0072 -9.9 1.0 -9.9 0.9         |
| SCIENCE<br>SCIENCE | 8 742950 0<br>8 851347 0 | B.3.3.3<br>A.2.1.5 |          | 0.69 0.10<br>0.69 0.13 |      | 0.14 | 0.06 0.00              | 0.42 | -0.24<br>-0.17 | 0.42  | -0.17<br>-0.29 | -0.25 -0.2272<br>-0.20 -0.2976 | 0.0067   -9.9   1.0   -9.9   1.0 |
| SCIENCE            | 8 837499 0               | A.2.1.3<br>A.2.1.1 |          | 0.63 0.63              |      | 0.07 | 0.11 0.00              | 0.43 | 0.41           | -0.22 | -0.29          | -0.20 -0.2976                  | 0.0067 -0.3 1.0 -4.4 1.0         |
| SCIENCE            | 8 899650 0               | B.3.1.1            |          | 0.84 0.05              |      | 0.13 | 0.12 0.00              | 0.41 | -0.26          | -0.22 | -0.29          | 0.52 -1.3049                   | 0.0063 -1.9 1.0 -1.3 1.0         |
| SCIENCE            | 8 451675 0               | B.3.1.1<br>B.3.1.2 |          | 0.76 0.03              |      | 0.07 | 0.08 0.00              | 0.32 | -0.26          | -0.29 | 0.27           | -0.10 -0.7380                  | 0.0082 -9.9 0.8 -9.9 0.7         |
| SCIENCE            | 8 288836 0               |                    |          | 0.67 0.11              |      | 0.70 | 0.67 0.00              | 0.27 | -0.07          | -0.23 | -0.26          | 0.53 -0.1831                   | 0.0066 -9.9 0.9 -9.9 0.8         |
| SCIENCE            | 8 654478 0               |                    |          | 0.68 0.08              |      | 0.10 | 0.68 0.00              | 0.33 | -0.24          | -0.19 | -0.22          | 0.41 -0.3048                   | 0.0067 6.1 1.0 7.5 1.0           |
| SCIENCE            | 8 982562 0               |                    |          | 0.72 0.14              |      | 0.08 | 0.72 0.00              | 0.47 | -0.21          | -0.19 | -0.22          | 0.47 -0.4613                   | 0.0069 -9.9 0.9 -9.9 0.8         |
| SCIENCE            | 8 298835 0               |                    |          | 0.54 0.11              |      | 0.17 | 0.19 0.00              | 0.26 | -0.24          | 0.26  | -0.07          | -0.08 0.4791                   | 0.0063 9.9 1.2 9.9 1.2           |
| SCIENCE            | 8 785295 0               | A.3.1.5            |          | 0.68 0.11              |      | 0.68 | 0.11 0.00              | 0.49 | -0.24          | -0.28 | 0.49           | -0.22 -0.3857                  | 0.0068 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 773976 0               | A.1.1.4            |          | 0.67 0.13              |      | 0.67 | 0.10 0.00              | 0.45 | -0.19          | -0.22 | 0.45           | -0.27 -0.2280                  | 0.0067 -9.9 1.0 -9.9 0.9         |
| SCIENCE            | 8 577084 0               | B.2.1.5            |          | 0.43 0.25              |      | 0.20 | 0.43 0.00              | 0.12 | -0.08          | -0.16 | 0.08           | 0.12 1.0205                    | 0.0063 9.9 1.3 9.9 1.5           |
| SCIENCE            | 8 623536 0               | D.1.2.2            |          | 0.55 0.23              |      | 0.10 | 0.12 0.00              | 0.38 | -0.09          | 0.38  | -0.28          | -0.20 0.4036                   | 0.0063 9.9 1.0 8.9 1.0           |
| SCIENCE            | 8 551365 0               | A.1.3.2            |          | 0.59 0.14              |      | 0.59 | 0.13 0.00              | 0.38 | -0.20          | -0.22 | 0.38           | -0.12 0.1906                   | 0.0064 9.9 1.0 9.9 1.0           |
| SCIENCE            | 8 778285 0               | A.3.1.1            |          | 0.78 0.06              |      | 0.78 | 0.07 0.00              | 0.46 | -0.26          | -0.29 | 0.46           | -0.18 -0.8080                  | 0.0073 -9.9 0.9 -9.9 0.8         |
| SCIENCE            | 8 452101 0               |                    |          | 0.76 0.76              |      | 0.09 | 0.06 0.00              | 0.51 | 0.51           | -0.28 | -0.27          | -0.26 -0.7986                  | 0.0073 -9.9 0.9 -9.9 0.8         |
| SCIENCE            | 8 559488 0               |                    |          | 0.73 0.05              |      | 0.13 | 0.73 0.00              | 0.44 | -0.29          | -0.29 | -0.14          | 0.44 -0.5894                   | 0.0070 -9.1 1.0 0.5 1.0          |
| SCIENCE            | 8 618394 0               |                    |          | 0.74 0.10              |      | 0.74 | 0.07 0.00              | 0.49 | -0.26          | -0.25 | 0.49           | -0.25 -0.6723                  | 0.0071 -9.9 0.9 -9.9 0.8         |
| SCIENCE            | 8 325670 0               | C.3.1.1            | 2 127027 | 0.59 0.19              | 0.59 | 0.07 | 0.15 0.00              | 0.26 | -0.07          | 0.26  | -0.18          | -0.15 0.1659                   | 0.0064 9.9 1.2 9.9 1.2           |
| SCIENCE            | 8 917389 0               | A.1.1.1            | 2 127027 | 0.57 0.27              | 0.57 | 0.10 | 0.06 0.00              | 0.28 | -0.01          | 0.28  | -0.25          | -0.25 0.3722                   | 0.0063 9.9 1.2 9.9 1.2           |
| SCIENCE            | 8 682917 0               | A.1.2.2            | 2 127027 | 0.61 0.11              | 0.61 | 0.21 | 0.07 0.00              | 0.39 | -0.26          | 0.39  | -0.12          | -0.24 0.1267                   | 0.0064 8.2 1.0 5.1 1.0           |
| SCIENCE            | 8 578398 0               | A.1.2.4            | 2 127027 | 0.66 0.14              | 0.13 | 0.07 | 0.66 0.00              | 0.57 | -0.28          | -0.28 | -0.29          | 0.57 -0.1249                   | 0.0066 -9.9 0.8 -9.9 0.8         |
| SCIENCE            | 8 541135 0               | D.1.2.2            | 2 127027 | 0.62 0.09              | 0.19 | 0.10 | 0.62 0.00              | 0.52 | -0.30          | -0.30 | -0.16          | 0.52 0.0184                    | 0.0065 -9.9 0.9 -9.9 0.9         |
| SCIENCE            | 8 874630 0               | A.2.1.5            | 3 127027 | 0.51 0.21              |      | 0.51 | 0.11 0.00              | 0.33 | -0.08          | -0.20 | 0.33           | -0.18 0.6608                   | 0.0063 9.9 1.1 9.9 1.1           |
| SCIENCE            | 8 981393 0               | A.2.2.2            | 2 127027 | 0.84 0.84              | 0.05 | 0.08 | 0.03 0.00              | 0.46 | 0.46           | -0.26 | -0.26          | -0.23 -1.3955                  | 0.0084 -9.9   0.9 -9.9   0.8     |

| SCIENCE | 8 3 | 398279 | 0 | A.2.2.3 | 2 | 127027 | 0.54 | 0.24 | 0.54 | 0.08 | 0.14 | 0.00 | 0.28  | -0.03 | 0.28  | -0.27 | -0.15 | 0.5057  | 0.0063 | 9.9  | 1.1 9.9  | 1.2    |    |    |
|---------|-----|--------|---|---------|---|--------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|----------|--------|----|----|
| SCIENCE | 8 4 | 144065 | 0 | A.3.2.2 | 2 | 127027 | 0.74 | 0.74 | 0.07 | 0.06 | 0.12 | 0.00 | 0.44  | 0.44  | -0.29 | -0.31 | -0.13 | -0.8720 | 0.0074 | 9.8  | 1.0 9.9  | 1.1    |    |    |
| SCIENCE | 8 9 | 988281 | 0 | C.1.1.1 | 1 | 127027 | 0.49 | 0.23 | 0.10 | 0.18 | 0.49 | 0.00 | 0.38  | -0.04 | -0.29 | -0.23 | 0.38  | 0.7933  | 0.0063 | 4.0  | 1.0 9.9  | 1.0    |    |    |
| SCIENCE | 8 5 | 48651  | 0 | C.1.1.2 | 2 | 127027 | 0.72 | 0.07 | 0.07 | 0.72 | 0.14 | 0.00 | 0.35  | -0.19 | -0.22 | 0.35  | -0.14 | -0.5397 | 0.0070 | 9.9  | 1.1 9.9  | 1.1    |    |    |
| SCIENCE | 8 6 | 62094  | 0 | C.2.1.1 | 2 | 127027 | 0.70 | 0.18 | 0.06 | 0.70 | 0.06 | 0.00 | 0.41  | -0.14 | -0.29 | 0.41  | -0.27 | -0.4027 | 0.0068 | 1.7  | 1.0 3.1  | 1.0    |    |    |
| SCIENCE | 8 9 | 960881 | 0 | C.1.1.3 | 2 | 127027 | 0.64 | 0.64 | 0.23 | 0.06 | 0.07 | 0.00 | 0.39  | 0.39  | -0.14 | -0.30 | -0.23 | -0.0020 | 0.0065 | 4.8  | 1.0 -3.0 | 1.0    |    |    |
| SCIENCE | 8 5 | 69481  | 0 | A.2.1.4 | 2 | 127027 | 0.72 | 0.18 | 0.05 | 0.72 | 0.05 | 0.00 | 0.40  | -0.21 | -0.25 | 0.40  | -0.19 | -0.5238 | 0.0070 | 4.4  | 1.0 -0.8 | 1.0    |    |    |
| SCIENCE | 8 3 | 345086 | 1 | B.3.2.3 | 2 | 10881  | 0.50 | 0.31 | 0.09 | 0.10 | 0.50 | 0.00 | 0.33  | 0.00  | -0.29 | -0.24 | 0.33  | 0.6064  | 0.0214 | 9.9  | 1.1 9.9  | 1.1 A+ | A+ | A+ |
| SCIENCE | 8 8 | 387071 | 1 | A.1.2.3 | 2 | 10881  | 0.56 | 0.10 | 0.11 | 0.56 | 0.22 | 0.00 | 0.38  | -0.19 | -0.27 | 0.38  | -0.10 | 0.3317  | 0.0215 | 2.5  | 1.0 2.8  | 1.0 A- | A+ | A- |
| SCIENCE | 8 4 | 172852 | 1 | D.1.1.3 | 2 | 10881  | 0.30 | 0.14 | 0.31 | 0.30 | 0.24 | 0.00 | 0.02  | -0.13 | 0.15  | 0.02  | -0.07 | 1.6265  | 0.0228 | 9.9  | 1.3 9.9  | 1.7 A- | A- | A+ |
| SCIENCE | 8 7 | 775185 | 1 | C.1.1.3 | 2 | 10881  | 0.36 | 0.36 | 0.15 | 0.14 | 0.34 | 0.00 | 0.35  | 0.35  | -0.23 | -0.20 | -0.02 | 1.3125  | 0.0220 | -1.0 | 1.0 6.9  | 1.1 A- | A- | A- |
| SCIENCE | 8 4 | 164042 | 1 | A.1.1.1 | 2 | 10881  | 0.64 | 0.64 | 0.10 | 0.08 | 0.18 | 0.00 | 0.44  | 0.44  | -0.28 | -0.32 | -0.11 | -0.1306 | 0.0223 | -3.1 | 1.0 -4.4 | 0.9 A+ | A- | A- |
| SCIENCE | 8 1 | 37870  | 1 | A.3.1.4 | 2 | 10881  | 0.37 | 0.21 | 0.15 | 0.27 | 0.37 | 0.00 | 0.21  | -0.05 | -0.20 | -0.02 | 0.21  | 1.2488  | 0.0219 | 9.9  | 1.2 9.9  | 1.3 A+ | A- | A- |
| SCIENCE | 8 3 | 379194 | 1 | B.2.2.2 | 1 | 10881  | 0.84 | 0.08 | 0.84 | 0.05 | 0.03 | 0.00 | 0.49  | -0.27 | 0.49  | -0.27 | -0.25 | -1.3828 | 0.0279 | -8.7 | 0.9 -9.9 | 0.7 B+ | A- | B- |
| SCIENCE | 8 5 | 18723  | 1 | A.2.1.2 | 2 | 10881  | 0.45 | 0.18 | 0.45 | 0.16 | 0.20 | 0.00 | 0.28  | -0.14 | 0.28  | -0.07 | -0.13 | 0.8392  | 0.0214 | 9.9  | 1.1 9.9  | 1.2 A+ | A+ | A+ |
| SCIENCE | 8 6 | 516025 | 1 | B.3.3.2 | 2 | 10881  | 0.19 | 0.43 | 0.19 | 0.17 | 0.21 | 0.00 | -0.03 | 0.15  | -0.03 | -0.17 | 0.01  | 2.3698  | 0.0264 | 9.9  | 1.2 9.9  | 2.3 A+ | A+ | A+ |
| SCIENCE | 8 9 | 21783  | 1 | C.2.1.1 | 2 | 10881  | 0.32 | 0.41 | 0.17 | 0.32 | 0.10 | 0.00 | 0.13  | 0.16  | -0.20 | 0.13  | -0.20 | 1.5180  | 0.0225 | 9.9  | 1.2 9.9  | 1.5 A- | A- | A- |
| SCIENCE | 8 1 | 24765  | 1 | A.1.2.1 | 2 | 10881  | 0.59 | 0.11 | 0.59 | 0.17 | 0.13 | 0.00 | 0.42  | -0.30 | 0.42  | -0.14 | -0.17 | 0.1251  | 0.0218 | -0.5 | 1.0 -0.8 | 1.0 A+ | A- | A- |
| SCIENCE | 8 3 | 398247 | 1 | A.2.1.2 | 1 | 10881  | 0.58 | 0.58 | 0.26 | 0.08 | 0.07 | 0.00 | 0.33  | 0.33  | -0.03 | -0.31 | -0.23 | 0.1907  | 0.0217 | 9.9  | 1.1 9.0  | 1.1 A+ | A+ | A- |
| SCIENCE | 8 7 | 754104 | 2 | C.2.2.1 | 1 | 10465  | 0.66 | 0.09 | 0.14 | 0.66 | 0.10 | 0.00 | 0.29  | -0.26 | -0.13 | 0.29  | -0.04 | -0.1803 | 0.0231 | 9.9  | 1.1 9.9  | 1.2 A- | A- | A- |
| SCIENCE | 8 8 | 380699 | 2 | D.1.1.4 | 2 | 10465  | 0.69 | 0.69 | 0.16 | 0.07 | 0.08 | 0.00 | 0.54  | 0.54  | -0.27 | -0.30 | -0.28 | -0.3030 | 0.0234 | -9.9 | 0.9 -9.9 | 0.8 A+ | A- | A- |
| SCIENCE | 8 6 | 571560 | 2 | B.2.1.1 | 2 | 10465  | 0.44 | 0.44 | 0.35 | 0.08 | 0.13 | 0.00 | 0.16  | 0.16  | 0.08  | -0.27 | -0.12 | 0.9753  | 0.0220 | 9.9  | 1.3 9.9  | 1.4 A+ | A- | A- |
| SCIENCE | 8 2 | 253386 | 2 | A.2.1.2 | 2 | 10465  | 0.48 | 0.14 | 0.25 | 0.13 | 0.48 | 0.00 | 0.44  | -0.18 | -0.12 | -0.29 | 0.44  | 0.7966  | 0.0219 | -6.0 | 1.0 -2.7 | 1.0 A+ | A- | A- |
| SCIENCE | 8 2 | 220859 | 2 | C.1.1.2 | 2 | 10465  | 0.61 | 0.09 | 0.16 | 0.13 | 0.61 | 0.00 | 0.50  | -0.25 | -0.20 | -0.27 | 0.50  | 0.1031  | 0.0224 | -9.9 | 0.9 -9.2 | 0.9 A+ | A- | A- |
| SCIENCE | 8 2 | 223582 | 2 | A.2.1.4 | 2 | 10465  | 0.71 | 0.14 | 0.10 | 0.05 | 0.71 | 0.00 | 0.46  | -0.24 | -0.22 | -0.24 | 0.46  | -0.4299 | 0.0239 | -4.4 | 1.0 -5.3 | 0.9 A+ | A- | A- |
| SCIENCE | 8 1 | 64315  | 2 | A.1.1.2 | 2 | 10465  | 0.61 | 0.12 | 0.61 | 0.10 | 0.17 | 0.00 | 0.34  | -0.24 | 0.34  | -0.13 | -0.12 | 0.1242  | 0.0224 | 8.8  | 1.1 9.9  | 1.2 A+ | A- | A+ |
| SCIENCE | 8 5 | 67290  | 2 | A.1.2.2 | 2 | 10465  | 0.58 | 0.06 | 0.58 | 0.06 | 0.29 | 0.00 | 0.28  | -0.27 | 0.28  | -0.29 | -0.01 | 0.2485  | 0.0222 | 9.9  | 1.2 9.9  | 1.2 A- | A+ | A- |
| SCIENCE | 8 1 | 24019  | 2 | A.2.2.2 | 2 | 10465  | 0.64 | 0.16 | 0.06 | 0.13 | 0.64 | 0.00 | 0.44  | -0.20 | -0.28 | -0.19 | 0.44  | -0.0640 | 0.0228 | -2.4 | 1.0 -1.5 | 1.0 A- | A+ | A+ |
| SCIENCE | 8 1 | 06258  | 2 | C.1.1.1 | 2 | 10465  | 0.33 | 0.19 | 0.15 | 0.33 | 0.33 | 0.00 | 0.28  | -0.12 | -0.17 | -0.05 | 0.28  | 1.5279  | 0.0229 | 3.8  | 1.0 9.9  | 1.2 A+ | A+ | A+ |
| SCIENCE | 8 4 | 159684 | 2 | C.2.1.3 | 2 | 10465  | 0.64 | 0.12 | 0.05 | 0.19 | 0.64 | 0.00 | 0.50  | -0.32 | -0.28 | -0.18 | 0.50  | -0.0656 | 0.0228 | -9.3 | 0.9 -9.9 | 0.9 A+ | A- | A- |
| SCIENCE | 8 8 | 333023 | 2 | A.3.1.5 | 2 | 10465  | 0.58 | 0.58 | 0.08 | 0.11 | 0.21 | 0.00 | 0.48  | 0.48  | -0.27 | -0.26 | -0.19 | 0.2431  | 0.0222 | -8.8 | 0.9 -8.9 | 0.9 A- | A+ | A+ |
| SCIENCE | 8 4 | 163092 | 3 | A.1.3.2 | 2 | 10493  | 0.62 | 0.06 | 0.11 | 0.62 | 0.21 | 0.00 | 0.23  | -0.28 | -0.21 | 0.23  | 0.05  | 0.0694  | 0.0225 | 9.9  | 1.2 9.9  | 1.3 A+ | A- | A- |
| SCIENCE | 8 2 | 202532 | 3 | A.1.1.1 | 2 | 10493  | 0.54 | 0.23 | 0.11 | 0.11 | 0.54 | 0.00 | 0.41  | -0.13 | -0.24 | -0.23 | 0.41  | 0.4486  | 0.0220 | 1.0  | 1.0 0.8  | 1.0 A+ | A+ | A+ |
| SCIENCE | 8 9 | 940767 | 3 | B.1.1.1 | 2 | 10493  | 0.34 | 0.12 | 0.34 | 0.08 | 0.46 | 0.00 | 0.05  | -0.29 | 0.05  | -0.25 | 0.28  | 1.4940  | 0.0228 | 9.9  | 1.4 9.9  | 1.7 A+ | A+ | A+ |
| SCIENCE | 8 7 | 783800 | 3 | C.3.1.1 | 2 | 10493  | 0.76 | 0.13 | 0.05 | 0.06 | 0.76 | 0.00 | 0.49  | -0.24 | -0.27 | -0.28 | 0.49  | -0.7765 | 0.0252 | -7.6 | 0.9 -8.8 | 0.8 A+ | A- | A- |
| SCIENCE | 8 2 | 275546 | 3 | B.3.3.4 | 2 | 10493  | 0.62 | 0.10 | 0.13 | 0.14 | 0.62 | 0.00 | 0.49  | -0.23 | -0.20 | -0.28 | 0.49  | 0.0272  | 0.0225 | -8.5 | 0.9 -6.0 | 0.9 A+ | A- | A+ |
| SCIENCE | 8 1 | 79422  | 3 | A.2.1.1 | 2 | 10493  | 0.24 | 0.24 | 0.30 | 0.32 | 0.14 | 0.00 | 0.26  | 0.26  | -0.09 | -0.07 | -0.11 | 2.0697  | 0.0248 | -0.9 | 1.0 9.9  | 1.4 A- | A- | A- |
| SCIENCE |     | 357503 | 3 | C.2.1.1 | 2 | 10493  | 0.68 | 0.08 | 0.68 | 0.18 |      | 0.00 | 0.41  | -0.19 | 0.41  | -0.24 | -0.19 | -0.2971 | 0.0234 | 0.1  | 1.0 -2.8 | 1.0 B- | A- | A- |
| SCIENCE |     | 366083 | 3 | A.1.2.3 | 2 | 10493  | 0.42 | 0.42 | 0.34 | 0.06 |      | 0.00 | 0.33  | 0.33  | -0.10 | -0.29 | -0.12 | 1.0432  | 0.0220 | 4.5  | 1.0 9.8  | 1.1 B- | A- | A- |
| SCIENCE |     | 559284 | 3 | A.2.1.5 | 2 | 10493  | 0.80 | 0.07 | 0.07 | 0.80 |      | 0.00 | 0.50  | -0.27 | -0.29 | 0.50  | -0.23 | -1.0787 | 0.0268 | -9.2 | 0.9 -6.4 | 0.8 A+ | A+ | A- |
| SCIENCE | 8 3 | 348373 | 3 | B.3.1.1 | 2 | 10493  | 0.48 | 0.24 | 0.48 | 0.12 |      | 0.00 | 0.29  | 0.00  | 0.29  | -0.23 | -0.19 | 0.7573  | 0.0218 | 9.9  | 1.1 9.9  | 1.2 A+ | A- | A- |
| SCIENCE | 8 1 | 31478  | 3 | A.3.2.1 | 2 | 10493  | 0.57 | 0.07 | 0.57 | 0.27 |      | 0.00 | 0.45  | -0.28 | 0.45  | -0.16 | -0.28 | 0.3203  | 0.0221 | -4.8 | 1.0 -4.9 | 0.9 A+ | A- | A- |
| SCIENCE | 8 1 | 61841  | 3 | D.1.3.1 | 1 | 10493  | 0.57 | 0.22 | 0.11 | 0.57 | 0.10 | 0.00 | 0.41  | -0.11 | -0.22 | 0.41  | -0.29 | 0.3100  | 0.0221 | -0.2 | 1.0 -1.6 | 1.0 A- | A- | A+ |
| SCIENCE |     | 01960  | 4 | A.2.1.1 | 2 | 10467  | 0.57 | 0.29 | 0.57 | 0.07 |      | 0.00 | 0.35  | -0.04 | 0.35  | -0.34 | -0.26 | 0.3226  | 0.0220 | 7.1  | 1.1 6.3  | 1.1 A+ | A+ | A- |
| SCIENCE |     | 252219 | 4 | A.1.2.3 | 2 | 10467  | 0.46 | 0.11 | 0.23 | 0.46 |      | 0.00 | 0.14  | -0.23 | -0.02 | 0.14  | 0.04  | 0.8738  | 0.0218 | 9.9  | 1.3 9.9  | 1.4 A- | A- | A- |
| SCIENCE |     | 318087 | 4 | C.1.1.2 | 2 | 10467  | 0.69 | 0.69 | 0.14 | 0.08 |      | 0.00 | 0.55  | 0.55  | -0.26 | -0.31 | -0.28 | -0.3479 | 0.0236 | -9.9 | 0.9 -9.9 | 0.8 A+ | A- | A- |
| SCIENCE |     | 87089  | 4 | D.1.1.1 | 2 | 10467  | 0.48 | 0.48 | 0.27 | 0.13 |      | 0.00 | 0.23  | 0.23  | -0.10 | -0.12 | -0.08 | 0.7599  | 0.0218 | 9.9  | 1.2 9.9  | 1.3 A- | A- | A- |
| SCIENCE |     | 17232  | 4 | C.2.1.2 | 2 | 10467  | 0.54 | 0.28 | 0.08 | 0.54 | 0.10 |      | 0.27  | 0.02  | -0.26 | 0.27  | -0.22 | 0.5101  | 0.0218 | 9.9  | 1.2 9.9  | 1.2 A+ | A- | A- |
| SCIENCE |     | 320471 | 4 | A.1.3.3 | 3 | 10467  | 0.67 | 0.67 | 0.13 | 0.12 | 0.07 | 0.00 | 0.49  | 0.49  | -0.29 | -0.25 | -0.19 | -0.2287 | 0.0232 | -7.8 | 0.9 -8.2 | 0.9 A+ | A- | A- |
| SCIENCE |     | 287949 | 4 | C.2.1.2 | 2 | 10467  | 0.41 | 0.41 | 0.10 | 0.20 |      | 0.00 | 0.30  | 0.30  | -0.26 | -0.11 | -0.05 | 1.1141  | 0.0220 | 6.2  | 1.1 9.9  | 1.2 B- | A- | A- |
| SCIENCE | 8 5 | 80894  | 4 | A.2.1.3 | 2 | 10467  | 0.39 | 0.23 | 0.21 | 0.39 | 0.17 | 0.00 | 0.28  | -0.05 | -0.06 | 0.28  | -0.24 | 1.2462  | 0.0222 | 6.7  | 1.1 9.9  | 1.2 A+ | A- | A- |

| SCIENCE | 0 0  | 41349 | 4      | A.1.1.4            | 2 | 10467 | 0.66 | 0.14 | 0.10 | 0.10 | 0.66 0 | 0.00 | 0.55  | -0.26 | -0.29 | -0.27 | 0.55  | -0.1330 | 0.0229 | -9.9 | 0.9 -9.9 | 0.8 A-  | A- | A-           |
|---------|------|-------|--------|--------------------|---|-------|------|------|------|------|--------|------|-------|-------|-------|-------|-------|---------|--------|------|----------|---------|----|--------------|
| SCIENCE |      | 71001 | 4      | A.1.1.4<br>A.3.2.2 | 2 | 10467 | 0.00 | 0.14 | 0.71 | 0.10 |        | 0.00 | 0.52  | -0.25 | 0.52  | -0.27 | -0.24 | -0.1330 | 0.0229 |      | 0.9 -9.9 | 0.8 A+  | A- | A-           |
| SCIENCE |      | 00505 | 4      | B.3.1.2            | 2 | 10467 | 0.71 | 0.40 | 0.71 | 0.13 |        | 0.00 | 0.32  | 0.23  | -0.07 | -0.29 | -0.24 | 1.1972  | 0.0239 | 9.9  | 1.1 9.9  | 1.3 A-  | _  | _            |
|         |      |       | 4      |                    |   |       |      |      |      | 0.14 |        |      |       |       |       |       |       |         | 0.0221 |      |          |         | A+ | A-           |
| SCIENCE |      | 13374 | 4      | D.1.2.2            | 2 | 10467 | 0.27 | 0.27 | 0.10 |      |        | 0.00 | 0.17  | 0.17  | -0.29 | 0.12  | -0.13 | 1.8765  |        | 9.9  | 1.1 9.9  | 1.5 A-  | A- | A-           |
| SCIENCE |      | 86449 | 5      | A.1.2.3            | 2 | 10513 | 0.69 | 0.10 | 0.10 | 0.10 |        | 0.00 | 0.57  | -0.28 | -0.33 | -0.25 | 0.57  | -0.3531 | 0.0236 | -9.9 | 0.8 -9.9 | 0.8 A-  | A- | A-           |
| SCIENCE |      | 61866 | 5      | B.3.3.1            | 2 | 10513 | 0.66 | 0.66 | 0.20 | 0.06 | 0.08 0 |      | 0.43  | 0.43  | -0.16 | -0.27 | -0.27 | -0.1547 | 0.0230 |      | 1.0 -2.8 | 1.0 A+  | A- | A-           |
| SCIENCE |      | 57216 | 5      | C.2.1.3            | 2 | 10513 | 0.64 | 0.10 | 0.15 | 0.11 |        | 0.00 | 0.43  | -0.25 | -0.18 | -0.20 | 0.43  | -0.0282 | 0.0227 | -1.1 | 1.0 -3.4 | 1.0 A-  | A+ | A-           |
| SCIENCE |      | 53356 | 5      | A.2.1.1            | 2 | 10513 | 0.46 | 0.15 | 0.15 | 0.24 |        | 0.00 | 0.36  | -0.22 | -0.24 | -0.03 | 0.36  | 0.8967  | 0.0219 | 5.9  | 1.1 6.9  | 1.1 A+  | A- | A+           |
| SCIENCE |      | 45898 | 5      | A.2.1.6            | 2 | 10513 | 0.83 | 0.06 | 0.83 | 0.05 |        | 0.00 | 0.53  | -0.30 | 0.53  | -0.29 | -0.28 | -1.2711 | 0.0281 | -9.9 | 0.8 -9.9 | 0.6 A+  | A- | A-           |
| SCIENCE |      | 68396 | 5      | B.3.2.3            | 2 | 10513 | 0.68 | 0.21 | 0.05 | 0.06 |        | 0.00 | 0.49  | -0.21 | -0.31 | -0.30 | 0.49  | -0.2894 | 0.0234 | -7.5 | 0.9 -5.5 | 0.9 A+  | A- | A-           |
| SCIENCE |      | 61874 | 5      | D.3.1.2            | 1 | 10513 | 0.75 | 0.05 | 0.11 | 0.09 |        | 0.00 | 0.51  | -0.25 | -0.28 | -0.27 | 0.51  | -0.7081 | 0.0250 |      | 0.9 -9.9 | 0.8 A-  | A- | A-           |
| SCIENCE |      | 05705 | 5      | C.2.1.3            | 2 | 10513 | 0.52 | 0.17 | 0.19 | 0.12 |        | 0.00 | 0.46  | -0.21 | -0.14 | -0.28 | 0.46  | 0.5902  | 0.0219 | -6.8 | 0.9 -5.7 | 0.9 A+  | A+ | A+           |
| SCIENCE |      | 83386 | 5      | A.1.1.1            | 2 | 10513 | 0.58 | 0.23 | 0.11 | 0.58 |        | 0.00 | 0.39  | -0.07 | -0.30 | 0.39  | -0.25 | 0.2776  | 0.0222 | 3.7  | 1.0 4.3  | 1.1 A+  | A- | A-           |
| SCIENCE |      | 46547 | 5      | A.1.1.2            | 2 | 10513 | 0.42 | 0.26 | 0.42 | 0.13 |        | 0.00 | 0.21  | 0.00  | 0.21  | -0.26 | -0.03 | 1.0874  | 0.0221 | 9.9  |          | 1.4 A-  | A- | A+           |
| SCIENCE |      | 46025 | 5      | A.1.2.1            | 2 | 10513 | 0.49 | 0.16 | 0.49 | 0.14 |        | 0.00 | 0.29  | -0.06 | 0.29  | -0.26 | -0.08 | 0.7200  | 0.0219 | 9.9  | 1.1 9.9  | 1.2 A-  | A- | A-           |
| SCIENCE |      | 23923 | 5      | D.1.3.2            | 2 | 10513 | 0.34 | 0.18 | 0.36 | 0.12 |        | 0.00 | 0.29  | -0.16 | -0.04 | -0.17 | 0.29  | 1.4793  | 0.0227 | 6.0  |          | 1.2 A-  | A- | A-           |
| SCIENCE |      | 16451 | 6      | C.2.2.2            | 1 | 10480 | 0.41 | 0.11 | 0.13 | 0.41 |        | 0.00 | 0.29  | -0.11 | -0.18 | 0.29  | -0.10 | 1.1593  | 0.0221 | 8.7  | 1.1 9.9  | 1.2 B-  | A- | A-           |
| SCIENCE |      | 01437 | 6      | A.2.1.6            | 3 | 10480 | 0.53 | 0.15 | 0.16 | 0.53 |        | 0.00 | 0.32  | -0.20 | -0.13 | 0.32  | -0.11 | 0.5588  | 0.0219 | 9.9  |          | 1.1 A-  | A- | A-           |
| SCIENCE | 8 48 | 88641 | 6      | C.2.2.1            | 1 | 10480 | 0.61 | 0.22 | 0.12 | 0.61 | 0.06 0 | 0.00 | 0.34  | -0.09 | -0.25 | 0.34  | -0.19 | 0.1357  | 0.0224 | 9.0  | 1.1 6.3  | 1.1 A-  | A- | A-           |
| SCIENCE | 8 94 | 47344 | 6      | A.1.2.2            | 2 | 10480 | 0.72 | 0.11 | 0.09 | 0.72 | 0.07 0 | 0.00 | 0.52  | -0.25 | -0.32 | 0.52  | -0.23 | -0.5231 | 0.0242 | -9.9 | 0.9 -9.9 | 0.8 A+  | A+ | A+           |
| SCIENCE | 8 8  | 61746 | 6      | B.3.3.1            | 2 | 10480 | 0.66 | 0.07 | 0.14 | 0.66 | 0.12 0 | 0.00 | 0.49  | -0.25 | -0.26 | 0.49  | -0.23 | -0.1553 | 0.0230 | -7.7 | 0.9 -8.7 | 0.9 A-  | A- | A-           |
| SCIENCE | 8 32 | 28135 | 6      | D.3.1.3            | 2 | 10480 | 0.33 | 0.15 | 0.36 | 0.15 | 0.33 0 | 0.00 | 0.24  | -0.20 | 0.08  | -0.23 | 0.24  | 1.5298  | 0.0229 | 9.9  | 1.1 9.9  | 1.3 A-  | A+ | A+           |
| SCIENCE | 8 24 | 45072 | 6      | A.1.3.2            | 3 | 10480 | 0.31 | 0.31 | 0.19 | 0.23 | 0.27 0 | 0.00 | 0.17  | 0.17  | -0.16 | -0.11 | 0.07  | 1.6685  | 0.0233 | 9.9  | 1.1 9.9  | 1.5 A-  | A- | A+           |
| SCIENCE | 8 83 | 34603 | 6      | A.2.2.3            | 2 | 10480 | 0.74 | 0.05 | 0.10 | 0.11 | 0.74 0 | 0.00 | 0.55  | -0.28 | -0.33 | -0.25 | 0.55  | -0.6220 | 0.0246 | -9.9 | 0.9 -9.9 | 0.7 A+  | A- | A+           |
| SCIENCE | 8 90 | 02815 | 6      | C.3.1.1            | 2 | 10480 | 0.49 | 0.10 | 0.13 | 0.28 | 0.49 0 | 0.00 | 0.34  | -0.29 | -0.20 | -0.03 | 0.34  | 0.7181  | 0.0219 | 9.1  | 1.1 9.9  | 1.1 A+  | A+ | A-           |
| SCIENCE | 8 1  | 78727 | 6      | A.2.1.6            | 3 | 10480 | 0.85 | 0.85 | 0.05 | 0.06 | 0.04 0 | 0.00 | 0.49  | 0.49  | -0.30 | -0.27 | -0.24 | -1.4790 | 0.0297 | -8.4 | 0.9 -9.9 | 0.7 A+  | B- | A-           |
| SCIENCE | 8 39 | 96732 | 6      | A.3.3.2            | 2 | 10480 | 0.20 | 0.06 | 0.20 | 0.56 | 0.17 0 | 0.00 | 0.19  | -0.21 | 0.19  | -0.01 | -0.04 | 2.3422  | 0.0262 | 5.1  | 1.1 9.9  | 1.6 A-  | A- | A+           |
| SCIENCE | 8 9  | 14660 | 6      | D.1.3.3            | 2 | 10480 | 0.51 | 0.51 | 0.24 | 0.10 | 0.15 0 | 0.00 | 0.35  | 0.35  | -0.18 | -0.24 | -0.07 | 0.6488  | 0.0219 | 5.6  | 1.1 5.6  | 1.1 B-  | A- | A-           |
| SCIENCE | 8 69 | 94875 | 7      | C.1.1.2            | 2 | 10519 | 0.45 | 0.21 | 0.45 | 0.17 | 0.18 0 | 0.00 | 0.34  | -0.11 | 0.34  | -0.19 | -0.14 | 0.9530  | 0.0218 | 2.7  | 1.0 8.3  | 1.1 A+  | A+ | A+           |
| SCIENCE | 8 3  | 11975 | 7      | C.2.1.2            | 2 | 10519 | 0.59 | 0.59 | 0.16 | 0.21 | 0.04 0 | 0.00 | 0.23  | 0.23  | -0.06 | -0.08 | -0.29 | 0.2338  | 0.0222 | 9.9  | 1.2 9.9  | 1.3 A+  | A+ | A+           |
| SCIENCE | 8 5: | 52790 | 7      | A.2.1.3            | 2 | 10519 | 0.35 | 0.21 | 0.25 | 0.35 | 0.18 0 | 0.00 | 0.12  | 0.04  | -0.05 | 0.12  | -0.13 | 1.4308  | 0.0225 | 9.9  | 1.3 9.9  | 1.5 A+  | A- | A-           |
| SCIENCE | 8 40 | 05608 | 7      | A.2.1.1            | 2 | 10519 | 0.62 | 0.17 | 0.62 | 0.13 | 0.08 0 | 0.00 | 0.45  | -0.18 | 0.45  | -0.27 | -0.21 | 0.0802  | 0.0224 | -4.2 | 1.0 -5.4 | 0.9 A-  | A- | A-           |
| SCIENCE | 8 6  | 71215 | 7      | D.2.1.1            | 2 | 10519 | 0.41 | 0.27 | 0.18 | 0.14 | 0.41 0 | 0.00 | 0.26  | -0.01 | -0.19 | -0.14 | 0.26  | 1.1553  | 0.0220 | 9.9  | 1.1 9.9  | 1.2 A+  | A+ | A-           |
| SCIENCE | 8 9: | 54841 | 7      | A.3.1.2            | 1 | 10519 | 0.50 | 0.27 | 0.09 | 0.50 | 0.14 0 | 0.00 | 0.36  | -0.13 | -0.23 | 0.36  | -0.16 | 0.6626  | 0.0218 | 4.2  | 1.0 4.3  | 1.1 A-  | A- | A-           |
| SCIENCE | 8 60 | 67555 | 7      | A.2.1.4            | 2 | 10519 | 0.68 | 0.09 | 0.11 | 0.68 | 0.12 0 | 0.00 | 0.38  | -0.29 | -0.24 | 0.38  | -0.05 | -0.2490 | 0.0233 | 3.8  | 1.0 7.1  | 1.1 A+  | A- | A-           |
| SCIENCE | 8 5  | 76543 | 7      | C.2.2.2            | 2 | 10519 | 0.36 | 0.36 | 0.19 | 0.27 | 0.17 0 | 0.00 | 0.29  | 0.29  | -0.09 | -0.06 | -0.20 | 1.3934  | 0.0224 | 6.7  | 1.1 9.9  | 1.2 A-  | A- | A+           |
| SCIENCE | 8 82 | 22298 | 7      | A.1.1.3            | 2 | 10519 | 0.70 | 0.08 | 0.18 | 0.70 | 0.05 0 | 0.00 | 0.36  | -0.27 | -0.10 | 0.36  | -0.24 | -0.3689 | 0.0236 | 4.9  | 1.1 9.4  | 1.2 A+  | A- | A+           |
| SCIENCE | 8 6  | 70589 | 7      | A.2.2.1            | 2 | 10519 | 0.69 | 0.06 | 0.06 | 0.69 | 0.18 0 | 0.00 | 0.46  | -0.29 | -0.32 | 0.46  | -0.16 | -0.3345 | 0.0235 | -4.3 | 1.0 -3.1 | 1.0 A+  | A- | A-           |
| SCIENCE | 8 2  | 84866 | 7      | B.3.3.3            | 2 | 10519 | 0.43 | 0.20 | 0.16 | 0.43 | 0.20 0 | 0.00 | 0.33  | -0.11 | -0.26 | 0.33  | -0.05 | 1.0612  | 0.0219 | 4.4  | 1.0 9.9  | 1.2 A+  | A- | A-           |
| SCIENCE | 8 24 | 45499 | 7      | A.1.1.2            | 2 | 10519 | 0.72 | 0.21 | 0.04 | 0.72 | 0.03 0 | 0.00 | 0.45  | -0.24 | -0.29 | 0.45  | -0.26 | -0.4727 | 0.0240 | -4.1 | 1.0 -4.5 | 0.9 B+  | A- | A-           |
| SCIENCE | 8 19 | 95716 | 8      | C.1.1.1            | 2 | 10516 | 0.35 | 0.35 | 0.19 | 0.27 | 0.19 0 | 0.00 | 0.26  | 0.26  | -0.17 | -0.10 | -0.03 | 1.4024  | 0.0225 | 7.6  | 1.1 9.9  | 1.3 A-  | A+ | A-           |
| SCIENCE | 8 20 | 61081 | 8      | C.2.1.3            | 2 | 10516 | 0.48 | 0.27 | 0.10 | 0.15 | 0.48 0 | 0.00 | 0.34  | -0.10 | -0.23 | -0.16 | 0.34  | 0.7718  | 0.0217 | 5.1  | 1.0 7.1  | 1.1 A-  | A+ | A+           |
| SCIENCE | 8 7: | 50211 | 8      | A.1.1.4            | 3 | 10516 | 0.46 | 0.25 | 0.46 | 0.18 | 0.10 0 | 0.00 | 0.33  | -0.19 | 0.33  | -0.11 | -0.13 | 0.8414  | 0.0218 | 4.7  | 1.0 8.1  | 1.1 A-  | A+ | A+           |
| SCIENCE |      | 93060 | 8      | A.1.2.3            | 3 | 10516 | 0.59 | 0.10 | 0.19 | 0.12 |        | 0.00 | 0.47  | -0.24 | -0.21 | -0.23 | 0.47  | 0.2038  | 0.0221 | -7.8 | 0.9 -7.8 | 0.9 A+  | A- | A+           |
| SCIENCE |      | 94229 | 8      | C.3.1.2            | 2 | 10516 | 0.61 | 0.07 | 0.11 | 0.21 | 0.61 0 |      | 0.31  | -0.27 | -0.24 | -0.01 | 0.31  | 0.0806  | 0.0223 | 9.9  | 1.1 9.9  | 1.2 A+  | A- | A-           |
| SCIENCE |      | 68452 | 8      | A.3.1.3            | 2 | 10516 | 0.64 | 0.12 | 0.12 | 0.12 |        | 0.00 | 0.48  | -0.21 | -0.22 | -0.28 | 0.48  | -0.0758 | 0.0226 | -8.0 |          | 0.9 A-  | A- | A-           |
| SCIENCE |      | 24304 | 8      | C.2.2.3            | 3 | 10516 | 0.14 | 0.12 | 0.12 | 0.12 |        | 0.00 | -0.01 | -0.11 | -0.20 | 0.25  | -0.01 | 2.7820  | 0.0226 | 9.9  | 1.2 9.9  | 2.4 A-  | A- | A-           |
| SCIENCE |      | 41160 | 8      | A.1.2.1            | 2 | 10516 | 0.47 | 0.47 | 0.08 | 0.27 |        | 0.00 | 0.31  | 0.31  | -0.25 | -0.06 | -0.15 | 0.8239  | 0.0218 | 8.7  | 1.1 9.9  | 1.1 B-  | A+ | A+           |
| SCIENCE |      | 34983 | 8      | A.2.2.2            | 2 | 10516 | 0.47 | 0.09 | 0.16 | 0.64 |        | 0.00 | 0.42  | -0.21 | -0.25 | 0.42  | -0.15 | -0.0735 | 0.0216 | -1.3 | 1.0 -2.7 | 1.0 A+  | A- | A-           |
| SCIENCE |      | 65812 | 8      | B.3.3.4            | 2 | 10516 | 0.66 | 0.66 | 0.10 | 0.12 |        | 0.00 | 0.42  | 0.57  | -0.23 | -0.29 | -0.10 | -0.1542 | 0.0228 | -9.9 | 0.8 -9.9 | 0.7 A+  | A- | A-           |
| SCIENCE |      | 58932 | Q<br>Q | A.1.2.4            | 2 | 10516 | 0.49 | 0.16 | 0.12 | 0.12 |        | 0.00 | 0.30  | -0.16 | -0.04 | 0.30  | -0.23 | 0.7048  | 0.0228 | 9.9  |          | 1.2 A+  | Δ- | A-           |
| SCIENCE | 0 2. | J07J2 | 0      | Λ.1.2.4            | 7 | 10510 | 0.47 | 0.10 | 0.20 | 0.49 | 0.00   | .00  | 0.50  | -0.10 | -0.04 | 0.50  | -0.27 | 0.7040  | 0.0217 | 7.7  | 1.1 9.9  | 1.4 11+ | Δ- | / <b>1</b> - |

| SCIENCE | 8 | 551708 | 8  | D.2.1.3 | 2 | 10516 | 0.47 | 0.14 | 0.47 | 0.23 | 0.16 | 0.00 | 0.24  | -0.17 | 0.24  | -0.07 | -0.08 | 0.8145  | 0.0218 | 9.9  | 1.2 9.9  | 1.3 A   | - A- | A- |
|---------|---|--------|----|---------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|---------|--------|------|----------|---------|------|----|
| SCIENCE | 8 | 336669 | 9  | D.1.1.1 | 2 | 10487 | 0.55 | 0.15 | 0.13 | 0.55 | 0.17 | 0.00 | 0.27  | -0.13 | -0.15 | 0.27  | -0.10 | 0.4600  | 0.0218 | 9.9  | 1.1 9.9  | 1.2 A   |      | A- |
| SCIENCE | 8 | 346566 | 9  | A.2.2.3 | 2 | 10487 | 0.46 | 0.17 | 0.12 | 0.46 | 0.25 | 0.00 | 0.25  | -0.16 | -0.16 | 0.25  | -0.03 | 0.8896  | 0.0217 | 9.9  | 1.1 9.9  | 1.2 A   | + A- | A- |
| SCIENCE | 8 | 204821 | 9  | B.1.1.4 | 2 | 10487 | 0.67 | 0.06 | 0.67 | 0.06 | 0.21 | 0.00 | 0.37  | -0.25 | 0.37  | -0.30 | -0.11 | -0.1870 | 0.0230 | 3.5  | 1.0 2.3  | 1.0 A   | + A- | A- |
| SCIENCE | 8 | 238324 | 9  | A.3.1.5 | 2 | 10487 | 0.63 | 0.11 | 0.13 | 0.63 | 0.12 | 0.00 | 0.41  | -0.21 | -0.22 | 0.41  | -0.16 | 0.0051  | 0.0225 | -1.1 | 1.0 -3.2 | 2 1.0 A | + A- | A- |
| SCIENCE | 8 | 790122 | 9  | C.3.1.1 | 3 | 10487 | 0.41 | 0.41 | 0.13 | 0.31 | 0.16 | 0.00 | 0.23  | 0.23  | -0.22 | 0.09  | -0.21 | 1.1498  | 0.0219 | 9.9  | 1.1 9.9  | 1.3 A   | - A- | A- |
| SCIENCE | 8 | 494687 | 9  | A.1.3.1 | 1 | 10487 | 0.70 | 0.09 | 0.15 | 0.70 | 0.06 | 0.00 | 0.47  | -0.25 | -0.20 | 0.47  | -0.29 | -0.3693 | 0.0236 | -6.3 | 0.9 -7.5 | 0.9 A   | - A- | A- |
| SCIENCE | 8 | 912131 | 9  | A.2.2.3 | 2 | 10487 | 0.76 | 0.13 | 0.08 | 0.76 | 0.03 | 0.00 | 0.49  | -0.24 | -0.28 | 0.49  | -0.28 | -0.7196 | 0.0250 | -8.4 | 0.9 -8.1 | 0.8 B   | - A- | A- |
| SCIENCE | 8 | 799325 | 9  | A.1.1.2 | 2 | 10487 | 0.36 | 0.36 | 0.18 | 0.20 | 0.26 | 0.00 | 0.18  | 0.18  | -0.10 | -0.11 | 0.00  | 1.3759  | 0.0223 | 9.9  | 1.2 9.9  | 1.4 A   | + A+ | A+ |
| SCIENCE | 8 | 761004 | 9  | B.2.1.5 | 2 | 10487 | 0.44 | 0.20 | 0.14 | 0.22 | 0.44 | 0.00 | 0.40  | -0.11 | -0.25 | -0.16 | 0.40  | 0.9851  | 0.0218 | -5.8 | 1.0 0.0  | 1.0 A   | - A- | A- |
| SCIENCE | 8 | 972668 | 9  | C.2.1.3 | 2 | 10487 | 0.30 | 0.28 | 0.20 | 0.30 | 0.22 | 0.00 | 0.11  | 0.03  | -0.19 | 0.11  | 0.04  | 1.7177  | 0.0233 | 9.9  | 1.2 9.9  | 1.6 A   | - A- | A- |
| SCIENCE | 8 | 980125 | 9  | A.1.3.2 | 3 | 10487 | 0.39 | 0.22 | 0.39 | 0.22 | 0.16 | 0.00 | 0.20  | -0.06 | 0.20  | -0.08 | -0.10 | 1.2258  | 0.0221 | 9.9  | 1.2 9.9  | 1.3 A   | - A- | A- |
| SCIENCE | 8 | 950417 | 9  | D.3.1.1 | 2 | 10487 | 0.34 | 0.11 | 0.34 | 0.12 | 0.42 | 0.00 | 0.08  | -0.25 | 0.08  | -0.26 | 0.25  | 1.4640  | 0.0225 | 9.9  | 1.3 9.9  | 1.6 A   | + A- | A- |
| SCIENCE | 8 | 592347 | 10 | D.1.1.2 | 2 | 10502 | 0.57 | 0.12 | 0.57 | 0.11 | 0.19 | 0.00 | 0.39  | -0.24 | 0.39  | -0.23 | -0.10 | 0.3214  | 0.0220 | 1.7  | 1.0 1.8  | 1.0 A   | + A- | A- |
| SCIENCE | 8 | 882081 | 10 | A.3.2.3 | 2 | 10502 | 0.54 | 0.11 | 0.18 | 0.54 | 0.17 | 0.00 | 0.44  | -0.26 | -0.19 | 0.44  | -0.18 | 0.4858  | 0.0218 | -6.2 | 1.0 -5.8 | 0.9 A   | + A- | A- |
| SCIENCE | 8 | 800353 | 10 | D.3.1.2 | 2 | 10502 | 0.71 | 0.08 | 0.71 | 0.07 | 0.13 | 0.00 | 0.49  | -0.18 | 0.49  | -0.30 | -0.28 | -0.4565 | 0.0238 | -8.3 | 0.9 -7.9 | 0.9 A   | - A- | A- |
| SCIENCE | 8 | 680753 | 10 | C.3.1.2 | 2 | 10502 | 0.38 | 0.17 | 0.11 | 0.38 | 0.34 | 0.00 | 0.21  | -0.16 | -0.21 | 0.21  | 0.06  | 1.2954  | 0.0222 | 9.9  | 1.2 9.9  | 1.3 A   | - A+ | A- |
| SCIENCE | 8 | 113453 | 10 | A.2.1.2 | 2 | 10502 | 0.65 | 0.65 | 0.09 | 0.16 | 0.10 | 0.00 | 0.47  | 0.47  | -0.24 | -0.20 | -0.27 | -0.0897 | 0.0227 | -6.7 | 0.9 -8.9 | 0.9 A   | - A- | A- |
| SCIENCE | 8 | 226902 | 10 | A.3.1.1 | 2 | 10502 | 0.54 | 0.12 | 0.11 | 0.22 | 0.54 | 0.00 | 0.49  | -0.23 | -0.35 | -0.14 | 0.49  | 0.4491  | 0.0219 | -9.9 | 0.9 -9.9 | 0.9 A   | + A+ | A- |
| SCIENCE | 8 | 259076 | 10 | A.1.1.4 | 3 | 10502 | 0.42 | 0.42 | 0.11 | 0.39 | 0.08 | 0.00 | 0.23  | 0.23  | -0.27 | 0.08  | -0.25 | 1.0625  | 0.0219 | 9.9  | 1.2 9.9  | 1.3 A   | - A- | A- |
| SCIENCE | 8 | 680015 | 10 | B.1.1.1 | 2 | 10502 | 0.64 | 0.14 | 0.64 | 0.07 | 0.16 | 0.00 | 0.41  | -0.23 | 0.41  | -0.27 | -0.14 | -0.0413 | 0.0226 | -0.1 | 1.0 -2.0 | 1.0 A   | - A- | A- |
| SCIENCE | 8 | 382662 | 10 | D.2.1.2 | 2 | 10502 | 0.29 | 0.31 | 0.14 | 0.29 | 0.25 | 0.00 | -0.01 | 0.14  | -0.16 | -0.01 | -0.01 | 1.7445  | 0.0234 | 9.9  | 1.4 9.9  | 1.8 A   | + A+ | A- |
| SCIENCE | 8 | 120517 | 10 | B.3.1.3 | 2 | 10502 | 0.55 | 0.23 | 0.12 | 0.55 | 0.10 | 0.00 | 0.29  | 0.02  | -0.27 | 0.29  | -0.21 | 0.4276  | 0.0219 | 9.9  | 1.1 9.9  | 1.2 A   | - A- | A+ |
| SCIENCE | 8 | 457290 | 10 | B.3.3.2 | 1 | 10502 | 0.53 | 0.10 | 0.11 | 0.53 | 0.26 | 0.00 | 0.36  | -0.23 | -0.22 | 0.36  | -0.09 | 0.5281  | 0.0218 | 4.9  | 1.0 4.6  | 1.1 A   | - A- | A- |
| SCIENCE | 8 | 448262 | 10 | A.2.1.4 | 3 | 10502 | 0.44 | 0.18 | 0.44 | 0.23 | 0.15 | 0.00 | 0.29  | -0.12 | 0.29  | -0.13 | -0.12 | 0.9817  | 0.0218 | 9.5  | 1.1 9.9  | 1.2 A   | + A+ | A+ |
| SCIENCE | 8 | 130436 | 11 | B.2.1.5 | 2 | 10554 | 0.50 | 0.50 | 0.34 | 0.09 | 0.08 | 0.00 | 0.36  | 0.36  | -0.09 | -0.24 | -0.24 | 0.6863  | 0.0216 | 3.4  | 1.0 5.2  | 2 1.1 A | - A- | A- |
| SCIENCE | 8 | 972159 | 11 | A.3.3.1 | 2 | 10554 | 0.41 | 0.14 | 0.21 | 0.41 | 0.23 | 0.00 | 0.17  | -0.20 | -0.09 | 0.17  | 0.06  | 1.0983  | 0.0219 | 9.9  | 1.2 9.9  | 1.4 A   | + A+ | A+ |
| SCIENCE | 8 | 626816 | 11 | A.1.2.4 | 2 | 10554 | 0.55 | 0.13 | 0.55 | 0.17 | 0.14 | 0.00 | 0.40  | -0.20 | 0.40  | -0.25 | -0.09 | 0.4011  | 0.0218 | -0.8 | 1.0 -1.2 | 2 1.0 A | - A- | A- |
| SCIENCE | 8 | 197174 | 11 | B.3.3.2 | 2 | 10554 | 0.46 | 0.24 | 0.14 | 0.46 | 0.16 | 0.00 | 0.32  | -0.08 | -0.22 | 0.32  | -0.13 | 0.8554  | 0.0217 | 6.8  | 1.1 9.0  | 1.1 A   | - A- | A+ |
| SCIENCE | 8 | 615734 | 11 | A.3.1.4 | 2 | 10554 | 0.40 | 0.40 | 0.24 | 0.19 | 0.17 | 0.00 | 0.22  | 0.22  | -0.07 | -0.17 | -0.02 | 1.1486  | 0.0219 | 9.9  | 1.2 9.9  | 1.3 A   | + A+ | A- |
| SCIENCE | 8 | 191756 | 11 | C.1.1.3 | 2 | 10554 | 0.59 | 0.59 | 0.12 | 0.13 | 0.15 | 0.00 | 0.44  | 0.44  | -0.25 | -0.22 | -0.15 | 0.2165  | 0.0220 | -4.0 | 1.0 -4.8 | 0.9 A   | + A- | A+ |
| SCIENCE | 8 | 306248 | 11 | A.3.3.2 | 2 | 10554 | 0.66 | 0.66 | 0.12 | 0.06 | 0.15 | 0.00 | 0.40  | 0.40  | -0.25 | -0.29 | -0.09 | -0.1362 | 0.0228 | 1.2  | 1.0 4.2  | 2 1.1 A | + A- | A- |
| SCIENCE | 8 | 165086 | 11 | C.3.1.3 | 2 | 10554 | 0.26 | 0.11 | 0.54 | 0.26 | 0.08 | 0.00 | 0.16  | -0.16 | 0.12  | 0.16  | -0.28 | 1.9042  | 0.0239 | 9.9  | 1.1 9.9  | 1.5 A   | - A- | A+ |
| SCIENCE | 8 | 273941 | 11 | D.1.1.4 | 2 | 10554 | 0.60 | 0.10 | 0.60 | 0.09 | 0.21 | 0.00 | 0.30  | -0.23 | 0.30  | -0.25 | -0.02 | 0.1776  | 0.0221 | 9.9  | 1.1 9.9  | 1.2 A   | - A- | A- |
| SCIENCE | 8 | 128303 | 11 | A.1.3.4 | 2 | 10554 | 0.39 | 0.39 | 0.19 | 0.21 | 0.21 | 0.00 | 0.24  | 0.24  | -0.08 | -0.16 | -0.05 | 1.2205  | 0.0220 | 9.9  | 1.1 9.9  | 1.3 A   | - A- | A- |
| SCIENCE | 8 | 942236 | 11 | A.3.1.2 | 3 | 10554 | 0.49 | 0.21 | 0.49 | 0.16 | 0.14 | 0.00 | 0.33  | -0.09 | 0.33  | -0.20 | -0.16 | 0.7266  | 0.0216 | 6.7  | 1.1 8.0  | 1.1 A   | + A- | A- |
| SCIENCE |   | 155629 | 11 | D.3.1.3 | 2 | 10554 | 0.23 | 0.18 | 0.15 | 0.43 |      | 0.00 | 0.04  | -0.07 | -0.17 | 0.16  | 0.04  | 2.0926  | 0.0248 | 9.9  |          |         | + A- | A+ |
| SCIENCE | 8 | 174171 | 12 | B.1.1.4 | 2 | 10498 | 0.51 | 0.14 | 0.51 | 0.20 |      | 0.00 | 0.34  | -0.18 | 0.34  | -0.14 | -0.15 | 0.6173  | 0.0219 | 7.0  |          |         | + A+ | A+ |
| SCIENCE | 8 | 880834 | 12 | A.2.1.5 | 2 | 10498 | 0.61 | 0.61 | 0.23 | 0.08 |      | 0.00 | 0.40  | 0.40  | -0.12 | -0.29 | -0.23 | 0.0959  | 0.0224 | 1.7  | 1.0 2.0  |         |      | A- |
| SCIENCE | 8 | 578649 | 12 | A.1.1.2 | 2 | 10498 | 0.43 | 0.22 | 0.17 | 0.18 |      | 0.00 | 0.30  | -0.06 | -0.19 | -0.12 | 0.30  | 1.0330  | 0.0220 | 9.9  | 1.1 9.9  | 1.2 A   | + A- | A- |
| SCIENCE | 8 | 819254 | 12 | B.3.1.3 | 2 | 10498 | 0.41 | 0.09 | 0.41 | 0.26 | 0.23 | 0.00 | 0.25  | -0.22 | 0.25  | -0.12 | 0.00  | 1.1131  | 0.0221 | 9.9  | 1.1 9.9  | 1.3 A   | + A- | A+ |
| SCIENCE | 8 | 221089 | 12 | D.1.2.2 | 2 | 10498 | 0.30 | 0.27 | 0.22 | 0.21 | 0.30 | 0.00 | 0.16  | 0.02  | -0.06 | -0.13 | 0.16  | 1.7048  | 0.0234 | 9.9  | 1.2 9.9  | 1.5 A   | - A- | A- |
| SCIENCE | 8 | 670899 | 12 | D.1.1.4 | 2 | 10498 | 0.57 | 0.09 | 0.17 | 0.17 | 0.57 | 0.00 | 0.49  | -0.25 | -0.18 | -0.27 | 0.49  | 0.3399  | 0.0221 | -9.9 | 0.9 -9.7 | 0.9 A   | + A- | A- |
| SCIENCE | 8 | 562264 | 12 | B.1.1.1 | 2 | 10498 | 0.74 | 0.04 | 0.04 | 0.17 | 0.74 | 0.00 | 0.44  | -0.27 | -0.26 | -0.22 | 0.44  | -0.6536 | 0.0247 | -3.2 | 1.0 -3.9 | 0.9 A   | + B- | A- |
| SCIENCE | 8 | 839100 | 12 | C.1.1.1 | 2 | 10498 | 0.58 | 0.19 | 0.58 | 0.12 | 0.10 | 0.00 | 0.27  | -0.14 | 0.27  | -0.17 | -0.07 | 0.2543  | 0.0222 | 9.9  | 1.2 9.9  | 1.2 A   | + A- | A+ |
| SCIENCE | 8 | 802937 | 12 | A.1.3.3 | 2 | 10498 | 0.45 | 0.45 | 0.11 | 0.23 | 0.21 | 0.00 | 0.38  | 0.38  | -0.23 | -0.18 | -0.10 | 0.9314  | 0.0219 | -1.7 | 1.0 3.8  | 1.1 B   | - A- | A- |
| SCIENCE | 8 | 278140 | 12 | A.2.1.1 | 1 | 10498 | 0.75 | 0.16 | 0.05 | 0.04 | 0.75 | 0.01 | 0.45  | -0.22 | -0.27 | -0.28 | 0.45  | -0.6916 | 0.0249 | -4.6 | 0.9 -4.8 | 0.9 A   | + A+ | A+ |
| SCIENCE | 8 | 837558 | 12 | A.3.1.3 | 2 | 10498 | 0.71 | 0.71 | 0.08 | 0.08 | 0.12 | 0.00 | 0.50  | 0.50  | -0.26 | -0.25 | -0.25 | -0.4674 | 0.0240 | -8.0 | 0.9 -9.9 | 0.8 A   | + A- | A- |
| SCIENCE | 8 | 453500 | 12 | D.1.1.1 | 2 | 10498 | 0.25 | 0.17 | 0.34 | 0.24 | 0.25 | 0.00 | 0.15  | -0.05 | -0.08 | -0.01 | 0.15  | 2.0405  | 0.0247 | 9.9  | 1.2 9.9  | 1.6 A   | + A- | A- |

| WRITING | 5 | 745699 | 1 | B.6 | 1 | 124429 | 0.72 | 0.06 | 0.06 | 0.72 | 0.16 | 0.00 | 0.39 | -0.25 | -0.16 | 0.39  | -0.21 | 0.6846  | 0.0083 | 9.9 | 1.7 | 9.9 | 9.9 |  |  |
|---------|---|--------|---|-----|---|--------|------|------|------|------|------|------|------|-------|-------|-------|-------|---------|--------|-----|-----|-----|-----|--|--|
| WRITING | 5 | 118533 | 1 | B.6 | 1 | 124429 | 0.86 | 0.07 | 0.86 | 0.03 |      |      | 0.30 | -0.14 | 0.30  | -0.16 | -0.22 | -0.8342 | 0.0105 | 9.9 |     | 9.9 | 9.9 |  |  |
| WRITING | 5 | 728403 | 1 | B.5 | 2 | 124429 | 0.70 | 0.08 | 0.05 | 0.16 | 0.70 | 0.00 | 0.40 | -0.26 | -0.26 | -0.14 | 0.40  | 0.8613  | 0.0082 | 9.9 | 1.7 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 336952 | 1 | B.5 | 2 | 124429 | 0.65 | 0.11 | 0.15 | 0.09 | 0.65 | 0.00 | 0.31 | -0.18 | -0.11 | -0.17 | 0.31  | 1.2556  | 0.0081 | 9.9 | 2.0 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 657763 | 1 | B.5 | 2 | 124429 | 0.82 | 0.82 | 0.09 | 0.02 | 0.06 | 0.00 | 0.44 | 0.44  | -0.24 | -0.23 | -0.26 | -0.3434 | 0.0095 | 9.9 | 1.4 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 597893 | 1 | B.5 | 2 | 124429 | 0.88 | 0.06 | 0.88 | 0.03 | 0.03 | 0.00 | 0.37 | -0.22 | 0.37  | -0.19 | -0.21 | -1.0630 | 0.0110 | 9.9 | 1.5 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 613475 | 1 | B.6 | 2 | 124429 | 0.66 | 0.09 | 0.11 | 0.66 | 0.13 | 0.00 | 0.33 | -0.19 | -0.17 | 0.33  | -0.13 | 1.1318  | 0.0081 | 9.9 | 1.9 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 401704 | 1 | B.5 | 2 | 124429 | 0.59 | 0.28 | 0.08 | 0.05 | 0.59 | 0.00 | 0.43 | -0.21 | -0.26 | -0.20 | 0.43  | 1.7205  | 0.0080 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 431220 | 1 | B.5 | 2 | 124429 | 0.68 | 0.04 | 0.02 | 0.27 | 0.68 | 0.00 | 0.34 | -0.18 | -0.21 | -0.22 | 0.34  | 1.0267  | 0.0081 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 343537 | 1 | B.6 | 1 | 124429 | 0.71 | 0.14 | 0.71 | 0.06 | 0.09 | 0.00 | 0.41 | -0.23 | 0.41  | -0.19 | -0.21 | 0.7798  | 0.0083 | 9.9 | 1.6 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 176942 | 1 | B.6 | 1 | 124429 | 0.65 | 0.65 | 0.15 | 0.09 | 0.11 | 0.00 | 0.37 | 0.37  | -0.19 | -0.20 | -0.16 | 1.2462  | 0.0081 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 5 | 547148 | 1 | B.5 | 2 | 124429 | 0.68 | 0.06 | 0.13 | 0.12 | 0.68 | 0.00 | 0.31 | -0.22 | -0.14 | -0.12 | 0.31  | 0.9964  | 0.0081 | 9.9 | 1.9 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 238868 | 1 | B.6 | 2 | 127637 | 0.53 | 0.10 | 0.15 | 0.53 | 0.22 | 0.00 | 0.32 | -0.18 | -0.12 | 0.32  | -0.15 | 2.4093  | 0.0076 | 9.9 | 1.9 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 374496 | 1 | B.5 | 2 | 127637 | 0.70 | 0.09 | 0.08 | 0.13 | 0.70 | 0.00 | 0.38 | -0.25 | -0.21 | -0.13 | 0.38  | 1.1094  | 0.0082 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 873175 | 1 | B.5 | 2 | 127637 | 0.48 | 0.04 | 0.48 | 0.30 | 0.18 | 0.00 | 0.35 | -0.11 | 0.35  | -0.18 | -0.18 | 2.7813  | 0.0075 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 376527 | 1 | B.6 | 1 | 127637 | 0.79 | 0.79 | 0.08 | 0.03 | 0.10 | 0.00 | 0.31 | 0.31  | -0.19 | -0.16 | -0.15 | 0.2962  | 0.0089 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 100048 | 1 | B.5 | 2 | 127637 | 0.77 | 0.09 | 0.77 | 0.08 | 0.06 | 0.00 | 0.30 | -0.23 | 0.30  | -0.18 | -0.04 | 0.4446  | 0.0087 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 301527 | 1 | B.6 | 2 | 127637 | 0.62 | 0.62 | 0.11 | 0.16 | 0.10 | 0.00 | 0.44 | 0.44  | -0.22 | -0.21 | -0.22 | 1.6969  | 0.0078 | 9.9 | 1.7 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 759431 | 1 | B.6 | 1 | 127637 | 0.75 | 0.03 | 0.75 | 0.07 | 0.15 | 0.00 | 0.41 | -0.21 | 0.41  | -0.20 | -0.25 | 0.6314  | 0.0085 | 9.9 | 1.7 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 329565 | 1 | B.5 | 2 | 127637 | 0.72 | 0.12 | 0.03 | 0.13 | 0.72 | 0.00 | 0.33 | -0.20 | -0.20 | -0.14 | 0.33  | 0.9170  | 0.0083 | 9.9 | 1.9 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 445588 | 1 | B.5 | 2 | 127637 | 0.62 | 0.07 | 0.19 | 0.62 | 0.12 | 0.00 | 0.39 | -0.23 | -0.19 | 0.39  | -0.17 | 1.7130  | 0.0078 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 354546 | 1 | B.6 | 1 | 127637 | 0.70 | 0.09 | 0.70 | 0.17 | 0.04 | 0.00 | 0.42 | -0.16 | 0.42  | -0.28 | -0.20 | 1.1189  | 0.0081 | 9.9 | 1.7 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 928356 | 1 | B.5 | 2 | 127637 | 0.61 | 0.27 | 0.04 | 0.08 | 0.61 | 0.00 | 0.38 | -0.19 | -0.25 | -0.19 | 0.38  | 1.7694  | 0.0078 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |
| WRITING | 8 | 699346 | 1 | B.6 | 1 | 127637 | 0.63 | 0.14 | 0.63 | 0.17 | 0.07 | 0.00 | 0.41 | -0.22 | 0.41  | -0.21 | -0.18 | 1.6824  | 0.0078 | 9.9 | 1.8 | 9.9 | 9.9 |  |  |

| MATH   3   801995   2   B-O.I   2   1100   2.09   0.14   0.17   0.26   0.31   0.12   0.00   0.72   0.61   0.21   0.04   0.38   0.32   2.6399   0.0380   0.1   1.0   0.1   1.0   A-B   B-C   MATH   3   645005   4   A-T.I   2   1099   0.54   0.61   0.24   0.13   0.01   0.00   0.01   0.55   0.56   0.32   0.37   0.08   0.08   5.4581   0.0520   2.1   0.9   2.6   0.8   A-A   A-A   MATH   3   822702   6   D-M.4   2   1099   1.56   0.34   0.13   0.08   0.00   0.09   0.04   0.04   0.22   0.27   0.23   4.1923   0.0387   3.7   1.2   0.2   1.5   A-B   B-A   MATH   3   822702   6   D-M.4   2   1099   1.56   0.34   0.11   0.16   0.15   0.00   0.09   0.04   0.04   0.18   0.31   0.33   0.32   0.0387   3.7   1.2   0.2   1.5   A-B   B-A   MATH   3   822702   6   D-M.4   2   1.099   1.56   0.34   0.11   0.16   0.15   0.00   0.09   0.04   0.04   0.18   0.31   0.33   0.326   0.0385   1.5   1.1   0.1   0.1   0.04   0.18   0.04   0.18   0.04   0.18   0.04   0.18   0.0387   0.08   0.08   0.08   0.08   0.08   0.09   0.04   0.04   0.18   0.04   0.18   0.0387   0.08   0.08   0.08   0.08   0.08   0.08   0.09   0.04   0.04   0.18   0.04   0.18   0.03   0.0387   0.08   0.08   0.08   0.08   0.08   0.09   0.04   0.04   0.18   0.04   0.18   0.03   0.0387   0.0387   0.08   0.08   0.08   0.08   0.08   0.08   0.08   0.09   0.04   0.04   0.04   0.04   0.04   0.04   0.03   0.0387   0.0387   0.08   0.08   0.08   0.08   0.08   0.09   0.04   0.04   0.09   0.05   0.04   0.04   0.09   0.05   0.04   0.04   0.09   0.05   0.04   0.04   0.09   0.05   0.04   0.04   0.09   0.05   0.04   0.04   0.09   0.05   0.04   0.04   0.09   0.05   0.04   0.05 |      | Item Info   | rmatior    | ı       |     |        |      |      |        |      |      | Cl   | lassica | ıl           |       |               |       |       |       | Ra     | sch    | Inf  | fit | Out  | fit |     | DIF |     |
|---|------|-------------|------------|---------|-----|--------|------|------|--------|------|------|------|---------|--------------|-------|---------------|-------|-------|-------|--------|--------|------|-----|------|-----|-----|-----|-----|
| MATH   3   07687   0   D.2   3   124538   1.86   0.16   0.28   0.26   0.17   0.14   0.01   0.63   -0.55   -0.18   0.17   0.25   0.32   2.8744   0.0035   99   1.3   99   1.3   MATH   3   142160   0   A.3   3   124538   2.08   0.14   0.21   0.21   0.21   0.01   0.14   0.00   0.72   -0.61   -0.24   0.09   0.33   0.36   2.6069   0.0035   99   1.1   9.9   1.0   MATH   3   805351   1   D-M.1   3   1101   1.65   0.18   0.28   0.31   0.17   0.05   0.00   0.07   -0.61   -0.24   0.09   0.33   0.23   3.2935   0.040   1.6   1.1   2.1   1.1   A.   A.   A.   A.   A.   A.   | Cont | Grade PubII | Form       | Std     | DOK | N      | Mean | P(0) | P(1) P | (2)  | P(3) | P(4) | P(B)    | <b>PtBis</b> | PT(0) | <b>PT</b> (1) | PT(2) | PT(3) | PT(4) | Meas   | MeasSE | t    | MS  | t ]  | MS  | M/F | W/B | W/H |
| MATH 3 142160 0 A.3 3 124588 2.08 0.14 0.21 0.21 0.30 0.14 0.00 0.72 0.61 0.24 0.09 0.33 0.36 2.6669 0.0035 9.9 1.1 9.9 1.0   MATH 3 80995 2 B-0.1 2 1110 2.09 0.14 0.17 0.26 0.31 0.17 0.00 0.00 0.07 0.05 0.01 0.23 0.35 0.23 3.2535 0.001 1.6 1.1 2.1 1.1 A- A- A MATH 3 80995 2 B-0.1 2 1100 2.09 0.14 0.17 0.26 0.05 0.05 0.00 0.00 0.07 0.05 0.01 0.04 0.38 0.32 2.6999 0.0380 0.1 1.0 0.1 1.0 A- B- C MATH 3 751123 3 D-M2 2 1099 0.54 0.17 0.25 0.05 0.05 0.00 0.00 0.00 0.04 0.04 0.0  | MATH | 3 85937     | 7 (        | E.1     | 2   | 124538 | 3.02 | 0.02 | 0.07   | ).23 | 0.23 | 0.45 | 0.00    | 0.65         | -0.24 | -0.42         | -0.31 | 0.04  | 0.51  | 0.9097 | 0.0040 | 9.9  | 1.2 | 9.9  | 1.3 |     |     |     |
| MATH 3 695351 1 D.M.I 3 1101 1.65 0.18 0.28 0.31 0.17 0.06 0.00 0.07 0.05 0.15 0.23 0.35 0.23 3.2935 0.0401 1.6 1.1 2.1 1.1 A. A. A. A. MATH 3 75123 3 D.M.2 2 1109 2.09 0.14 0.17 0.26 0.31 0.12 0.00 0.72 0.00 0.72 0.01 0.04 0.38 0.32 2.6399 0.0380 0.1 1.0 1.0 1.1 0.4 B. C. MATH 3 64505 4 A.T.1 2 1099 0.44 0.12 0.78 0.05 0.05 0.00 0.00 0.04 0.04 0.00 0.18 0.23 0.06 4.7239 0.0618 1.0 1.1 0.7 1.1 A. B. A. A. MATH 3 64505 4 A.T.1 2 1099 0.44 0.01 0.03 0.05 0.05 0.00 0.00 0.01 0.55 0.05 0.32 0.37 0.08 0.08 0.48 1.0 1.1 0.07 1.1 A. B. A. MATH 3 68526 5 A.F.1 3 1101 0.91 0.51 0.25 0.11 0.09 0.05 0.05 0.00 0.00 0.01 0.55 0.05 0.32 0.37 0.08 0.08 0.4581 0.050 0.22 0.1 0.9 2.26 0.8 A. A. A. MATH 3 822702 6 D.M.4 2 1099 1.56 0.34 0.21 0.14 0.16 0.15 0.00 0.09 0.49 0.04 0.04 0.00 0.22 0.27 0.23 4.1923 0.0387 3.1 1.2 6.2 15.A. B. B. MATH 3 822702 6 D.M.4 2 1099 1.56 0.34 0.21 0.14 0.16 0.15 0.00 0.09 0.04 0.04 0.04 0.18 0.31 0.39 3.2626 0.0345 1.5 1.1 0.4 1.0 A. B. MATH 3 527517 7 D.M.3 3 1099 0.54 0.07 1.0 31 0.08 0.00 0.00 0.00 0.09 0.04 0.04 0.04 0.08 0.03 0.00 0.00 0.00 0.00 0.00 0.00  | MATH | 3 97668     | 7 (        | D.2     | . 3 | 124538 | 1.86 | 0.16 | 0.28   | ).26 | 0.17 | 0.14 | 0.01    | 0.63         | -0.55 | -0.18         | 0.17  | 0.25  | 0.32  | 2.8474 | 0.0035 | 9.9  | 1.3 | 9.9  | 1.3 |     |     |     |
| MATH   3   801995   2   B-O.I   2   1100   2.09   0.14   0.17   0.26   0.31   0.12   0.00   0.72   0.61   0.21   0.04   0.38   0.32   2.6399   0.0380   0.1   1.0   0.1   1.0   A-B   B-C   MATH   3   645205   4   A-T.I   2   1099   0.54   0.61   0.24   0.13   0.01   0.00   0.01   0.55   0.56   0.32   0.37   0.08   0.08   8.4581   0.0520   2.1   0.9   2.6   0.8   A-A   | MATH | 3 14216     | 0 0        | A.3     | 3   | 124538 | 2.08 | 0.14 | 0.21   | ).21 | 0.30 | 0.14 | 0.00    | 0.72         | -0.61 | -0.24         | 0.09  | 0.33  | 0.36  | 2.6069 | 0.0035 | 9.9  | 1.1 | 9.9  | 1.0 |     |     |     |
| MATH 3 751123 3 D-M2 2 1099 1.04 0.12 0.78 0.05 0.05 0.00 0.00 0.04 0.40 0.09 0.18 0.23 0.06 4.7239 0.0618 1.0 1.1 0.7 1.1 A+ B- A MATH 3 652402 4 A-T.1 2 1099 0.54 0.61 0.24 0.13 0.01 0.08 0.05 0.00 0.09 0.49 0.41 0.04 0.22 0.27 0.23 4.1923 0.0837 3.7 1.2 0.2 1.5 1.1 0.4 1.0 A- A- B MATH 3 822702 6 D-M.4 2 1099 1.56 0.34 0.21 0.14 0.16 0.15 0.00 0.9 0.9 0.44 0.04 0.18 0.31 0.39 3.2626 0.0345 1.5 1.1 0.4 1.0 A- A- B MATH 3 822702 6 D-M.4 2 1099 1.56 0.34 0.21 0.14 0.16 0.15 0.00 0.9 0.9 0.44 0.04 0.18 0.31 0.39 3.2626 0.0345 1.5 1.1 0.4 1.0 A- A- B MATH 3 82773 7 D-M.3 3 1099 0.54 0.71 0.13 0.08 0.05 0.00 0.09 0.54 0.04 0.00 0.37 0.35 0.10 0.19 0.21 0.15 4.9162 0.0445 5.1 1.3 0.4 1.0 A- A- B MATH 3 131104 9 C-G.1 2 1099 1.48 0.23 0.29 0.29 0.14 0.04 0.00 0.56 0.48 0.08 0.20 0.30 0.30 3.5222 0.099 7.3 1.3 7.0 1.3 A+ A- A MATH 4 611926 0 A-2 126616 2.10 0.17 0.14 0.20 0.04 0.09 0.05 0.65 0.53 0.19 0.19 0.38 0.28 1.3160 0.0034 9.9 1.2 9.9 1.2 MATH 4 816724 1 A-F.3 2 1101 1.00 0.50 0.22 0.12 0.11 0.07 0.07 0.58 0.05 0.20 0.30 0.30 0.30 0.30 0.39 0.30 0.39 0.39  | MATH | 3 69535     | 1 1        | D-M.1   | . 3 | 1101   | 1.65 | 0.18 | 0.28   | 0.31 | 0.17 | 0.06 | 0.00    | 0.67         | -0.59 | -0.15         | 0.23  | 0.35  | 0.23  | 3.2935 | 0.0401 | 1.6  | 1.1 | 2.1  | 1.1 | Α-  | A-  | A+  |
| MATH   3   645205   4   A.T.I   2   1099   0.54   0.61   0.24   0.13   0.01   0.00   0.01   0.55   0.56   0.32   0.37   0.08   0.08   0.54   5.1   0.9   2.6   0.8   A.   A.   A.   A.   A.   A.   A.   | MATH | 3 80199     | 5 2        | B-O.1   | . 2 | 1100   | 2.09 | 0.14 | 0.17   | ).26 | 0.31 | 0.12 | 0.00    | 0.72         | -0.61 | -0.21         | 0.04  | 0.38  | 0.32  | 2.6399 | 0.0380 | 0.1  | 1.0 | -0.1 | 1.0 | A+  | B-  | C-  |
| MATH 3 852462 5 A-F.I 3 1101 0.91 0.51 0.25 0.11 0.08 0.05 0.00 0.49 -0.41 0.04 0.22 0.27 0.23 4.1923 0.0387 3.7 1.2 6.2 1.5 A- B- B MATH 3 822702 6 D-M-4 2 1099 1.56 0.34 0.21 0.14 0.16 0.15 0.00 0.69 -0.64 -0.04 0.18 0.31 0.39 3.2626 0.0345 1.5 1.1 0.4 1.0 A- A- B MATH 3 527751 7 D-M-3 3 1099 0.54 0.71 0.13 0.08 0.06 0.02 0.00 0.37 -0.35 0.10 0.19 0.21 0.15 4.9162 0.0445 5.1 1.3 8.2 2.66 A- A- A- B MATH 3 479429 8 B-O.3 2 1098 1.18 0.38 0.30 0.14 0.11 0.07 0.00 0.64 0.61 0.09 0.25 0.32 0.28 3.8320 0.0381 1.0 1.0 -0.7 1.0 A- A- A MATH 4 611926 0 A-2 126616 2.10 0.17 0.14 0.20 0.00 0.00 0.56 -0.48 0.08 0.02 0.3 0.20 3.5522 0.039 7.3 1.3 7.0 1.3 A- A- A MATH 4 959437 0 B.I 2 126616 1.65 0.27 0.21 0.23 0.17 0.11 0.00 0.00 0.56 -0.48 0.08 0.28 1.3160 0.0034 9.7 1.2 9.9 1.2 MATH 4 816724 1 A-F.3 2 1101 1.00 0.50 0.22 0.12 0.11 0.05 0.01 0.57 0.51 0.04 0.04 0.04 0.03 0.29 0.29 0.14 0.04 0.04 0.08 0.00 0.05 0.05 0.04 0.04 0.04 0.03 0.02 0.35 0.03 1.0 0.07 1.0 0.00 0.05 0.05 0.05 0.05 0.05 0.05  | MATH | 3 75112     | 3 3        | D-M.2   | 2   | 1099   | 1.04 | 0.12 | 0.78   | 0.05 | 0.05 | 0.00 | 0.00    | 0.44         | -0.40 | 0.09          | 0.18  | 0.23  | 0.06  | 4.7239 | 0.0618 | 1.0  | 1.1 | 0.7  | 1.1 | A+  | B-  | A-  |
| MATH 3 822702 6 D-M.4 2 1099 1.56 0.34 0.21 0.14 0.16 0.15 0.00 0.69 -0.64 -0.04 0.18 0.31 0.39 3.2626 0.0345 1.5 1.1 0.4 1.0 A- A- B MATH 3 52751 7 D-M.3 3 1099 0.54 0.71 0.13 0.08 0.06 0.02 0.00 0.57 0.35 0.10 0.19 0.21 0.15 4.9162 0.0445 5.1 1.3 8.2 2.6 A+ A- A MATH 3 47942 8 B-O.3 2 1098 1.18 0.38 0.30 0.14 0.11 0.70 0.00 0.64 -0.61 0.09 0.25 0.32 0.28 3.8320 0.0381 1.0 1.0 0.71 0.1 A- A- B MATH 3 131104 9 C-G.1 2 1099 1.48 0.23 0.29 0.29 0.14 0.04 0.00 0.56 -0.48 -0.08 0.20 0.30 0.20 3.5522 0.0399 7.3 1.3 7.0 1.3 A+ A- A MATH 4 611926 0 A.2 126616 1.00 0.17 0.14 0.20 0.07 1.10 0.00 0.65 0.05 0.05 0.03 0.20 0.35 0.35 0.35 0.00 0.39 0.73 1.3 7.0 1.3 A+ A- A MATH 4 598537 0 B.1 2 126616 1.00 0.50 0.22 0.12 0.11 0.14 0.27 0.31 0.07 0.08 0.02 0.03 0.20 0.33 1.7012 0.0032 1.4 1.0 5.54 1.0 MATH 4 508531 4 B-O.1 2 1098 0.99 0.31 0.42 0.14 0.17 0.04 0.00 0.05 0.05 0.05 0.05 0.05 0.05  | MATH | 3 64520     | 5 4        | A-T.1   | . 2 | 1099   | 0.54 | 0.61 | 0.24   | 0.13 | 0.01 | 0.00 | 0.01    | 0.55         | -0.56 | 0.32          | 0.37  | 0.08  | 0.08  | 5.4581 | 0.0520 | -2.1 | 0.9 | -2.6 | 0.8 | Α-  | A-  | A-  |
| MATH  | MATH | 3 85246     | 2 5        | A-F.1   | . 3 | 1101   | 0.91 | 0.51 | 0.25   | ).11 | 0.08 | 0.05 | 0.00    | 0.49         | -0.41 | 0.04          | 0.22  | 0.27  | 0.23  | 4.1923 | 0.0387 | 3.7  | 1.2 | 6.2  | 1.5 | Α-  | B-  | B-  |
| MATH  | MATH | 3 82270     | 2 6        | D-M.4   | 2   | 1099   | 1.56 | 0.34 | 0.21   | ).14 | 0.16 | 0.15 | 0.00    | 0.69         | -0.64 | -0.04         | 0.18  | 0.31  | 0.39  | 3.2626 | 0.0345 | 1.5  | 1.1 | 0.4  | 1.0 | Α-  | A-  | B-  |
| MATH         3         131104         9         C-G.I         2         1099         1.48         0.23         0.29         0.29         0.14         0.04         0.00         0.56         -0.48         -0.08         0.20         0.30         0.20         3.5522         0.0399         7.3         1.3         7.0         1.3         A+         A-           MATH         4         611926         0         A.2         126616         2.10         0.17         0.11         0.00         0.68         -0.62         0.07         0.18         0.32         0.33         1.701         0.00         0.00         0.8         0.8         0.8         0.33         1.701         0.00         0.00         0.00         0.03         1.4         1.0         5.4         1.0         5.4         1.0         5.4         1.0         5.4         1.0         5.4         1.0         5.4         1.0         6.0         0.0 <td>MATH</td> <td>3 52775</td> <td>1 7</td> <td>D-M.3</td> <td>3</td> <td>1099</td> <td>0.54</td> <td>0.71</td> <td>0.13</td> <td>0.08</td> <td>0.06</td> <td>0.02</td> <td>0.00</td> <td>0.37</td> <td>-0.35</td> <td>0.10</td> <td>0.19</td> <td>0.21</td> <td>0.15</td> <td>4.9162</td> <td>0.0445</td> <td>5.1</td> <td>1.3</td> <td>8.2</td> <td>2.6</td> <td>A+</td> <td>A-</td> <td>A-</td>   | MATH | 3 52775     | 1 7        | D-M.3   | 3   | 1099   | 0.54 | 0.71 | 0.13   | 0.08 | 0.06 | 0.02 | 0.00    | 0.37         | -0.35 | 0.10          | 0.19  | 0.21  | 0.15  | 4.9162 | 0.0445 | 5.1  | 1.3 | 8.2  | 2.6 | A+  | A-  | A-  |
| MATH         4         611926         0         A.2         126616         2.10         0.17         0.14         0.20         0.40         0.09         0.02         0.65         -0.53         -0.19         -0.01         0.38         0.28         1.3160         0.0034         9.9         1.2         9.9         1.2         MATH         4         959437         0         B.1         2         126616         1.65         0.27         0.21         0.21         0.07         0.18         0.32         0.33         1.7012         0.0032         1.4         1.0         5.4         1.0           MATH         4         859805         0         E.1         3         126616         2.52         0.11         0.02         0.02         0.02         0.02         0.02         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.04         0.05         0.02         2.3340         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03         0.03   | MATH | 3 47942     | 9 8        | B-O.3   | 2   | 1098   | 1.18 | 0.38 | 0.30   | ).14 | 0.11 | 0.07 | 0.00    | 0.64         | -0.61 | 0.09          | 0.25  | 0.32  | 0.28  | 3.8320 | 0.0381 | -1.0 | 1.0 | -0.7 | 1.0 | A+  | A-  | A-  |
| MATH         4         959437         0         B.I         2         126616         1.65         0.27         0.21         0.23         0.17         0.11         0.00         0.68         -0.62         -0.07         0.18         0.32         0.33         1.7012         0.0032         1.4         1.0         -5.4         1.0           MATH         4         859805         0         E.I         3         126616         2.52         0.11         0.14         0.17         0.27         0.31         0.07         0.58         -0.28         0.41         0.10         0.01         0.57         0.51         0.04         0.06         0.03         9.9         1.3         0.9         0.4         1.0         0.4         0.0   | MATH | 3 13110     | 4 9        | C-G.1   | . 2 | 1099   | 1.48 | 0.23 | 0.29   | ).29 | 0.14 | 0.04 | 0.00    | 0.56         | -0.48 | -0.08         | 0.20  | 0.30  | 0.20  | 3.5522 | 0.0399 | 7.3  | 1.3 | 7.0  | 1.3 | A+  | A-  | A-  |
| MATH  | MATH | 4 61192     | 6 (        | A.2     |     | 126616 | 2.10 | 0.17 | 0.14   | 0.20 | 0.40 | 0.09 | 0.02    | 0.65         | -0.53 | -0.19         | -0.01 | 0.38  | 0.28  | 1.3160 | 0.0034 | 9.9  | 1.2 | 9.9  | 1.2 |     |     |     |
| MATH  | MATH | 4 95943     | 7 (        | B.1     | 2   | 126616 | 1.65 | 0.27 | 0.21   | ).23 | 0.17 | 0.11 | 0.00    | 0.68         | -0.62 | -0.07         | 0.18  | 0.32  | 0.33  | 1.7012 | 0.0032 | 1.4  | 1.0 | -5.4 | 1.0 |     |     |     |
| MATH  | MATH | 4 85980     | 5 (        | E.1     | 3   | 126616 | 2.52 | 0.11 | 0.14   | ).17 | 0.27 | 0.31 | 0.07    | 0.58         | -0.28 | -0.41         | -0.10 | 0.16  | 0.43  | 0.5954 | 0.0032 | 9.9  | 1.5 | 9.9  | 1.6 |     |     |     |
| MATH  | MATH | 4 81672     | 4 1        | A-F.3   | 3 2 | 1101   | 1.00 | 0.50 | 0.22   | 0.12 | 0.11 | 0.05 | 0.01    | 0.57         | -0.51 | 0.04          | 0.26  | 0.29  | 0.28  | 2.4684 | 0.0359 | -1.3 | 0.9 | -0.4 | 1.0 | A+  | A-  | A-  |
| MATH  | MATH | 4 55374     | 8 2        | B-O.2   | 2   | 1098   | 1.10 | 0.33 | 0.41   | ).17 | 0.04 | 0.06 | 0.01    | 0.61         | -0.65 | 0.21          | 0.29  | 0.17  | 0.25  | 2.3340 | 0.0392 | 0.3  | 1.0 | -0.7 | 1.0 | A+  | A-  | A-  |
| MATH  | MATH | 4 50853     | 1 4        | B-O.1   | . 2 | 1098   | 0.99 | 0.31 | 0.42   | ).24 | 0.03 | 0.00 | 0.00    | 0.65         | -0.63 | 0.17          | 0.42  | 0.17  | 0.09  | 3.3733 | 0.0473 | -3.7 | 0.9 | -4.1 | 0.8 | A-  | A-  | A-  |
| MATH  | MATH | 4 30700     | 3 5        | A-F.1   | . 2 |        | 0.67 | 0.59 | 0.23   | 0.13 | 0.03 | 0.02 |         | 0.51         |       | 0.24          |       | 0.16  | 0.17  |        | 0.0437 | 0.3  | 1.0 | 0.5  | 1.0 | A+  | A-  | A-  |
| MATH  |      | 4 39790     | 4 <i>6</i> | B-O.3   | 2   | 1099   | 0.61 | 0.69 | 0.13   | 80.0 |      |      | 0.01    | 0.48         | -0.47 | 0.15          |       |       | 0.15  |        | 0.0.00 |      | 1.0 |      |     | A-  | A-  | A-  |
| MATH  | MATH | 4 20016     | 1 7        | D-M.2   | 2   | 1100   | 0.63 | 0.70 | 0.07   | 0.13 | 0.08 | 0.01 | 0.01    | 0.45         | -0.43 | 0.08          | 0.23  | 0.30  | 0.14  | 3.2249 | 0.0404 | 1.5  | 1.1 | 2.9  | 1.5 | A+  |     | A-  |
| MATH 5 728077 0 C.1 126268 2.09 0.14 0.22 0.24 0.24 0.17 0.01 0.65 -0.49 -0.25 0.02 0.28 0.38 1.5023 0.0033 9.9 1.2 9.9 1.2 MATH 5 150757 0 D.1 3 126268 1.97 0.09 0.13 0.54 0.19 0.05 0.04 0.56 -0.30 -0.24 -0.10 0.41 0.25 1.8490 0.0041 9.9 1.2 9.9 1.2 MATH 5 370529 0 A.2 3 126268 1.46 0.28 0.30 0.18 0.18 0.07 0.01 0.69 -0.61 -0.07 0.24 0.38 0.28 2.4304 0.0034 5.0 1.0 -3.2 1.0 MATH 5 284094 1 D-M.3 3 1098 0.51 0.62 0.27 0.09 0.01 0.01 0.01 0.01 0.54 -0.55 0.36 0.30 0.15 0.10 4.1134 0.0515 -2.5 0.9 -2.4 0.8 A+ B- A MATH 5 458852 3 D-M.1 3 1099 0.37 0.73 0.21 0.04 0.02 0.01 0.00 0.00 0.64 -0.51 -0.12 0.34 0.35 0.04 3.6153 0.0446 -0.4 1.0 -0.6 1.0 B+ A- A MATH 5 451264 4 A-T.1 3 1100 0.20 0.86 0.09 0.05 0.00 0.00 0.00 0.00 0.39 -0.41 0.28 0.26 0.22 0.17 0.13 4.1586 0.0539 -1.4 0.9 0.9 1.1 A+ A- A MATH 5 351694 5 B-O.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.00 0.64 -0.52 -0.04 0.32 0.32 0.12 3.2298 0.0434 1.6 1.1 1.2 1.1 A+ B- B MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.00 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A  |      | 4 68577     | 2 8        | A-F.2   | 2   | 1100   | 0.69 | 0.53 | 0.28   | ).17 |      |      |         |              |       |               |       |       | 0.14  |        |        | -1.5 |     |      |     | A+  | A-  | C-  |
| MATH 5 150757 0 D.1 3 126268 1.97 0.09 0.13 0.54 0.19 0.05 0.04 0.56 -0.30 -0.24 -0.10 0.41 0.25 1.8490 0.0041 9.9 1.2 9.9 1.2 MATH 5 370529 0 A.2 3 126268 1.46 0.28 0.30 0.18 0.18 0.18 0.07 0.01 0.69 -0.61 -0.07 0.24 0.38 0.28 2.4304 0.0034 5.0 1.0 -3.2 1.0 MATH 5 284094 1 D-M.3 3 1098 0.51 0.62 0.27 0.09 0.01 0.01 0.01 0.01 0.54 -0.55 0.36 0.30 0.15 0.10 4.1134 0.0515 -2.5 0.9 2.4 0.8 A+ B- A MATH 5 810790 2 A-T.2 3 1100 1.33 0.20 0.37 0.33 0.10 0.00 0.00 0.64 -0.51 -0.12 0.34 0.35 0.04 3.6153 0.0446 -0.4 1.0 -0.6 1.0 B+ A- A MATH 5 458852 3 D-M.1 3 1099 0.37 0.73 0.21 0.04 0.02 0.01 0.00 0.00 0.43 -0.42 0.26 0.22 0.17 0.13 4.1586 0.0539 -1.4 0.9 0.9 1.1 A+ A- A MATH 5 351694 5 B-O.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.00 0.64 -0.52 -0.04 0.32 0.32 0.32 0.32 0.34 1.6 1.1 1.2 1.1 A+ B- B MATH 5 204561 6 A-F.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.00 0.69 -0.65 0.11 0.35 0.35 0.18 3.1918 0.0407 -3.8 0.8 -4.4 0.8 A+ A- A MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.04 0.04 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A   | MATH | 4 77473     | 5 9        | D-M.1   | . 3 | 1100   | 0.70 | 0.61 | 0.20   | 0.10 | 0.04 | 0.05 | 0.01    | 0.53         | -0.53 | 0.21          | 0.27  | 0.21  | 0.25  |        | 0.0402 | -1.4 | 0.9 | -2.0 | 0.8 | A-  | A-  | A-  |
| MATH 5 370529 0 A.2 3 126268 1.46 0.28 0.30 0.18 0.18 0.07 0.01 0.69 -0.61 -0.07 0.24 0.38 0.28 2.4304 0.0034 5.0 1.0 -3.2 1.0 MATH 5 284094 1 D-M.3 3 1098 0.51 0.62 0.27 0.09 0.01 0.01 0.01 0.01 0.054 -0.55 0.36 0.30 0.15 0.10 4.1134 0.0515 -2.5 0.9 -2.4 0.8 A+ B- A MATH 5 810790 2 A-T.2 3 1100 1.33 0.20 0.37 0.33 0.10 0.00 0.00 0.64 -0.51 -0.12 0.34 0.35 0.04 3.6153 0.0446 -0.4 1.0 -0.6 1.0 B+ A- A MATH 5 441264 4 A-T.1 3 1100 0.20 0.86 0.09 0.05 0.00 0.00 0.00 0.00 0.43 -0.42 0.26 0.22 0.17 0.13 4.1586 0.0539 -1.4 0.9 0.9 1.1 A+ A- A MATH 5 351694 5 B-O.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.00 0.61 -0.52 -0.04 0.32 0.32 0.12 3.2298 0.0434 1.6 1.1 1.2 1.1 A+ B- B MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.01 0.00 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.01 0.01 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A   | MATH | 5 72807     | 7 (        | C.1     |     | 126268 | 2.09 | 0.14 | 0.22   | ).24 | 0.24 | 0.17 | 0.01    | 0.65         | -0.49 |               | 0.02  |       | 0.38  |        | 0.0033 | 9.9  | 1.2 | 9.9  |     |     |     |     |
| MATH 5 284094 1 D-M.3 3 1098 0.51 0.62 0.27 0.09 0.01 0.01 0.01 0.01 0.54 -0.55 0.36 0.30 0.15 0.10 4.1134 0.0515 -2.5 0.9 -2.4 0.8 A+ B- A MATH 5 810790 2 A-T.2 3 1100 1.33 0.20 0.37 0.33 0.10 0.00 0.00 0.64 -0.51 -0.12 0.34 0.35 0.04 3.6153 0.0446 -0.4 1.0 -0.6 1.0 B+ A- A MATH 5 458852 3 D-M.1 3 1099 0.37 0.73 0.21 0.04 0.02 0.01 0.00 0.03 -0.42 0.26 0.22 0.17 0.13 4.1586 0.0539 -1.4 0.9 0.9 1.1 A+ A- A MATH 5 441264 4 A-T.1 3 1100 0.20 0.86 0.09 0.05 0.00 0.00 0.00 0.00 0.03 -0.41 0.28 0.26 0.09 0.06 4.7733 0.0666 -1.4 0.9 -2.1 0.7 A+ A+ A MATH 5 351694 5 B-O.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.61 -0.52 -0.04 0.32 0.32 0.12 3.2298 0.0434 1.6 1.1 1.2 1.1 A+ B- B MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.04 0.02 0.01 0.30 0.41 0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.04 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A  | MATH | 5 15075     | 7 (        | D.1     | . 3 | 126268 | 1.97 | 0.09 | 0.13   | ).54 | 0.19 | 0.05 | 0.04    | 0.56         | -0.30 | -0.24         | -0.10 | 0.41  | 0.25  | 1.8490 | 0.0041 | 9.9  | 1.2 | 9.9  | 1.2 |     |     |     |
| MATH 5 810790 2 A-T.2 3 1100 1.33 0.20 0.37 0.33 0.10 0.00 0.00 0.64 -0.51 -0.12 0.34 0.35 0.04 3.6153 0.0446 -0.4 1.0 -0.6 1.0 B+ A- A MATH 5 458852 3 D-M.1 3 1099 0.37 0.73 0.21 0.04 0.02 0.01 0.00 0.03 -0.42 0.26 0.22 0.17 0.13 4.1586 0.0539 -1.4 0.9 0.9 1.1 A+ A- A MATH 5 351694 5 B-O.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.00 0.03 -0.41 0.28 0.26 0.09 0.06 4.7733 0.0666 -1.4 0.9 -2.1 0.7 A+ A+ A MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.00 0.00 0.01 0.00 0.01 0.05 0.05  | MATH | 5 37052     | 9 (        | A.2     | 3   | 126268 | 1.46 | 0.28 | 0.30   | 0.18 | 0.18 | 0.07 | 0.01    |              | -0.61 | -0.07         | 0.24  | 0.38  | 0.28  | 2.4304 | 0.0034 |      | 1.0 | -3.2 | 1.0 |     |     |     |
| MATH 5 458852 3 D-M.1 3 1099 0.37 0.73 0.21 0.04 0.02 0.01 0.00 0.43 -0.42 0.26 0.22 0.17 0.13 4.1586 0.0539 -1.4 0.9 0.9 1.1 A+ A- A MATH 5 441264 4 A-T.1 3 1100 0.20 0.86 0.09 0.05 0.00 0.00 0.00 0.00 0.00 0.39 -0.41 0.28 0.26 0.09 0.06 4.7733 0.0666 -1.4 0.9 -2.1 0.7 A+ A+ A MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.01 0.00 0.61 -0.52 -0.04 0.32 0.32 0.12 3.2298 0.0434 1.6 1.1 1.2 1.1 A+ B- B MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.01 0.00 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A   |      | 5 28409     | 4 1        |         | 3   | 1098   | 0.00 | 0.0- |        | 0.09 |      |      | 0.01    |              |       |               |       |       |       |        |        |      | 0.9 | -2.4 | 0.8 | A+  | B-  | A-  |
| MATH 5 441264 4 A-T.1 3 1100 0.20 0.86 0.09 0.05 0.00 0.00 0.00 0.00 0.39 -0.41 0.28 0.26 0.09 0.06 4.7733 0.0666 -1.4 0.9 -2.1 0.7 A+ A+ A MATH 5 351694 5 B-O.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.61 -0.52 -0.04 0.32 0.32 0.12 3.2298 0.0434 1.6 1.1 1.2 1.1 A+ B- B MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.69 -0.65 0.11 0.35 0.35 0.18 3.1918 0.0407 -3.8 0.8 -4.4 0.8 A+ A- A MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.04 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A   | MATH | 5 81079     | 0 2        | 2 A-T.2 | 2 3 | 1100   | 1.33 | 0.20 | 0.37   | ).33 | 0.10 | 0.00 | 0.00    | 0.64         | -0.51 | -0.12         | 0.34  | 0.35  | 0.04  | 3.6153 | 0.0446 | -0.4 | 1.0 | -0.6 | 1.0 | B+  | A-  | A-  |
| MATH 5 351694 5 B-O.2 3 1100 1.23 0.26 0.35 0.29 0.09 0.01 0.00 0.61 -0.52 -0.04 0.32 0.32 0.12 3.2298 0.0434 1.6 1.1 1.2 1.1 A+ B- B MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.69 -0.65 0.11 0.35 0.35 0.18 3.1918 0.0407 -3.8 0.8 -4.4 0.8 A+ A- A MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A   | MATH | 5 45885     | 2 3        | D-M.1   | . 3 | 1099   | 0.37 | 0.73 | 0.21   | 0.04 | 0.02 | 0.01 | 0.00    |              | -0.42 |               | 0.22  | 0.17  | 0.13  |        | 0.0539 | -1.4 |     |      | 1.1 | A+  | A-  | A+  |
| MATH 5 204561 6 A-F.2 3 1100 1.03 0.40 0.30 0.18 0.09 0.02 0.00 0.69 -0.65 0.11 0.35 0.35 0.18 3.1918 0.0407 -3.8 0.8 -4.4 0.8 A+ A- A MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A   |      | 5 44126     |            |         | . 3 |        | 0.20 | 0.86 | 0.09 ( |      | 0.00 | 0.00 |         |              |       |               |       |       |       |        | 0.0000 |      | 0.9 | -2.1 | 0.7 | A+  |     | A-  |
| MATH 5 912401 7 B-O.1 3 1099 1.05 0.16 0.70 0.09 0.03 0.02 0.00 0.41 -0.34 0.05 0.18 0.19 0.13 3.1124 0.0527 2.7 1.2 3.8 1.3 A+ A+ A  |      |             |            | B 0.2   | 3   | 1100   | 1.23 | 0.26 | 0.35   |      |      |      |         |              | -0.52 |               |       |       |       |        |        |      |     | 1.2  | 1.1 | A+  | B-  | B-  |
|   |      | 5 20456     | 1 6        |         | 2 3 |        | 1.03 | 0.40 | 0.30   |      |      |      |         |              |       |               |       |       |       |        |        |      |     |      | 0.8 | A+  |     | A-  |
|   |      |             |            |         | . 3 | 1099   | 1.05 | 0.16 | 0.70   | 0.09 | 0.03 | 0.02 | 0.00    |              |       | 0.05          |       |       |       |        | 0.00-  |      |     | 3.8  | 1.3 | A+  | A+  | A+  |
|   |      |             |            |         | 3   |        |      |      | 0.00   |      | 0.00 | 0.00 |         |              |       |               |       | 0.15  |       |        |        |      | 1.2 |      |     | A+  |     | A-  |
| MATH 5 479048 9 C-G.2 2 1100 0.32 0.70 0.28 0.02 0.00 0.00 0.01 0.35 -0.34 0.30 0.14 0.05 5.3614 0.0696 2.3 1.1 3.0 1.2 A- A- A   | MATH | 5 47904     | 8 9        | C-G.2   | 2 2 | 1100   | 0.32 | 0.70 | 0.28   | 0.02 | 0.00 | 0.00 | 0.01    | 0.35         | -0.34 | 0.30          | 0.14  |       | 0.05  | 5.3614 | 0.0696 | 2.3  | 1.1 | 3.0  | 1.2 | A-  | A-  | A-  |

| MATH 6 161458 0 C.3 3 124870 1.36 0.13 0.63 0.05 0.12 0.07 0.01 0.58 -0.46 -0.10 0.10 0.31 0.31 2.1104 0.0039 9.9 1.1 9.9 1.1 9.9 1.1 MATH 6 175706 0 D.2 2 124870 1.56 0.17 0.34 0.27 0.20 0.02 0.06 0.63 -0.45 -0.23 0.21 0.41 0.17 2.3668 0.0038 9.9 1.1 9.9 1.1 9.9 1.1 MATH 6 135034 0 A.1 3 124870 2.70 0.05 0.08 0.20 0.46 0.21 0.00 0.71 -0.38 -0.35 -0.26 0.16 0.49 0.4082 0.0038 -9.9 0.9 -9.9 0.9 -9.9 0.9 MATH 6 754596 1 A-N.2 3 1041 0.86 0.44 0.37 0.12 0.06 0.02 0.01 0.60 -0.62 0.28 0.30 0.23 0.18 3.0705 0.0436 -1.5 0.9 -1.4 0.9 A+ A-B-MATH 6 106902 2 A-N.1 3 1086 0.85 0.44 0.37 0.08 0.09 0.01 0.00 0.58 -0.55 0.20 0.26 0.33 0.12 3.2614 0.0432 0.6 1.0 -0.1 1.0 A+ A-A+MATH 6 227361 3 A-R.1 3 1084 0.66 0.41 0.54 0.04 0.01 0.00 0.01 0.58 -0.56 0.42 0.25 0.16 0.04 4.4073 0.0585 -3.3 0.9 -4.0 0.8 A+ B-A-MATH 6 548409 5 A-N.3 3 1084 1.38 0.24 0.42 0.12 0.14 0.07 0.00 0.67 -0.55 -0.09 0.24 0.34 0.31 2.1382 0.0377 -0.2 1.0 -1.4 0.9 A+ B-A-MATH 6 548409 5 A-N.3 3 1084 1.38 0.24 0.42 0.12 0.14 0.07 0.00 0.67 -0.55 -0.09 0.24 0.34 0.31 2.1382 0.0377 -0.2 1.0 -1.4 0.9 A+ B-A-MATH 6 548409 5 A-N.3 3 1084 1.38 0.24 0.42 0.12 0.14 0.07 0.00 0.67 -0.55 -0.09 0.24 0.34 0.31 2.1382 0.0377 -0.2 1.0 -1.4 0.9 A+ B-A-MATH   |
|--|
| MATH 6 135034 0 A.1 3 124870 2.70 0.05 0.08 0.20 0.46 0.21 0.00 0.71 -0.38 -0.35 -0.26 0.16 0.49 0.4082 0.0038 -9.9 0.9 -9.9 0.9 -9.9 0.9 H MATH 6 754596 1 A-N.2 3 1041 0.86 0.44 0.37 0.12 0.06 0.02 0.01 0.60 -0.62 0.28 0.30 0.23 0.18 3.0705 0.0436 -1.5 0.9 -1.4 0.9 A+ A- B- MATH 6 106902 2 A-N.1 3 1086 0.85 0.44 0.37 0.08 0.09 0.01 0.00 0.58 -0.55 0.20 0.26 0.33 0.12 3.2614 0.0432 0.6 1.0 -0.1 1.0 A+ A- A+ MATH 6 227361 3 A-R.1 3 1084 0.66 0.41 0.54 0.04 0.01 0.00 0.01 0.58 -0.56 0.42 0.25 0.16 0.04 4.4073 0.0585 -3.3 0.9 -4.0 0.8 A+ B- A- MATH 6 602683 4 B-E.1 3 1081 0.31 0.81 0.31 0.81 0.10 0.06 0.02 0.00 0.01 0.43 -0.44 0.23 0.28 0.20 0.06 4.2032 0.0554 -0.7 1.0 -1.5 0.8 A+ A- A+   |
| MATH 6 754596 1 A-N.2 3 1041 0.86 0.44 0.37 0.12 0.06 0.02 0.01 0.60 -0.62 0.28 0.30 0.23 0.18 3.0705 0.0436 -1.5 0.9 -1.4 0.9 A+ A- B- MATH 6 106902 2 A-N.1 3 1086 0.85 0.44 0.37 0.08 0.09 0.01 0.00 0.58 -0.55 0.20 0.26 0.33 0.12 3.2614 0.0432 0.6 1.0 -0.1 1.0 A+ A- A+ MATH 6 227361 3 A-R.1 3 1084 0.66 0.41 0.54 0.04 0.01 0.00 0.01 0.58 -0.56 0.42 0.25 0.16 0.04 4.4073 0.0585 -3.3 0.9 -4.0 0.8 A+ B- A- MATH 6 602683 4 B-E.1 3 1081 0.31 0.81 0.10 0.06 0.02 0.00 0.01 0.43 -0.44 0.23 0.28 0.20 0.06 4.2032 0.0554 -0.7 1.0 -1.5 0.8 A+ A- A+   |
| MATH 6 106902 2 A-N.1 3 1086 0.85 0.44 0.37 0.08 0.09 0.01 0.00 0.58 -0.55 0.20 0.26 0.33 0.12 3.2614 0.0432 0.6 1.0 -0.1 1.0 A+ A- A+ MATH 6 227361 3 A-R.1 3 1084 0.66 0.41 0.54 0.04 0.01 0.00 0.01 0.58 -0.56 0.42 0.25 0.16 0.04 4.4073 0.0585 -3.3 0.9 -4.0 0.8 A+ B- A- MATH 6 602683 4 B-E.1 3 1081 0.31 0.81 0.10 0.06 0.02 0.00 0.01 0.43 -0.44 0.23 0.28 0.20 0.06 4.2032 0.0554 -0.7 1.0 -1.5 0.8 A+ A- A+   |
| MATH 6 227361 3 A-R.1 3 1084 0.66 0.41 0.54 0.04 0.01 0.00 0.01 0.58 -0.56 0.42 0.25 0.16 0.04 4.4073 0.0585 -3.3 0.9 -4.0 0.8 A+ B- A- MATH 6 602683 4 B-E.1 3 1081 0.31 0.81 0.10 0.06 0.02 0.00 0.01 0.43 -0.44 0.23 0.28 0.20 0.06 4.2032 0.0554 -0.7 1.0 -1.5 0.8 A+ A- A+  |
| MATH 6 602683 4 B-E.1 3 1081 0.31 0.81 0.10 0.06 0.02 0.00 0.01 0.43 -0.44 0.23 0.28 0.20 0.06 4.2032 0.0554 -0.7 1.0 -1.5 0.8 A+ A- A+  |
|  |
| MATH 6 548409 5 A-N 3 3 1084 1 38 0 24 0 42 0 12 0 14 0 07 0 00 0 67 -0 55 -0 09 0 24 0 34 0 31 2 1382 0 0377 -0 21 10 -1 4 0 9 A - R- A-  |
| [0.0101001] - [0.0101001] - [0.0101001] - [0.0101000] - [0.000100] - [0.0000] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.0000] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.000100] - [0.0000] - [0.000100] - [0.000100] - [0.000 |
| MATH 6 887562 6 A-N.2 3 1088 0.80 0.47 0.34 0.14 0.03 0.02 0.00 0.61 -0.59 0.22 0.36 0.22 0.18 3.1395 0.0443 -2.2 0.9 -2.9 0.9 A+ B- A-  |
| MATH 6 262230 7 B-E.1 3 1089 1.34 0.43 0.15 0.15 0.19 0.08 0.01 0.71 -0.65 0.00 0.22 0.38 0.35 2.2382 0.0345 -2.0 0.9 -2.6 0.8 A+ A- B-  |
| MATH 6 473603 8 A-R.1 3 1085 1.14 0.41 0.19 0.31 0.03 0.06 0.01 0.64 -0.59 0.06 0.33 0.21 0.32 2.5100 0.0383 -0.9 1.0 -1.0 0.9 A- A- A-  |
| MATH 6 622147 9 D-S.1 3 1085 0.46 0.60 0.35 0.04 0.01 0.00 0.00 0.51 -0.51 0.41 0.22 0.12 0.05 4.5531 0.0591 -1.0 1.0 -1.6 0.9 A+ C- A-  |
| MATH 6 629996 10 A-R.1 3 1091 0.49 0.58 0.35 0.06 0.00 0.00 0.00 0.41 -0.36 0.22 0.29 0.08 4.5131 0.0600 2.4 1.1 3.2 1.2 B- A- A-  |
| MATH 6 905662 11 B-E.2 3 1090 0.88 0.50 0.23 0.18 0.06 0.03 0.02 0.57 -0.49 0.03 0.35 0.24 0.24 2.9269 0.0404 1.9 1.1 0.1 1.0 A+ A- A+   |
| MATH 6 249710 13 D-S.1 3 1091 0.53 0.66 0.18 0.13 0.01 0.01 0.01 0.36 -0.32 0.11 0.24 0.14 0.13 3.8163 0.0489 8.3 1.5 8.3 1.9 A+ A+ A+   |
| MATH 6 608240 14 A-R.1 3 1088 1.19 0.44 0.21 0.17 0.08 0.09 0.00 0.62 -0.52 -0.01 0.21 0.25 0.39 2.3034 0.0353 1.0 1.1 1.6 1.1 A- A- A-  |
| MATH 6 591345 15 B-E.3 3 1085 0.50 0.64 0.26 0.08 0.03 0.00 0.01 0.56 -0.57 0.37 0.22 0.08 4.2961 0.0529 -2.2 0.9 -2.9 0.8 A+ A- B-  |
| MATH 6 219941 16 C-G.1 3 1081 0.59 0.60 0.26 0.10 0.04 0.01 0.01 0.56 -0.54 0.25 0.35 0.22 0.10 3.7419 0.0483 -1.0 0.9 -2.2 0.9 A- B- A-   |
| MATH 6 237758 17 C-G.I 3 1085 0.56 0.62 0.22 0.14 0.01 0.01 0.00 0.52 -0.51 0.25 0.35 0.15 0.11 3.7403 0.0486 -0.8 1.0 0.3 1.0 A+ A- A-  |
| MATH 6 513826 18 B-E.2 3 1084 0.19 0.84 0.14 0.01 0.01 0.00 0.01 0.34 -0.33 0.26 0.16 0.11 0.05 4.9661 0.0763 -0.8 0.9 0.8 1.1 A- A-   |
| MATH 6 391304 19 D-S.1 3 1084 0.34 0.69 0.29 0.02 0.00 0.00 0.01 0.44 -0.44 0.39 0.17 0.06 4.5523 0.0673 0.3 1.0 -0.1 1.0 B+ A+ A+   |
| MATH 6 820145 20 C-G.1 3 1085 0.28 0.79 0.15 0.04 0.01 0.01 0.01 0.01 0.47 -0.49 0.37 0.25 0.11 0.11 4.2561 0.0621 -2.9 0.8 -3.5 0.6 A+ A- A-  |
| MATH 7 970842 0 D.3 2 128295 1.70 0.25 0.26 0.21 0.10 0.18 0.05 0.68 -0.51 -0.19 0.13 0.23 0.47 1.6261 0.0031 9.9 1.1 9.9 1.1  |
| MATH 7 694550 0 A.2 2 128295 2.12 0.19 0.08 0.27 0.36 0.10 0.01 0.67 -0.56 -0.12 -0.05 0.35 0.35 1.3763 0.0033 9.9 1.1 9.9 1.1   |
| MATH 7 288794 0 E.3 3 128295 1.21 0.27 0.46 0.10 0.13 0.04 0.01 0.65 -0.59 0.04 0.24 0.35 0.25 2.4684 0.0037 3.6 1.0 -3.6 1.0  |
| MATH 7 468972 1 D-S.2 3 1048 0.29 0.78 0.17 0.03 0.02 0.00 0.01 0.46 -0.47 0.36 0.21 0.19 3.8167 0.0623 -0.7 1.0 -2.0 0.8 A+ A- A-   |
| MATH 7 889230 2 A-N.1 3 1083 1.87 0.19 0.24 0.22 0.19 0.15 0.01 0.67 -0.55 -0.19 0.09 0.34 0.35 1.4923 0.0346 4.1 1.2 3.5 1.2 C+ A- B-   |
| MATH 7 612629 3 D-S.1 3 1080 1.40 0.40 0.16 0.19 0.13 0.12 0.01 0.72 -0.64 -0.05 0.24 0.36 0.38 2.0509 0.0337 -1.5 0.9 -2.1 0.9 A+ A- A-   |
| MATH 7 787480 4 D-S.2 3 1084 0.52 0.60 0.31 0.07 0.02 0.00 0.01 0.56 -0.56 0.38 0.28 0.19 0.05 4.2472 0.0524 -2.1 0.9 -2.7 0.8 A+ A+ A-  |
| MATH 7 932107 5 B-E.1 2 1087 0.36 0.71 0.23 0.04 0.01 0.00 0.02 0.44 -0.45 0.33 0.21 0.14 0.10 4.1235 0.0580 0.3 1.0 1.2 1.1 B+ A+ A+  |
| MATH 7 665891 6 B-E.2 3 1085 1.53 0.30 0.23 0.12 0.32 0.03 0.01 0.71 -0.59 -0.13 0.14 0.53 0.22 2.2795 0.0356 -1.0 1.0 -1.4 0.9 A- A- A-   |
| MATH 7 544446 7 D-S.3 3 1090 2.32 0.04 0.21 0.28 0.32 0.15 0.00 0.66 -0.32 -0.42 -0.13 0.35 0.37 0.7814 0.0389 0.0 1.0 0.2 1.0 B+ A- A+  |
| MATH 7 976262 8 D-S.3 3 1087 0.32 0.80 0.13 0.04 0.03 0.01 0.01 0.48 -0.51 0.34 0.23 0.23 0.11 4.0976 0.0552 -2.4 0.8 -3.4 0.6 A+ A- A-  |
| MATH 7 291823 9 A-R.1 3 1076 0.37 0.80 0.07 0.11 0.01 0.01 0.01 0.04 0.45 0.52 0.24 0.37 0.14 0.14 3.7772 0.0507 -1.2 0.9 -0.7 0.9 A+ A- A-  |
| MATH 7 976335 10 C-G.1 3 1088 1.42 0.28 0.28 0.18 0.25 0.01 0.01 0.56 -0.51 -0.01 0.17 0.37 0.13 2.6574 0.0371 7.7 1.4 8.2 1.5 A+ C- B-  |
| MATH 7 235345 11 A-R.1 3 1090 0.73 0.51 0.31 0.12 0.05 0.01 0.01 0.66 -0.62 0.22 0.40 0.30 0.11 3.4982 0.0453 -5.0 0.8 -5.5 0.7 A+ A- A+   |
| MATH 7 801801 12 C-G.1 3 1086 0.29 0.77 0.20 0.03 0.00 0.01 0.01 0.50 -0.52 0.44 0.19 0.11 0.12 4.3290 0.0652 -3.4 0.8 -3.5 0.7 A- A- A-   |
| MATH 7 796013 13 D-S.1 3 1083 1.54 0.43 0.13 0.01 0.33 0.10 0.01 0.71 -0.63 -0.08 0.04 0.47 0.37 1.9799 0.0322 1.2 1.1 1.3 1.1 A- A- A-  |
| MATH 7 201638 14 C-G.2 3 1085 0.55 0.65 0.24 0.04 0.04 0.02 0.01 0.54 -0.54 0.30 0.22 0.27 0.21 3.2666 0.0449 -2.2 0.9 -2.9 0.8 A+ A- A-   |
| MATH 7 384637 15 B-E.2 2 1086 0.46 0.65 0.28 0.05 0.02 0.01 0.01 0.53 -0.50 0.31 0.29 0.21 0.12 4.1917 0.0558 -2.1 0.9 -1.5 0.9 A+ A- A-   |
| MATH 7 504663 16 B-E.1 3 1078 0.90 0.41 0.40 0.11 0.06 0.02 0.01 0.66 -0.63 0.22 0.32 0.19 2.8820 0.0422 -4.3 0.8 -5.0 0.8 A+ A- A-  |
| MATH 7 799682 17 A-N.1 3 1083 1.81 0.07 0.34 0.36 0.19 0.05 0.01 0.56 -0.34 -0.31 0.11 0.32 0.25 1.6107 0.0419 3.5 1.2 3.6 1.2 3.6 1.2 A+ C- A+  |
| MATH 7 653144 18 A-N.1 3 1082 0.77 0.51 0.33 0.07 0.06 0.03 0.01 0.61 -0.56 0.21 0.30 0.24 3.0208 0.0423 -2.3 0.9 -3.1 0.81 A-B-A-   |
| MATH 7 545795 19 C-G.1 3 1085 0.60 0.48 0.46 0.03 0.02 0.00 0.00 0.42 -0.38 0.25 0.18 0.19 0.07 3.8438 0.0542 2.2 1.1 2.0 1.1 A+ C- A-   |
|  |
| MATH   7   836795   20   C-G.2   3   1088   0.40   0.80   0.09   0.06   0.04   0.02   0.01   0.49   -0.48   0.18   0.27   0.25   0.22   3.4377   0.0468   -3.4   0.8   0.5   1.1   A-   A-   |

| MATH      | 8   | 389765 | 0  | C.1         | 3 128678 | 1.43 0.44 0.0 | 6 0.27 0    | 0.09 0.14 | 0.01 | 0.66 | -0.63 | -0.04 | 0.26 | 0.25 | 0.39 | 2.2784  | 0.0031 9.9 1.1 9.9   | 1.2    |    | $\top$                         |
|-----------|-----|--------|----|-------------|----------|---------------|-------------|-----------|------|------|-------|-------|------|------|------|---------|----------------------|--------|----|--------------------------------|
| MATH      |     | 562517 | 0  | D.1         | 3 128678 | 1.68 0.17 0.3 |             | 0.16 0.11 | 0.01 | 0.64 | -0.40 | -0.33 | 0.20 | 0.25 | 0.33 | 1.9387  | 0.0031 9.9 1.1 9.9   | 1.1    | -  | +-                             |
|           |     | 866527 | 0  |             |          | 1.76 0.06 0.5 |             | 0.24 0.08 | 0.03 | 0.59 | -0.40 |       |      |      |      |         |                      |        | -  | +                              |
| MATH      | 8   |        | 0  | A.1         | 3 128678 |               |             |           | 0.00 |      |       | -0.33 | 0.12 | 0.33 | 0.30 | 1.6626  | 0.000. 7.7 2.6 7.7   | 1.4    | -  | +                              |
| MATH      | 8   | 453808 | 1  | D-S.1       | 2 1055   | 1.06 0.28 0.5 |             | 0.07 0.04 | 0.01 | 0.58 | -0.51 | 0.09  | 0.27 | 0.25 | 0.23 | 2.8773  | 0.0440 0.0 1.0 -0.2  | 1.0 A+ | A+ | A-                             |
| MATH      | 8   | 515249 | 2  | B-E.3       | 2 1086   | 1.07 0.42 0.3 |             | 0.08 0.09 | 0.01 | 0.59 | -0.55 | 0.12  | 0.20 | 0.27 | 0.34 | 2.6001  | 0.0363 -0.2 1.0 -0.8 | 1.0 A+ | A- | A-                             |
| MATH      | - 8 | 132566 | 3  | C-G.3       | 3 1078   | 0.81 0.39 0.4 |             | 0.02 0.01 | 0.01 | 0.60 | -0.58 | 0.26  | 0.35 | 0.16 | 0.13 | 3.6097  | 0.0497 -1.9 0.9 -3.1 | 0.9 A- | A- | A-                             |
| MATH      | 8   | 570068 | 4  | B-E.1       | 2 1085   | 0.88 0.39 0.4 |             | 0.08 0.01 | 0.01 | 0.57 | -0.55 | 0.22  | 0.23 | 0.30 | 0.13 | 3.3841  | 0.0443 -0.9 1.0 -0.8 | 1.0 A+ | B- | A-                             |
| MATH      | 8   | 360003 | 5  | C-G.2       | 3 1090   | 0.58 0.54 0.3 |             | 0.03 0.01 | 0.02 | 0.57 | -0.58 | 0.41  | 0.23 | 0.20 | 0.12 | 4.2130  | 0.0542 -3.1 0.8 -3.1 | 0.8 A- | A- | A+                             |
| MATH      | 8   | 221332 | 6  |             | 2 1079   | 1.39 0.17 0.4 |             | 0.00      | 0.00 | 0.63 | -0.52 | -0.14 | 0.33 | 0.33 | 0.08 | 3.0969  | 0.0448 0.4 1.0 0.2   | 1.0 A- | B- | A-                             |
| MATH      | 8   | 828124 | 7  | B-E.3       | 2 1081   | 0.74 0.64 0.1 | 6 0.06 0    | 0.12 0.03 | 0.01 | 0.57 | -0.57 | 0.19  | 0.20 | 0.38 | 0.20 | 3.3551  | 0.0402 -1.4 0.9 -1.3 | 0.9 A- | A- | A-                             |
| MATH      | 8   | 934664 | 8  | B-F.1       | 3 1086   | 1.12 0.11 0.7 | 4 0.08 0    | 0.05 0.02 | 0.01 | 0.50 | -0.42 | -0.01 | 0.24 | 0.24 | 0.16 | 2.9572  | 0.0553 -0.9 0.9 -1.4 | 0.9 A+ | A- | A-                             |
| MATH      | 8   | 946898 | 9  | A-N.1       | 3 1084   | 0.81 0.42 0.4 | 2 0.11 0    | 0.05 0.01 | 0.01 | 0.62 | -0.63 | 0.32  | 0.29 | 0.24 | 0.12 | 3.6022  | 0.0468 -3.3 0.9 -4.0 | 0.8 A- | A- | B-                             |
| MATH      | 8   | 841637 | 10 | B-F.1       | 2 1086   | 1.07 0.40 0.2 | 7 0.24 0    | 0.05 0.04 | 0.01 | 0.59 | -0.48 | -0.08 | 0.42 | 0.21 | 0.25 | 2.8801  | 0.0403 0.6 1.0 1.8   | 1.1 A- | A- | A-                             |
| MATH      | 8   | 579379 | 11 | D-S.1       | 3 1084   | 1.22 0.30 0.2 | 9 0.30 0    | 0.10 0.01 | 0.01 | 0.57 | -0.55 | 0.06  | 0.30 | 0.27 | 0.09 | 3.2004  | 0.0421 4.7 1.2 4.4   | 1.2 A+ | B- | A-                             |
| MATH      | 8   | 687020 | 12 | C-G.1       | 3 1088   | 0.87 0.26 0.6 | 4 0.09 0    | 0.02 0.00 | 0.01 | 0.51 | -0.48 | 0.23  | 0.26 | 0.17 |      | 2.9723  | 0.0572 -1.2 0.9 -1.3 | 0.9 A+ | C- | A-                             |
| MATH      | 8   | 493224 | 13 | B-E.2       | 3 1082   | 0.83 0.48 0.3 | 6 0.06 0    | 0.05      | 0.01 | 0.59 | -0.61 | 0.31  | 0.22 | 0.23 | 0.26 | 3.0473  | 0.0404 -1.7 0.9 -1.4 | 0.9 A- | B- | A-                             |
| MATH      | 8   | 744403 | 14 |             | 2 1089   | 0.40 0.65 0.3 |             | 0.01 0.00 | 0.01 | 0.44 | -0.46 | 0.40  | 0.11 | 0.12 | 0.09 | 4.2510  | 0.0595 -0.6 1.0 -0.6 | 1.0 A- | B- | A-                             |
| MATH      | 8   | 378698 | 15 |             | 3 1090   | 0.68 0.64 0.1 |             | 0.02 0.03 | 0.00 | 0.51 | -0.49 | 0.08  | 0.41 | 0.09 | 0.21 | 3.3170  | 0.0413 1.9 1.1 1.2   | 1.1 A- | A- | A-                             |
| MATH      | 8   | 845028 | 16 |             | 3 1082   | 0.73 0.58 0.2 |             | 0.05 0.03 | 0.01 | 0.56 | -0.55 | 0.21  | 0.30 | 0.25 | 0.21 | 3.3562  | 0.0424 0.8 1.0 -0.1  | 1.0 A- | B- | A-                             |
| MATH      | 8   | 505958 | 17 |             | 3 1087   | 0.70 0.62 0.1 |             | 0.03 0.03 | 0.01 | 0.47 | -0.48 | 0.15  | 0.33 | 0.13 | 0.19 | 3.3071  | 0.0412 6.3 1.4 3.8   | 1.4 A- | A- | A+                             |
| MATH      | - 8 | 797017 | 18 | C-G.2       | 2 1089   | 0.96 0.42 0.2 |             | 0.02 0.01 | 0.01 | 0.63 | -0.40 | 0.13  | 0.48 | 0.13 | 0.16 | 3.2654  | 0.0437 -1.9 0.9 -1.4 | 0.9 A+ | A- | B-                             |
| MATH      | - 8 | 934404 | 19 |             | 2 1084   | 1.95 0.09 0.2 |             | 0.27 0.07 | 0.01 | 0.66 | -0.37 | -0.42 | 0.10 | 0.13 | 0.24 | 1.6612  | 0.0407 1.4 1.1 1.1   | 1.0 A- | A- | A-                             |
| MATH      | 0   | 960626 | 20 |             | 3 1085   | 1.31 0.41 0.2 |             | 0.11 0.11 | 0.01 | 0.64 | -0.61 | 0.03  | 0.16 | 0.43 | 0.24 | 2.3480  | 0.0344 2.6 1.1 1.1   | 1.0 A+ | A- | A-                             |
| READING   | 2   | 456766 | 20 | B.1.1.1     | 124495   | 1.48 0.10 0.4 |             | 0.09      | 0.01 | 0.58 | -0.49 | -0.20 | 0.25 | 0.24 | 0.30 | 1.0333  | 0.0046 9.0 1.0 9.1   | 1.1 A+ | A- | Α-                             |
| READING   | 2   | 104223 | 0  |             | 2 124495 | 1.56 0.07 0.4 |             | 0.10      | 0.01 | 0.52 | -0.49 | -0.25 | 0.33 | 0.23 |      | 0.7726  | 0.0047 9.9 1.1 9.9   | 1.1    | -  | +                              |
|           | 2   |        | 1  | 2.1.1.1     |          |               |             | 0.07      | 0.01 |      |       | -0.23 |      | 0.24 |      | 1.2247  |                      |        | Α. | Α.                             |
| ELA       | 3   | 467113 | 1  | B-K.1.1.3   | 3 1086   |               |             |           |      | 0.60 | -0.49 |       | 0.41 |      |      |         | 0.0484 -1.7 0.9 -1.7 | 0.9 B+ | A+ | A+                             |
| ELA       | 3   | 502039 | 2  | B-K.1.1.3   | 3 1090   | 1.27 0.17 0.4 |             | 0.07      | 0.01 | 0.59 | -0.47 | -0.14 | 0.38 | 0.26 |      | 1.5091  | 0.0479 -1.4 0.9 -1.5 | 0.9 A+ | A- | A+                             |
| ELA       | 3   | 321816 | 3  | B-K.1.1.3   | 3 1085   | 1.58 0.08 0.3 |             | 0.12      | 0.01 | 0.57 | -0.43 | -0.27 | 0.30 | 0.30 |      | 0.7473  | 0.0480 0.1 1.0 0.0   | 1.0 C+ | A+ | A+                             |
| ELA       | 3   | 570767 | 4  | B-K.1.1.1   | 3 1088   | 1.22 0.19 0.4 |             | 0.08      | 0.01 | 0.55 | -0.46 | -0.07 | 0.33 | 0.27 |      | 1.5181  | 0.0463 0.7 1.0 0.8   | 1.0 A+ | A- | A+                             |
| ELA       | 3   | 783075 | 5  | B-K.1.1.1   | 2 1079   | 1.61 0.06 0.3 |             | 0.11      | 0.01 | 0.55 | -0.40 | -0.29 | 0.31 | 0.27 |      | 0.6838  | 0.0495 0.1 1.0 0.3   | 1.0 C+ | A- | A-                             |
| ELA       | 3   | 173935 | 6  | A-K.1.1.1   | 3 1087   | 1.47 0.10 0.3 |             | 0.06      | 0.01 | 0.58 | -0.47 | -0.21 | 0.39 | 0.21 |      | 1.1757  | 0.0508 0.2 1.0 0.2   | 1.0 A+ | A- | A-                             |
| ELA       | 3   | 625562 | 7  | A-K.1.1.2   | 3 1083   | 1.76 0.11 0.2 |             | 0.21      | 0.02 | 0.67 | -0.48 | -0.35 | 0.27 | 0.39 |      | 0.5349  | 0.0450 -2.8 0.9 -2.4 | 0.9 B+ | A- | A-                             |
| ELA       | 3   | 857572 | 8  | A-K.1.1.2   | 3 1086   | 1.55 0.08 0.3 |             | 0.10      | 0.01 | 0.56 | -0.43 | -0.24 | 0.31 | 0.28 |      | 0.8676  | 0.0489 -0.1 1.0 -0.1 | 1.0 C+ | A- | A-                             |
| ELA       | 3   | 227190 | 9  | 71 11.1.1.5 | 3 1083   | 1.64 0.08 0.3 |             | ).16      | 0.01 | 0.61 | -0.43 | -0.31 | 0.28 | 0.36 |      | 0.6386  | 0.0473 -0.7 1.0 -0.9 | 1.0 A+ | A- | A-                             |
| READING   | 4   | 536408 | 0  | B.1.1.1     | 126593   | 1.90 0.07 0.2 |             | 0.28      | 0.01 | 0.58 | -0.42 | -0.32 | 0.15 | 0.38 |      | 0.1461  | 0.0041 3.7 1.0 5.0   | 1.0    |    |                                |
| READING   | 4   | 928682 | 0  |             | 3 126593 | 1.59 0.14 0.3 |             | 0.20      | 0.01 | 0.59 | -0.47 | -0.20 | 0.22 | 0.38 |      | 0.7630  | 0.0039 -1.2 1.0 -3.1 | 1.0    |    |                                |
| READING   | 4   | 608524 | 0  |             | 2 126593 | 1.97 0.06 0.2 |             | 0.31      | 0.01 | 0.57 | -0.41 | -0.30 | 0.08 | 0.39 |      | 0.0484  | 0.0041 9.9 1.1 9.9   | 1.0    |    |                                |
| READING   | 4   | 319655 | 0  | A.1.5.1     | 3 126593 | 1.81 0.07 0.2 | 6 0.44 0    | ).22      | 0.01 | 0.56 | -0.40 | -0.31 | 0.19 | 0.34 |      | 0.3204  | 0.0042 9.9 1.0 9.9   | 1.0    |    |                                |
| READING   | 5   | 466697 | 0  |             | 3 126213 | 1.87 0.03 0.2 |             | ).16      | 0.01 | 0.52 | -0.31 | -0.38 | 0.23 | 0.27 |      | 0.1991  | 0.0049 3.0 1.0 3.6   | 1.0    |    | $oldsymbol{oldsymbol{\sqcup}}$ |
| READING   | 5   | 150904 | 0  | B.1.1.1     | 2 126213 | 1.72 0.08 0.2 |             | 0.13      | 0.01 | 0.61 | -0.48 | -0.29 | 0.32 | 0.29 |      | 0.7613  | 0.0045 -9.9 0.9 -9.9 | 0.9    |    |                                |
| READING   | 5   | 576832 | 0  | B.1.1.1     | 3 126213 | 1.80 0.08 0.1 |             | ).15      | 0.00 | 0.65 | -0.50 | -0.33 | 0.32 | 0.31 |      | 0.6699  | 0.0044 -9.9 0.9 -9.9 | 0.9    |    |                                |
| READING   | 5   | 868828 | 0  | B.1.2.1     | 3 126213 | 1.40 0.15 0.4 | 0 0.35 0    | 0.10      | 0.01 | 0.50 | -0.40 | -0.12 | 0.25 | 0.27 |      | 1.3265  | 0.0041 9.9 1.1 9.9   | 1.1    |    |                                |
| READING   | 6   | 272514 | 0  | B.1.2.1     | 3 124788 | 1.68 0.05 0.3 | 2 0.53 0    | 0.10      | 0.00 | 0.56 | -0.34 | -0.35 | 0.30 | 0.30 |      | 0.5489  | 0.0048 -7.9 1.0 -7.2 | 1.0    |    |                                |
| READING   | 6   | 936206 | 0  | A.2.3.1     | 3 124788 | 1.68 0.06 0.3 | 4 0.47 0    | 0.13      | 0.01 | 0.46 | -0.36 | -0.23 | 0.23 | 0.23 |      | 0.5064  | 0.0046 9.9 1.2 9.9   | 1.2    |    |                                |
| READING   | 6   | 846051 | 0  | B.1.1.1     | 3 124788 | 1.43 0.20 0.2 | 7 0.44 0    | 0.09      | 0.01 | 0.67 | -0.53 | -0.22 | 0.45 | 0.30 |      | 1.2805  | 0.0041 -9.9 0.9 -9.9 | 0.9    |    |                                |
| READING   | 6   | 984972 | 0  | A.2.3.1     | 3 124788 | 1.86 0.03 0.3 | 0 0.46 0    | ).22      | 0.00 | 0.42 | -0.28 | -0.28 | 0.13 | 0.26 |      | -0.0601 | 0.0046 9.9 1.3 9.9   | 1.3    |    |                                |
| READING   | 7   | 797134 | 0  | A.1.3.1     | 128162   | 1.71 0.08 0.3 | 1 0.44 0    | 0.18      | 0.02 | 0.61 | -0.40 | -0.35 | 0.25 | 0.38 |      | 0.6064  | 0.0041 -9.9 0.9 -9.9 | 0.9    |    |                                |
| READING   | 7   | 282855 | 0  |             | 3 128162 | 1.67 0.03 0.4 | 9 0.27 0    | 0.21      | 0.00 | 0.56 | -0.29 | -0.43 | 0.22 | 0.39 |      | 0.2081  | 0.0041 -9.9 1.0 -9.9 | 1.0    |    | $\top$                         |
| READING   | 7   | 750832 | 0  | B.1.2.1     | 3 128162 | 1.62 0.12 0.3 |             | 0.21      | 0.01 | 0.53 | -0.39 | -0.19 | 0.12 | 0.39 |      | 0.7682  | 0.0038 9.9 1.1 9.9   | 1.1    |    | $\top$                         |
| READING   | 7   | 114348 | 0  |             | 3 128162 | 1.82 0.07 0.3 |             | 0.26      | 0.01 | 0.61 | -0.42 | -0.34 | 0.17 | 0.41 |      | 0.3848  | 0.0039 -9.9 0.9 -9.9 | 0.9    |    | $\top$                         |
| READING   | 8   | 608739 | 0  |             | 3 128535 | 1.65 0.07 0.3 |             | 0.14      | 0.01 | 0.60 | -0.40 | -0.33 | 0.28 | 0.35 |      | 1.2478  | 0.0042 -9.9 0.9 -9.9 | 0.9    | 1  | $\dagger \Box$                 |
| READING   | 8   | 920262 | 0  | B.1.2.1     | 3 128535 | 1.61 0.11 0.3 |             | ).19      | 0.01 | 0.56 | -0.45 | -0.21 | 0.23 | 0.34 | +    | 1.3222  | 0.0039 7.3 1.0 6.6   | 1.0    | 1  | +                              |
| READING   | 8   | 252025 | 0  |             | 3 128535 | 2.04 0.04 0.1 |             | 0.27      | 0.01 | 0.56 | -0.37 | -0.36 | 0.10 | 0.35 |      | 0.5481  | 0.0045 -9.2 1.0 -9.3 | 1.0    | +  | +                              |
| READING   | 8   | 945525 | 0  |             | 3 128535 | 1.71 0.08 0.3 |             | 0.16      | 0.01 | 0.60 | -0.44 | -0.29 | 0.26 | 0.33 |      | 1.2055  | 0.0042 -9.9 0.9 -9.9 | 0.9    | +  | +-                             |
| ALL IDING | - 0 | 713323 |    | 11.1.2.1    | 5 120555 | 1.71 0.00 0.3 | J 0. TO   U |           | 0.01 | 0.00 | U.7-T | 0.27  | 0.20 | 0.55 |      | 1.2000  | 0.00 12 7.7 0.7 -7.7 | 0.7    | -1 | لـــــا                        |

| SCIENCE |     | 236279 | 0  | A.3.1.3 | 2 | 1200.0 |      | 0.14 |      |      |      |      | 0.01 | 0.59 | -0.43 | -0.25 | 0.54               |      |      | 0.3018  | 0.0049 |      | 0.9 |      | 0.9 |      |    |                        |
|---------|-----|--------|----|---------|---|--------|------|------|------|------|------|------|------|------|-------|-------|--------------------|------|------|---------|--------|------|-----|------|-----|------|----|------------------------|
| SCIENCE |     | 504894 | 0  | A.1.3.3 | 2 | 126348 | 1.42 | 0.06 | 0.46 | 0.48 |      |      | 0.01 | 0.33 | -0.33 | -0.08 | 0.24               |      |      | -0.2069 | 0.0055 | 9.9  | 1.2 | 9.9  | 1.3 |      |    |                        |
| SCIENCE |     | 107340 | 0  | A.3.1.4 | 2 | 126348 | 1.16 | 0.24 | 0.35 | 0.40 |      |      | 0.01 | 0.53 | -0.48 | -0.01 | 0.43               |      |      | 0.8528  | 0.0045 | 9.9  | 1.1 | 9.9  | 1.1 |      |    |                        |
| SCIENCE |     | 299002 | 0  | B.3.2.2 | 2 | 126348 | 1.28 |      |      |      |      |      | 0.01 | 0.51 | -0.45 | -0.08 | 0.41               |      |      | 0.4876  | 0.0047 | 9.9  | 1.1 | 9.9  | 1.1 |      |    |                        |
| SCIENCE |     | 269449 | 0  | C.2.1.2 | 2 | 126348 | 1.16 | 0.21 | 0.42 | 0.37 |      |      | 0.01 | 0.37 | -0.33 | -0.01 | 0.29               |      |      | 0.8227  | 0.0047 | 9.9  | 1.3 | 9.9  | 1.3 |      |    |                        |
| SCIENCE |     | 997963 | 1  | C.1.1.1 | 3 |        | 0.64 | 0.42 | 0.51 | 0.07 |      |      | 0.01 | 0.53 | -0.52 | 0.39  | 0.25               |      |      | 2.5338  | 0.0587 |      | 0.9 |      | 0.9 |      | B- | A+                     |
| SCIENCE | 4   | 760022 | 2  | C.3.1.2 | 3 | 1100   | 0.89 | 0.32 | 0.46 | 0.22 |      |      | 0.01 | 0.40 | -0.39 | 0.15  | 0.26               |      |      | 1.5156  | 0.0500 |      | 1.2 | 4.7  | 1.2 | Α-   | A- | A-                     |
| SCIENCE | 4   | 835261 | 3  | A.1.2.2 | 2 | 1099   | 0.64 | 0.50 | 0.36 | 0.14 |      |      | 0.01 | 0.44 | -0.40 | 0.17  | 0.33               |      |      | 2.1846  | 0.0508 |      | 1.1 | 1.6  | 1.1 | Α-   | A- | A-                     |
| SCIENCE | 4   | 890138 | 4  | C.3.1.1 | 3 | 1098   | 1.12 | 0.26 | 0.36 | 0.38 |      |      | 0.01 | 0.53 | -0.46 | -0.01 | 0.44               |      |      | 0.9619  | 0.0479 | 1.4  | 1.1 | 1.6  | 1.1 | A-   | B- | C-                     |
| SCIENCE | 4   | 779226 | 5  | A.2.1.1 | 3 | 1100   | 0.31 | 0.73 | 0.23 | 0.04 |      |      | 0.01 | 0.38 | -0.37 | 0.30  | 0.20               |      |      | 3.3665  | 0.0638 | -0.3 | 1.0 | -0.6 | 1.0 | Α    | A- | B-                     |
| SCIENCE | 4   | 164707 | 6  | D.3.1.3 | 3 | 1099   | 1.09 | 0.26 | 0.38 | 0.35 |      |      | 0.01 | 0.37 | -0.28 | -0.09 | 0.34               |      |      | 1.0119  | 0.0477 | 7.8  | 1.3 | 8.6  | 1.4 | A+   | C- | A-                     |
| SCIENCE | 4   | 614669 | 7  | A.2.1.3 | 3 | 1099   | 0.13 | 0.88 | 0.11 | 0.01 |      |      | 0.01 | 0.14 | -0.13 | 0.12  | 0.06               |      |      | 4.4206  | 0.0907 | 2.0  | 1.2 | 3.0  | 1.5 | A+ . | A- | A-                     |
| SCIENCE | 4   | 955970 | 8  | B.3.1.1 | 2 | 1099   | 0.73 | 0.43 | 0.41 | 0.16 |      |      | 0.02 | 0.48 | -0.41 | 0.13  | 0.39               |      |      | 1.9741  | 0.0507 | -0.6 | 1.0 | 0.0  | 1.0 | A-   | B+ | B+                     |
| SCIENCE | 4   | 119715 | 9  | B.3.2.3 | 2 | 1100   | 1.41 | 0.14 | 0.32 | 0.54 |      |      | 0.02 | 0.48 | -0.33 | -0.26 | 0.47               |      |      | 0.1821  | 0.0516 | 2.3  | 1.1 | 2.6  | 1.2 | A+   | C- | A-                     |
| SCIENCE | 4   | 783527 | 10 | A.1.2.1 | 2 | 1100   | 1.57 | 0.08 | 0.26 | 0.66 |      |      | 0.01 | 0.46 | -0.34 | -0.25 | 0.43               |      |      | -0.3260 | 0.0565 | 1.4  | 1.1 | 3.7  | 1.3 | A-   | C- | C-                     |
| SCIENCE | 4   | 551508 | 11 | D.1.1.3 | 3 | 1099   | 0.91 | 0.27 | 0.55 | 0.18 |      |      | 0.01 | 0.57 | -0.53 | 0.19  | 0.37               |      |      | 1.5435  | 0.0540 | -2.8 | 0.9 | -3.1 | 0.9 | A+ : | B- | A-                     |
| SCIENCE | 4   | 707581 | 12 | B.1.1.3 | 3 | 1099   | 0.71 | 0.54 | 0.22 | 0.25 |      |      | 0.01 | 0.51 | -0.47 | 0.11  | 0.44               |      |      | 1.8960  | 0.0462 | 1.2  | 1.1 | 1.6  | 1.1 | Α-   | A- | A-                     |
| SCIENCE | 8 4 | 441214 | 0  | A.1.3.3 | 3 | 127027 | 1.19 | 0.26 | 0.29 | 0.45 |      |      | 0.01 | 0.60 | -0.57 | 0.01  | 0.49               |      |      | 0.2234  | 0.0043 | -9.9 | 0.9 | -9.9 | 0.9 |      |    |                        |
| SCIENCE | 8 4 | 477126 | 0  | B.3.2.3 | 2 | 127027 | 1.50 | 0.12 | 0.27 | 0.61 |      |      | 0.01 | 0.42 | -0.37 | -0.12 | 0.36               |      |      | -0.6193 | 0.0049 | 9.9  | 1.2 | 9.9  | 1.3 |      |    |                        |
| SCIENCE | 8   | 832619 | 0  | A.2.2.1 | 2 | 127027 | 1.08 | 0.28 | 0.36 | 0.36 |      |      | 0.02 | 0.46 | -0.42 | 0.02  | 0.37               |      |      | 0.4772  | 0.0044 | 9.9  | 1.2 | 9.9  | 1.2 |      |    |                        |
| SCIENCE | 8   | 966808 | 0  | D.1.2.1 | 3 | 127027 | 0.94 | 0.36 | 0.34 | 0.30 |      |      | 0.03 | 0.55 | -0.55 | 0.18  | 0.39               |      |      | 0.8151  | 0.0043 | 1.7  | 1.0 | -0.4 | 1.0 |      |    |                        |
| SCIENCE | 8   | 791638 | 0  | A.3.2.2 | 2 | 127027 | 1.35 | 0.14 | 0.36 | 0.49 |      |      | 0.02 | 0.53 | -0.45 | -0.13 | 0.44               |      |      | -0.2704 | 0.0048 | 4.8  | 1.0 | 5.9  | 1.0 |      |    |                        |
| SCIENCE | 8 : | 266752 | 1  | A.1.2.1 | 2 | 1100   | 1.10 | 0.23 | 0.45 | 0.32 |      |      | 0.02 | 0.38 | -0.37 | 0.06  | 0.27               |      |      | 0.4195  | 0.0490 | 5.2  | 1.2 | 5.3  | 1.2 | A+ : | B- | A-                     |
| SCIENCE | 8 4 | 457149 | 2  | B.3.2.3 | 3 | 1098   | 1.25 | 0.23 | 0.29 | 0.48 |      |      | 0.02 | 0.56 | -0.55 | 0.03  | 0.44               |      |      | 0.1137  | 0.0472 | 0.7  | 1.0 | 1.1  | 1.1 | Α-   | C- | C-                     |
| SCIENCE | 8   | 642918 | 3  | B.3.1.1 | 3 | 1099   | 0.86 | 0.30 | 0.54 | 0.16 |      |      | 0.01 | 0.46 | -0.40 | 0.11  | 0.34               |      |      | 1.0974  | 0.0534 | 0.4  | 1.0 | 0.3  | 1.0 | A+ : | B- | A-                     |
| SCIENCE | 8   | 993846 | 4  | B.1.1.3 | 3 | 1100   | 0.38 | 0.73 | 0.15 | 0.12 |      |      | 0.06 | 0.37 | -0.35 | 0.17  | 0.30               |      |      | 2.0640  | 0.0510 | 0.3  | 1.0 | 0.3  | 1.0 | A+ . | A- | A-                     |
| SCIENCE | 8   | 716086 | 5  | C.3.1.2 | 3 | 1100   | 0.40 | 0.76 | 0.09 | 0.15 |      |      | 0.02 | 0.37 | -0.37 | 0.15  | 0.32               |      |      | 1.9864  | 0.0491 | 1.7  | 1.1 | 3.3  | 1.5 |      | Α- | Α-                     |
| SCIENCE | 8   | 261945 | 6  | C.3.1.1 | 3 | 1100   | 0.36 | 0.68 | 0.27 | 0.04 |      |      | 0.01 | 0.39 | -0.38 | 0.31  | 0.20               |      |      | 2.5837  | 0.0606 |      | 1.0 | -0.2 | 1.0 |      | Α- | B-                     |
| SCIENCE |     | 523466 | 7  | C.1.1.1 | 2 | 1100   | 0.25 | 0.80 | 0.15 | 0.05 |      |      | 0.02 | 0.36 | -0.36 | 0.27  | 0.22               |      |      | 2.6379  | 0.0625 | -1.2 | 0.9 | -1.1 | 0.9 | A+   | Α- | A+                     |
| SCIENCE | 8   | 974922 | 8  | D.3.1.3 | 2 | 1099   | 1.18 | 0.18 |      | 0.36 |      |      | 0.02 | 0.45 | -0.40 | -0.04 | 0.35               |      |      | 0.1574  | 0.0507 | 2.6  | 1.1 | 2.6  | 1.1 | Α-   | C- | Α-                     |
| SCIENCE | 8   | 252816 | 9  | D.1.1.3 | 2 | 1099   | 0.60 | 0.52 | 0.36 | 0.12 |      |      | 0.02 | 0.54 | -0.53 | 0.33  | 0.34               |      |      | 1.7138  | 0.0511 | -4.5 | 0.8 |      | 0.8 | Α-   | C- | A-                     |
| SCIENCE |     | 297840 | 10 | A.1.2.2 | 2 | 1099   | 1.30 | 0.16 | 0.38 | 0.46 |      |      | 0.01 | 0.43 | -0.40 | -0.05 | 0.33               |      |      | -0.1160 | 0.0503 | 3.8  | 1.2 | 3.9  | 1.2 | A+   | C- | C-                     |
| SCIENCE | 8   | 579171 | 11 | A.2.1.1 | 3 | 1100   | 0.87 | 0.40 | 0.34 | 0.27 |      |      | 0.03 | 0.54 | -0.51 | 0.12  | 0.43               |      |      | 0.9620  | 0.0456 |      | 1.0 | -1.0 | 1.0 | Α-   | A- | Α-                     |
| SCIENCE |     | 430893 | 12 | A.2.1.3 | 3 | 1099   | 0.63 | 0.51 |      | 0.14 |      |      | 0.03 | 0.53 | -0.54 | 0.33  | 0.33               |      |      | 1.6485  | 0.0505 |      | 0.9 | -2.5 | 0.9 |      | A- | Α-                     |
| WRITING | 5 . | 401156 | 1  | A.3     | 3 | 124429 | 2.45 | 0.00 | 0.07 | 0.46 | 0.43 | 0.05 |      | 0.68 |       | -0.44 | -0.37              | 0.49 | 0.28 | 3.0410  | 0.0066 |      | 0.6 | -9.9 | 0.5 |      |    |                        |
| WRITING |     | 401156 | 1  | B.6     | 3 |        | 2.44 |      | 0.07 | 0.46 |      | 0.05 |      | 0.69 |       | -0.45 | -0.37              | 0.49 | 0.28 | 3.0682  | 0.0066 |      | 0.6 |      | 0.5 |      |    | $\vdash \vdash \vdash$ |
| WRITING |     | 502220 | 1  | A.2     | 3 | 124429 | 2.51 |      | 0.06 | 0    | 0.48 | 0.00 |      | 0.69 |       | -0.42 | -0.44              | 0.51 | 0.29 | 2.7710  | 0.0067 | -9.9 | 0.6 | -9.9 | 0.5 |      |    | $\vdash$               |
| WRITING |     | 502220 | 1  | B.6     | 3 |        | 2.48 |      | 0.07 |      | 0.46 |      |      | 0.71 |       | -0.44 | -0.41              | 0.52 | 0.28 | 2.9769  | 0.0066 |      | 0.7 |      | 0.7 |      |    | $\vdash$               |
| WRITING | -   | 127031 | 1  | A.2     | 3 | 127637 | 2.76 |      | 0.02 |      | 0.65 | 0.07 |      | 0.64 |       | -0.29 | -0.51              | 0.32 | 0.32 | 1.6622  | 0.0070 |      | 0.6 | -9.9 | 0.5 |      |    | $\vdash$               |
| WRITING |     | 127031 | 1  | B.6     | 3 | 127637 | 2.74 |      | 0.02 | 00   |      | 0.07 |      | 0.67 |       | -0.27 | -0.52              | 0.37 | 0.32 | 1.7499  | 0.0070 |      | 0.8 | -9.9 | 0.7 |      |    | $\vdash$               |
| WRITING |     | 738344 | 1  | A.3     | 3 | 127637 | 2.64 |      | 0.03 |      |      | 0.07 |      | 0.67 |       | -0.35 | -0.50              | 0.41 | 0.33 | 2.2255  | 0.0066 |      | 0.6 | -9.9 | 0.7 |      |    | +-                     |
| WRITING |     | 738344 | 1  | B.6     | 3 |        | 2.64 |      | 0.04 |      | 0.56 |      |      | 0.70 |       | -0.38 | -0.49              | 0.40 | 0.31 | 2.3099  | 0.0064 |      | 0.8 | -9.9 | 0.7 |      |    | +-                     |
| WILLIAM | 0   | 130344 | 1  | D.0     |   | 12/03/ | 2.04 |      | 0.03 | 0.55 | 0.50 | 0.00 |      | 0.70 |       | -0.36 | -U. <del>+</del> 2 | 0.47 | 0.55 | 2.3077  | 0.0004 | -7.7 | 0.0 | -7.7 | 0.7 |      |    |                        |

Appendix F: Item Statistics Evidence-Based Selected Response

|      |       | Item Inf | ormati | on        |     |       |      |      |      |      | Cla  | ssical |       |       |       |       |       | Ras     | sch    | Inf  | ït  | Out  | fit |     | DIF | $\overline{}$ |
|------|-------|----------|--------|-----------|-----|-------|------|------|------|------|------|--------|-------|-------|-------|-------|-------|---------|--------|------|-----|------|-----|-----|-----|---------------|
| Cont | Grade | PubID    | Form   | Std       | DOK | N     | Mean | P(0) | P(1) | P(2) | P(3) | P(B)   | PtBis | PT(0) | PT(1) | PT(2) | PT(3) | Meas    | MeasSE | t    | MS  | t    | MS  | M/F | W/B | W/H           |
| ELA  | 3     | 356822   | 1      | B-C.2.1.2 | 3   | 14010 | 0.63 | 0.50 | 0.36 | 0.13 |      |        | 0.19  | -0.12 | -0.04 | 0.23  |       | 1.9351  | 0.0147 | 9.9  | 1.5 | 9.9  | 1.9 | A-  | A+  | A-            |
| ELA  | 3     | 868845   | 1      | B-K.1.1.1 | 3   | 14010 | 1.54 | 0.15 | 0.36 | 0.30 | 0.20 |        | 0.53  | -0.32 | -0.26 | 0.18  | 0.40  | 0.7710  | 0.0117 | 9.9  | 1.2 | 9.9  | 1.2 | A+  | A-  | A-            |
| ELA  | 3     | 279820   | 2      | B-K.1.1.2 | 3   | 13860 | 1.32 | 0.18 | 0.42 | 0.31 | 0.09 |        | 0.37  | -0.21 | -0.15 | 0.16  | 0.29  | 1.3438  | 0.0127 | 9.9  | 1.4 | 9.9  | 1.4 | A-  | A-  | A-            |
| ELA  | 3     | 491253   | 2      | B-C.2.1.2 | 3   | 13860 | 0.86 | 0.39 | 0.37 | 0.25 |      |        | 0.35  | -0.25 | -0.05 | 0.34  |       | 1.3409  | 0.0139 | 9.9  | 1.4 | 9.9  | 1.5 | A-  | A-  | A-            |
| ELA  | 3     | 923231   | 3      | B-K.1.1.2 | 3   | 13843 | 2.03 | 0.06 | 0.21 | 0.36 | 0.37 |        | 0.61  | -0.34 | -0.39 | 0.03  | 0.47  | -0.1197 | 0.0125 | 1.3  | 1.0 | 2.3  | 1.0 | A+  | A-  | A-            |
| ELA  | 3     | 827535   | 3      | B-K.1.1.1 | 3   | 13843 | 1.31 | 0.18 | 0.33 | 0.49 |      |        | 0.42  | -0.25 | -0.28 | 0.45  |       | 0.1286  | 0.0143 | 9.9  | 1.3 | 9.9  | 1.4 | A+  | A+  | A+            |
| ELA  | 3     | 846989   | 4      | B-K.1.1.1 | 3   | 13810 | 1.80 | 0.15 | 0.26 | 0.22 | 0.37 |        | 0.59  | -0.31 | -0.36 | -0.01 | 0.56  | 0.4644  | 0.0113 | 9.9  | 1.2 | 9.5  | 1.2 | A-  | A-  | A-            |
| ELA  | 3     | 807622   | 4      | B-C.2.1.2 | 3   | 13810 | 1.30 | 0.22 | 0.26 | 0.52 |      |        | 0.63  | -0.54 | -0.14 | 0.57  |       | 0.2494  | 0.0140 | -5.7 | 0.9 | -4.4 | 0.9 | A-  | A-  | A-            |
| ELA  | 3     | 647871   | 5      | B-K.1.1.2 | 3   | 13797 | 0.81 | 0.41 | 0.37 | 0.22 |      |        | 0.20  | -0.13 | -0.06 | 0.22  |       | 1.4679  | 0.0139 | 9.9  | 1.6 | 9.9  | 1.9 | A-  | A-  | A-            |
| ELA  | 3     | 939411   | 5      | B-K.1.1.1 | 3   | 13797 | 2.01 | 0.08 | 0.21 | 0.33 | 0.38 |        | 0.67  | -0.37 | -0.43 | 0.02  | 0.55  | 0.0192  | 0.0120 | -9.7 | 0.9 | -9.8 | 0.9 | A+  | A-  | A-            |
| ELA  | 3     | 967225   | 6      | A-K.1.1.2 | . 3 | 13824 | 0.76 | 0.46 | 0.34 | 0.21 |      |        | 0.34  | -0.25 | -0.03 | 0.34  |       | 1.6779  | 0.0141 | 9.9  | 1.4 | 9.9  | 1.7 | A+  | A-  | A-            |
| ELA  | 3     | 310673   | 6      | A-K.1.1.3 | 3   | 13824 | 1.74 | 0.13 | 0.27 | 0.31 | 0.28 |        | 0.56  | -0.31 | -0.34 | 0.11  | 0.45  | 0.5538  | 0.0118 | 9.9  | 1.2 | 9.9  | 1.2 | A+  | A-  | A-            |
| ELA  | 3     | 172776   | 7      | A-K.1.1.2 | 3   | 13752 | 1.57 | 0.15 | 0.32 | 0.34 | 0.19 |        | 0.48  | -0.31 | -0.24 | 0.21  | 0.31  | 0.8901  | 0.0121 | 9.9  | 1.4 | 9.9  | 1.4 | A+  | A-  | A-            |
| ELA  | 3     | 802730   | 7      | A-K.1.1.3 | 3   | 13752 | 1.34 | 0.17 | 0.33 | 0.51 |      |        | 0.60  | -0.46 | -0.21 | 0.55  |       | 0.1082  | 0.0147 | -3.4 | 1.0 | -3.2 | 1.0 | A+  | A-  | A-            |
| ELA  | 3     | 865207   | 8      | A-K.1.1.3 | 3   | 13843 | 1.35 | 0.27 | 0.29 | 0.26 | 0.18 |        | 0.45  | -0.20 | -0.33 | 0.20  | 0.39  | 1.2686  | 0.0112 | 9.9  | 1.3 | 9.9  | 1.4 | A-  | A-  | A-            |
| ELA  | 3     | 463739   | 8      | A-K.1.1.3 | 3   | 13843 | 1.10 | 0.32 | 0.26 | 0.42 |      |        | 0.52  | -0.41 | -0.14 | 0.51  |       | 0.7832  | 0.0131 | 9.9  | 1.1 | 9.9  | 1.2 | A-  | A+  | A-            |
| ELA  | 3     | 765066   | 9      | A-K.1.1.3 | 3   | 13738 | 1.38 | 0.18 | 0.27 | 0.56 |      |        | 0.64  | -0.49 | -0.28 | 0.62  |       | -0.0087 | 0.0145 | -8.6 | 0.9 | -9.9 | 0.8 |     | A-  | A-            |
| ELA  | 3     | 514395   | 9      | A-K.1.1.1 | 3   | 13738 | 1.62 | 0.15 | 0.31 | 0.30 | 0.24 |        | 0.45  | -0.19 | -0.30 | 0.07  | 0.41  | 0.7422  | 0.0118 | 9.9  | 1.5 | 9.9  | 1.5 | A-  | A-  | A-            |
| ELA  | 4     | 804395   | 1      | A-K.1.1.3 | 3   | 14428 | 1.24 | 0.15 | 0.46 | 0.39 |      |        | 0.55  | -0.46 | -0.11 | 0.45  |       | 0.2019  | 0.0145 | -5.2 | 1.0 | -6.1 | 0.9 | A+  | B-  | C-            |
| ELA  | 4     | 446807   | 1      | A-K.1.1.1 | 3   | 14428 | 1.65 | 0.12 | 0.36 | 0.28 | 0.24 |        | 0.53  | -0.32 | -0.27 | 0.11  | 0.42  | 0.5483  | 0.0113 | 9.9  | 1.1 | 9.4  | 1.1 | A-  | B-  | B-            |
| ELA  | 4     | 937509   | 2      | A-C.2.1.1 | 3   | 14024 | 1.50 | 0.16 | 0.39 | 0.23 | 0.22 |        | 0.45  | -0.29 | -0.15 | 0.03  | 0.41  | 0.8557  | 0.0111 | 9.9  | 1.2 | 9.9  | 1.3 | A+  | A-  | A+            |
| ELA  | 4     | 369597   | 2      | A-K.1.1.3 | 3   | 14024 | 1.17 | 0.23 | 0.37 | 0.40 |      |        | 0.42  | -0.31 | -0.14 | 0.40  |       | 0.5403  | 0.0135 | 9.9  | 1.2 | 9.9  | 1.3 | A+  | A-  | A-            |
| ELA  | 4     | 601474   | 3      | A-K.1.1.3 | 3   | 14061 | 1.04 | 0.32 | 0.32 | 0.36 |      |        | 0.36  | -0.25 | -0.13 | 0.37  |       | 0.8767  | 0.0127 | 9.9  | 1.3 | 9.9  | 1.4 | A-  | A+  | A-            |
| ELA  | 4     | 103669   | 3      | A-K.1.1.1 | 3   | 14061 | 1.99 | 0.08 | 0.21 | 0.36 | 0.35 |        | 0.55  | -0.32 | -0.33 | 0.03  | 0.43  | 0.1051  | 0.0117 | 6.8  | 1.1 | 6.1  |     | A+  | A-  | A-            |
| ELA  | 4     | 612598   | 4      | A-K.1.1.3 | 3   | 14050 | 1.24 | 0.27 | 0.22 | 0.51 |      |        | 0.49  | -0.36 | -0.23 | 0.51  |       | 0.4485  | 0.0129 | 9.9  | 1.2 | 9.9  | 1.2 | A-  | A-  | A-            |
| ELA  | 4     | 518430   | 4      | A-K.1.1.3 | 3   | 14050 | 2.07 | 0.09 | 0.16 | 0.34 | 0.41 |        | 0.61  | -0.36 | -0.38 | 0.01  | 0.49  | 0.0039  | 0.0118 | -1.4 | 1.0 | -2.0 | 1.0 | A-  | B-  | B-            |
| ELA  | 4     | 387588   | 5      | B-K.1.1.1 | 3   | 14036 | 1.28 | 0.23 | 0.26 | 0.51 |      |        | 0.48  | -0.33 | -0.27 | 0.51  |       | 0.3612  | 0.0133 | 9.9  | 1.2 | 9.9  | 1.2 | A-  | A-  | A-            |
| ELA  | 4     | 689199   | 5      | B-K.1.1.2 | 3   | 14036 | 1.83 | 0.09 | 0.21 | 0.47 | 0.23 |        | 0.53  | -0.32 | -0.42 | 0.29  | 0.28  | 0.4048  | 0.0124 | 9.0  | 1.1 | 8.4  | 1.1 | A+  | A-  | A-            |
| ELA  | 4     | 250225   | 6      | B-C.3.1.1 | 3   | 14040 | 1.77 | 0.08 | 0.24 | 0.53 | 0.16 |        | 0.44  | -0.27 | -0.29 | 0.21  | 0.25  | 0.5147  | 0.0132 | 9.9  | 1.2 | 9.9  | 1.2 | A+  | B-  | A-            |
| ELA  | 4     | 270367   | 6      | B-V.4.1.1 | 2   | 14040 | 1.65 | 0.08 | 0.19 | 0.73 |      |        | 0.59  | -0.44 | -0.32 | 0.55  |       | -0.7726 | 0.0166 | -9.9 | 0.8 | -7.8 | 0.8 | A+  | B-  | C-            |
| ELA  | 4     | 749604   | 7      | B-C.3.1.2 | 3   | 14009 | 1.76 | 0.10 | 0.26 | 0.43 | 0.22 |        | 0.54  | -0.33 | -0.34 | 0.20  | 0.35  | 0.5034  | 0.0121 | 6.3  | 1.1 | 5.7  | 1.1 | A+  | A-  | A-            |
| ELA  | 4     | 984866   | 7      | B-C.3.1.1 | 3   | 14009 | 1.10 | 0.31 | 0.28 | 0.41 |      |        | 0.46  | -0.35 | -0.15 | 0.47  |       | 0.7773  | 0.0127 | 9.9  | 1.2 | 9.9  | 1.3 | A+  | A-  | B-            |
| ELA  | 4     | 370737   | 8      | B-C.3.1.1 | 3   | 13958 | 1.29 | 0.21 | 0.29 | 0.50 |      |        | 0.53  | -0.37 | -0.26 | 0.53  |       | 0.3147  | 0.0134 | 3.0  | 1.0 | 3.5  | 1.1 | A-  | B-  | B-            |
| ELA  | 4     | 376592   | 8      | B-C.3.1.2 | 3   | 13958 | 1.62 | 0.13 | 0.34 | 0.33 | 0.21 |        | 0.41  | -0.23 | -0.23 | 0.11  | 0.33  | 0.7331  | 0.0115 | 9.9  | 1.3 | 9.9  | 1.3 | A-  | B-  | A-            |
| ELA  | 4     | 905947   | 9      | B-K.1.1.2 | 3   | 13959 | 2.11 | 0.05 | 0.16 | 0.41 | 0.38 |        | 0.62  | -0.31 | -0.46 | 0.03  | 0.46  | -0.1546 | 0.0127 | -8.0 | 0.9 | -8.6 | 0.9 | A+  | B-  | A-            |
| ELA  | 4     | 742885   | 9      | B-K.1.1.1 | 3   | 13959 | 1.36 | 0.22 | 0.20 | 0.58 |      |        | 0.54  | -0.37 | -0.34 | 0.58  |       | 0.2253  | 0.0133 | 6.0  | 1.1 | 9.9  | 1.2 | A+  | B-  | A-            |

| ELA        | 5   | 895077           | 1 B-K.1.1.1                 | 3   | 14378 | 1.35         | 0.19 | 0.27 | 0.54 |      | 0.61 | -0.48          | -0.23         | 0.58          |      | 0.2827            | 0.0134 | -9.8        | 0.9 | -9.9       | 0.8 A- | Α-   | A-       |
|------------|-----|------------------|-----------------------------|-----|-------|--------------|------|------|------|------|------|----------------|---------------|---------------|------|-------------------|--------|-------------|-----|------------|--------|------|----------|
| ELA        | 5   | 723310           | 1 B-K.1.1.2                 | 3   | 14378 | 1.33         | 0.14 | 0.52 | 0.23 | 0.12 | 0.34 | -0.21          | -0.11         | 0.10          | 0.28 | 1.2583            | 0.0121 | 9.9         | 1.3 | 9.9        |        |      | A-       |
| ELA        | 5   | 591316           | 2 B-K.1.1.2                 | 3   | 14008 | 1.50         | 0.14 | 0.36 | 0.36 | 0.14 | 0.36 | -0.24          | -0.16         | 0.14          | 0.25 | 1.1105            | 0.0118 | 9.9         | 1.3 | 9.9        |        |      | A-       |
| ELA        | 5   | 801607           | 2 B-K.1.1.1                 | 3   | 14008 | 1.19         | 0.23 | 0.35 | 0.42 |      | 0.46 | -0.32          | -0.21         | 0.47          |      | 0.6745            | 0.0133 | 9.1         | 1.1 | 8.1        |        | -    | A-       |
| ELA        | 5   | 525170           | 3 B-C.3.1.1                 | 3   | 14016 | 1.37         | 0.21 | 0.21 | 0.58 |      | 0.53 | -0.41          | -0.24         | 0.54          | 1    | 0.3402            | 0.0134 | 5.8         | 1.1 | 3.6        |        | A-   | A+       |
| ELA        | 5   | 799506           | 3 B-K.1.1.1                 | 3   | 14016 | 1.90         | 0.09 | 0.30 | 0.24 | 0.37 | 0.33 | -0.22          | -0.11         | -0.10         | 0.32 | 0.3794            | 0.0112 | 9.9         | 1.6 | 9.9        |        | A    | A-       |
| ELA        | 5   | 963076           | 4 B-K.1.1.1                 | 3   | 14022 | 0.87         | 0.28 | 0.57 | 0.15 |      | 0.24 | -0.23          | 0.11          | 0.14          |      | 1.5375            | 0.0152 | 9.9         | 1.3 | 9.9        | 1.3 A- | A    | A-       |
| ELA        | 5   | 118020           | 4 B-K.1.1.2                 | . 3 | 14022 | 1.04         | 0.35 | 0.36 | 0.20 | 0.10 | 0.05 | 0.12           | -0.21         | -0.06         | 0.21 | 1.8433            | 0.0110 | 9.9         | 1.9 | 9.9        | 2.2 A- | Α-   | A-       |
| ELA        | 5   | 469148           | 5 B-K.1.1.2                 | 3   | 13967 | 1.42         | 0.17 | 0.39 | 0.28 | 0.16 | 0.30 | -0.13          | -0.16         | 0.05          | 0.29 | 1.2258            | 0.0113 | 9.9         | 1.4 | 9.9        | 1.5 A- | A    | A-       |
| ELA        | 5   | 700497           | 5 B-K.1.1.1                 | 3   | 13967 | 0.78         | 0.52 | 0.18 | 0.30 |      | 0.36 | -0.24          | -0.18         | 0.42          |      | 1.6098            | 0.0120 | 9.9         | 1.2 | 9.9        | 1.7 A- | Α-   | A-       |
| ELA        | 5   | 749715           | 6 A-K.1.1.1                 | 3   | 13935 | 1.94         | 0.06 | 0.17 | 0.56 | 0.22 | 0.54 | -0.34          | -0.37         | 0.17          | 0.31 | 0.3447            | 0.0133 | -1.4        | 1.0 | -2.0       | 1.0 A- | C- 1 | B-       |
| ELA        | 5   | 535104           | 6 A-K.1.1.1                 | 3   | 13935 | 0.72         | 0.47 | 0.35 | 0.18 |      | 0.22 | -0.15          | -0.04         | 0.24          |      | 1.8668            | 0.0135 | 9.9         | 1.4 | 9.9        | 1.7 A- | A+ . | A+       |
| ELA        | 5   | 359886           | 7 A-K.1.1.1                 | 3   | 13980 | 2.23         | 0.05 | 0.12 | 0.37 | 0.46 | 0.58 | -0.33          | -0.42         | -0.02         | 0.44 | -0.1477           | 0.0126 | -2.7        | 1.0 | -2.0       | 1.0 A+ | Α-   | A-       |
| ELA        | 5   | 994412           | 7 A-K.1.1.1                 | 3   | 13980 | 1.18         | 0.26 | 0.30 | 0.44 |      | 0.39 | -0.31          | -0.12         | 0.38          |      | 0.7553            | 0.0129 | 9.9         | 1.3 | 9.9        | 1.3 A- | Α-   | A-       |
| ELA        | 5   | 572159           | 8 A-K.1.1.1                 | 3   | 13888 | 1.36         | 0.19 | 0.26 | 0.55 |      | 0.59 | -0.44          | -0.26         | 0.57          |      | 0.3271            | 0.0136 | -7.2        | 0.9 | -9.1       | 0.9 A+ | Α-   | A-       |
| ELA        | 5   | 611315           | 8 A-K.1.1.3                 | 3   | 13888 | 1.66         | 0.13 | 0.28 | 0.38 | 0.21 | 0.49 | -0.25          | -0.33         | 0.17          | 0.37 | 0.8751            | 0.0117 | 9.9         | 1.1 | 9.9        | 1.1 A- | Α-   | A-       |
| ELA        | 5   | 889899           | 9 A-K.1.1.1                 | 3   | 13993 | 0.89         | 0.46 | 0.19 | 0.35 |      | 0.41 | -0.32          | -0.12         | 0.44          |      | 1.3623            | 0.0119 | 9.9         | 1.2 | 9.9        | 1.4 A+ | A-   | A-       |
| ELA        | 5   | 915626           | 9 A-K.1.1.2                 | 3   | 13993 | 1.25         | 0.34 | 0.29 | 0.14 | 0.23 | 0.35 | -0.10          | -0.29         | 0.03          | 0.41 | 1.4305            | 0.0099 | 9.9         | 1.4 | 9.9        | 1.7 A+ | A-   | A-       |
| ELA        | 6   | 464819           | 1 A-K.1.1.2                 | 3   | 6628  | 1.61         | 0.10 | 0.37 | 0.36 | 0.17 | 0.40 | -0.29          | -0.14         | 0.09          | 0.29 | 0.5561            | 0.0181 | 9.9         | 1.4 | 9.9        | 1.4 A- | A    | A-       |
| ELA        | 6   | 769299           | 1 A-K.1.1.3                 | 3   | 6628  | 1.35         | 0.22 | 0.21 | 0.57 |      | 0.43 | -0.25          | -0.35         | 0.50          |      | 0.0315            | 0.0198 | 9.9         | 1.4 | 9.9        | 1.6 A+ | A+ . | A-       |
| ELA        | 6   | 753198           | 2 A-K.1.1.1                 | . 3 | 6197  | 0.76         | 0.38 | 0.49 | 0.13 |      | 0.17 | -0.14          | 0.05          | 0.13          |      | 1.6835            | 0.0225 | 9.9         | 1.5 | 9.9        | 1.6 A- | A    | A-       |
| ELA        | 6   | 239324           | 2 A-K.1.1.3                 | 3   | 6197  | 1.61         | 0.12 | 0.30 | 0.44 | 0.15 | 0.42 | -0.28          | -0.22         | 0.21          | 0.25 | 0.7611            | 0.0185 | 9.9         | 1.3 | 9.9        | 1.3 A+ | A    | A+       |
| ELA        | 6   | 524870           | 3 A-K.1.1.1                 | . 3 | 6202  | 2.18         | 0.05 | 0.12 | 0.45 | 0.39 | 0.53 | -0.32          | -0.35         | 0.01          | 0.36 | -0.3433           | 0.0200 | 3.2         | 1.1 | 4.3        | 1.1 A+ | A    | A-       |
| ELA        | 6   | 991153           | 3 A-K.1.1.1                 | . 3 | 6202  | 1.12         | 0.28 | 0.32 | 0.40 |      | 0.37 | -0.27          | -0.12         | 0.36          |      | 0.6875            | 0.0199 | 9.9         | 1.4 | 9.9        |        |      | A-       |
| ELA        | 6   | 185971           | 4 A-C.2.1.3                 | 3   | 6194  | 1.08         | 0.25 | 0.43 | 0.32 |      | 0.47 | -0.41          | 0.00          | 0.38          |      | 0.7844            | 0.0210 | 7.3         | 1.1 | 8.4        |        |      | A-       |
| ELA        | 6   | 735678           | 4 A-K.1.1.1                 | . 3 | 6194  | 1.63         | 0.08 | 0.34 | 0.46 | 0.13 | 0.47 | -0.33          | -0.24         | 0.22          | 0.27 | 0.6841            | 0.0200 | 7.5         | 1.1 | 7.6        |        |      | A-       |
| ELA        | 6   | 897783           | 5 A-K.1.1.1                 | 3   | 6264  | 1.18         | 0.26 | 0.31 | 0.44 |      | 0.47 | -0.32          | -0.21         | 0.48          |      | 0.5478            | 0.0199 | 9.9         | 1.2 | 9.2        |        |      | B-       |
| ELA        | 6   | 252499           | 5 A-K.1.1.3                 | 3   | 6264  | 1.53         | 0.19 | 0.29 | 0.30 | 0.21 | 0.41 | -0.19          | -0.28         | 0.12          | 0.36 | 0.9240            | 0.0167 | 9.9         | 1.4 | 9.9        |        | -    | Α-       |
| ELA        | 6   | 236764           | 6 A-K.1.1.1                 | 3   | 6196  | 1.96         | 0.07 | 0.22 | 0.40 | 0.31 | 0.51 | -0.30          | -0.29         | 0.03          | 0.39 | 0.0851            | 0.0187 | 9.9         | 1.2 | 9.9        |        | -    | A-       |
| ELA        | 6   | 834286           | 6 A-K.1.1.1                 | . 3 | 6196  | 0.99         | 0.34 | 0.34 | 0.32 |      | 0.31 | -0.24          | -0.04         | 0.29          |      | 1.0681            | 0.0199 | 9.9         | 1.5 | 9.9        |        | -    | A-       |
| ELA        | 6   | 456978           | 7 A-C.2.1.3                 | 3   | 6214  | 1.29         | 0.14 | 0.43 | 0.43 | 0.00 | 0.37 | -0.28          | -0.13         | 0.32          | 0.25 | 0.1235            | 0.0222 | 9.9         | 1.3 | 9.9        |        |      | B-       |
| ELA        | 6   | 240382           | 7 A-K.1.1.1                 | 3   | 6214  | 1.73<br>2.37 | 0.11 | 0.27 | 0.39 | 0.23 | 0.48 | -0.24          | -0.33         | 0.14          | 0.36 | 0.5290            | 0.0178 | 9.9         | 1.2 | 9.9        | 1.0 11 |      | A-       |
| ELA<br>ELA | 0   | 604650<br>931766 | 8 A-K.1.1.1<br>8 A-K.1.1.2  | 3   | 6188  | 1.12         | 0.03 | 0.10 | 0.32 | 0.54 | 0.58 | -0.27<br>-0.39 | -0.44<br>0.01 | -0.10<br>0.33 | 0.46 | -0.7166<br>0.6835 | 0.0206 | -1.4<br>9.9 | 1.0 | 0.5<br>9.9 |        |      | A-       |
| ELA        | 0   | 112783           | 9 A-K.1.1.1                 | 3   | 6227  | 1.12         | 0.22 | 0.43 | 0.34 |      | 0.43 | -0.39          | -0.14         | 0.33          |      | 0.0833            | 0.0213 | 9.9         | 1.4 | 9.9        |        |      | A-       |
| ELA        | 6   | 950024           | 9 A-K.1.1.1                 | 2   | 6227  | 2.20         | 0.22 | 0.29 | 0.49 | 0.50 | 0.38 | -0.29          | -0.14         | 0.00          | 0.51 | -0.1874           | 0.0200 | -1.3        | 1.4 | -1.3       |        |      | A-<br>C- |
| ELA        | 6   | 798494           | 9 A-K.1.1.3<br>10 A-K.1.1.3 | 2   | 6224  | 1.26         | 0.08 | 0.13 | 0.28 | 0.30 | 0.62 | -0.33          | -0.40         | 0.00          | 0.51 | 0.1364            | 0.0177 | 9.9         | 1.0 | 9.9        |        | _    | A-       |
| ELA        | 6   | 981299           | 10 A-K.1.1.3                | 3   | 6224  | 1.20         | 0.12 | 0.30 | 0.38 | 0.33 | 0.33 | -0.34          | -0.01         | 0.24          | 0.36 | -0.0710           | 0.0231 | 9.9         | 1.2 | 9.9        |        |      | A-       |
| ELA        | 6   | 343967           | 11 B-C.3.1.1                | 3   | 6191  | 0.81         | 0.03 | 0.23 | 0.38 | 0.55 | 0.48 | -0.35          | 0.29          | 0.02          | 0.30 | 1.6626            | 0.0187 | 9.6         | 1.2 | 9.9        |        |      | A-       |
| ELA        | 6   | 162153           | 11 B-K.1.1.2                | 3   | 6191  | 1.56         | 0.29 | 0.01 | 0.30 | 0.21 | 0.25 | -0.19          | -0.32         | 0.00          | 0.39 | 0.8669            | 0.0243 | 9.9         | 1.2 | 9.9        |        |      | A-       |
| ELA        | 6   | 522685           | 12 B-K.1.1.1                | 3   | 6209  | 1.32         | 0.17 | 0.30 | 0.51 | 0.21 | 0.43 | -0.19          | -0.14         | 0.50          | 0.57 | 0.2020            | 0.0206 | -1.8        | 1.0 | -2.0       |        | -    | A-       |
| ELA        | 6   | 381573           | 12 B-K.1.1.3                | 2   | 6209  | 1.85         | 0.17 | 0.23 | 0.36 | 0.30 | 0.53 | -0.30          | -0.14         | 0.09          | 0.41 | 0.3525            | 0.0174 | 7.9         | 1.1 | 7.0        |        |      | A-       |
| ELA        | 6   | 590523           | 13 B-C.2.1.1                | 3   | 6215  | 1.77         | 0.08 | 0.32 | 0.35 | 0.25 | 0.51 | -0.30          | -0.31         | 0.14          | 0.37 | 0.4034            | 0.0180 | 7.6         | 1.1 | 7.5        |        |      | A-       |
| ELA        | 6   | 714555           | 13 B-V.4.1.1                | 2   | 6215  | 1.22         | 0.22 | 0.35 | 0.43 | 0.23 | 0.54 | -0.46          | -0.08         | 0.46          | 0.57 | 0.4434            | 0.0204 | 1.1         | 1.0 | 1.4        |        |      | A-       |
| ELA        | 6   | 876485           | 14 B-C.3.1.1                | 3   | 6241  | 1.92         | 0.07 | 0.24 | 0.38 | 0.31 | 0.60 | -0.31          | -0.42         | 0.12          | 0.44 | 0.1355            | 0.0182 | -1.7        | 1.0 | -2.5       |        | -    | A-       |
| ELA        | 6   | 899973           | 14 B-K.1.1.1                | 3   | 6241  | 0.88         | 0.41 | 0.30 | 0.30 | 0.51 | 0.29 | -0.16          | -0.20         | 0.37          | 0    | 1.2510            | 0.0193 | 9.9         | 1.5 | 9.9        |        |      | A-       |
| ELA        | 6   | 272516           | 15 B-C.3.1.1                | 3   | 6224  | 1.79         | 0.09 | 0.27 | 0.42 | 0.23 | 0.50 | -0.32          | -0.28         | 0.15          | 0.33 | 0.4344            | 0.0180 | 6.9         | 1.1 | 7.2        |        |      | B-       |
| ELA        | 6   | 604219           | 15 B-K.1.1.1                | 3   | 6224  | 0.84         | 0.28 | 0.59 | 0.13 | 0    | 0.34 | -0.39          | 0.29          | 0.10          |      | 1.5148            | 0.0236 | 8.6         | 1.2 | 9.9        |        |      | A-       |
| ELA        | 6   | 392526           | 16 B-C.2.1.1                | 3   | 6244  | 1.27         | 0.20 | 0.32 | 0.47 |      | 0.54 | -0.44          | -0.15         | 0.49          |      | 0.3207            | 0.0206 | 2.3         | 1.0 | 1.1        |        |      | A-       |
| ELA        | 6   | 242166           | 16 B-K.1.1.1                | 3   | 6244  | 2.36         | 0.04 | 0.11 | 0.30 | 0.55 | 0.61 | -0.28          | -0.44         | -0.13         | 0.51 | -0.6354           | 0.0198 | -4.1        | 0.9 | -1.8       | 1.0 A+ | B-   | A-       |
|            | - 1 |                  | -1                          |     |       |              |      |      |      | •    | <br> |                |               |               |      |                   |        |             |     |            |        | —-   |          |

#### Appendix F: Item Statistics Evidence-Based Selected Response

| ELA | 6 | 182402 | 17 | B-C.2.1.1 | 3   | 6257 | 1.31  | 0.20  | 0.30  | 0.51  |       | 0.50   | -0.41  | -0.14  | 0.46   |       | 0.2400  | 0.0206 | 6.7   | 1.1  | 6.1   | 1.2 A+  | A- | A- |
|-----|---|--------|----|-----------|-----|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|---------|--------|-------|------|-------|---------|----|----|
| ELA | 6 | 741953 | 17 |           | 3   | 6257 | 1.77  | 0.09  | 0.26  | 0.44  | 0.21  | 0.53   | -0.25  | -0.40  | 0.19   | 0.37  | 0.4751  | 0.0186 | 4.6   | 1.1  | 3.7   | 1.1 A+  | Α- | Α- |
| ELA | 6 | 171565 | 18 |           | 3   | 6217 | 1.60  | 0.10  | 0.21  | 0.70  |       | 0.51   | -0.38  | -0.28  | 0.49   |       | -0.5863 | 0.0235 | -0.7  | 1.0  | 1.6   | 1.1 A+  | A- | A+ |
| ELA | 6 | 269544 | 18 |           | 3   | 6217 | 1.98  | 0.05  | 0.16  | 0.55  | 0.24  | 0.56   | -0.34  | -0.40  | 0.15   | 0.34  | 0.0323  | 0.0203 | -2.0  | 1.0  | -2.4  | 1.0 A+  | A- | A- |
| ELA | 6 | 132215 | 19 |           | 3   | 6231 | 2.00  | 0.09  | 0.18  | 0.36  | 0.37  | 0.60   | -0.29  | -0.45  | 0.05   | 0.48  | 0.1314  | 0.0173 | -1.1  | 1.0  | -2.1  | 1.0 A-  | B- | A- |
| ELA | 6 | 147199 | 19 |           | 3   | 6231 | 1.09  | 0.27  | 0.38  | 0.35  | 0.57  | 0.33   | -0.21  | -0.16  | 0.35   | 00    | 0.7581  | 0.0198 | 9.9   | 1.3  | 9.9   | 1.4 A+  | A- | A+ |
| ELA | 6 | 208763 | 20 |           | 3   | 6194 | 0.92  | 0.35  | 0.38  | 0.27  |       | 0.39   | -0.31  | -0.02  | 0.35   |       | 1.1740  | 0.0198 | 9.9   | 1.2  | 9.9   | 1.3 A-  | A- | A- |
| ELA | 6 | 986656 | 20 |           | 3   | 6194 | 1.81  | 0.08  | 0.26  | 0.45  | 0.22  | 0.51   | -0.32  | -0.29  | 0.15   | 0.34  | 0.3670  | 0.0185 | 4.6   | 1.1  | 4.2   | 1.1 A-  | A- | A- |
| ELA | 7 | 507677 | 1  | A-V.4.1.1 | 3   | 6800 | 1.33  | 0.15  | 0.38  | 0.48  |       | 0.45   | -0.41  | -0.07  | 0.36   |       | 0.0668  | 0.0207 | 7.9   | 1.1  | 9.4   | 1.2 A+  | A- | B- |
| ELA | 7 | 301069 | 1  | A-K.1.1.1 | 3   | 6800 | 2.08  | 0.07  | 0.15  | 0.41  | 0.37  | 0.60   | -0.37  | -0.39  | 0.05   | 0.43  | -0.0683 | 0.0176 | -2.3  | 1.0  | -1.3  | 1.0 A+  | B- | C- |
| ELA | 7 | 244744 | 2  | A-K.1.1.3 | 3   | 6405 | 1.38  | 0.21  | 0.31  | 0.38  | 0.11  | 0.49   | -0.27  | -0.32  | 0.34   | 0.29  | 1.3639  | 0.0172 | 6.3   | 1.1  | 7.0   | 1.1 A-  | B- | A- |
| ELA | 7 | 826984 | 2  | A-K.1.1.1 | 3   | 6405 | 1.38  | 0.13  | 0.36  | 0.51  |       | 0.44   | -0.37  | -0.13  | 0.37   |       | 0.0462  | 0.0213 | 6.1   | 1.1  | 6.9   | 1.2 A+  | A- | A- |
| ELA | 7 | 449620 | 3  | A-V.4.1.1 | 3   | 6373 | 1.81  | 0.09  | 0.27  | 0.39  | 0.26  | 0.48   | -0.31  | -0.27  | 0.12   | 0.34  | 0.5298  | 0.0173 | 8.9   | 1.2  | 9.4   | 1.2 A+  | B- | A- |
| ELA | 7 | 392042 | 3  | A-K.1.1.2 | 3   | 6373 | 1.23  | 0.26  | 0.26  | 0.49  |       | 0.48   | -0.36  | -0.19  | 0.49   |       | 0.6116  | 0.0189 | 5.7   | 1.1  | 6.3   | 1.2 A+  | A- | A- |
| ELA | 7 | 405214 | 4  | A-K.1.1.3 | 3   | 6365 | 1.29  | 0.22  | 0.39  | 0.26  | 0.12  | 0.22   | -0.09  | -0.10  | 0.00   | 0.27  | 1.4217  | 0.0169 | 9.9   | 1.6  | 9.9   | 1.7 A+  | A- | A- |
| ELA | 7 | 253474 | 4  | A-V.4.1.1 | 2   | 6365 | 1.65  | 0.08  | 0.19  | 0.73  |       | 0.46   | -0.34  | -0.25  | 0.43   |       | -0.5803 | 0.0238 | 1.9   | 1.0  | 3.0   | 1.1 A+  | A- | C- |
| ELA | 7 | 663401 | 5  | A-V.4.1.1 | 3   | 6398 | 1.24  | 0.28  | 0.21  | 0.51  |       | 0.42   | -0.31  | -0.19  | 0.43   |       | 0.5769  | 0.0185 | 9.9   | 1.3  | 9.9   | 1.3 A+  | A+ | A- |
| ELA | 7 | 339697 | 5  | A-K.1.1.1 | 3   | 6398 | 1.88  | 0.11  | 0.18  | 0.44  | 0.27  | 0.57   | -0.32  | -0.38  | 0.11   | 0.43  | 0.4745  | 0.0173 | -0.5  | 1.0  | -1.0  | 1.0 A-  | A- | A- |
| ELA | 7 | 781036 | 6  | A-K.1.1.3 | 3   | 6402 | 1.58  | 0.12  | 0.31  | 0.44  | 0.13  | 0.40   | -0.29  | -0.20  | 0.24   | 0.20  | 0.9801  | 0.0183 | 9.9   | 1.3  | 9.9   | 1.3 A+  | B- | A- |
| ELA | 7 | 110094 | 6  | A-V.4.1.2 | . 3 | 6402 | 1.26  | 0.24  | 0.26  | 0.50  |       | 0.46   | -0.35  | -0.19  | 0.46   |       | 0.5250  | 0.0191 | 9.0   | 1.2  | 7.5   | 1.2 A+  | A- | A- |
| ELA | 7 | 640923 | 7  | A-K.1.1.1 | 3   | 6418 | 1.76  | 0.11  | 0.23  | 0.45  | 0.21  | 0.52   | -0.36  | -0.28  | 0.19   | 0.33  | 0.6365  | 0.0174 | 3.0   | 1.1  | 3.0   | 1.1 A-  | B- | B- |
| ELA | 7 | 994073 | 7  | A-C.3.1.1 | 3   | 6418 | 0.64  | 0.56  | 0.25  | 0.19  |       | 0.15   | -0.09  | -0.07  | 0.19   |       | 1.8548  | 0.0191 | 9.9   | 1.4  | 9.9   | 2.3 B-  | A- | A+ |
| ELA | 7 | 687435 | 8  | A-C.2.1.1 | 3   | 6412 | 2.02  | 0.08  | 0.21  | 0.31  | 0.40  | 0.57   | -0.27  | -0.42  | 0.04   | 0.47  | 0.1923  | 0.0169 | 1.1   | 1.0  | 1.9   | 1.0 A-  | B- | A- |
| ELA | 7 | 218836 | 8  | A-K.1.1.1 | 3   | 6412 | 0.66  | 0.36  | 0.63  | 0.01  |       | 0.16   | -0.19  | 0.21   | -0.09  |       | 3.0220  | 0.0277 | 9.9   | 1.3  | 9.9   | 1.3 A-  | A- | A+ |
| ELA | 7 | 276462 | 9  | A-K.1.1.3 | 3   | 6408 | 1.74  | 0.07  | 0.11  | 0.81  |       | 0.58   | -0.39  | -0.43  | 0.61   |       | -0.8128 | 0.0257 | -8.3  | 0.8  | -9.8  | 0.6 A+  | A- | A- |
| ELA | 7 | 307949 | 9  | A-C.2.1.1 | 3   | 6408 | 1.62  | 0.12  | 0.31  | 0.41  | 0.17  | 0.56   | -0.37  | -0.30  | 0.28   | 0.33  | 0.8723  | 0.0179 | -1.0  | 1.0  | -0.8  | 1.0 A+  | A- | A- |
| ELA | 7 | 680416 | 10 | A-V.4.1.1 | 3   | 6402 | 1.50  | 0.09  | 0.33  | 0.59  |       | 0.44   | -0.42  | -0.09  | 0.33   |       | -0.3093 | 0.0229 | 4.3   | 1.1  | 8.8   | 1.2 A-  | A- | A- |
| ELA | 7 | 152113 | 10 | A-C.2.1.1 | 3   | 6402 | 1.57  | 0.13  | 0.32  | 0.39  | 0.16  | 0.48   | -0.33  | -0.22  | 0.22   | 0.29  | 0.9704  | 0.0177 | 9.5   | 1.2  | 9.9   | 1.2 A-  | B- | A- |
| ELA | 7 | 909158 | 11 | B-K.1.1.1 | 2   | 6379 | 1.30  | 0.19  | 0.32  | 0.49  |       | 0.44   | -0.34  | -0.15  | 0.41   |       | 0.3594  | 0.0200 | 8.2   | 1.1  | 9.9   | 1.2 A+  | A- | A- |
| ELA | 7 | 614839 | 11 | B-C.3.1.1 | 3   | 6379 | 2.22  | 0.09  | 0.10  | 0.31  | 0.50  | 0.56   | -0.27  | -0.44  | -0.07  | 0.49  | -0.0118 | 0.0173 | 3.7   | 1.1  | 3.1   | 1.1 A+  | A- | A- |
| ELA | 7 | 628876 | 12 | B-K.1.1.2 | 3   | 6401 | 1.59  | 0.11  | 0.36  | 0.39  | 0.15  | 0.49   | -0.27  | -0.33  | 0.27   | 0.29  | 0.8756  | 0.0181 | 4.9   | 1.1  | 4.7   | 1.1 A-  | A- | A- |
| ELA | 7 | 369270 | 12 | B-C.3.1.1 | 3   | 6401 | 1.35  | 0.20  | 0.25  | 0.55  |       | 0.56   | -0.41  | -0.27  | 0.56   |       | 0.2888  | 0.0196 | -1.2  | 1.0  | -2.7  | 0.9 A-  | A- | A- |
| ELA | 7 | 246880 | 13 | B-C.2.1.1 | 3   | 6337 | 0.86  | 0.50  | 0.14  | 0.36  |       | 0.36   | -0.23  | -0.27  | 0.44   |       | 1.3191  | 0.0172 | 9.9   | 1.3  | 9.9   | 1.7 A-  | A- | A+ |
| ELA | 7 | 954140 | 13 | B-V.4.1.1 | 3   | 6337 | 1.86  | 0.14  | 0.21  | 0.30  | 0.35  | 0.42   | -0.24  | -0.25  | 0.01   | 0.37  | 0.5000  | 0.0159 | 9.9   | 1.4  | 9.9   | 1.4 A+  | A- | A- |
| ELA | 7 | 773364 | 14 | B-K.1.1.1 | 3   | 6389 | 1.69  | 0.134 | 0.285 | 0.337 | 0.244 | 0.473  | -0.187 | -0.382 | 0.149  | 0.387 | 0.7189  | 0.0164 | 9.9   | 1.18 | 9.9   | 1.18 A+ | A- | A- |
| ELA | 7 | 607813 | 14 | B-C.3.1.1 | 3   | 6389 | 1.167 | 0.36  | 0.114 | 0.527 |       | 0.449  | -0.351 | -0.251 | 0.497  |       | 0.7508  | 0.0174 | 9.9   | 1.23 | 9.9   | 1.4 A-  | A- | A- |
| ELA | 7 | 438037 | 15 | B-C.3.1.1 | 3   | 6384 | 1.266 | 0.24  | 0.253 | 0.507 |       | 0.531  | -0.386 | -0.245 | 0.543  |       | 0.4919  | 0.019  | 0.97  | 1.02 | 0.53  | 1.01 A- | A- | A- |
| ELA | 7 | 770376 | 15 | B-K.1.1.1 | 3   | 6384 | 1.501 | 0.142 | 0.371 | 0.331 | 0.156 | 0.406  | -0.275 | -0.127 | 0.079  | 0.331 | 1.027   | 0.0172 | 9.9   | 1.24 | 9.9   | 1.26 A- | A- | A- |
| ELA | 7 | 903341 | 16 | B-C.3.1.1 | 3   | 6376 | 1.078 | 0.304 | 0.313 | 0.383 |       | 0.458  | -0.373 | -0.074 | 0.424  |       | 0.8858  | 0.0187 | 5.59  | 1.09 | 7.05  | 1.14 A- | A- | A- |
| ELA | 7 | 276875 | 16 | B-C.2.1.3 | 3   | 6376 | 0.657 | 0.517 | 0.33  | 0.13  | 0.022 | -0.014 | 0.119  | -0.198 | 0.056  | 0.101 | 2.6786  | 0.0192 | 9.9   | 1.7  | 9.9   | 2.43 A- | A- | A- |
| ELA | 7 | 893543 | 17 | B-K.1.1.2 | 3   | 6393 | 1.701 | 0.139 | 0.267 | 0.349 | 0.246 | 0.557  | -0.318 | -0.308 | 0.109  | 0.452 | 0.7469  | 0.0164 | 0.74  | 1.01 | 0.88  | 1.01 A- | A- | A- |
| ELA | 7 | 120187 | 17 | B-C.3.1.1 | 3   | 6393 | 1.165 | 0.224 | 0.387 | 0.389 |       | 0.453  | -0.348 | -0.116 | 0.414  |       | 0.6742  | 0.0198 | 5.3   | 1.08 | 5.13  | 1.09 A- | A- | A- |
| ELA | 7 | 910090 | 18 | B-K.1.1.2 | 3   | 6337 | 1.211 | 0.156 | 0.477 | 0.367 |       | 0.419  | -0.332 | -0.098 | 0.352  |       | 0.4935  | 0.0215 | 5.98  | 1.1  | 6.96  | 1.12 A- | A- | A- |
| ELA | 7 | 817225 |    | B-C.2.1.1 | 3   | 6337 | 2.225 | 0.032 | 0.117 | 0.446 | 0.405 | 0.56   | -0.293 | -0.407 | -0.037 | 0.408 | -0.3351 | 0.0199 | -3.42 | 0.94 | -3.65 | 0.93 A+ | A- | A- |
| ELA | 7 | 898722 | 19 | B-K.1.1.1 | 3   | 6399 | 1.902 | 0.06  | 0.276 | 0.367 | 0.297 | 0.569  | -0.319 | -0.373 | 0.105  | 0.42  | 0.2217  | 0.0175 | -2.85 | 0.95 | -3.03 | 0.95 A- | B- | A- |
| ELA | 7 | 854341 | 19 | B-C.2.1.1 | 3   | 6399 | 1.541 | 0.113 | 0.232 | 0.655 |       | 0.59   | -0.437 | -0.308 | 0.565  |       | -0.2692 | 0.0219 | -8.35 | 0.85 | -7.8  | 0.79 A+ | A+ | A- |
| ELA | 7 | 942700 |    | B-K.1.1.1 | 3   | 6357 | 1.563 | 0.24  | 0.218 | 0.281 | 0.261 | 0.47   | -0.228 | -0.367 | 0.155  | 0.408 | 0.9935  | 0.0151 | 9.9   | 1.26 | 9.9   | 1.32 A- | A- | A- |
| ELA | 7 | 601705 | 20 | B-C.3.1.1 | 3   | 6357 | 1.136 | 0.33  | 0.204 | 0.466 |       | 0.48   | -0.376 | -0.172 | 0.494  |       | 0.7944  | 0.0179 | 7.16  | 1.11 | 7.66  | 1.19 A- | A+ | A+ |

#### Appendix F: Item Statistics Evidence-Based Selected Response

| ELA | 8 | 138452 | 1  | A-K.1.1.1 | 3 | 6795 | 1.262 | 0.296 | 0.146 | 0.558 |       | 0.535 | -0.413 | -0.276 | 0.576 |       | 1.003   | 0.0182 | 8.06  | 1.15 | 7     | 1.23 A+ | A- | B- |
|-----|---|--------|----|-----------|---|------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|---------|--------|-------|------|-------|---------|----|----|
| ELA | 8 | 213468 | _  | A-V.4.1.2 | 3 | 6795 | 2.216 | 0.052 | 0.141 | 0.345 | 0.462 | 0.571 | -0.307 | -0.41  | -0.02 | 0.442 | 0.1867  | 0.0182 | 1.87  | 1.03 | 3.04  | 1.06 A- | A- | C- |
| ELA | 8 | 921390 | 2  | A-K.1.1.3 | 2 | 6387 | 1.528 | 0.121 | 0.23  | 0.649 |       | 0.518 | -0.414 | -0.221 | 0.478 |       | 0.3311  | 0.0219 | 0.45  | 1.01 | 0.91  | 1.03 A+ | A- | A- |
| ELA | 8 | 426890 | 2  | A-C.2.1.1 | 2 | 6387 | 1.597 | 0.154 | 0.268 | 0.407 | 0.172 | 0.465 | -0.222 | -0.34  | 0.207 | 0.341 | 1.5187  | 0.0171 | 9.9   | 1.18 | 9.9   | 1.19 A- | A- | A- |
| ELA | 8 | 920126 | 3  | A-C.2.1.3 | 3 | 6413 | 1.862 | 0.078 | 0.276 | 0.352 | 0.294 | 0.467 | -0.255 | -0.309 | 0.1   | 0.348 | 0.9215  | 0.0174 | 9.9   | 1.22 | 9.9   | 1.23 A+ | B- | B- |
| ELA | 8 | 214352 | 3  | A-C.2.1.2 | 3 | 6413 | 0.831 | 0.435 | 0.3   | 0.265 |       | 0.405 | -0.282 | -0.113 | 0.435 |       | 2.0416  | 0.0189 | 7.88  | 1.12 | 9.9   | 1.29 A+ | A- | A- |
| ELA | 8 | 552275 | 4  | A-V.4.1.1 | 3 | 6419 | 1.629 | 0.082 | 0.207 | 0.711 |       | 0.568 | -0.443 | -0.284 | 0.522 |       | -0.0372 | 0.024  | -5.93 | 0.88 | -6.85 | 0.78 A- | B- | B- |
| ELA | 8 | 794626 | 4  | A-K.1.1.2 | 3 | 6419 | 1.973 | 0.075 | 0.158 | 0.488 | 0.28  | 0.493 | -0.258 | -0.362 | 0.088 | 0.347 | 0.8118  | 0.0186 | 6.93  | 1.13 | 8.32  | 1.15 A+ | A- | A- |
| ELA | 8 | 132160 | 5  | A-C.2.1.3 | 3 | 6418 | 1.727 | 0.062 | 0.148 | 0.789 |       | 0.522 | -0.38  | -0.319 | 0.503 |       | -0.3056 | 0.026  | -3.83 | 0.91 | -5.42 | 0.78 A- | B- | A- |
| ELA | 8 | 800211 | 5  | A-K.1.1.3 | 3 | 6418 | 1.971 | 0.11  | 0.161 | 0.375 | 0.353 | 0.599 | -0.352 | -0.446 | 0.153 | 0.419 | 0.9162  | 0.0169 | -1.84 | 0.97 | -3.35 | 0.94 A- | A- | A- |
| ELA | 8 | 413372 | 6  | A-C.2.1.3 | 2 | 6375 | 1.312 | 0.069 | 0.551 | 0.38  |       | 0.368 | -0.39  | -0.043 | 0.247 |       | 0.5069  | 0.0242 | 6.28  | 1.1  | 7.26  | 1.12 A+ | A- | A- |
| ELA | 8 | 505116 | 6  | A-K.1.1.2 | 3 | 6375 | 1.981 | 0.07  | 0.188 | 0.433 | 0.309 | 0.501 | -0.327 | -0.299 | 0.085 | 0.342 | 0.7881  | 0.0181 | 6.47  | 1.11 | 6.39  | 1.12 A+ | A- | A- |
| ELA | 8 | 925376 | 7  | A-K.1.1.1 | 2 | 6400 | 1.379 | 0.23  | 0.16  | 0.61  |       | 0.365 | -0.243 | -0.273 | 0.415 |       | 0.8837  | 0.019  | 9.9   | 1.39 | 9.9   | 1.61 A+ | A+ | A+ |
| ELA | 8 | 872941 | 7  | A-K.1.1.3 | 2 | 6400 | 1.902 | 0.066 | 0.217 | 0.466 | 0.251 | 0.495 | -0.28  | -0.34  | 0.137 | 0.326 | 0.8964  | 0.0183 | 3.95  | 1.07 | 3.27  | 1.06 A- | A- | A+ |
| ELA | 8 | 779669 | 8  | A-C.2.1.1 | 3 | 6447 | 1.698 | 0.196 | 0.166 | 0.382 | 0.256 | 0.345 | -0.097 | -0.378 | 0.067 | 0.336 | 1.3949  | 0.0155 | 9.9   | 1.51 | 9.9   | 1.64 A+ | A- | A- |
| ELA | 8 | 494376 | 8  | A-K.1.1.3 | 3 | 6447 | 0.6   | 0.555 | 0.289 | 0.156 |       | 0.104 | -0.079 | 0.003  | 0.104 |       | 2.5241  | 0.0197 | 9.9   | 1.48 | 9.9   | 2.08 A+ | A- | A+ |
| ELA | 8 | 282099 | g  | A-V.4.1.1 | 3 | 6407 | 2.053 | 0.07  | 0.132 | 0.474 | 0.324 | 0.475 | -0.284 | -0.329 | 0.066 | 0.322 | 0.6929  | 0.0183 | 7.07  | 1.13 | 7.91  | 1.15 A- | A- | A- |
| ELA | 8 | 533139 | g  | A-K.1.1.3 | 3 | 6407 | 1.346 | 0.228 | 0.197 | 0.575 |       | 0.41  | -0.285 | -0.25  | 0.443 |       | 0.9103  | 0.019  | 9.9   | 1.26 | 9.9   | 1.36 A+ | A+ | A- |
| ELA | 8 | 507139 | 10 | A-K.1.1.3 | 3 | 6419 | 0.459 | 0.684 | 0.174 | 0.143 |       | 0.008 | 0.065  | -0.176 | 0.104 |       | 2.8166  | 0.02   | 9.9   | 1.62 | 9.9   | 3.23 A+ | A+ | A+ |
| ELA | 8 | 886763 | 10 | A-K.1.1.1 | 3 | 6419 | 1.766 | 0.098 | 0.262 | 0.416 | 0.224 | 0.368 | -0.17  | -0.246 | 0.069 | 0.299 | 1.1633  | 0.0173 | 9.9   | 1.33 | 9.9   | 1.37 A- | A- | A- |
| ELA | 8 | 108131 | 11 | B-C.3.1.1 | 3 | 6432 | 0.663 | 0.569 | 0.198 | 0.232 |       | 0.285 | -0.184 | -0.134 | 0.343 |       | 2.3045  | 0.0182 | 9.9   | 1.22 | 9.9   | 1.82 C- | A- | A- |
| ELA | 8 | 743340 | 11 | B-K.1.1.2 | 3 | 6432 | 1.976 | 0.074 | 0.235 | 0.332 | 0.359 | 0.502 | -0.291 | -0.299 | 0.018 | 0.405 | 0.7552  | 0.0169 | 7.34  | 1.13 | 8.4   | 1.16 A- | B- | A- |
| ELA | 8 | 123621 | 12 | B-K.1.1.1 | 2 | 6414 | 0.672 | 0.461 | 0.407 | 0.132 |       | 0.036 | 0.025  | -0.101 | 0.111 |       | 2.4932  | 0.0209 | 9.9   | 1.6  | 9.9   | 1.85 A+ | A- | A- |
| ELA | 8 | 175904 | 12 | B-K.1.1.3 | 2 | 6414 | 1.853 | 0.062 | 0.268 | 0.425 | 0.245 | 0.564 | -0.386 | -0.311 | 0.141 | 0.374 | 0.8929  | 0.018  | -3.2  | 0.95 | -3.35 | 0.95 A- | B- | A- |
| ELA | 8 | 918831 | 13 | B-C.3.1.1 | 2 | 6405 | 1.318 | 0.328 | 0.232 | 0.233 | 0.207 | 0.37  | -0.15  | -0.3   | 0.104 | 0.378 | 1.8742  | 0.0145 | 9.9   | 1.35 | 9.9   | 1.63 B- | A- | A- |
| ELA | 8 | 295661 | 13 | B-K.1.1.3 | 3 | 6405 | 0.852 | 0.298 | 0.551 | 0.151 |       | 0.276 | -0.28  | 0.153  | 0.145 |       | 2.0497  | 0.022  | 9.9   | 1.21 | 9.9   | 1.23 A+ | A+ | A- |
| ELA | 8 | 165362 | 14 | B-C.2.1.1 | 3 | 6417 | 1.735 | 0.104 | 0.259 | 0.436 | 0.202 | 0.508 | -0.328 | -0.286 | 0.191 | 0.326 | 1.2352  | 0.0175 | 4.02  | 1.07 | 3.71  | 1.06 A- | A- | A- |
| ELA | 8 | 930871 | 14 | B-C.2.1.2 | 3 | 6417 | 1.285 | 0.213 | 0.289 | 0.498 |       | 0.519 | -0.356 | -0.266 | 0.532 |       | 0.9924  | 0.0194 | 1.34  | 1.02 | -0.59 | 0.99 A+ | A- | A- |
| ELA | 8 | 990087 | 15 | B-V.4.1.2 | 3 | 6403 | 1.369 | 0.201 | 0.229 | 0.57  |       | 0.332 | -0.284 | -0.087 | 0.304 |       | 0.8452  | 0.0194 | 9.9   | 1.35 | 9.9   | 1.6 A-  | B- | A- |
| ELA | 8 | 246130 | 15 | B-K.1.1.3 | 3 | 6403 | 1.624 | 0.158 | 0.247 | 0.409 | 0.187 | 0.425 | -0.211 | -0.293 | 0.153 | 0.329 | 1.4921  | 0.0166 | 9.9   | 1.24 | 9.9   | 1.25 A- | A+ | A- |
| ELA | 8 | 821602 | 16 | B-K.1.1.1 | 2 | 6389 | 1.467 | 0.156 | 0.22  | 0.624 |       | 0.454 | -0.354 | -0.201 | 0.437 |       | 0.5642  | 0.0204 | 6.04  | 1.11 | 7.33  | 1.22 A+ | A- | A- |
| ELA | 8 | 140265 | 16 | B-K.1.1.1 | 2 | 6389 | 1.687 | 0.228 | 0.217 | 0.196 | 0.36  | 0.487 | -0.219 | -0.368 | 0.011 | 0.498 | 1.3602  | 0.0144 | 9.9   | 1.22 | 9.9   | 1.29 A- | A- | A- |
| ELA | 8 | 921732 | 17 | B-V.4.1.2 | 2 | 6382 | 1.284 | 0.275 | 0.166 | 0.559 |       | 0.556 | -0.438 | -0.247 | 0.579 |       | 1.0796  | 0.0183 | -1.27 | 0.98 | -2.88 | 0.92 A+ | A+ | A+ |
| ELA | 8 | 547075 | 17 | B-K.1.1.2 | 3 | 6382 | 1.253 | 0.231 | 0.403 | 0.246 | 0.119 | 0.321 | -0.177 | -0.144 | 0.144 | 0.257 | 2.0151  | 0.0168 | 9.9   | 1.34 | 9.9   | 1.41 A- | A- | A- |
| ELA | 8 | 728374 | 18 | B-K.1.1.1 | 2 | 6419 | 1.133 | 0.29  | 0.287 | 0.423 |       | 0.19  | -0.089 | -0.172 | 0.239 |       | 1.3342  | 0.0184 | 9.9   | 1.58 | 9.9   | 1.76 A- | A- | A- |
| ELA | 8 | 544619 | 18 | B-C.3.1.1 | 3 | 6419 | 1.378 | 0.142 | 0.423 | 0.348 | 0.086 | 0.395 | -0.306 | -0.114 | 0.22  | 0.208 | 1.8424  | 0.0182 | 8.77  | 1.15 | 9.9   | 1.17 A- | B- | A- |
| ELA | 8 | 186842 | 19 | B-C.3.1.2 | 3 | 6383 | 1.176 | 0.16  | 0.505 | 0.335 | ·     | 0.453 | -0.355 | -0.096 | 0.378 |       | 1.1309  | 0.0215 | 1.1   | 1.02 | 0.79  | 1.01 A+ | A+ | A+ |
| ELA | 8 | 726163 | 19 | B-K.1.1.1 | 3 | 6383 | 1.646 | 0.144 | 0.279 | 0.364 | 0.213 | 0.428 | -0.266 | -0.221 | 0.13  | 0.317 | 1.4118  | 0.0165 | 9.9   | 1.26 | 9.9   | 1.3 A+  | A- | A- |
| ELA | 8 | 701044 | 20 | B-C.3.1.1 | 3 | 6383 | 1.599 | 0.112 | 0.299 | 0.469 | 0.12  | 0.334 | -0.205 | -0.214 | 0.218 | 0.165 | 1.5337  | 0.0184 | 9.9   | 1.33 | 9.9   | 1.33 A- | A- | A- |
| ELA | 8 | 878179 | 20 | B-K.1.1.2 | 2 | 6383 | 1.049 | 0.266 | 0.418 | 0.316 |       | 0.363 | -0.304 | -0.015 | 0.305 |       | 1.5317  | 0.0198 | 9.9   | 1.21 | 9.9   | 1.25 A+ | A+ | A+ |
|     |   |        |    |           |   |      |       |       |       |       |       |       |        |        |       |       |         |        |       |      |       |         |    |    |

Appendix F: Item Statistics Text-Dependent Analysis

|      |       | Item   | Information | 1         |     |      |      |           |      |      | C    | lassic | al           |       |       |       |       |       | Ra     | asch   | Infit |     | Out  | tfit   |     | DIF | Ī   |
|------|-------|--------|-------------|-----------|-----|------|------|-----------|------|------|------|--------|--------------|-------|-------|-------|-------|-------|--------|--------|-------|-----|------|--------|-----|-----|-----|
| Cont | Grade | PubID  | Form Std1   | Std2      | DOK | N    | Mean | P(0) P(1) | P(2) | P(3) | P(4) | P(B)   | <b>PtBis</b> | PT(0) | PT(1) | PT(2) | PT(3) | PT(4) | Meas   | MeasSE | t N   | ΛS  | t    | MS     | M/F | W/B | W/H |
| ELA  | 4     | 990612 | 1 E.1.1     | A-K.1.1.2 | 3   | 1474 | 1.16 | 0.10 0.68 | 0.18 | 0.04 | 0.00 | 0.00   | 0.50         | -0.44 | -0.03 | 0.28  | 0.20  | 0.05  | 2.6299 | 0.0469 | -1.6  | 0.9 | -1.8 | 0.9    | 4+  | A-  | A-  |
| ELA  | 4     | 100693 | 2 E.1.1     | A-C.3.1.1 | 3   | 1495 | 1.33 | 0.14 0.48 | 0.29 | 0.08 | 0.00 | 0.01   | 0.62         | -0.56 | -0.08 | 0.34  | 0.28  | 0.07  | 2.4274 | 0.0389 | -3.9  | 0.9 | -4.2 | 0.9    | C+  | B-  | B-  |
| ELA  | 4     | 475167 | 3 E.1.1     | A-K.1.1.2 | 3   | 1495 | 1.14 | 0.12 0.66 | 0.18 | 0.04 | 0.00 | 0.02   | 0.51         | -0.43 | -0.03 | 0.30  | 0.21  | 0.04  | 3.0369 | 0.0450 | -2.0  | 0.9 | -2.5 | 0.9 I  | 3+  | A-  | A-  |
| ELA  | 4     | 545551 | 4 E.1.1     | A-K.1.1.1 | 3   | 1492 | 1.24 | 0.19 0.47 | 0.27 | 0.07 | 0.00 | 0.01   | 0.62         | -0.52 | -0.08 | 0.38  | 0.27  | 0.06  | 2.6146 | 0.0383 | -4.5  | 0.9 | -4.8 | 0.8    | 4+  | A-  | B-  |
| ELA  | 4     | 650132 | 5 E.1.1     | B-K.1.1.1 | 3   | 1491 | 1.41 | 0.06 0.57 | 0.27 | 0.09 | 0.00 | 0.01   | 0.56         | -0.40 | -0.28 | 0.33  | 0.28  | 0.07  | 2.1710 | 0.0419 | -2.9  | 0.9 | -3.4 | 0.9    | λ+  | A-  | A-  |
| ELA  | 4     | 550961 | 6 E.1.1     | B-K.1.1.1 | 3   | 1484 | 1.61 | 0.05 0.44 | 0.39 | 0.12 | 0.01 | 0.01   | 0.59         | -0.37 | -0.37 | 0.30  | 0.33  | 0.07  | 1.8259 | 0.0412 | -3.4  | 0.9 | -3.3 | 0.9 I  | 3+  | A-  | A-  |
| ELA  | 4     | 825535 | 7 E.1.1     | B-K.1.1.1 | 3   | 1487 | 1.40 | 0.09 0.5  | 0.31 | 0.09 | 0.01 | 0.01   | 0.57         | -0.44 | -0.22 | 0.34  | 0.26  | 0.09  | 2.1449 | 0.0404 | -2.7  | 0.9 | -2.8 | 0.9 I  | 3+  | B-  | A-  |
| ELA  | 4     | 802988 | 8 E.1.1     | B-K.1.1.1 | 3   | 1487 | 1.43 | 0.07 0.53 | 0.31 | 0.09 | 0.00 | 0.01   | 0.56         | -0.42 | -0.24 | 0.31  | 0.28  | 0.07  | 2.0595 | 0.0409 | -2.3  | 0.9 | -2.4 | 0.9    | 4+  | B-  | B-  |
| ELA  | 4     | 789339 | 9 E.1.1     | B-C.3.1.1 | 3   | 1489 | 1.33 | 0.08 0.58 | 0.27 | 0.07 | 0.00 | 0.01   | 0.56         | -0.46 | -0.18 | 0.33  | 0.26  | 0.07  | 2.2111 | 0.0425 | -3.1  | 0.9 | -3.5 | 0.9    | C+  | B-  | A-  |
| ELA  | 5     | 476188 | 1 E.1.1     | B-K.1.1.3 | 3   | 1473 | 1.46 | 0.11 0.46 | 0.31 | 0.10 | 0.02 | 0.01   | 0.54         | -0.33 | -0.29 | 0.30  | 0.30  | 0.12  | 1.9614 | 0.0370 | -2.0  | 0.9 | -2.4 | 0.9 I  | 3+  | A-  | A-  |
| ELA  | 5     | 101115 | 2 E.1.1     | B-C.3.1.2 | 3   | 1487 | 1.56 | 0.11 0.35 | 0.41 | 0.12 | 0.01 | 0.01   | 0.59         | -0.47 | -0.22 | 0.30  | 0.29  | 0.11  | 2.0903 | 0.0372 | -2.5  | 0.9 | -2.6 | 0.9    | λ+  | A-  | B-  |
| ELA  | 5     | 722738 | 3 E.1.1     | B-K.1.1.1 | 3   | 1484 | 1.53 | 0.09 0.42 | 0.36 | 0.11 | 0.01 | 0.01   | 0.55         | -0.41 | -0.24 | 0.27  | 0.29  | 0.11  | 1.9816 | 0.0376 | -2.1  | 0.9 | -2.4 | 0.9 I  | 3+  | C-  | B-  |
| ELA  | 5     | 427189 | 4 E.1.1     | B-C.3.1.1 | 3   | 1492 | 1.67 | 0.06 0.37 | 0.43 | 0.12 | 0.02 | 0.00   | 0.57         | -0.38 | -0.30 | 0.23  | 0.30  | 0.19  | 1.5932 | 0.0376 | -3.0  | 0.9 | -3.1 | 0.9    | C+  | A-  | A-  |
| ELA  | 5     | 498568 | 5 E.1.1     | B-C.3.1.1 | 3   | 1496 | 1.55 | 0.08 0.41 | 0.40 | 0.09 | 0.02 | 0.01   | 0.58         | -0.44 | -0.29 | 0.35  | 0.25  | 0.12  | 1.7910 | 0.0379 | -2.2  | 0.9 | -2.3 | 0.9 I  | 3+  | A-  | A-  |
| ELA  | 5     | 385430 | 6 E.1.1     | A-K.1.1.3 | 3   | 1496 | 1.54 | 0.09 0.44 | 0.32 | 0.13 | 0.02 | 0.01   | 0.64         | -0.44 | -0.31 | 0.32  | 0.34  | 0.17  | 1.8344 | 0.0363 | -6.2  | 0.8 | -6.3 | 0.8 I  | 3+  | A-  | A-  |
| ELA  | 5     | 707708 | 7 E.1.1     | A-K.1.1.2 | 3   | 1486 | 1.63 | 0.06 0.35 | 0.48 | 0.09 | 0.01 | 0.00   | 0.62         | -0.46 | -0.34 | 0.38  | 0.25  | 0.11  | 1.7788 | 0.0406 | -4.6  | 0.8 | -4.6 | 0.8    | 4+  | B-  | A-  |
| ELA  | 5     | 737840 | 8 E.1.1     | A-K.1.1.2 | 3   | 1488 | 1.39 | 0.16 0.4  | 0.32 | 0.10 | 0.01 | 0.01   | 0.60         | -0.47 | -0.17 | 0.34  | 0.29  | 0.11  | 2.3612 | 0.0367 | -2.9  | 0.9 | -3.1 | 0.9    | 4+  | A-  | B-  |
| ELA  | 5     | 271089 | 9 E.1.1     | A-K.1.1.3 | 3   | 1470 | 1.61 | 0.10 0.33 | 0.44 | 0.12 | 0.01 | 0.01   | 0.64         | -0.51 | -0.26 | 0.32  | 0.32  | 0.10  | 1.9991 | 0.0374 | -5.7  | 0.8 | -5.6 | 0.8    | C+  | A-  | A-  |
| ELA  | 6     | 741955 | 1 E.1.1     | A-K.1.1.2 | 3   | 1505 | 1.64 | 0.08 0.35 | 0.42 | 0.14 | 0.01 | 0.01   | 0.63         | -0.47 | -0.30 | 0.29  | 0.34  | 0.11  | 1.6733 | 0.0378 | -3.7  | 0.9 | -3.7 | 0.9    | C+  | A-  | B-  |
| ELA  | 6     | 304778 | 2 E.1.1     | A-C.3.1.1 | 3   | 1504 | 1.63 | 0.07 0.37 | 0.44 | 0.11 | 0.01 | 0.01   | 0.62         | -0.36 | -0.39 | 0.32  | 0.34  | 0.11  | 1.7202 | 0.0395 | -4.8  | 0.8 | -4.8 | 0.8    | C+  | A-  | A-  |
| ELA  | 6     | 246370 | 3 E.1.1     | A-K.1.1.3 | 3   | 1503 | 1.87 | 0.03 0.30 | 0.47 | 0.17 | 0.02 | 0.01   | 0.62         | -0.29 | -0.48 | 0.21  | 0.35  | 0.19  | 1.0951 | 0.0397 | -3.8  | 0.9 | -3.8 | 0.9    | C+  | A-  | A-  |
| ELA  | 6     | 599349 | 4 E.1.1     | A-K.1.1.1 | 3   | 1503 | 1.84 | 0.03 0.29 | 0.51 | 0.17 | 0.01 | 0.01   | 0.60         | -0.31 | -0.45 | 0.23  | 0.35  | 0.11  | 1.3670 | 0.0418 | -3.4  | 0.9 | -3.4 | 0.9    | C+  | B-  | A+  |
| ELA  | 6     | 792335 | 5 E.1.1     | A-C.2.1.2 | 3   | 1504 | 1.56 | 0.06 0.48 | 0.33 | 0.13 | 0.01 | 0.01   | 0.59         | -0.39 | -0.33 | 0.27  | 0.34  | 0.13  | 1.7201 | 0.0393 | -3.1  | 0.9 | -3.2 | 0.9    | 4+  | B-  | A-  |
| ELA  | 6     | 914272 | 6 E.1.1     | A-C.2.1.1 | 3   | 1504 | 1.52 | 0.13 0.34 | 0.42 | 0.10 | 0.01 | 0.01   | 0.61         | -0.39 | -0.32 | 0.36  | 0.32  | 0.12  | 2.0142 | 0.0379 | -2.2  | 0.9 | -2.3 | 0.9    | 4+  | C-  | C-  |
| ELA  | 6     | 158685 | 7 E.1.1     | A-K.1.1.2 | 3   | 1501 | 1.72 | 0.05 0.34 | 0.46 | 0.15 | 0.01 | 0.00   | 0.60         | -0.37 | -0.37 | 0.26  | 0.35  | 0.10  | 1.6120 | 0.0398 | -2.7  | 0.9 | -2.7 | 0.9    | C+  | A-  | B-  |
| ELA  | 6     | 179355 | 8 E.1.1     | A-K.1.1.3 | 3   | 1502 | 1.81 | 0.03 0.33 | 0.50 | 0.16 | 0.01 | 0.01   | 0.63         | -0.27 | -0.51 | 0.27  | 0.37  | 0.10  | 1.4243 | 0.0425 | -5.2  | 0.8 | -5.2 | 0.8    | C+  | A-  | A-  |
| ELA  | 6     | 774296 | 9 E.1.1     | A-K.1.1.2 | 3   | 1499 | 1.49 | 0.09 0.44 |      | 0.10 | 0.01 | 0.01   | 0.62         | -0.41 | -0.31 | 0.35  | 0.32  | 0.11  | 1.9569 | 0.0390 | -4.3  | 0.9 | -4.6 | 0.8  I |     | A-  | A-  |
| ELA  | 6     | 754339 | 10 E.1.1    |           | 3   | 1503 | 1.72 | 0.05 0.32 |      |      | 0.01 | 0.01   | 0.63         | -0.37 | -0.41 | 0.30  | 0.33  | 0.14  | 1.5401 | 0.0406 |       | 0.9 | -4.3 | 0.9    |     | A-  | A-  |
| ELA  | 6     | 454644 |             | B-K.1.1.1 | 3   | 1501 | 1.66 | 0.06 0.39 |      | 0.15 | 0.01 | 0.01   | 0.65         | -0.43 | -0.37 | 0.29  | 0.37  | 0.14  | 1.6206 | 0.0377 | -5.8  | 0.8 | -5.9 | 0.8  I | 3+  | A-  | A-  |
| ELA  | 6     | 711813 | 12 E.1.1    | B-K.1.1.1 | 3   | 1504 | 1.81 | 0.03 0.29 |      | 0.14 | 0.01 | 0.01   | 0.57         | -0.27 | -0.43 | 0.23  | 0.34  | 0.08  | 1.4992 | 0.0429 |       |     | -1.9 | 0.9    |     | A-  | A-  |
| ELA  | 6     | 589594 | 13 E.1.1    | B-K.1.1.1 | 3   | 1502 | 1.66 | 0.05 0.42 |      | 0.14 | 0.02 | 0.01   | 0.60         | -0.34 | -0.39 | 0.26  | 0.35  | 0.15  | 1.4984 | 0.0386 | -3.8  | 0.9 | -3.5 | 0.9    | C+  | A-  | B-  |
| ELA  | 6     | 439032 | 14 E.1.1    | B-K.1.1.1 | 3   | 1503 | 1.67 | 0.05 0.37 |      |      |      | 0.00   | 0.57         | -0.31 | -0.40 | 0.31  | 0.30  | 0.11  | 1.6195 | 0.0403 |       |     | -1.9 | 0.9 I  |     | B-  | A-  |
| ELA  | 6     | 975657 |             | B-K.1.1.1 | 3   | 1502 | 1.72 | 0.06 0.36 |      | 00   | 0.02 | 0.01   | 0.58         | -0.37 | -0.35 | 0.23  | 0.32  | 0.17  | 1.3751 | 0.0373 |       |     | -2.1 | 0.9    | C+  | B-  | B-  |
| ELA  | 6     | 549650 |             | B-K.1.1.2 | 3   | 1505 | 1.70 | 0.05 0.35 |      |      |      | 0.01   | 0.59         | -0.34 | -0.39 | 0.29  | 0.32  | 0.09  | 1.8288 | 0.0409 |       |     | -2.3 | 0.9 I  | 3+  | B-  | B-  |
| ELA  | 6     | 316152 |             | B-K.1.1.1 | 3   | 1503 |      | 0.04 0.51 |      |      |      | 0.01   | 0.59         | -0.33 | -0.41 | 0.38  | 0.29  | 0.10  | 1.8924 | 0.0429 |       |     | -4.3 | 0.8 I  |     | A-  | A-  |
| ELA  | 6     | 909020 |             | B-K.1.1.1 | 3   | 1502 | 1.71 | 0.03 0.36 |      | 0.12 |      | 0.01   | 0.58         | -0.31 | -0.41 | 0.27  | 0.34  | 0.08  | 1.6096 | 0.0422 |       |     | -3.0 | 0.9    | C+  | A+  | A+  |
| ELA  | 6     | 616548 |             | B-K.1.1.1 | 3   | 1503 | 1.73 | 0.03 0.38 |      |      | 0.01 | 0.01   | 0.58         | -0.27 | -0.44 | 0.26  | 0.34  | 0.12  | 1.3980 | 0.0405 |       | _   | -3.6 | 0.9    |     | A-  | A+  |
| ELA  | 6     | 937071 | 20 E.1.1    | B-K.1.1.1 | 3   | 1501 | 1.43 | 0.07 0.50 | 0.35 | 0.07 | 0.00 | 0.00   | 0.57         | -0.39 | -0.29 | 0.36  | 0.27  | 0.05  | 2.3493 | 0.0421 | -3.9  | 0.9 | -3.9 | 0.9    | C+  | A-  | A-  |

#### Appendix F: Item Statistics Text-Dependent Analysis

| ELA 7 | 867718        | 1 E.1.1 A-K.1.1.3  | 3 1508 | 1.76 0.03 ( | 0.37 0.42 | 0.15 | 0.02 0.0  | 0.62 | -0.34 | -0.44 | 0.24 | 0.36 | 0.17 1.3232 | 0.0386 | -5.2 0.8 | -5.1 | 0.8 C+ | A-  | A+ |
|-------|---------------|--------------------|--------|-------------|-----------|------|-----------|------|-------|-------|------|------|-------------|--------|----------|------|--------|-----|----|
| ELA 7 | 925235        | 2 E.1.1 A-K.1.1.2  | 3 1502 |             | 0.52 0.29 |      | 0.01 0.0  |      | -0.36 | -0.35 | 0.32 | 0.34 | 0.14 1.9378 | 0.0389 |          |      | 0.8 B+ | Α-  | A- |
| ELA 7 | 612903        | 3 E.1.1 A-C.2.1.1  | 3 1506 | 1.81 0.02 ( | 0.37 0.41 | 0.20 | 0.01 0.0  | 0.61 | -0.27 | -0.49 | 0.22 | 0.38 | 0.14 1.3372 | 0.0390 | -4.1 0.9 | -4.2 | 0.9 C+ | A-  | Α- |
| ELA 7 | 274750        | 4 E.1.1 A-C.2.1.1  | 3 1502 | 1.98 0.03 ( | 0.31 0.38 | 0.23 | 0.05 0.0  | 0.63 | -0.27 | -0.47 | 0.08 | 0.37 | 0.27 0.8948 | 0.0355 | -4.3 0.9 | -4.2 | 0.9 C+ | A-  | Α- |
| ELA 7 | 842753        | 5 E.1.1 A-C.2.1.3  | 3 1500 | 1.79 0.03 ( |           |      | 0.02 0.0  |      | -0.27 | -0.46 | 0.20 | 0.37 | 0.19 1.3125 | 0.0387 | 1        | -4.7 | 0.8 B+ | A-  | A- |
| ELA 7 | 862844        | 6 E.1.1 A-K.1.1.1  | 3 1500 | 1.70 0.06 0 | 0.39 0.36 | 0.15 | 0.04 0.0  | 0.63 | -0.44 | -0.35 | 0.27 | 0.31 | 0.21 1.3873 | 0.0354 | -4.4 0.9 | -4.4 | 0.9 C+ | A-  | Α- |
| ELA 7 | 563028        | 7 E.1.1 A-C.3.1.1  | 3 1501 | 1.49 0.05 ( | 0.56 0.25 | 0.13 | 0.01 0.0  | 0.58 | -0.37 | -0.32 | 0.26 | 0.35 | 0.15 1.6851 | 0.0375 | -4.3 0.9 | -4.6 | 0.8 B+ | A-  | Α- |
| ELA 7 | 139372        | 8 E.1.1 A-C.3.1.1  | 3 1505 | 1.72 0.06 0 | 0.34 0.43 | 0.14 | 0.02 0.0  | 0.64 | -0.40 | -0.39 | 0.28 | 0.35 | 0.17 1.4949 | 0.0373 | -4.9 0.8 | -5.0 | 0.8 C+ | A-  | A- |
| ELA 7 | 128009        | 9 E.1.1 A-C.3.1.1  | 3 1506 | 1.75 0.05 0 | 0.37 0.39 | 0.17 | 0.02 0.0  | 0.60 | -0.37 | -0.36 | 0.18 | 0.37 | 0.18 1.4619 | 0.0374 | -3.3 0.9 | -3.4 | 0.9 C+ | A-  | A- |
| ELA 7 | 157788        | 10 E.1.1 A-C.2.1.2 | 3 1501 | 1.62 0.11   | 0.37 0.34 | 0.15 | 0.03 0.0  | 0.64 | -0.42 | -0.33 | 0.27 | 0.36 | 0.20 1.6338 | 0.0343 | -4.3 0.9 | -4.6 | 0.8 B+ | C-  | A- |
| ELA 7 | 553442        | 11 E.1.1 B-K.1.1.2 | 3 1502 | 1.86 0.05 ( | 0.32 0.37 | 0.23 | 0.03 0.0  | 0.64 | -0.40 | -0.40 | 0.17 | 0.39 | 0.19 1.2957 | 0.0350 | -5.0 0.8 | -5.2 | 0.8 C+ | A-  | A- |
| ELA 7 | 207643        | 12 E.1.1 B-K.1.1.1 | 3 1501 | 1.80 0.04 ( | 0.36 0.41 | 0.16 | 0.04 0.00 | 0.58 | -0.29 | -0.39 | 0.14 | 0.35 | 0.23 1.2022 | 0.0369 | -3.2 0.9 | -3.3 | 0.9 A+ | A-  | A- |
| ELA 7 | 327346        | 13 E.1.1 B-K.1.1.3 | 3 1502 | 1.73 0.05 0 | 0.39 0.38 | 0.14 | 0.04 0.0  | 0.58 | -0.31 | -0.41 | 0.26 | 0.30 | 0.21 1.2827 | 0.0356 | -2.8 0.9 | -2.8 | 0.9 C+ | A-  | B- |
| ELA 7 | 554874        | 14 E.1.1 B-K.1.1.2 | 3 1503 | 1.85 0.04 0 | 0.31 0.43 | 0.18 | 0.03 0.0  | 0.60 | -0.33 | -0.40 | 0.17 | 0.35 | 0.18 1.2299 | 0.0365 | -3.6 0.9 | -3.7 | 0.9 C+ | A-  | A- |
| ELA 7 | 833008        | 15 E.1.1 B-K.1.1.1 | 3 1503 | 1.63 0.05 0 | 0.46 0.33 | 0.14 | 0.02 0.0  | 0.60 | -0.36 | -0.37 | 0.24 | 0.35 | 0.17 1.5241 | 0.0365 | -4.3 0.9 | -4.5 | 0.8 A+ | B-  | A- |
| ELA 7 | 963843        | 16 E.1.1 B-K.1.1.1 | 3 1501 | 1.75 0.09 0 | 0.30 0.40 | 0.16 | 0.04 0.0  | 0.67 | -0.45 | -0.35 | 0.23 | 0.37 | 0.22 1.4112 | 0.0340 | -5.9 0.8 | -6.1 | 0.8 A+ | A-  | B- |
| ELA 7 | 333516        | 17 E.1.1 B-K.1.1.3 | 3 1504 | 1.66 0.02 0 | 0.44 0.38 | 0.13 | 0.01 0.00 | 0.55 | -0.28 | -0.42 | 0.25 | 0.34 | 0.11 1.4663 | 0.0397 | -2.9 0.9 | -3.0 | 0.9 A+ | B-  | A- |
| ELA 7 | 797888        | 18 E.1.1 B-K.1.1.1 | 3 1503 | 1.94 0.03 ( | 0.28 0.44 | 0.20 | 0.04 0.00 | 0.52 | -0.25 | -0.38 | 0.11 | 0.30 | 0.21 1.0226 | 0.0365 | 0.1 1.0  | 0.1  | 1.0 C+ | B-  | A- |
| ELA 7 | 694750        | 19 E.1.1 B-K.1.1.1 | 3 1498 | 1.74 0.03 0 | 0.41 0.38 | 0.17 | 0.02 0.0  | 0.53 | -0.27 | -0.38 | 0.18 | 0.34 | 0.15 1.3606 | 0.0382 | -0.9 1.0 | -1.2 | 1.0 C+ | A-  | A- |
| ELA 7 | 519451        | 20 E.1.1 B-K.1.1.1 | 3 1503 | 1.82 0.04 0 | 0.37      | 0.19 | 0.04 0.0  | 0.55 | -0.21 | -0.44 | 0.16 | 0.34 | 0.20 1.2046 | 0.0355 | -1.9 0.9 | -2.1 | 0.9 C+ | A-  | A- |
| ELA 8 | 811313        | 1 E.1.1 A-K.1.1.2  | 3 1501 | 1.90 0.02 0 | 0.40      | 0.22 | 0.02 0.0  | 0.61 | -0.19 | -0.54 | 0.18 | 0.39 | 0.17 1.6100 | 0.0382 | -4.0 0.9 | -4.2 | 0.9 B+ | A-  | A- |
| ELA 8 | 704797        | 2 E.1.1 A-K.1.1.1  | 3 1502 | 1.91 0.02 0 | 0.34 0.37 | 0.24 | 0.03 0.0  | 0.60 | -0.28 | -0.44 | 0.10 | 0.40 | 0.19 1.6372 | 0.0367 | -3.4 0.9 | -3.4 | 0.9 B+ | A-  | A- |
| ELA 8 | 3 281808      | 3 E.1.1 A-C.2.1.2  | 3 1503 | 1.80 0.02 0 | 0.38      | 0.17 | 0.03 0.0  | 0.62 | -0.21 | -0.53 | 0.23 | 0.38 | 0.20 1.7315 | 0.0376 | -5.9 0.8 | -6.2 | 0.8 B+ | A-  | A- |
| ELA 8 | 373105        | 4 E.1.1 A-K.1.1.2  | 3 1502 | 2.04 0.04 0 | 0.24 0.40 | 0.26 | 0.05 0.0  | 0.66 | -0.33 | -0.48 | 0.09 | 0.40 | 0.24 1.5734 | 0.0354 | -5.8 0.8 | -5.8 | 0.8 C+ | A-  | A- |
| ELA 8 | 3 262069      | 5 E.1.1 A-K.1.1.1  | 3 1500 |             | 0.38      |      | 0.02 0.0  |      | -0.31 | -0.49 | 0.23 | 0.40 | 0.15 1.9472 | 0.0370 |          | -6.0 | 0.8 B+ | B-  | A- |
| ELA 8 | 371465        | 6 E.1.1 A-K.1.1.1  | 3 1501 | 2.10 0.03 0 |           |      | 0.05 0.0  |      | -0.30 | -0.50 | 0.03 | 0.41 | 0.26 1.3917 | 0.0353 |          |      | 0.8 C+ | A+  | A- |
| ELA 8 | 854001        | 7 E.1.1 A-K.1.1.2  | 3 1501 | 1.99 0.02 0 | 0.27 0.41 | 0.27 | 0.02 0.0  | 0.64 | -0.22 | -0.54 | 0.12 | 0.42 | 0.17 1.6094 | 0.0374 | -5.7 0.8 | -5.8 | 0.8 C+ | A-  | A- |
| ELA 8 | 3 152143      | 8 E.1.1 A-K.1.1.2  | 3 1504 |             | 0.39      | 0.17 | 0.02 0.03 | 0.62 | -0.31 | -0.47 | 0.26 | 0.38 | 0.14 1.9760 | 0.0374 |          | -6.3 | 0.8 A+ | A-  | A- |
| ELA 8 | 522903        | 9 E.1.1 A-C.2.1.3  | 3 1503 |             | 0.24 0.41 |      | 0.04 0.0  | 0.63 | -0.23 | -0.52 | 0.07 | 0.39 | 0.22 1.3431 | 0.0363 |          | -5.3 | 0.8 C+ | B-  | A- |
| ELA 8 | 166430        | 10 E.1.1 A-K.1.1.2 | 3 1501 | 1.99 0.05 0 |           |      | 0.04 0.0  |      | -0.42 | -0.44 | 0.13 | 0.40 | 0.22 1.6515 | 0.0344 |          |      | 0.8 B+ | A-  | A- |
| ELA 8 | 3 278458      | 11 E.1.1 B-C.3.1.1 | 3 1500 | 1.90 0.03 0 | 0.31 0.40 | 0.22 | 0.03 0.0  | 0.63 | -0.32 | -0.47 | 0.19 | 0.36 | 0.20 1.6960 | 0.0361 | -5.7 0.8 | -5.6 | 0.8 B+ | A-  | A- |
| ELA 8 | 408371        | 12 E.1.1 B-K.1.1.1 | 3 1502 | 2.03 0.03 0 | 0.27 0.38 | 0.26 | 0.05 0.0  | 0.69 | -0.28 | -0.57 | 0.13 | 0.43 | 0.24 1.4535 | 0.0351 | -8.6 0.7 | -8.5 | 0.7 B+ | B-  | A- |
| ELA 8 | 3 204429      | 13 E.1.1 B-K.1.1.2 | 3 1500 |             | 0.33      |      | 0.03 0.0  | 0.62 | -0.21 | -0.54 | 0.18 | 0.38 | 0.20 1.5263 | 0.0361 | -6.5 0.8 | -6.3 | 0.8 A+ | A-  | A- |
| ELA 8 | 3 265769      | 14 E.1.1 B-K.1.1.1 | 3 1502 |             | 0.27 0.38 |      | 0.03 0.0  |      | -0.28 | -0.49 | 0.06 | 0.45 | 0.22 1.6569 | 0.0356 |          |      | 0.8 A+ | A+  | A- |
| ELA 8 | 816846        | 15 E.1.1 B-K.1.1.3 | 3 1500 | 1.75 0.03 0 |           | 0.18 |           |      | -0.24 | -0.42 | 0.18 | 0.38 | 0.14 1.9868 | 0.0378 |          | -3.2 | 0.9 A+ | A-  | A- |
| ELA 8 | 329605        | 16 E.1.1 B-C.3.1.1 | 3 1503 | 1.76 0.06 0 |           | 0.19 |           |      | -0.36 | -0.43 | 0.22 | 0.39 | 0.19 1.9668 | 0.0354 |          |      | 0.8 C+ | B-  | A- |
| ELA 8 | 3 537023      | 17 E.1.1 B-K.1.1.3 | 3 1502 | 1.83 0.02 0 | 0.34 0.43 |      | 0.02 0.0  | 0.63 | -0.23 | -0.54 | 0.25 | 0.39 | 0.14 1.7725 | 0.0387 |          |      | 0.8 B+ | A-  | A- |
| ELA 8 | 8 802488      | 18 E.1.1 B-C.3.1.2 | 3 1502 | 1.67 0.05 0 | 0.42 0.35 | 0.17 | 0.01 0.02 | 0.60 | -0.27 | -0.45 | 0.26 | 0.38 | 0.13 2.1559 | 0.0369 | -5.5 0.8 | -5.4 | 0.8 A+ | A-  | A- |
| ELA 8 | 943921        | 19 E.1.1 B-C.3.1.2 | 3 1505 | 1.78 0.02 0 | 0.36 0.43 | 0.17 | 0.01 0.02 | 0.64 | -0.25 | -0.55 | 0.30 | 0.38 | 0.11 2.0453 | 0.0396 | -6.7 0.8 | -6.9 | 0.8 B+ | A-  | A- |
| ELA 8 | 3 742528      | 20 E.1.1 B-C.3.1.2 | 3 1502 | 1.88 0.04 0 | 0.30 0.42 | 0.22 | 0.02 0.0  | 0.65 | -0.31 | -0.50 | 0.20 | 0.41 | 0.16 1.8611 | 0.0372 | -7.4 0.8 | -7.3 | 0.8 A+ | B-  | A- |
|       | · <del></del> |                    |        |             |           |      |           |      |       |       |      |      |             |        | •        | _    |        | · · | -  |

Appendix G:

Test Book Section Layout Plans

#### Mathematics and Reading Test/Answer Book Section Layout for Grades 4, 5, 6, 7, and 8

Mathematics Core Reading Core

Core/common MC items 60 (16 core linking)

3 core 4 pt OE items 60 (16 core linking)

40 (16 core linking)

4 core 3 pt OE items 12 (6 core linking)

Total 72 points Total 52 points

The estimated testing time for mathematics is approximately 155–185 minutes. The estimated testing time for reading is approximately 165–255 minutes (including equating block items and embedded field test items). [Timing assumes 5 to 10 min per OE/SA, 30 min per TDA; 3 to 5 min per SR; 1½ to 2 min per MC, and 7 min per reading passage set.]

| Section | Content     | Number<br>of MC/SR | MC/SR Item Breakdown  | Number of<br>OE/SA/TDA | OE/SA/TDA Item<br>Breakdown | Estimated<br>Number of<br>Passages | Section Time<br>(in minutes) |
|---------|-------------|--------------------|---|------------------------|-----------------------------|------------------------------------|------------------------------|
| 1       | Mathematics | 24                 | 23–common (core) items<br>(includes 4 non–calc)<br>1–non–calc field test item | 2                      | 2–common (core)<br>items    | N/A                                | 55-65                        |
| 2       | Reading     | 19—24              | 19–24–common (core) items   | 2                      | 2–common (core)<br>items    | 3                                  | 65—85                        |
| 3       | Mathematics | 24                 | 13–common (core) items<br>2–equating block items<br>9–field test items        | 1                      | 1–field test                | N/A                                | 50-60                        |
| 4       | Reading     | 18                 | 8–equating block items<br>10–field test items                                 | 1                      | 1–field test                | 2                                  | 50—95                        |
| 5       | Mathematics | 24                 | 24–common (core) items  | 1                      | 1–common (core) item        | N/A                                | 50-60                        |
| 6       | Reading     | 16—21              | 16–21–common (core) items   | 2                      | 2–common (core)<br>items    | 2 or 3                             | 50-75                        |

Notes: 1) There will be nine forms in Grades 4 and 5. There will be twenty forms in Grades 6 through 8. 2) The ruler items may fall in Section 1, 3, or 5. 3) Sections 2 and 6 must equal a combined total of 40 MC items. 4) Section 2 cannot be more than 24 MC items. Section 6 cannot be less than 16 MC items.

#### Mathematics and Reading Test/Answer Book Section Layout for Grade 3

Mathematics Core Reading Core

Core/common MC items 60 (16 core linking)

3 core 4 pt OE items 12 (8 core linking)

The latest 12 (8 core linking)

Core/common MC items 40 (16 core linking)

2 core 3 pt OE items 6 (3 core linking)

Total 72 points Total 46 points

The estimated testing time for mathematics is approximately 130-185 minutes. The estimated testing time for reading is approximately 160-215 minutes (including equating block items and embedded field test items). [Timing assumes 5 to 10 min per OE,  $1\frac{1}{2}$  to 2 min per

MC, and 7 min per reading passage set.]

| Section | Content     | Number<br>of MC/SR | MC Item Breakdown   | Number<br>of<br>OE/SA | OE/SA Item Breakdown | Estimated<br>Number of<br>Passages | Section Time<br>(in minutes) |
|---------|-------------|--------------------|---|-----------------------|----------------------|------------------------------------|------------------------------|
| 1       | Mathematics | 24                 | 24-common (core) items  | 2                     | 2–common (core) item | N/A                                | 55-65                        |
| 2       | Reading     | 25                 | 25–common (core) items  | 1                     | 1–common (core) item | 3                                  | 60-70                        |
| 3       | Mathematics | 24                 | 12–common (core) items<br>2–equating block items<br>10–field test items | 1                     | 1–field test         | N/A                                | 50-60                        |
| 4       | Reading     | 18                 | 8–equating block items<br>10–field test items                           | 1                     | 1–field test         | 2                                  | 50-60                        |
| 5       | Mathematics | 24                 | 24–common (core) items  | 1                     | 1–common (core) item | N/A                                | 50-60                        |
| 6       | Reading     | 15                 | 15–common (core) items  | 1                     | 1–common (core) item | 2                                  | 40-50                        |

Notes: 1) There will be nine forms. 2) The ruler items may fall in Section 1, 3, or 5. 3) Sections 2 and 6 must equal a combined total of 40 MC items. 4) Section 2 cannot be more than 24 MC items. Section 6 cannot be less than 16 MC items.

### **Science Test/Answer Book Section Layout**

General Information (see grade level page for specifics)

- Timing Key: MC = 1 to  $1\frac{1}{2}$  min; 2 pt OE = 5 min; 4 pt OE = 10 min; G8 Scenario stimulus = 3 min
- There are 12 forms per grade.
- Within a section at Grade 4, MC *most likely* will precede OE items.
- Within a section at Grade 8, non-scenario MC items *most likely* will precede scenario-based MC items which will precede OE items.
- Grade 4 and 8 will have both Test Booklets and scannable Answer Booklets.
- Generally, core items will precede equating block items, which will precede field test items.

Science: Grade 4

Core/common MC items 58 (16 core linking) 5 core 2 pt OE items 10 (2 core linking)

Total 68 points

The estimated Ggrade 4 testing time for science is approximately 95–100 minutes or 110–115 minutes administration time (including equating block items and embedded field test items). [Timing assumes 5 min per 2 pt OE and 1 min per MC.]

| Grade | Section | Number<br>of MC | <b>Estimated MC Item Breakdown</b>  | Number<br>of OE | Estimated OE Item Breakdown                      | Testing<br>Time |
|-------|---------|-----------------|---|-----------------|--|-----------------|
| 4     | 1       | 34              | 29-common (core) items 1-equating block item 4-embedded field test item   | 3               | 3-common (core) items                            | 45—55           |
| 4     | 2       | 34              | 29-common (core) items 1-equating block item 4- embedded field test items | 3               | 2-common (core) items 1-embedded field test item | 45—55           |

**Science: Grade 8** 

Core/common MC items 58 (16 core linking) 5 core 2 pt OE items 10 (2 core linking)

Total 68 points

The estimated grade 8 testing time is 105—110 minutes per grade for science or 120—125 minutes administration time (including equating block items and embedded field test items). [Timing assumes 5 min per 2 pt OE, 1 min per MC, and 3 min per grade 8 scenario.]

| Grade | Section | Number<br>of MC | Estimated MC Item Breakdown  | Number<br>of OE | Estimated OE Item Breakdown                      | Testing<br>Time |
|-------|---------|-----------------|--|-----------------|--|-----------------|
| 8     | 1       | 35              | 27-common (core) items 4-embedded field test scenario-based items 1-equating block item 3-embedded field test item | 3               | 3-common (core) items                            | 50-60           |
| 8     | 2       | 35              | 27-common (core) items 4-common (core) scenario-based items 1-equating block item 3-embedded field test item       | 3               | 2-common (core) items 1-embedded field test item | 50-60           |

### **Writing Book Section Layout**

#### **General Information**

- There is 1 form for Grade 5 and 1 form for Grade 8.
- Both grades will have one consumable writing booklet.
- Writing assessments fall within two categories:
  - o Composition Academic Standard 1.4, Types of Writing
  - o Revising and Editing Academic Standard 1.5, Quality of Writing

#### **Writing: Both Grades**

Core/common MC items 12 (weighted x1)
2 core 4 pt (Mode) WP items 80 (weighted x10)
2 core 4 pt (Conv.) WP items 8 (weighted x1)
Total 100 points

| Section | Contents               | Core Points Distribution by<br>Academic Standards | Core/FT Item Breakdown    | Testing<br>Time |
|---------|------------------------|---|---------------------------|-----------------|
| 1       | 12 Multiple-<br>choice | 12 points within 1.5.E & 1.5.F                    | 12-common (core) MC items | 25—35           |
| 2       | 1 Writing<br>Prompt    | 8 points within 1.5.E & 1.5.F                     | 2 common (como) WD itomo  | 55-65           |
| 3       | 1 Writing<br>Prompt    | 80 points within 1.4.A, 1.4.B, & 1.4.C            | 2-common (core) WP items  | 55-65           |

<sup>\*</sup> Grade 5 does not have an embedded field test WP, and therefore has only 3 sections.

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# Appendix H: Mean Raw Scores by Form

| Column<br>Heading | Definition         |
|-------------------|--------------------|
| Form              | Form               |
| N                 | N students         |
| L                 | Length             |
| Pts               | Points possible    |
| Min               | Minimum            |
| Max               | Maximum            |
| Mean              | Mean               |
| Med               | Median             |
| SD                | Standard deviation |

|               | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD    |               | Form     | N            | L        | Pts      | Min    | Max      | Mean         | Med          | SD             |
|---------------|------|--------|----|-----|-----|-----|------|------|-------|---------------|----------|--------------|----------|----------|--------|----------|--------------|--------------|----------------|
|               | 0    | 124702 | 63 | 72  | 4   | 72  | 51.9 | 56.0 | 14.71 |               | 0        | 126911       | 63       | 72       | 1      | 72       | 50.0         | 53.0         | 14.66          |
|               | 1    | 14275  | 63 | 72  | 8   | 72  | 50.9 | 55.0 | 15.24 |               | 1        | 14605        | 63       | 72       | 5      | 72       | 48.8         | 52.0         | 15.22          |
| $\epsilon$    | 2    | 13887  | 63 | 72  | 7   | 72  | 51.7 | 55.0 | 14.66 | 4             | 2        | 14125        | 63       | 72       | 6      | 72       | 49.5         | 53.0         | 14.86          |
| ics           | 3    | 13829  | 63 | 72  | 5   | 72  | 51.5 | 55.0 | 14.77 | ics           | 3        | 14167        | 63       | 72       | 3      | 72       | 50.1         | 53.0         | 14.60          |
| na            | 4    | 13790  | 63 | 72  | 6   | 72  | 52.1 | 56.0 | 14.75 | na            | 4        | 14042        | 63       | 72       | 1      | 72       | 50.1         | 53.0         | 14.58          |
| her           | 5    | 13839  | 63 | 72  | 4   | 72  | 52.1 | 56.0 | 14.64 | her           | 5        | 14029        | 63       | 72       | 6      | 72       | 50.4         | 54.0         | 14.58          |
| Mathematics 3 | 6    | 13794  | 63 | 72  | 8   | 72  | 52.2 | 56.0 | 14.63 | Mathematics   | 6        | 14032        | 63       | 72       | 5      | 72       | 50.1         | 53.0         | 14.48          |
| 2             | 7    | 13748  | 63 | 72  | 6   | 72  | 52.6 | 56.0 | 14.40 | 2             | 7        | 13995        | 63       | 72       | 5      | 72       | 50.1         | 53.0         | 14.54          |
|               | 8    | 13817  | 63 | 72  | 6   | 72  | 52.2 | 56.0 | 14.65 |               | 8        | 13960        | 63       | 72       | 5      | 72       | 50.2         | 53.0         | 14.51          |
|               | 9    | 13723  | 63 | 72  | 7   | 72  | 52.1 | 56.0 | 14.60 |               | 9        | 13956        | 63       | 72       | 1      | 72       | 50.2         | 53.0         | 14.48          |
|               | 0    | 126693 | 63 | 72  | 5   | 72  | 46.4 | 49.0 | 15.55 |               | 0        | 126128       | 63       | 72       | 4      | 72       | 48.0         | 50.0         | 14.27          |
|               | 1    | 14647  | 63 | 72  | 5   | 72  | 45.4 | 48.0 | 15.83 |               | 1        | 7225         | 63       | 72       | 5      | 72       | 46.4         | 48.0         | 15.13          |
|               | 2    | 14148  | 63 | 72  | 5   | 72  | 46.3 | 49.0 | 15.55 |               | 2        | 6605         | 63       | 72       | 9      | 72       | 47.7         | 50.0         | 14.40          |
|               | 3    | 14007  | 63 | 72  | 6   | 72  | 46.5 | 49.0 | 15.32 |               | 3        | 6610         | 63       | 72       | 9      | 72       | 47.8         | 50.0         | 14.40          |
|               | 4    | 14014  | 63 | 72  | 6   | 72  | 46.3 | 49.0 | 15.70 |               | 4        | 6196         | 63       | 72       | 5      | 72       | 48.0         | 50.0         | 14.23          |
|               | 5    | 13959  | 63 | 72  | 5   | 72  | 46.6 | 49.0 | 15.37 |               | 5        | 6265         | 63       | 72       | 8      | 72       | 48.1         | 50.0         | 14.31          |
|               | 6    | 13936  | 63 | 72  | 5   | 72  | 46.6 | 49.0 | 15.51 |               | 6        | 6194         | 63       | 72       | 7      | 72       | 48.0         | 50.0         | 14.30          |
| w             | 7    | 14104  | 63 | 72  | 6   | 72  | 46.7 | 49.0 | 15.44 | 9             | 7        | 6210         | 63       | 72       | 7      | 72       | 48.3         | 50.5         | 14.09          |
|               | 8    | 13893  | 63 | 72  | 6   | 72  | 46.4 | 49.0 | 15.70 | Mathematics 6 | 8        | 6191         | 63       | 72       | 7      | 72       | 48.2         | 50.0         | 14.09          |
| Mathematics   | 9    | 13985  | 63 | 72  | 8   | 72  | 46.7 | 49.0 | 15.49 | nat           | 9        | 6223<br>6225 | 63       | 72       | 7      | 72       | 48.0         | 50.0         | 14.05          |
| hen           |      |        |    |     |     |     |      |      |       | hen           | 10<br>11 | 6183         | 63<br>63 | 72<br>72 | 7<br>8 | 72<br>72 | 47.8<br>48.2 | 50.0<br>50.0 | 14.31<br>14.11 |
| [at]          |      |        |    |     |     |     |      |      |       | [at]          | 12       | 6202         | 63       | 72       | 8      | 72       | 48.0         | 50.0         | 14.11          |
| 2             |      |        |    |     |     |     |      |      |       | 2             | 13       | 6218         | 63       | 72       | 8      | 72       | 48.2         | 50.0         | 14.10          |
|               |      |        |    |     |     |     |      |      |       |               | 14       | 6236         | 63       | 72       | 8      | 72       | 48.3         | 50.0         | 14.31          |
|               |      |        |    |     |     |     |      |      |       |               | 15       | 6220         | 63       | 72       | 4      | 72       | 48.3         | 50.0         | 14.12          |
|               |      |        |    |     |     |     |      |      |       |               | 16       | 6234         | 63       | 72       | 7      | 72       | 48.3         | 50.0         | 14.32          |
|               |      |        |    |     |     |     |      |      |       |               | 17       | 6251         | 63       | 72       | 7      | 72       | 48.3         | 51.0         | 14.12          |
|               |      |        |    |     |     |     |      |      |       |               | 18       | 6214         | 63       | 72       | 8      | 72       | 48.2         | 50.0         | 14.29          |
|               |      |        |    |     |     |     |      |      |       |               | 19       | 6228         | 63       | 72       | 9      | 72       | 48.3         | 50.0         | 14.09          |
|               |      |        |    |     |     |     |      |      |       |               | 20       | 6198         | 63       | 72       | 5      | 72       | 47.9         | 50.0         | 14.19          |

Appendix H: Mean Raw Scores by Form

|             | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD                      | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD    |
|-------------|------|--------|----|-----|-----|-----|------|------|-------------------------|------|--------|----|-----|-----|-----|------|------|-------|
|             | 0    | 130189 | 63 | 72  | 4   | 72  | 45.0 | 47.0 | 15.41                   | 0    | 131363 | 63 | 72  | 3   | 72  | 48.3 | 51.0 | 15.62 |
|             | 1    | 7647   | 63 | 72  | 5   | 72  | 43.1 | 44.0 | 15.88                   | 1    | 7955   | 63 | 72  | 5   | 72  | 46.3 | 49.0 | 16.37 |
|             | 2    | 7016   | 63 | 72  | 5   | 72  | 44.6 | 46.0 | 15.56                   | 2    | 7256   | 63 | 72  | 6   | 72  | 47.7 | 50.0 | 15.58 |
|             | 3    | 6376   | 63 | 72  | 6   | 72  | 45.5 | 47.0 | 15.23                   | 3    | 6409   | 63 | 72  | 3   | 72  | 48.4 | 52.0 | 15.70 |
|             | 4    | 6363   | 63 | 72  | 5   | 72  | 44.8 | 46.0 | 15.39                   | 4    | 7272   | 63 | 72  | 5   | 72  | 48.3 | 51.0 | 15.57 |
|             | 5    | 7008   | 63 | 72  | 4   | 72  | 45.1 | 47.0 | 15.24                   | 5    | 6418   | 63 | 72  | 7   | 72  | 48.4 | 51.0 | 15.66 |
|             | 6    | 6400   | 63 | 72  | 6   | 72  | 45.0 | 47.0 | 15.35                   | 6    | 6383   | 63 | 72  | 8   | 72  | 48.5 | 52.0 | 15.54 |
| _           | 7    | 6413   | 63 | 72  | 6   | 72  | 45.1 | 47.0 | 15.30                   | 7    | 6404   | 63 | 72  | 6   | 72  | 48.4 | 52.0 | 15.43 |
| .s. 7       | 8    | 6417   | 63 | 72  | 6   | 72  | 45.2 | 47.0 | 15.37                   | 8    | 6445   | 63 | 72  | 7   | 72  | 48.3 | 51.0 | 15.65 |
| atic        | 9    | 6402   | 63 | 72  | 7   | 72  | 45.2 | 47.0 | 15.26                   | 9    | 6410   | 63 | 72  | 5   | 72  | 48.4 | 52.0 | 15.59 |
| Mathematics | 10   | 6400   | 63 | 72  | 7   | 72  | 45.1 | 47.0 | 15.26<br>15.48<br>15.51 | 10   | 6417   | 63 | 72  | 5   | 72  | 48.6 | 52.0 | 15.44 |
| ţ           | 11   | 6387   | 63 | 72  | 6   | 72  | 45.1 | 47.0 | 15.51                   | 11   | 6427   | 63 | 72  | 6   | 72  | 48.7 | 52.0 | 15.52 |
| Ϋ́          | 12   | 6395   | 63 | 72  | 5   | 72  | 44.9 | 46.0 | 15.34                   | 12   | 6408   | 63 | 72  | 5   | 72  | 48.5 | 52.0 | 15.62 |
|             | 13   | 6335   | 63 | 72  | 7   | 72  | 45.3 | 47.0 | 15.36                   | 13   | 6401   | 63 | 72  | 5   | 72  | 48.3 | 52.0 | 15.52 |
|             | 14   | 6384   | 63 | 72  | 8   | 72  | 45.1 | 47.0 | 15.27                   | 14   | 6412   | 63 | 72  | 6   | 72  | 48.6 | 52.0 | 15.57 |
|             | 15   | 6384   | 63 | 72  | 5   | 72  | 44.9 | 47.0 | 15.52                   | 15   | 6407   | 63 | 72  | 7   | 72  | 48.7 | 52.0 | 15.63 |
|             | 16   | 6376   | 63 | 72  | 5   | 72  | 44.9 | 47.0 | 15.43                   | 16   | 6386   | 63 | 72  | 6   | 72  | 48.7 | 52.0 | 15.62 |
|             | 17   | 6391   | 63 | 72  | 5   | 72  | 45.2 | 47.0 | 15.39                   | 17   | 6379   | 63 | 72  | 3   | 72  | 48.5 | 52.0 | 15.61 |
|             | 18   | 6342   | 63 | 72  | 7   | 72  | 45.2 | 47.0 | 15.40                   | 18   | 6409   | 63 | 72  | 7   | 72  | 48.6 | 52.0 | 15.45 |
|             | 19   | 6391   | 63 | 72  | 6   | 72  | 45.1 | 47.0 | 15.28                   | 19   | 6383   | 63 | 72  | 6   | 72  | 48.8 | 52.0 | 15.42 |
|             | 20   | 6362   | 63 | 72  | 7   | 72  | 44.9 | 46.0 | 15.35                   | 20   | 6382   | 63 | 72  | 6   | 72  | 48.5 | 51.0 | 15.50 |

|           | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD   |           | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD    |
|-----------|------|--------|----|-----|-----|-----|------|------|------|-----------|------|--------|----|-----|-----|-----|------|------|-------|
|           | 0    | 124659 | 42 | 46  | 2   | 46  | 30.6 | 33.0 | 9.73 |           | 0    | 126887 | 44 | 52  | 0   | 52  | 35.1 | 37.0 | 10.23 |
|           | 1    | 14137  | 42 | 46  | 3   | 46  | 29.9 | 32.0 | 9.98 |           | 1    | 14602  | 44 | 52  | 0   | 52  | 34.3 | 37.0 | 10.79 |
|           | 2    | 13907  | 42 | 46  | 2   | 46  | 30.5 | 33.0 | 9.82 |           | 2    | 14124  | 44 | 52  | 1   | 52  | 34.8 | 37.0 | 10.38 |
| 6         | 3    | 13837  | 42 | 46  | 2   | 46  | 30.3 | 32.0 | 9.75 | 4         | 3    | 14158  | 44 | 52  | 3   | 52  | 35.1 | 37.0 | 10.15 |
| ing       | 4    | 13801  | 42 | 46  | 3   | 46  | 30.7 | 33.0 | 9.73 | ing       | 4    | 14042  | 44 | 52  | 1   | 52  | 34.9 | 37.0 | 10.31 |
| Reading 3 | 5    | 13847  | 42 | 46  | 3   | 46  | 30.6 | 33.0 | 9.66 | Reading 4 | 5    | 14027  | 44 | 52  | 3   | 52  | 35.3 | 38.0 | 10.18 |
| Ž         | 6    | 13818  | 42 | 46  | 3   | 46  | 30.8 | 33.0 | 9.64 | Ž         | 6    | 14031  | 44 | 52  | 2   | 52  | 35.4 | 38.0 | 9.99  |
|           | 7    | 13747  | 42 | 46  | 3   | 46  | 30.9 | 33.0 | 9.58 |           | 7    | 14000  | 44 | 52  | 2   | 52  | 35.1 | 37.0 | 10.16 |
|           | 8    | 13835  | 42 | 46  | 2   | 46  | 30.8 | 33.0 | 9.65 |           | 8    | 13953  | 44 | 52  | 4   | 52  | 35.4 | 38.0 | 10.04 |
|           | 9    | 13730  | 42 | 46  | 2   | 46  | 30.6 | 33.0 | 9.73 |           | 9    | 13950  | 44 | 52  | 4   | 52  | 35.4 | 38.0 | 9.97  |
|           | 0    | 126639 | 44 | 52  | 1   | 52  | 35.0 | 37.0 | 9.59 |           | 0    | 126044 | 44 | 52  | 2   | 52  | 34.1 | 36.0 | 10.15 |
|           | 1    | 14636  | 44 | 52  | 2   | 52  | 34.5 | 37.0 | 9.86 |           | 1    | 7205   | 44 | 52  | 4   | 52  | 32.6 | 35.0 | 11.04 |
|           | 2    | 14144  | 44 | 52  | 3   | 52  | 34.8 | 37.0 | 9.66 |           | 2    | 6605   | 44 | 52  | 4   | 52  | 33.9 | 36.0 | 10.25 |
|           | 3    | 14005  | 44 | 52  | 4   | 52  | 35.0 | 37.0 | 9.67 |           | 3    | 6606   | 44 | 52  | 5   | 52  | 34.0 | 36.0 | 10.15 |
|           | 4    | 14009  | 44 | 52  | 4   | 52  | 35.1 | 37.0 | 9.62 |           | 4    | 6190   | 44 | 52  | 4   | 52  | 34.1 | 36.0 | 10.10 |
|           | 5    | 13953  | 44 | 52  | 4   | 52  | 35.1 | 37.0 | 9.49 |           | 5    | 6258   | 44 | 52  | 4   | 52  | 34.1 | 36.0 | 10.29 |
|           | 6    | 13924  | 44 | 52  | 2   | 52  | 35.3 | 37.0 | 9.47 |           | 6    | 6192   | 44 | 52  | 3   | 52  | 34.4 | 37.0 | 10.14 |
|           | 7    | 14107  | 44 | 52  | 4   | 52  | 35.0 | 37.0 | 9.37 |           | 7    | 6209   | 44 | 52  | 5   | 52  | 34.0 | 36.0 | 10.15 |
| w         | 8    | 13877  | 44 | 52  | 1   | 52  | 35.0 | 37.0 | 9.57 | 9         | 8    | 6182   | 44 | 52  | 2   | 52  | 34.3 | 36.0 | 10.04 |
|           | 9    | 13984  | 44 | 52  | 4   | 52  | 34.9 | 37.0 | 9.59 | ng        | 9    | 6222   | 44 | 52  | 3   | 52  | 34.1 | 36.0 | 10.03 |
| Reading   |      |        | 44 | 52  |     |     |      |      |      | Reading   | 10   | 6218   | 44 | 52  | 4   | 52  | 34.2 | 36.0 | 9.94  |
| Re        |      |        | 44 | 52  |     |     |      |      |      | Re        | 11   | 6183   | 44 | 52  | 3   | 52  | 34.3 | 36.0 | 9.93  |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 12   | 6202   | 44 | 52  | 3   | 52  | 34.1 | 36.0 | 9.97  |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 13   | 6209   | 44 | 52  | 2   | 52  | 34.2 | 37.0 | 10.13 |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 14   | 6235   | 44 | 52  | 2   | 52  | 34.1 | 36.0 | 10.28 |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 15   | 6218   | 44 | 52  | 4   | 52  | 34.4 | 37.0 | 9.97  |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 16   | 6235   | 44 | 52  | 5   | 52  | 34.2 | 36.0 | 10.14 |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 17   | 6252   | 44 | 52  | 2   | 52  | 34.3 | 36.0 | 10.09 |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 18   | 6211   | 44 | 52  | 4   | 52  | 34.1 | 36.0 | 10.07 |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 19   | 6224   | 44 | 52  | 5   | 52  | 34.2 | 36.0 | 10.01 |
|           |      |        | 44 | 52  |     |     |      |      |      |           | 20   | 6188   | 44 | 52  | 5   | 52  | 34.2 | 36.5 | 10.01 |

Appendix H: Mean Raw Scores by Form

|         | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD    | Form            | N      | L  | Pts | Min | Max | Mean | Med  | SD    |
|---------|------|--------|----|-----|-----|-----|------|------|-------|-----------------|--------|----|-----|-----|-----|------|------|-------|
|         | 0    | 130053 | 44 | 52  | 2   | 52  | 34.7 | 36.0 | 9.83  | 0               | 131218 | 44 | 52  | 0   | 52  | 34.6 | 37.0 | 9.65  |
|         | 1    | 7625   | 44 | 52  | 4   | 52  | 33.3 | 35.0 | 10.55 | 1               | 7942   | 44 | 52  | 1   | 52  | 33.2 | 35.0 | 10.39 |
|         | 2    | 7009   | 44 | 52  | 3   | 52  | 34.4 | 36.0 | 9.89  | 2               | 7246   | 44 | 52  | 5   | 52  | 34.5 | 36.0 | 9.64  |
|         | 3    | 6366   | 44 | 52  | 4   | 52  | 35.1 | 37.0 | 9.62  | 3               | 6406   | 44 | 52  | 4   | 52  | 34.7 | 37.0 | 9.71  |
|         | 4    | 6357   | 44 | 52  | 4   | 52  | 34.9 | 36.0 | 9.84  | 4               | 7267   | 44 | 52  | 3   | 52  | 34.5 | 36.0 | 9.67  |
|         | 5    | 6997   | 44 | 52  | 2   | 52  | 34.5 | 36.0 | 9.80  | 5               | 6411   | 44 | 52  | 4   | 52  | 34.8 | 37.0 | 9.55  |
|         | 6    | 6397   | 44 | 52  | 3   | 52  | 34.9 | 37.0 | 9.74  | 6               | 6367   | 44 | 52  | 2   | 52  | 34.9 | 37.0 | 9.57  |
|         | 7    | 6414   | 44 | 52  | 3   | 52  | 34.7 | 36.0 | 9.74  | 7               | 6393   | 44 | 52  | 3   | 52  | 34.9 | 37.0 | 9.50  |
| 7       | 8    | 6407   | 44 | 52  | 3   | 52  | 34.9 | 37.0 | 9.73  | <b>8</b>        | 6439   | 44 | 52  | 4   | 52  | 34.6 | 37.0 | 9.54  |
| ng,     | 9    | 6401   | 44 | 52  | 3   | 52  | 34.9 | 37.0 | 9.77  | <b>a</b> 9      | 6399   | 44 | 52  | 4   | 52  | 34.6 | 37.0 | 9.65  |
| Reading | 10   | 6394   | 44 | 52  | 4   | 52  | 34.8 | 36.0 | 9.84  | Reading 9 11 11 | 6412   | 44 | 52  | 5   | 52  | 34.8 | 37.0 | 9.62  |
| Res     | 11   | 6373   | 44 | 52  | 4   | 52  | 34.7 | 36.0 | 9.82  | <u>ا</u> ق      | 6421   | 44 | 52  | 4   | 52  | 34.5 | 37.0 | 9.63  |
|         | 12   | 6395   | 44 | 52  | 3   | 52  | 34.7 | 36.0 | 9.74  | 12              | 6405   | 44 | 52  | 5   | 52  | 34.6 | 37.0 | 9.57  |
|         | 13   | 6332   | 44 | 52  | 2   | 52  | 34.6 | 36.0 | 9.81  | 13              | 6396   | 44 | 52  | 0   | 51  | 34.6 | 36.0 | 9.70  |
|         | 14   | 6381   | 44 | 52  | 2   | 52  | 34.6 | 36.0 | 9.76  | 14              | 6407   | 44 | 52  | 4   | 52  | 34.7 | 37.0 | 9.63  |
|         | 15   | 6376   | 44 | 52  | 6   | 52  | 34.8 | 37.0 | 9.97  | 15              | 6394   | 44 | 52  | 4   | 52  | 34.8 | 37.0 | 9.57  |
|         | 16   | 6370   | 44 | 52  | 5   | 52  | 34.7 | 36.0 | 9.75  | 16              | 6380   | 44 | 52  | 4   | 52  | 34.6 | 37.0 | 9.68  |
|         | 17   | 6386   | 44 | 52  | 6   | 52  | 34.9 | 37.0 | 9.75  | 17              | 6375   | 44 | 52  | 6   | 52  | 34.8 | 37.0 | 9.55  |
|         | 18   | 6331   | 44 | 52  | 3   | 52  | 35.0 | 37.0 | 9.79  | 18              | 6410   | 44 | 52  | 2   | 52  | 34.6 | 37.0 | 9.62  |
|         | 19   | 6392   | 44 | 52  | 3   | 52  | 34.6 | 36.0 | 9.69  | 19              | 6374   | 44 | 52  | 4   | 52  | 34.9 | 37.0 | 9.43  |
|         | 20   | 6350   | 44 | 52  | 6   | 52  | 34.7 | 36.0 | 9.69  | 20              | 6374   | 44 | 52  | 5   | 52  | 34.9 | 37.0 | 9.48  |

Appendix H: Mean Raw Scores by Form

|         | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD    |     | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD    |
|---------|------|--------|----|-----|-----|-----|------|------|-------|-----|------|--------|----|-----|-----|-----|------|------|-------|
|         | 0    | 127105 | 63 | 68  | 0   | 68  | 47.4 | 50.0 | 13.01 |     | 0    | 130918 | 63 | 68  | 0   | 68  | 45.5 | 49.0 | 13.81 |
|         | 1    | 11285  | 63 | 68  | 1   | 68  | 46.5 | 49.0 | 13.36 |     | 1    | 12475  | 63 | 68  | 6   | 68  | 44.6 | 48.0 | 14.11 |
|         | 2    | 10692  | 63 | 68  | 8   | 68  | 47.4 | 50.0 | 12.92 |     | 2    | 11766  | 63 | 68  | 0   | 68  | 45.6 | 49.0 | 13.62 |
|         | 3    | 10511  | 63 | 68  | 3   | 68  | 47.5 | 50.0 | 13.01 |     | 3    | 10532  | 63 | 68  | 6   | 68  | 45.4 | 49.0 | 13.87 |
|         | 4    | 10492  | 63 | 68  | 6   | 68  | 47.2 | 50.0 | 13.11 |     | 4    | 11766  | 63 | 68  | 2   | 68  | 45.7 | 49.0 | 13.63 |
| 9<br>4  | 5    | 10469  | 63 | 68  | 8   | 68  | 47.8 | 51.0 | 12.88 | ě   | 5    | 10550  | 63 | 68  | 4   | 68  | 45.5 | 49.0 | 13.80 |
| enc     | 6    | 10712  | 63 | 68  | 5   | 68  | 47.4 | 50.0 | 12.97 | enc | 6    | 10518  | 63 | 68  | 5   | 68  | 45.6 | 49.0 | 13.81 |
| Science | 7    | 10492  | 63 | 68  | 4   | 68  | 47.7 | 50.0 | 12.70 | Sci | 7    | 10556  | 63 | 68  | 8   | 68  | 45.8 | 49.0 | 13.88 |
| •       | 8    | 10489  | 63 | 68  | 8   | 68  | 47.6 | 51.0 | 13.06 | • • | 8    | 10557  | 63 | 68  | 8   | 68  | 45.3 | 49.0 | 13.77 |
|         | 9    | 10468  | 63 | 68  | 0   | 68  | 47.4 | 50.0 | 13.03 |     | 9    | 10524  | 63 | 68  | 4   | 68  | 45.8 | 49.0 | 13.72 |
|         | 10   | 10502  | 63 | 68  | 8   | 68  | 47.3 | 50.0 | 13.06 |     | 10   | 10543  | 63 | 68  | 2   | 68  | 45.6 | 49.0 | 13.72 |
|         | 11   | 10485  | 63 | 68  | 7   | 68  | 47.5 | 50.0 | 13.01 |     | 11   | 10592  | 63 | 68  | 4   | 68  | 45.6 | 49.0 | 13.86 |
|         | 12   | 10508  | 63 | 68  | 6   | 68  | 47.6 | 50.0 | 13.00 |     | 12   | 10539  | 63 | 68  | 6   | 68  | 45.6 | 49.0 | 13.87 |

Appendix H: Mean Raw Scores by Form

|       | Form | N      | L  | Pts | Min | Max | Mean | Med  | SD    | Form          | N      | L  | Pts | Min | Max | Mean | Med  | SD    |
|-------|------|--------|----|-----|-----|-----|------|------|-------|---------------|--------|----|-----|-----|-----|------|------|-------|
|       | 0    | 124666 | 16 | 100 | 22  | 100 | 63.1 | 64.0 | 14.89 | 0             | 130302 | 16 | 100 | 22  | 100 | 67.2 | 72.0 | 13.89 |
| ing 5 | 1    | 124666 | 16 | 100 | 22  | 100 | 63.1 | 64.0 | 14.89 | ჯ<br>გე<br>ლე | 130302 | 16 | 100 | 22  | 100 | 67.2 | 72.0 | 13.89 |
| Writi |      |        |    |     |     |     |      |      |       | Writh         |        |    |     |     |     |      |      |       |

## Appendix I:

Demographic Characteristics of Students

#### **Demographic Characteristics of Students Taking the 2014 PSSA: Mathematics**

|   | 3              | Grade 3     |                           | 13             | Grade 4     |                |                | Grade 5     | 5              |  | Grade 6                   | i              | 3              | Grade 7       | 7              | 13             | Grade 8       | 3                                       |
|---|----------------|-------------|---------------------------|----------------|-------------|----------------|----------------|-------------|----------------|--|---------------------------|----------------|----------------|---------------|----------------|----------------|---------------|---|
| Demographic or  | PPT            | СВТ         | Total                     | PPT            | CBT         | Total          | PPT            | CBT         | Total          | PPT  | СВТ                       | Total          | PPT            | СВТ           | Total          | PPT            | CBT           | Total                                   |
| Educational Characteristic                                  | N/Pct          | N/Pct       | N/Pct                     | N/Pct          | N/Pct       | N/Pct          | N/Pct          | N/Pct       | N/Pct          | N/Pct  | N/Pct                     | N/Pct          | N/Pct          | N/Pct         | N/Pct          | N/Pct          | N/Pct         | N/Pct                                   |
| Gender  |                |             |                           |                |             |                |                |             |                |  |                           |                |                |               |                |                |               |   |
| Female  | 60,658<br>48.7 | 100<br>40.7 | 60,758<br>48.7            | 61,916<br>48.9 | 172<br>43.3 | 62,088<br>48.9 | 61,893<br>49.1 | 244<br>44.4 | 62,137<br>49.0 | 60,697<br>48.7   | 650<br>46.3               | 61,347<br>48.6 | 62,530<br>48.8 | 100           | 63,523<br>48.8 | 62,638<br>48.7 | 1,396<br>48.6 | 1000                                    |
| Male  | 63,716<br>51.2 | 146<br>59.3 | 1000                      | 64,523<br>51.0 | 225<br>56.7 | 64,748<br>51.0 | 64,170<br>50.9 | 306<br>55.6 | 22,424,270,00  | The state of the s | 10000                     | 64,677<br>51.3 | 65,524<br>51.1 | 1,059<br>51.6 | 100            | 65,694<br>51.1 | 1,476<br>51.4 |   |
| Race/Ethnicity  |                |             |                           |                |             |                |                |             |                |  |                           |                |                |               |                |                |               |   |
| American Indian/Alaskan<br>Native (not Hispanic)            | 206<br>0.2     | 1<br>0.4    | 1990                      | 176<br>0.1     | 1<br>0.3    | 5.70           | 174<br>0.1     | 0.2         | 175<br>0.1     | 191<br>0.2   | 0.0                       | 40.0           | 187<br>0.1     | 2<br>0.1      | 189<br>0.1     | 167<br>0.1     | 6<br>0.2      | 10000                                   |
| Asian (not Hispanic)  | 4,486<br>3.6   | 8<br>3.3    | 4,494<br>3.6              | 4,675<br>3.7   | 3<br>0.8    | 4,678<br>3,7   | 4,571<br>3.6   | 4<br>0.7    | 4,575<br>3.6   | 4,414<br>3.5   | 100                       | 40 3000        | 4,458<br>3.5   | 100           | 4,473<br>3.4   | 4,344<br>3.4   | 20<br>0.7     | 100000                                  |
| Black or African American (not<br>Hispanic)                 | 18,338<br>14.7 | 29<br>11.8  | Action of the Park of the | 18,356<br>14.5 | 36<br>9.1   | 0.23, 27.2     | 18,515<br>14.7 | 42<br>7.6   | 622 L. C.      | 1000000  | The state of the state of |                | 18,645<br>14.6 | 100           | 1000           | 18,908<br>14.7 | 306<br>10.7   | 100000000000000000000000000000000000000 |
| Hispanic (any race)   | 12,419<br>10.0 | 5<br>2.0    | 12,424<br>10.0            | 12,300<br>9.7  | 31<br>7.8   |                | 11,763<br>9.3  | 32<br>5.8   |                | 11,546<br>9.3  |                           |                | 11,728<br>9.2  | 173<br>8.4    | 11,901<br>9.1  | 11,079<br>8.6  | 7000          | - 10                                    |
| Multi-Racial (not Hispanic)                                 | 4,336<br>3.5   | 4<br>1.6    | 4,340<br>3.5              | 3,850<br>3.0   | 11<br>2.8   | 77.45.70       | 3,286<br>2.6   | 100         | 2467.2         | 2,694<br>2.2   | 1 2 7 7                   | 2000           | 2,435<br>1.9   | 60<br>2.9     | 2,495<br>1.9   | 2,387<br>1.9   | 63<br>2.2     | - F 13-00                               |
| White (not Hispanic)  | 84,491<br>67.9 | 197<br>80.1 | 84,688<br>67.9            | 86,984<br>68.8 | 312<br>78.6 | 7.7            | 87,658<br>69.5 | 448<br>81.5 |                |  | 1,039<br>74.0             |                | 90,484<br>70.6 | 1,508<br>73.5 | and the second | 91,317<br>71.1 | 2,285<br>79.6 |   |
| Native Hawaiian or Other<br>Pacific Islander (not Hispanic) | 75<br>0.1      | 2<br>0.8    | 77<br>0.1                 | 80<br>0.1      | 3<br>0.8    | 83<br>0.1      | 78<br>0.1      | 4<br>0.7    | 82<br>0.1      | 78<br>0.1  | 0.0                       | 78<br>0.1      | 94<br>0.1      | 2<br>0.1      | 96<br>0.1      | 115<br>0.1     | 3<br>0.1      | 118<br>0.1                              |

#### Demographic Characteristics of Students Taking the 2014 PSSA: Mathematics (continued)

| and the latest and th |                | Grade 3     |                |                         | Grade 4     |                |                   | Grade 5     | i.             |                | Grade 6     | ;                                       |                | Grade 7       |   |  | Grade 8       | \$             |
|--|----------------|-------------|----------------|-------------------------|-------------|----------------|-------------------|-------------|----------------|----------------|-------------|---|----------------|---------------|---|--|---------------|----------------|
| Demographic or   | PPT            | CBT         | Total          | PPT                     | CBT         | Total          | PPT               | CBT         | Total          | PPT            | CBT         | Total                                   | PPT            | CBT           | Total                                   | PPT  | CBT           | Total          |
| Educational Characteristic   | N/Pct          | N/Pct       | N/Pct          | N/Pct                   | N/Pct       | N/Pct          | N/Pct             | N/Pct       | N/Pct          | N/Pct          | N/Pct       | N/Pct                                   | N/Pct          | N/Pct         | N/Pct                                   | N/Pct  | N/Pct         | N/Pct          |
| Educational Category and Other Demographic Groups  |                |             |                |                         |             |                |                   |             |                |                |             |   |                |               |   |  |               |                |
| IEP (not gifted)   | 19,048<br>15.3 | 114<br>46.3 | 19,162<br>15.4 | The same of the same of | 146<br>36.8 | 20,361<br>16.0 | 19,974<br>15.8    | 183<br>33.3 | 20,157<br>15.9 | 19,249<br>15.4 | 368<br>26.2 | 19,617<br>15.6                          | 19,503<br>15.2 | 491<br>23.9   | 19,994<br>15.4                          | 100 mg at 100  | 657<br>22.9   | 20,169<br>15.4 |
| Student exited IEP in last 2 years   | 2,641<br>2.1   | 1<br>0.4    | 2,642<br>2.1   | 24 30 64                | 7<br>1.8    | 3,140<br>2.5   | 1000              | 8<br>1.5    | 3,560<br>2.8   | the second     | 27<br>1.9   | 200                                     | 3,189<br>2.5   | 74<br>3.6     |   |  | 80<br>2.8     | C-3.8 - 9-0-1  |
| Title I  | 56,158<br>45.1 | 77<br>31.3  | 56,235<br>45.1 | 54,434<br>43.0          | 158<br>39.8 | 54,592<br>43.0 | Land to the land  | 195<br>35.5 | 50,711<br>40.0 | 40,758<br>32.7 | 630<br>44.9 | 100000000000000000000000000000000000000 | 32,724<br>25.5 | 210<br>10.2   | 32,934<br>25.3                          | 32,190<br>25.1   | 245<br>8.5    | 32,435<br>24.7 |
| Title III served   | 3,817<br>3.1   | 1<br>0.4    | 3,818<br>3.1   |                         | 2<br>0.5    | 2,946<br>2.3   | 7                 | 5<br>0.9    | 2,558<br>2.0   |                | 15<br>1.1   | 2.4.3.5                                 | 2 C Y          | 12<br>0.6     |   | 0.00   | 10<br>0.3     | 1.00           |
| Title III not served   | 330<br>0.3     | 2<br>0.8    | 332<br>0.3     | 3007                    | 1<br>0.3    | 247<br>0.2     | 2.347             | 5<br>0.9    | 253<br>0.2     | 200            | 1000        | 1000                                    |                | 21<br>1.0     | 1000                                    | 0.00   | 18<br>0.6     | 10.00          |
| Migrant student  | 48<br>0.0      | 0.0         | 48<br>0.0      | 10 July 10 H            | 0.0         | 51<br>0.0      | 64<br>0.1         | 0.0         | 64<br>0.1      | 58<br>0.0      |             |   | 16.79          | 0.0           | 65<br>0.0                               | Pel  | 0.0           | 61<br>0.0      |
| ELL (enrolled after 5/3/13)  | 0.0            | 100         |                |                         | 7           | 0.0            | 0.0               | - 3         | 0.0            |                |             |   |                | 0.0           |   |  |               | 20             |
| ELL (enrolled on or before 5/3/13)   | 4,149<br>3.3   | 3<br>1.2    | 4,152<br>3.3   | and the second          | 3<br>0.8    | 3,165<br>2.5   | 2,788<br>2.2      | 10<br>1.8   | 2,798<br>2.2   | 2,719<br>2.2   | 29<br>2.1   |   | 2,834<br>2.2   | 33<br>1.6     | 2,867<br>2.2                            | 2,698<br>2.1   | 28<br>1.0     |                |
| Exited ESL/bilingual program and in first year of monitoring   | 974<br>0.8     | 1<br>0.4    | 975<br>0.8     | 200                     | 2<br>0.5    | 1,428<br>1.1   | 1,050<br>0.8      | 1<br>0.2    | 1,051<br>0.8   | 599<br>0.5     | 200         | 602<br>0.5                              | 1000           | 1<br>0.0      | 433<br>0.3                              | 100  | 2<br>0.1      | 425<br>0.3     |
| Exited ESL/bilingual program and in 2nd year of monitoring   | 263<br>0.2     | 0.0         | 10000          | 2000                    | 0.0         | 674<br>0.5     | 1,016<br>0.8      | 0.0         | 1,016<br>0.8   | 1000           | 371         |   | 200            | 12<br>0.6     |   | 13.5   | 10<br>0.3     | 600.0          |
| Former ELL no longer<br>monitored  | 197<br>0.2     | 0.0         |                | C. V.A.                 | 0.0         | 535<br>0.4     | 1000              | 0.0         | 1,263<br>1.0   | 2,112<br>1.7   | 4<br>0.3    | 2,116<br>1.7                            | 2,659<br>2.1   | 16<br>0.8     | 100000000000000000000000000000000000000 | 2,722<br>2.1   | 14<br>0.5     | 10.60.30.3     |
| Economically disadvantaged   | 59,349<br>47.7 | 108<br>43.9 |                | 100,000,000             | 223<br>56.2 | 59,250<br>46.7 | CONTRACTOR OF THE | 284<br>51.6 | 57,720<br>45.6 | 56,185<br>45.0 | 690<br>49.1 | 56,875<br>45.1                          | 56,010<br>43.7 | 1,024<br>49.9 | 57,034<br>43.8                          | The state of the s | 1,326<br>46.2 | 55,700<br>42.4 |
| Historically Underperforming<br>Subgroup   | 68,013<br>54.6 | 153<br>62.2 | 68,166<br>54.7 | and the second second   | 269<br>67.8 | 68,199<br>53.7 | 66,140<br>52.4    | 351<br>63.8 | 66,491<br>52.5 | 64,262<br>51.5 | 839<br>59.8 | -24-20-00                               |                | 1,211<br>59.0 | 65,529<br>50.3                          | - Table 1997   | 1,601<br>55.7 | 64,366<br>49.0 |

#### Demographic Characteristics of Students Taking the 2014 PSSA: Mathematics (continued)

|   | 13             | Grade 3  |              | - 0            | Grade 4        |              |                | Grade 5           |           |   | Grade 6   | i         | 1.0            | Grade 7     |            | 1.0            | Grade 8   | 3                                       |
|---|----------------|----------|--------------|----------------|----------------|--------------|----------------|-------------------|-----------|---|-----------|-----------|----------------|-------------|------------|----------------|-----------|---|
| Demographic or<br>Educational Characteristic                            | PPT            | CBT      | Total        | PPT            | CBT            | Total        | PPT            | CBT               | Total     | PPT                                     | CBT       | Total     | PPT            | CBT         | Total      | PPT            | CBT       | Total                                   |
| Educational Characteristic  | N/Pct          | N/Pct    | N/Pct        | N/Pct          | N/Pct          | N/Pct        | N/Pct          | N/Pct             | N/Pct     | N/Pct                                   | N/Pct     | N/Pct     | N/Pct          | N/Pct       | N/Pct      | N/Pct          | N/Pct     | N/Pct                                   |
| Enrollment  |                |          |              |                |                |              |                |                   |           |   |           |           |                |             |            |                |           |   |
| Enrollment in school of residence after 10/1/13                         | 3,373<br>2.7   | 4<br>1.6 | 3,377<br>2.7 | 3,309<br>2.6   | - 25           | 3,312<br>2.6 | 2,955<br>2.3   | 753               |           | 100000000000000000000000000000000000000 |           | 3000      | 3,048<br>2.4   | 58<br>2.8   | 200        | - 1            | 93<br>3.2 | 0.00                                    |
| Enrollment in district of residence after 10/1/13                       | 1,728<br>1.4   | 10.77    | 1,729<br>1.4 | 1,659<br>1.3   | and the second | 34374        | 100            | the second of the | -/        | 1.300                                   |           | 30.7      | 1,811<br>1.4   | 46<br>2.2   | 36,0,30    | 1,931<br>1.5   | 1.00      | 100000000000000000000000000000000000000 |
| Enrollment as PA resident after 10/1/13                                 | 0.0            | 1        | 0.0          | 0.0            |                | 0.0          | 0.0            | 0.0               | 0.0       | 0.0                                     | 0.0       | 0.0       | 0.0            | 0.0         | 0.0        | 0.0            | 0.0       | 0.0                                     |
| Enrollment in school of residence after 10/1/12 but on/before 10/1/13   | 27,734<br>22.3 | 1000     | 1000         | 28,026<br>22.2 | 51<br>12.8     | 7000         | 27,949<br>22.2 |                   |           | 1000                                    | 200       |           | 29,050<br>22.7 | 542<br>26.4 | 1-000      | 22,985<br>17.9 | A 1       |   |
| Enrollment in district of residence after 10/1/12 but on/before 10/1/13 | 10,916<br>8.8  | 4        | - Care 3.0   |                | 39<br>9.8      | 470 W 4477   | 10,763<br>8.5  | 4 4 4             |           | 441-7-6-0                               | 3 (3.595) | 22.24     | 11,707<br>9.1  | 212<br>10.3 | 1232401211 | 9,673<br>7.5   | - F. C.   |   |
| Education in Non-<br>Traditional Settings                               |                |          |              |                |                |              |                |                   |           |   |           |           |                |             |            |                |           |   |
| Court/agency placed   | 28<br>0.0      | 100      | 29<br>0.0    | 41<br>0.0      | 3<br>0.8       | 44<br>0.0    | 54<br>0.0      | 100 1 3           | 55<br>0.0 |   | 100       | 95<br>0.1 | 145<br>0.1     | 20<br>1.0   |            | LO-GO          | 20<br>0.7 | 1000                                    |
| Students with scores used in state summaries                            | 124,456        | 246      | 124,702      | 126,514        | 397            | 126,911      | 126,143        | 550               | 126,693   | 124,724                                 | 1,404     | 126,128   | 128,137        | 2,052       | 130,189    | 128,491        | 2,872     | 131,363                                 |

#### Demographic Characteristics of Students Taking the 2014 PSSA: Reading

| E. C.                   | 9              | Grade 3     | 3                             | 3                      | Grade 4     | ļ.                  | 1 3            | Grade 5               |  |                | Grade 6  |  |                | Grade 7       |                 | - 19           | Grade 8       | 3              |
|---|----------------|-------------|-------------------------------|------------------------|-------------|---------------------|----------------|-----------------------|--|----------------|--|--|----------------|---------------|-----------------|----------------|---------------|----------------|
| Demographic or  | PPT            | CBT         | Total                         | PPT                    | CBT         | Total               | PPT            | CBT                   | Total  | PPT            | CBT  | Total  | PPT            | CBT           | Total           | PPT            | CBT           | Total          |
| Educational Characteristic                                  | N/Pct          | N/Pct       | N/Pct                         | N/Pct                  | N/Pct       | N/Pct               | N/Pct          | N/Pct                 | N/Pct  | N/Pct          | N/Pct  | N/Pct  | N/Pct          | N/Pct         | N/Pct           | N/Pct          | N/Pct         | N/Pct          |
| Gender  |                |             |                               |                        |             |                     |                |                       |  |                |  |  |                |               |                 |                |               |                |
| Female  | 60,643<br>48.7 | 100<br>40.7 | 1000                          | 61,923<br>49.0         | 172<br>43.4 | 62,095<br>48.9      | 61,868<br>49.1 | 245<br>44.5           | A 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  | 60,675<br>48.7 | 650<br>46.4  | 61,325<br>48.7   | 62,477<br>48.8 | 992<br>48.4   | 63,469<br>48.8  | 62,561<br>48.7 | 1,397<br>48.7 | 63,958<br>48.7 |
| Male  | 63,687<br>51.2 | 146<br>59.3 | the state of the state of     | 64,493<br>51.0         | 2.00        | 64,717<br>51.0      | 64,140<br>50.9 | and the second second | Street, and the street, and th | 63,862<br>51.2 | 752<br>53.6  | 64,614<br>51.3   | 65,443<br>51.1 | 1,057<br>51.6 | 66,500<br>51.1  | 65,628<br>51.1 | 1,473<br>51.3 | 67,101<br>51.1 |
| Race/Ethnicity  |                |             |                               |                        |             |                     |                |                       |  |                |  |  |                |               |                 |                |               |                |
| American Indian/Alaskan<br>Native (not Hispanic)            | 206<br>0.2     | 1<br>0.4    | 207<br>0.2                    |                        | 1<br>0.3    | 177<br>0.1          |                | 2<br>0.4              | 176<br>0,1   |                | 0.0  | 191<br>0.2   | 2000           | 2<br>0.1      | 189<br>0.1      | 166<br>0.1     | 6<br>0.2      |                |
| Asian (not Hispanic)  | 4,480<br>3.6   | 8<br>3.3    | 4,488<br>3.6                  | The state of           | 3<br>0.8    | 4,673<br>3.7        | 4,570<br>3.6   | 4<br>0.7              | 4,574<br>3.6   |                | 1,000  | 4,424<br>3.5   | 4,457<br>3.5   | 15<br>0.7     | 4,472<br>3.4    | 4,339<br>3.4   | (40.4         | 5,600          |
| Black or African American (not<br>Hispanic)                 | 18,317<br>14.7 | 29<br>11.8  | A STATE OF THE REAL PROPERTY. | Contract to the second | 35<br>8.8   | C. 100 C. 100 C. V. | 18,501<br>14.7 | 42<br>7.6             | 10000 10000  | 18,524<br>14.9 | 100000000000000000000000000000000000000  | 100 miles (100 miles ( | 18,615<br>14.5 | 290<br>14.2   | a manufacture A | 18,843<br>14.7 | 307<br>10.7   | 19,150<br>14.6 |
| Hispanic (any race)   | 12,402<br>10.0 | 5<br>2.0    | 12,407<br>10.0                | 12,289<br>9.7          | 31<br>7.8   | 12,320<br>9.7       | 11,752<br>9.3  | 32<br>5.8             | /  | 11,528<br>9.2  | And the state of t | 7 100  | 11,704<br>9.1  | 173<br>8.4    | A CONTRACTOR    | 11,054<br>8.6  | 200           |                |
| Multi-Racial (not Hispanic)                                 | 4,334<br>3.5   | 4<br>1.6    | 4,338<br>3.5                  | 100                    | 11<br>2.8   | 3,857<br>3.0        | 3,284<br>2.6   | 19<br>3.4             | 444  | 2,691<br>2.2   | 43<br>3.1  | 2,734<br>2.2   | 2,426<br>1.9   | 60<br>2.9     | F-10 (45)       | 2,378<br>1.9   | 1000          | EV. 7.13       |
| White (not Hispanic)  | 84,492<br>67.9 | 197<br>80.1 | 84,689<br>67.9                | 1000                   | 312<br>78.8 | 87,299<br>68.8      | 87,631<br>69.5 | 448<br>81.3           |  | 87,039<br>69.8 | The second second  | 88,076<br>69.9   | 90,414<br>70.6 | 1,507<br>73.5 | 91,921<br>70.7  | 91,279<br>71.1 | 2,283<br>79.5 | 1              |
| Native Hawaiian or Other<br>Pacific Islander (not Hispanic) | 75<br>0.1      | 2<br>0.8    | 77<br>0.1                     | 2,700                  | 3<br>0.8    | 83<br>0.1           | 40.00          | 4<br>0.7              | 82<br>0.1  | 100            | 0.0  | 78<br>0.1  | 94<br>0.1      | 2<br>0.1      | 96<br>0.1       | 115<br>0.1     | 3<br>0.1      | 118<br>0.1     |

#### Demographic Characteristics of Students Taking the 2014 PSSA: Reading (continued)

| ALL CONTRACTOR OF THE PARTY OF | Grade 3 Grade 4 |             |   | Grade 5        |             |                | 1              | Grade 6     |                | Grade 7        |             |                | Grade 8        |               |                |                     |               |  |
|---|-----------------|-------------|---|----------------|-------------|----------------|----------------|-------------|----------------|----------------|-------------|----------------|----------------|---------------|----------------|---------------------|---------------|--|
| Demographic or  | PPT             | CBT         | Total                                   | PPT            | CBT         | Total          | PPT            | CBT         | Total          | PPT            | CBT         | Total          | PPT            | CBT           | Total          | PPT                 | CBT           | Total  |
| Educational Characteristic  | N/Pct           | N/Pct       | N/Pct                                   | N/Pct          | N/Pct       | N/Pct          | N/Pct          | N/Pct       | N/Pct          | N/Pct          | N/Pct       | N/Pct          | N/Pct          | N/Pct         | N/Pct          | N/Pct               | N/Pct         | N/Pct  |
| Educational Category and<br>Other Demographic Groups  |                 |             |   |                |             |                |                |             |                |                |             |                |                |               |                |                     |               |  |
| IEP (not gifted)  | 19,008<br>15.3  | 114<br>46.3 | 19,122<br>15.3                          | 20,183<br>16.0 | 145<br>36.6 | 20,328<br>16.0 | 19,967<br>15.8 | 183<br>33.2 | 20,150<br>15.9 | 19,215<br>15.4 | 366<br>26.1 | 19,581<br>15.5 | 19,464<br>15.2 | 490<br>23.9   | 19,954<br>15.3 | 19,467<br>15.2      | 657<br>22.9   | 20,124<br>15.3   |
| Student exited IEP in last 2 years  | 2,646<br>2.1    | 1<br>0.4    | 2,647<br>2.1                            | 3,135<br>2.5   | 7<br>1.8    | 3,142<br>2.5   | 3,550<br>2.8   | 8<br>1.5    | 3,558<br>2.8   |                | 27<br>1.9   |                | 1 PHE 1        | 74<br>3.6     | 3,261<br>2.5   |                     | 80<br>2.8     | 6.40-0-4   |
| Title I   | 56,131<br>45.1  | 77<br>31.3  | 56,208<br>45.1                          | 54,422<br>43.0 | 158<br>39.9 | 54,580<br>43.0 | 50,467<br>40.0 | 196<br>35.6 | 50,663<br>40.0 | 40,731<br>32.7 | 630<br>44.9 | 100 - 600 - 5  | 32,679<br>25.5 | 208<br>10.2   | 32,887<br>25.3 | 32,089<br>25.0      | 245<br>8.5    | 100,000,000  |
| Title III served  | 3,801<br>3.1    | 0.4         | 3,802<br>3.0                            | 2,927<br>2.3   | 0.5         | 2,929<br>2.3   | 2,535<br>2.0   | 5<br>0.9    | 2,540<br>2.0   | 2,489<br>2.0   | 15<br>1.1   | 2,504<br>2.0   | 2,571<br>2.0   | 12<br>0.6     | 2,583<br>2.0   | 2,449<br>1.9        | 10<br>0.3     | 100  |
| Title III not served  | 328<br>0.3      |             | 330<br>0.3                              | 100000         | 1<br>0.3    | 247<br>0.2     | 247<br>0.2     | 5<br>0.9    | 77.7           |                | 14<br>1.0   |                | 252<br>0.2     | 21<br>1.0     | 1              | 1 2 2 2 2 2 2       | 18<br>0.6     | 7-2-1-4  |
| Migrant student   | 48<br>0.0       | 2.74        | 1                                       | 1.0            | 0.0         | 49<br>0.0      | 64<br>0.1      | 0.0         | 64<br>0.1      | 58<br>0.0      | 0.0         | 100            | 66<br>0.1      | 0.0           | 100            | 60<br>0.0           | 0.0           | 2.20.2   |
| ELL (enrolled after 5/3/13)   | 0.0             | 0.0         | 0.0                                     | 0.0            | 0.0         | 0.0            | 0.0            | 0.0         | 0.0            | 0.0            | 0.0         | 0.0            | 0.0            | 0.0           | 0.0            | 0.0                 | 0.0           | 3  |
| ELL (enrolled on or before 5/3/13)  | 4,132<br>3.3    | 3<br>1.2    | 4,135<br>3.3                            | 3,145<br>2.5   | 3<br>0.8    | 3,148<br>2.5   | 2,770<br>2.2   | 10<br>1.8   | 2,780<br>2.2   | 2,707<br>2.2   | 29<br>2.1   | 1000           | 2,817<br>2.2   | 33<br>1.6     | 0.00           | mark 100 mg at 1 mg | 28<br>1.0     | 100000000000000000000000000000000000000  |
| Exited ESL/bilingual program and in first year of monitoring  | 973<br>0.8      | 1<br>0.4    | 974<br>0.8                              | 1,427<br>1.1   | 0.5         | 1,429<br>1.1   | 1,049<br>0.8   | 0.2         | 1,050<br>0.8   | 599<br>0.5     | 3<br>0.2    | 602<br>0.5     | 430<br>0.3     | 0.0           | 431<br>0.3     | 422<br>0.3          | 2<br>0.1      | - A-4-   |
| Exited ESL/bilingual program and in 2nd year of monitoring  | 263<br>0.2      | 0.0         |   | 100.00         | 0.0         | 676<br>0.5     | 1,018<br>0.8   | 0.0         | 1,018<br>0.8   | 1200           |             |                | 660<br>0.5     | 12<br>0.6     |                | 444<br>0.3          | 10<br>0.3     | and the same of th |
| Former ELL no longer<br>monitored   | 197<br>0.2      | 0.0         | 20.0                                    | 535<br>0.4     | 0.0         | 535<br>0.4     | 1,264<br>1.0   | 0.0         | 1,264<br>1.0   | 2,111<br>1.7   | 4<br>0.3    | 2,115<br>1.7   | 2,662<br>2.1   | 15<br>0.7     | 2,677<br>2.1   | 2,718<br>2.1        | 14<br>0.5     | 2.7  |
| Economically disadvantaged  | 59,308<br>47.7  | 108<br>43.9 | 100000000000000000000000000000000000000 | 59,007<br>46.6 | 222<br>56.1 | 59,229<br>46.7 | 57,397<br>45.5 | 285<br>51.7 | 57,682<br>45.5 | 56,136<br>45.0 | 689<br>49.1 | 56,825<br>45.1 | 55,917<br>43.7 | 1,025<br>50.0 | 56,942<br>43.8 | 54,267<br>42.3      | 1,325<br>46.2 | 55,592<br>42.4   |
| Historically Underperforming<br>Subgroup  | 67,965<br>54.6  | 153<br>62.2 | 68,118<br>54.6                          | V- V-5         | 268<br>67.7 | 68,168<br>53.7 | 66,093<br>52.4 | 352<br>63.9 | 66,445<br>52.5 | 1000           | 838<br>59.8 | 36.86.35       | 64,211<br>50.2 | 1,210<br>59.1 | 65,421<br>50.3 | 62,644<br>48.8      | 1,600<br>55.7 | TB(9400 146)   |

#### Demographic Characteristics of Students Taking the 2014 PSSA: Reading (continued)

|   | Grade 3 Grade 4 |            |              | Grade 5        |            |              |                | Grade 6     |           | Grade 7  |           |   | Grade 8        |             |               |                |   |   |
|---|-----------------|------------|--------------|----------------|------------|--------------|----------------|-------------|-----------|--|-----------|---|----------------|-------------|---------------|----------------|---|---|
| Demographic or  | PPT             | CBT        | Total        | PPT            | СВТ        | Total        | PPT            | CBT         | Total     | PPT  | СВТ       | Total                                   | PPT            | СВТ         | Total         | PPT            | СВТ                                     | Total                                   |
| Educational Characteristic  | N/Pct           | N/Pct      | N/Pct        | N/Pct          | N/Pct      | N/Pct        | N/Pct          | N/Pct       | N/Pct     | N/Pct  | N/Pct     | N/Pct                                   | N/Pct          | N/Pct       | N/Pct         | N/Pct          | N/Pct                                   | N/Pct                                   |
| Enrollment  |                 |            |              |                |            |              |                |             |           |  |           |   |                |             |               |                |   |   |
| Enrollment in school of residence after 10/1/13                         | 3,360<br>2.7    | 4<br>1.6   | 3,364<br>2.7 | 3,297<br>2.6   | 1000       | 3,300<br>2.6 | 2,949<br>2.3   | 10<br>1.8   |           | 100000000000000000000000000000000000000        | 30<br>2.1 |   | 3,032<br>2.4   | 57<br>2.8   | 4.747.744     | 3,103<br>2.4   | 94<br>3.3                               | 10 mg (10 mg)                           |
| Enrollment in district of residence after 10/1/13                       | 1,727<br>1.4    | 1<br>0.4   | 1,728<br>1.4 | 2.00           | 100        | -/           |                | 6<br>1.1    | -7        | 1000   | 4.5-1     | 100000000000000000000000000000000000000 | 1,808<br>1.4   | 46<br>2.2   |               | 1,923<br>1.5   | 25.5                                    | 1000                                    |
| Enrollment as PA resident after 10/1/13                                 | 0.0             | 1.7        | 0.0          | 0.0            |            | 0.0          | 0.0            | 0.0         | 0.0       | 0.0  | 0.0       | 0.0                                     | 0.0            | 0.0         | 0.0           | 0.0            | 0.0                                     | 0.0                                     |
| Enrollment in school of residence after 10/1/12 but on/before 10/1/13   | 27,714<br>22.3  | 34<br>13.8 | 200          | 28,020<br>22.2 | 50<br>12.6 | 1000         | 27,912<br>22.1 | 107<br>19.4 | 1000      | F-12-6-10-10-10-10-10-10-10-10-10-10-10-10-10- | 10.00     | 2 2 2 2                                 | 28,996<br>22.7 | 540<br>26.4 | 2.20          | 22,913<br>17.9 | 300000000000000000000000000000000000000 | 100000000000000000000000000000000000000 |
| Enrollment in district of residence after 10/1/12 but on/before 10/1/13 | 10,906<br>8.8   |            | 50.45CV      | 1,200,000      | 39<br>9.8  | 2-1          | 10,750<br>8.5  | 96<br>17.4  | 1.25.42   | N. E. W. A. C.                                 | 1.4.34    | 1.5.24.7.40                             | 1244640        | 211<br>10.3 | 11,892<br>9.1 | 9,652<br>7.5   | 1000                                    | 707.50                                  |
| Education in Non-<br>Traditional Settings                               |                 |            |              |                |            |              |                |             |           |  |           |   |                |             |               |                |   |   |
| Court/agency placed   | 29<br>0.0       | No. 241    | 30<br>0.0    | 38<br>0.0      |            | 41<br>0.0    | 56<br>0.0      | 0.2         | 57<br>0.0 | 1000   | 6<br>0.4  | 91<br>0.1                               | 144<br>0.1     | 20<br>1.0   | 164<br>0.1    | 307<br>0.2     | 19<br>0.7                               | 100                                     |
| Students with scores used in state summaries                            | 124,413         | 246        | 124,659      | 126,491        | 396        | 126,887      | 126,088        | 551         | 126,639   | 124,642  | 1,402     | 126,044                                 | 128,004        | 2,049       | 130,053       | 128,348        | 2,870                                   | 131,218                                 |

#### Demographic Characteristics of Students Taking the 2014 PSSA: Science

| and the same of th |                | Grade 4           | Grade 8        |                |               |                   |  |
|--|----------------|-------------------|----------------|----------------|---------------|-------------------|--|
| Demographic or   | PPT            | CBT               | Total          | PPT            | CBT           | Total             |  |
| Educational Characteristic   | N/Pct          | N/Pct             | N/Pct          | N/Pct          | N/Pct         | N/Pct             |  |
| Gender   |                |                   |                |                |               |                   |  |
| Female   | 61,728<br>48.9 | 405<br>47.1       | 62,133<br>48.9 | 61,763<br>48.7 | 2,020<br>49.5 | The second second |  |
| Male   | 64,425<br>51.0 | The second second | Acces          |                | 2,058<br>50.5 |                   |  |
| Race/Ethnicity   |                |                   |                |                |               |                   |  |
| American Indian/Alaskan<br>Native (not Hispanic)   | 176<br>0.1     | 2<br>0.2          | 178<br>0.1     | 166<br>0.1     | 7<br>0.2      | 173<br>0.1        |  |
| Asian (not Hispanic)   | 4,744<br>3.8   | 100               | 4,751<br>3.7   | 4,381<br>3.5   | 22<br>0.5     | 4,403<br>3.4      |  |
| Black or African American (not<br>Hispanic)  | 18,320<br>14.5 | 39<br>4.5         | 18,359<br>14.4 | 18,677<br>14.7 | 295<br>7.2    | 18,972<br>14.5    |  |
| Hispanic (any race)  | 12,445<br>9.9  | The Total         | 12,483<br>9.8  | 11,126<br>8.8  | 195<br>4.8    | 11,321<br>8.6     |  |
| Multi-Racial (not Hispanic)  | 3,836<br>3.0   | 17                | 3,854<br>3.0   | 2,350<br>1.9   | 2.5           | - 10 St 10        |  |
| White (not Hispanic)   | 86,528<br>68.5 | 752<br>87.5       | 87,280<br>68.7 | 89,844<br>70.8 | 3,481<br>85.4 | 93,325<br>71.3    |  |
| Native Hawaiian or Other<br>Pacific Islander (not Hispanic)  | 82<br>0.1      | 3<br>0.3          | 85<br>0.1      | 116<br>0.1     | 4<br>0.1      | 120<br>0.1        |  |

#### **Demographic Characteristics of Students Taking the 2014 PSSA: Science (continued)**

|  | - 49       | Grade 4  |            | Grade 8    |           |            |  |  |
|--|------------|----------|------------|------------|-----------|------------|--|--|
| Demographic or   | PPT        | CBT      | Total      | PPT        | CBT       | Total      |  |  |
| Educational Characteristic                                   | N/Pct      | N/Pct    | N/Pct      | N/Pct      | N/Pct     | N/Pct      |  |  |
| Educational Category and<br>Other Demographic Groups         |            |          |            |            |           |            |  |  |
| IEP (not gifted)   | 20,174     | 172      | 20,346     | 19,225     | 770       | 19,995     |  |  |
|  | 16.0       | 20.0     | 16.0       | 15.2       | 18.9      | 15.3       |  |  |
| Student exited IEP in last 2                                 | 3,114      | 25       | 3,139      | 2,641      | 108       | 2,749      |  |  |
| years  | 2.5        | 2.9      | 2.5        | 2.1        | 2.6       | 2.1        |  |  |
| Title I  | 54,091     | 550      | 54,641     | 31,959     | 220       | 32,179     |  |  |
|  | 42.8       | 64.0     | 43.0       | 25.2       | 5.4       | 24.6       |  |  |
| Title III served   | 3,241      | 2        | 3,243      | 2,678      | 11        | 2,689      |  |  |
|  | 2.6        | 0.2      | 2.6        | 2.1        | 0.3       | 2.1        |  |  |
| Title III not served   | 283        | 1        | 284        | 257        | 20        | 277        |  |  |
|  | 0.2        | 0.1      | 0.2        | 0.2        | 0.5       | 0.2        |  |  |
| Migrant student  | 52<br>0.0  | 0<br>0.0 | 52<br>0.0  | 59<br>0.0  | 0.0       | 59<br>0.0  |  |  |
| ELL (enrolled after 5/3/13)                                  | 350<br>0.3 | 0.0      | 350<br>0.3 | 260<br>0.2 | 1<br>0.0  | 261<br>0.2 |  |  |
| ELL (enrolled on or before 5/3/13)                           | 3,149      | 3        | 3,152      | 2,679      | 30        | 2,709      |  |  |
|  | 2.5        | 0.3      | 2.5        | 2.1        | 0.7       | 2.1        |  |  |
| Exited ESL/bilingual program and in first year of monitoring | 1,419      | 6        | 1,425      | 420        | 3         | 423        |  |  |
|  | 1.1        | 0.7      | 1.1        | 0.3        | 0.1       | 0.3        |  |  |
| Exited ESL/bilingual program and in 2nd year of monitoring   | 675<br>0.5 | 0.0      | 675<br>0.5 | 435<br>0.3 | 12<br>0.3 | 447<br>0.3 |  |  |
| Former ELL no longer   | 537        | 0.0      | 537        | 2,719      | 14        | 2,733      |  |  |
| monitored  | 0.4        |          | 0.4        | 2.1        | 0.3       | 2.1        |  |  |
| Economically disadvantaged                                   | 58,878     | 469      | 59,347     | 53,609     | 1,747     | 55,356     |  |  |
|  | 46.6       | 54.6     | 46.7       | 42.3       | 42.8      | 42.3       |  |  |
| Historically Underperforming                                 | 67,839     | 528      | 68,367     | 61,984     | 2,060     | 64,044     |  |  |
| Subgroup   | 53.7       | 61.5     | 53.8       | 48.9       | 50.5      | 48.9       |  |  |

#### **Demographic Characteristics of Students Taking the 2014 PSSA: Science (continued)**

|   |                | Grade 4   |  | Grade 8        |            |                |  |  |
|---|----------------|-----------|--|----------------|------------|----------------|--|--|
| Demographic or  | PPT            | CBT       | Total  | PPT            | CBT        | Total          |  |  |
| Educational Characteristic  | N/Pct          | N/Pct     | N/Pct  | N/Pct          | N/Pct      | N/Pct          |  |  |
| Enrollment  |                |           |  |                |            |                |  |  |
| Enrollment in school of residence after 10/1/13                         | 3,355<br>2.7   | 11<br>1.3 | 3,366<br>2.6   | 3,111<br>2.5   | 109<br>2.7 | 3,220<br>2.5   |  |  |
| Enrollment in district of residence after 10/1/13                       | 1,702<br>1.3   | 9<br>1.0  | 1,711<br>1.3   | 1,946<br>1.5   | 87<br>2.1  | 2,033<br>1.6   |  |  |
| Enrollment as PA resident after 10/1/13                                 | 0.0            | 0.0       | 0.0  | 0.0            | 0.0        | 0.0            |  |  |
| Enrollment in school of residence after 10/1/12 but on/before 10/1/13   | 28,223<br>22.4 | 82<br>9.5 | 28,305<br>22.3   | 22,827<br>18.0 | 344<br>8.4 | 23,171<br>17.7 |  |  |
| Enrollment in district of residence after 10/1/12 but on/before 10/1/13 | 10,924<br>8.7  | 68<br>7.9 | The state of the s | 9,698<br>7.6   | 100        | 10,023<br>7.7  |  |  |
| Education in Non-<br>Traditional Settings                               |                |           |  |                |            |                |  |  |
| Court/agency placed   | 39<br>0.0      | 2<br>0.2  | 41<br>0.0  | 317<br>0.2     | 20<br>0.5  | 337<br>0.3     |  |  |
| Students with scores used in state summaries                            | 126,246        | 859       | 127,105  | 126,840        | 4,078      | 130,918        |  |  |

#### Demographic Characteristics of Students Taking the 2014 PSSA: Writing

| San Carlotte                    | - 3            | Grade 5     |        | Grade 8        |               |                |  |  |
|---------------------------------|----------------|-------------|--------|----------------|---------------|----------------|--|--|
| Demographic or                  | PPT            | CBT         | Total  | PPT            | CBT           | Total          |  |  |
| Educational Characteristic      | N/Pct          | N/Pct       | N/Pct  | N/Pct          | N/Pct         | N/Pct          |  |  |
| Gender                          |                |             |        |                |               |                |  |  |
| Female                          | 61,335<br>49.3 | 166<br>45.9 |        | 62,321<br>48.9 | 1,388<br>48.7 | 63,709<br>48.9 |  |  |
| Male                            | 62,905         | 196         | 63,101 | 65,044         | 1,465         | 66,509         |  |  |
|                                 | 50.6           | 54.1        | 50.6   | 51.0           | 51.3          | 51.0           |  |  |
| Race/Ethnicity                  |                |             |        | 2007           |               |                |  |  |
| American Indian/Alaskan         | 174            | 0           | 174    | 164            | 5             | 169            |  |  |
| Native (not Hispanic)           | 0.1            | 0.0         | 0.1    | 0.1            | 0.2           | 0.1            |  |  |
| Asian (not Hispanic)            | 4,517          | 4           | 4,521  | 4,316          | 20            | 4,336          |  |  |
|                                 | 3.6            | 1.1         | 3.6    | 3.4            | 0.7           | 3.3            |  |  |
| Black or African American (not  | 17,851         | 21          | 17,872 | 18,661         | 260           | 18,921         |  |  |
| Hispanic)                       | 14.4           | 5.8         | 14.3   | 14.6           | 9.1           | 14.5           |  |  |
| Hispanic (any race)             | 11,389         | 19          | 11,408 | 10,887         | 188           | 11,075         |  |  |
|                                 | 9.2            | 5.2         | 9.2    | 8.5            | 6.6           | 8.5            |  |  |
| Multi-Racial (not Hispanic)     | 3,229          | 13          | 3,242  | 2,357          | 65            | 2,422          |  |  |
|                                 | 2.6            | 3.6         | 2.6    | 1.8            | 2.3           | 1.9            |  |  |
| White (not Hispanic)            | 86,992         | 301         | 87,293 | 90,850         | 2,312         | 93,162         |  |  |
|                                 | 70.0           | 83.1        | 70.0   | 71.3           | 81.0          | 71.5           |  |  |
| Native Hawaiian or Other        | 76             | 4           | 80     | 113            | 3             | 116            |  |  |
| Pacific Islander (not Hispanic) | 0.1            | 1.1         | 0.1    | 0.1            | 0.1           | 0.1            |  |  |

#### **Demographic Characteristics of Students Taking the 2014 PSSA: Writing (continued)**

| 4  | 1-3            | Grade 5     |                | Grade 8        |               |                |  |  |  |
|--|----------------|-------------|----------------|----------------|---------------|----------------|--|--|--|
| Demographic or   | PPT            | CBT         | Total          | PPT            | CBT           | Total          |  |  |  |
| Educational Characteristic                                   | N/Pct          | N/Pct       | N/Pct          | N/Pct          | N/Pct         | N/Pct          |  |  |  |
| Educational Category and<br>Other Demographic Groups         |                |             |                |                |               |                |  |  |  |
| IEP (not gifted)   | 19,064<br>15.3 | 119<br>32.9 | 19,183<br>15.4 | 19,120<br>15.0 | 589<br>20.6   | 19,709<br>15.1 |  |  |  |
| Student exited IEP in last 2 years                           | 3,515<br>2.8   | 1 m 1 m     | 3,518<br>2.8   | 2,662<br>2.1   | 84<br>2.9     | 2,746<br>2.1   |  |  |  |
| Title I  | 49,244<br>39.6 | 94<br>26.0  | 49,338<br>39.6 | 31,747<br>24.9 | 202<br>7.1    | 31,949<br>24.5 |  |  |  |
| Title III served   | 2,320<br>1.9   | 2<br>0.6    | 2,322<br>1.9   | 2,358<br>1.9   |               | 2,368<br>1.8   |  |  |  |
| Title III not served   | 230<br>0.2     | 5<br>1.4    | 235<br>0.2     | 218<br>0.2     | 20<br>0.7     | 238<br>0.2     |  |  |  |
| Migrant student  | 60<br>0.0      | 0<br>0.0    | 60<br>0.0      | 61<br>0.0      | 0<br>0.0      | 61<br>0.0      |  |  |  |
| ELL (enrolled after 5/3/13)                                  | 0.0            | 0.0         | 0.0            | 0.0            | 0.0           | 0.0            |  |  |  |
| ELL (enrolled on or before 5/3/13)                           | 2,536<br>2.0   | 7<br>1.9    | 2,543<br>2.0   | 2,578<br>2.0   |               | 2,608<br>2.0   |  |  |  |
| Exited ESL/bilingual program and in first year of monitoring | 1,040<br>0.8   | 0.0         | 1,040<br>0.8   | 420<br>0.3     | 2<br>0.1      | 422<br>0.3     |  |  |  |
| Exited ESL/bilingual program and in 2nd year of monitoring   | 1,011<br>0.8   | 0.0         | 1,011<br>0.8   | 437<br>0.3     | 10<br>0.4     | 447<br>0.3     |  |  |  |
| Former ELL no longer-<br>monitored                           | 1,256<br>1.0   | 0.0         | 1,256<br>1.0   | 2,712<br>2.1   | 14<br>0.5     | 2,726<br>2.1   |  |  |  |
| Economically disadvantaged                                   | 56,002<br>45.1 | 100         | 56,174<br>45.1 | 53,711<br>42.1 | 1,285<br>45.0 | 54,996<br>42.2 |  |  |  |
| Historically Underperforming<br>Subgroup                     | 64,486<br>51.9 |             | 64,712<br>51.9 | 61,974<br>48.6 | 1,540<br>54.0 | 63,514<br>48.7 |  |  |  |

#### **Demographic Characteristics of Students Taking the 2014 PSSA: Writing (continued)**

| Lancas and the same of the sam | 1              | Grade 5    |                | Grade 8        |            |                |  |  |
|--|----------------|------------|----------------|----------------|------------|----------------|--|--|
| Demographic or   | PPT            | CBT        | Total          | PPT            | CBT        | Total          |  |  |
| Educational Characteristic   | N/Pct          | N/Pct      | N/Pct          | N/Pct          | N/Pct      | N/Pct          |  |  |
| Enrollment   |                |            |                |                |            |                |  |  |
| Enrollment in school of residence after 10/1/13  | 2,837<br>2.3   | 7<br>1.9   | 2,844<br>2.3   | 3,051<br>2.4   | 4.0        | 3,143<br>2.4   |  |  |
| Enrollment in district of residence after 10/1/13  | 1,577<br>1.3   | 4<br>1.1   | 1,581<br>1.3   | 1,912<br>1.5   | 67<br>2.3  | 1,979<br>1.5   |  |  |
| Enrollment as PA resident after 10/1/13  | 0.0            | Mar. 31    | 0.0            | 0.0            | 7.3        | 0.0            |  |  |
| Enrollment in school of residence after 10/1/12 but on/before 10/1/13  | 27,075<br>21.8 |            | 27,163<br>21.8 | 22,614<br>17.7 | 278<br>9.7 | 22,892<br>17.6 |  |  |
| Enrollment in district of residence after 10/1/12 but on/before 10/1/13  | 10,467<br>8.4  | 80<br>22.1 | 10,547<br>8.5  | 9,513<br>7.5   | 255<br>8.9 | 9,768<br>7.5   |  |  |
| Education in Non-<br>Traditional Settings  |                |            |                |                |            |                |  |  |
| Court/agency placed  | 45<br>0.0      | 0.3        | 46<br>0.0      | 283<br>0.2     | 20<br>0.7  | 303<br>0.2     |  |  |
| Students with scores used in state summaries   | 124,304        | 362        | 124,666        | 127,449        | 2,853      | 130,302        |  |  |

## Appendix J:

Incidence of Accommodations Received

#### Incidence of Presentation Accommodations Received on the 2014 PSSA: Mathematics

| A constitution of                                   |              | Grade 3    | 3          |                 | Grade 4    |              |              | Grade 5     |            |   | Grade (     | ,            |          | Grade 7     |              |              | Grade 8    | \$         |
|---|--------------|------------|------------|-----------------|------------|--------------|--------------|-------------|------------|---|-------------|--------------|----------|-------------|--------------|--------------|------------|------------|
| Type of Presentation                                | PPT          | CBT        | Total      | PPT             | CBT        | Total        | PPT          | CBT         | Total      | PPT                                     | CBT         | Total        | PPT      | CBT         | Total        | PPT          | CBT        | Total      |
| Accommodation                                       | N/Pct        | N/Pct      | N/Pct      | N/Pct           | N/Pct      | N/Pct        | N/Pct        | N/Pct       | N/Pct      | N/Pct                                   | N/Pct       | N/Pct        | N/Pct    | N/Pct       | N/Pct        | N/Pct        | N/Pct      | N/Pct      |
| Braille format                                      | 0.0          | N/A<br>N/A | 0.0        | 0.0             | N/A<br>N/A | 0.0          | 5<br>0.0     | N/A<br>N/A  | 5<br>0,0   | 0.0                                     | N/A<br>N/A  | 8<br>0.0     | 6<br>0,0 | N/A<br>N/A  | 0.0          | 5<br>0.0     | N/A<br>N/A | 0.0        |
| Large print format                                  | 101<br>0.1   | N/A<br>N/A | 101<br>0.1 |                 |            | 120<br>0.1   | 108<br>0.1   | N/A<br>N/A  | 108<br>0.1 | 2,71,00                                 | N/A<br>N/A  | 100<br>0.1   | 7.7      | N/A<br>N/A  | 93<br>0.1    | JII O V      | 100        |            |
| Computer Assistive<br>Technology                    | 0,0          | N/A<br>N/A | 0.0        |                 | N/A<br>N/A | 0.0          | 12<br>0.0    | N/A<br>N/A  | 12<br>0.0  |   | N/A         | 0.0          |          | 2.77        |              |              | N/A<br>N/A |            |
| Some test items/questions read aloud                | 7,128<br>5.7 | 11<br>4.5  |            |                 | 12<br>3.0  | 7,574<br>6.0 | 7,402<br>5.9 | 33<br>6.0   |            | 5,806<br>4.7                            | 71<br>5.1   | 5,877<br>4.7 | 200      | 92<br>4.5   | 3,794<br>2.9 | 2,678<br>2.1 | 138<br>4.8 | 1000       |
| All test ítems/questions read aloud                 | 6,722<br>5.4 | 49<br>19.9 | 100000     | 6,280<br>5.0    | 68<br>17.1 | 6,348<br>5.0 | 4,859<br>3.9 | 69<br>12.5  |            | F 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 70<br>5.0   | 2,940<br>2.3 | 100      | 75.7 1.7    | 1,672<br>1.3 | 1,157<br>0.9 | 96<br>3.3  | 0.000      |
| Test items/questions signed                         | 41<br>0.0    | 0.0        | 41<br>0.0  |                 | 10.00      | 46<br>0.0    | 45<br>0.0    | Q.0         | 45<br>0.0  |   | 0.0         | 33<br>0.0    |          | 0.0         | 24<br>0.0    | 18<br>0.0    | 0.0        | 18<br>0.0  |
| Test items/questions<br>interpreted for ELL student | 84<br>0.1    | 0.0        | 84<br>0.1  |                 |            | 76<br>0.1    | 100<br>0.1   | 0.0         | 100<br>0.1 |   |             | 60<br>0.0    |          |             | 35<br>0.0    |              | 0.0        | 55<br>0.0  |
| Amplification device                                | 42<br>0.0    | 0.0        | 42<br>0.0  | No. of Contract |            | 48<br>0.0    | 46<br>0.0    | 0.0         | 46<br>0.0  |   | 0.0         | 27<br>0,0    | 1,500    | 100         | 19<br>0,0    | 1000         | 0.0        | 20<br>0.0  |
| Magnification device                                | 18<br>0.0    |            | 19<br>0.0  |                 |            | 17<br>0.0    | 18<br>0.0    | 0,0         | 18<br>0.0  | 1.40                                    | 0.1         | 16<br>0.0    |          |             | 0.0          | 10<br>0.0    | 1.0        | 10<br>0.0  |
| Color overlay                                       | 75<br>0.1    | N/A<br>N/A | 75<br>0.1  |                 |            | 78<br>0.1    | 54<br>0.0    | N/A<br>N/A  | 54<br>0.0  |   | N/A         | 45<br>0.0    | 1,000    |             |              | 100          |            |            |
| Other (per Accommodations<br>Guidelines)            | 423<br>0,3   | 1,6        | 427<br>0.3 | 2777            |            | 520<br>0.4   | 509<br>0.4   | 3<br>0.5    | 512<br>0.4 | 13300                                   | 0.2         | 133<br>0.1   | 100      | 0.1         | 75<br>0.1    | 1100         | 0.1        | 81<br>0,1  |
| Spanish version                                     | 153<br>0.1   | N/A<br>N/A | 153<br>0.1 |                 | N/A<br>N/A | 201<br>0.2   | 202<br>0.2   | N/A<br>N/A  | 202<br>0.2 |   | N/A<br>N/A  | 233<br>0.2   |          | N/A<br>N/A  | 17.7         |              | N/A<br>N/A |            |
| Online Accommodations<br>Received                   |              |            |            |                 |            |              |              |             |            |   |             |              |          |             |              |              |            |            |
| Audio   | N/A<br>N/A   | 88<br>35.8 | 88<br>0.1  |                 | 97<br>24.4 | 97<br>0.1    | N/A<br>N/A   | 136<br>24.7 | 136<br>0.1 | 00.77                                   | 182<br>13.0 | 182<br>0.1   | 1,000    | 233<br>11.4 | 233<br>0.2   |              | 267<br>9.3 | 267<br>0.2 |
| Video sign language                                 | N/A<br>N/A   | 0.4        | 0.0        | N/A<br>N/A      | 0.3        | 0.0          | N/A<br>N/A   | 0.0         | 0.0        | 0.00                                    | 0.0         | 0.0          | 7 7 3 1  | 0.0         | 0.0          | 935          | 0.0        | 0.0        |
| Color Chooser                                       | N/A<br>N/A   | 10<br>4.1  | 100        | 7.460. 3        |            | 0.0          | N/A<br>N/A   | 10<br>1.8   |            | 7.0                                     | 0.6         | 9<br>0.0     | 2.06.57  | 6<br>0.3    | 0.0          | 6.967        | 16<br>0.6  | 40.2.5     |
| Contrasting Text Chooser                            | N/A<br>N/A   | 10<br>4.1  | 100        | 11.2.36.4       |            | 0.0          | N/A<br>N/A   | 8<br>1.5    |            |   | 0.6         | 9<br>0.0     | 2.46.5   | 0.3         | 0.0          | 1.36         | 16<br>0.6  |            |

#### Incidence of Presentation Accommodations Received on the 2014 PSSA: Reading

| Accommodation  Braille format  arge print format  Computer Assistive Technology | 1            | Grade 3           |              | - 4                                     | Grade 4    |                 |                   | Grade 5    | ř.         | 1          | Grade 6    | j               | 1          | Grade 7    |       | A                     | Grade 8    | ţ       |
|---|--------------|-------------------|--------------|---|------------|-----------------|-------------------|------------|------------|------------|------------|-----------------|------------|------------|-------|-----------------------|------------|---------|
| Type of Presentation  | PPT          | CBT               | Total        | PPT                                     | СВТ        | Total           | PPT               | СВТ        | Total      | PPT        | CBT        | Total           | PPT        | СВТ        | Total | PPT                   | СВТ        | Total   |
| Accommodation   | N/Pct        | N/Pct             | N/Pct        | N/Pct                                   | N/Pct      | N/Pct           | N/Pct             | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct           | N/Pct      | N/Pct      | N/Pct | rai PPT  Pct N/Pct  7 | N/Pct      | N/Pct   |
| Braille format  | 4<br>0.0     | N/A<br>N/A        | 1000         | 3<br>0.0                                | N/A<br>N/A | 1000            | 8<br>0.0          | 2004.010   | 4.76       | 7<br>0.0   | N/A<br>N/A | 1 1 1 1 1 1 1 1 | 7<br>0.0   | N/A<br>N/A | 0.00  | 5<br>0.0              | N/A<br>N/A |         |
| Large print format  | 103<br>0.1   | N/A<br>N/A        |              |   | N/A<br>N/A | 1 4             | 106<br>0.1        | N/A<br>N/A | 4          |            | N/A<br>N/A | 1 4             | 91<br>0.1  | N/A<br>N/A | 1 4   | 93<br>0.1             | N/A<br>N/A |         |
| Computer Assistive<br>Technology  | 5<br>0.0     | N/A<br>N/A        |              | 3<br>0.0                                | N/A<br>N/A |                 | 11<br>0.0         | N/A<br>N/A | 1          |            | N/A<br>N/A | 100             | 10<br>0.0  |            |       | 7<br>0.0              | N/A<br>N/A | 100     |
| Amplification device  | 48<br>0.0    | 100               | 395          |   | 100        | 0.3             | The second second | 0.0        | 1000       |            |            | 100             | 17<br>0.0  | 0.0        | 100   | 100 mg 2 5 A          | 0.0        | 1 3 3 3 |
| Magnification device  | 16<br>0.0    | CA IN             | 17<br>0.0    | 1000                                    | 1<br>0.3   | 15<br>0.0       |                   | 0.0        | 744        |            | 100 000    | 100             | 8<br>0.0   | 0.0        |       | 9<br>0.0              | 0.0        |         |
| Color overlay   | 282<br>0.2   | V (C.2)           |              | 200 200 200 200 200 200 200 200 200 200 | N/A<br>N/A |                 | 208<br>0.2        | N/A<br>N/A |            | -5 200     | 1 3037     |                 | 59<br>0.0  | 2.000      |       | 15.0                  | N/A<br>N/A |         |
| Other (per Accommodations Guidelines)   | 1,010<br>0.8 | 4.15              | 1,013<br>0.8 | 7-9-0                                   | 0.0        | 9.55            | 852<br>0.7        | 3<br>0.5   | 855<br>0.7 | 7-10-11    |            | 234<br>0.2      | 200        | 0.0        | 1,000 | 97<br>0.1             | 2<br>0.1   |         |
| Online Accommodations<br>Received   |              |                   |              |   |            |                 |                   |            | -          |            |            |                 |            |            |       |                       |            |         |
| Color Chooser   | N/A<br>N/A   | 1 1 1 1 1 1 1 1 1 | 2.00         | 7.00                                    |            | 1 1 1 1 1 1 1 1 | 13.65.7           |            | 10<br>0.0  |            |            | 100             | 2.480.4    | 6<br>0.3   | 75.43 | N/A<br>N/A            | 16<br>0.6  |         |
| Contrasting Text Chooser  | N/A<br>N/A   | 10.00             |              |   | 40.1       | 1 7 7           | N/A<br>N/A        |            |            | N/A<br>N/A |            | 20.77           | N/A<br>N/A | 6<br>0.3   | 0.00  | N/A<br>N/A            | 16<br>0.6  | 20.0    |

#### Incidence of Presentation Accommodations Received on the 2014 PSSA: Science

|  | -            | Grade 4     | 1            |              | Grade 8    | 3            |
|--|--------------|-------------|--------------|--------------|------------|--------------|
| Type of Presentation                             | PPT          | CBT         | Total        | PPT          | CBT        | Total        |
| Accommodation                                    | N/Pct        | N/Pct       | N/Pct        | N/Pct        | N/Pct      | N/Pct        |
| Braille format                                   | 0.0          | N/A<br>N/A  | 0.0          | 7<br>0.0     | N/A<br>N/A | 0.0          |
| Large print format                               | 94<br>0.1    | N/A<br>N/A  | 94<br>0.1    | 77<br>0.1    | N/A<br>N/A | 77<br>0.1    |
| Computer Assistive<br>Technology                 | 0.0          | N/A<br>N/A  | 0.0          | 6<br>0.0     | N/A<br>N/A | 0.0          |
| Some test items/questions read aloud             | 6,059<br>4.8 | 24<br>2.8   | 6,083<br>4.8 | 1,603<br>1.3 | 133<br>3,3 | 1,736<br>1.3 |
| All test items/questions read aloud              | 5,821<br>4.6 | 59<br>6,9   | 5,880<br>4.6 | 1,061<br>0.8 | 89<br>2.2  | 1,150<br>0.9 |
| Test items/questions signed                      | 40<br>0.0    | 0.0         | 40<br>0,0    | 14<br>0.0    | 0.0        | 0.0          |
| Test items/questions interpreted for ELL student | 58<br>0.0    | 0.0         | 58<br>0.0    | 29<br>0.0    | 0.0        | 29<br>0.0    |
| Amplification device                             | 31<br>0.0    | 0,0         | 31<br>0,0    | 12<br>0.0    | 0.0        | 13<br>0.0    |
| Magnification device                             | 12<br>0.0    | 0.1         | 13<br>0.0    | 6<br>0.0     | 0.0        | 0.0          |
| Color overlay                                    | 56<br>0.0    | N/A<br>N/A  | 56<br>0.0    | 2<br>0.0     | N/A<br>N/A | 0.0          |
| Other (per Accommodations<br>Guidelines)         | 218<br>0.2   | 0.0         | 218<br>0.2   | 78<br>0.1    | 0.0        | 79<br>0.1    |
| Spanish version                                  | 299<br>0.2   | N/A<br>N/A  | 299<br>0.2   | 322<br>0.3   | N/A<br>N/A | 322<br>0.2   |
| Online Accommodations<br>Received                |              |             |              |              |            |              |
| Audio  | N/A<br>N/A   | 116<br>13.5 | 116<br>0.1   | N/A<br>N/A   | 305<br>7,5 | 305<br>0.2   |
| Video sign language                              | N/A<br>N/A   | 0.1         | 0.0          | N/A<br>N/A   | 0.0        | 0.0          |
| Color Chooser                                    | N/A<br>N/A   | 15<br>1.7   | 15<br>0.0    | N/A<br>N/A   | 34<br>0.8  | 34<br>0.0    |
| Contrasting Text Chooser                         | N/A<br>N/A   | 14<br>1.6   | 14<br>0.0    | N/A<br>N/A   | 3/4<br>0.8 | 34<br>0.0    |

#### Incidence of Presentation Accommodations Received on the 2014 PSSA: Writing

| 2 11 12 12 12 12 12 12 12                               |              | Grade 5    |              |              | Grade 8    | 3            |
|---|--------------|------------|--------------|--------------|------------|--------------|
| Type of Presentation                                    | PPT          | CBT        | Total        | PPT          | CBT        | Total        |
| Accommodation   | N/Pct        | N/Pct      | N/Pct        | N/Pct        | N/Pct      | N/Pct        |
| Braille format  | 5<br>0.0     | N/A<br>N/A | 5<br>0.0     | 5<br>0.0     | N/A<br>N/A | 5<br>0.0     |
| Large print format                                      | 89<br>0.1    | N/A<br>N/A | 89<br>0.1    | 71<br>0.1    | N/A<br>N/A | 71<br>0.1    |
| Computer Assistive<br>Technology                        | 12<br>0.0    | N/A<br>N/A | 12<br>0.0    | 5<br>0.0     | N/A<br>N/A | 5<br>0.0     |
| Some test<br>items/questions/prompt read<br>aloud       | 4,563<br>3.7 | 43<br>11.9 | 0.00         | 1,519<br>1.2 | 85<br>3.0  | 1,604<br>1.2 |
| All test<br>items/questions/prompt read<br>aloud        | 1,421<br>1.1 | 39<br>10.8 | 1,460<br>1.2 | 373<br>0.3   | 42<br>1.5  | 415<br>0.3   |
| Test items/questions/prompt signed                      | 34<br>0.0    | 0.0        | 34<br>0.0    | 21<br>0.0    | 0.0        | 21<br>0.0    |
| Test items/questions/prompt interpreted for ELL student | 35<br>0.0    | 0.0        | 35<br>0.0    | 20<br>0.0    | 0<br>0.0   | 20<br>0.0    |
| Amplification device                                    | 36<br>0.0    | 0.0        | 36<br>0.0    | 13<br>0.0    | 0.0        | 13<br>0.0    |
| Magnification device                                    | 11<br>0.0    | 0.0        | 11<br>0.0    | 8<br>0.0     | 0.0        | 0.0          |
| Color overlay   | 62<br>0.0    | N/A<br>N/A | 62<br>0.0    | 7<br>0.0     | N/A<br>N/A | 7<br>0.0     |
| Other (per Accommodations Guidelines)                   | 327<br>0.3   | 3<br>0.8   | .330<br>0.3  | 73<br>0.1    | 0.0        | 73<br>0.1    |
| Online Accommodations<br>Received                       |              |            |              |              |            |              |
| Color Chooser   | N/A<br>N/A   | 7<br>1.9   | 7<br>0.0     | N/A<br>N/A   | 0.1        | 0.0          |
| Contrasting Text Chooser                                | N/A<br>N/A   | 7<br>1.9   | 7<br>0.0     | N/A<br>N/A   | 2<br>0.1   | 0.0          |

#### Incidence of Response Accommodations Received on the 2014 PSSA: Mathematics

|   | 0          | Grade 3    |            | 1          | Grade 4    | k          | 0          | Grade 5    |            |                   | Grade 6    | ,          | ()         | Grade 7                                 | 7          |   | Grade 8    | 3          |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------------|------------|------------|------------|---|------------|---|------------|------------|
| Type of Response  | PPT        | CBT        | Total      | PPT        | CBT        | Total      | PPT        | CBT        | Total      | PPT               | CBT        | Total      | PPT        | CBT                                     | Total      | PPT                                     | CBT        | Total      |
| Accommodation   | N/Pct             | N/Pct      | N/Pct      | N/Pct      | N/Pct                                   | N/Pct      | N/Pct                                   | N/Pct      | N/Pct      |
| Test administrator marked multiple-choice responses at student's direction                        | 235<br>0.2 | 2<br>0.8   | 237<br>0.2 | 578<br>0.5 | 3<br>0.8   | 581<br>0.5 | 510<br>0.4 | 0.0        | 510<br>0.4 | 236<br>0.2        |            | 236<br>0.2 | 147<br>0.1 | 0.0                                     | 147<br>0.1 | 124<br>0.1                              | 0.0        | 0.1<br>0.1 |
| Test administrator scribed<br>open-ended responses at<br>student's direction                      | 970<br>0.8 | 3<br>1.2   | 973<br>0.8 | 767<br>0.6 | 3<br>0.8   | 10000      | 621<br>0.5 | 0.0        |            | 377<br>0.3        | 2<br>0.1   | 7.77       | 237<br>0.2 | 0.0                                     | 777        |   | 18<br>0.6  |            |
| Test administrator transcribed student responses  | 322<br>0.3 | 4<br>1.6   | 326<br>0.3 | 583<br>0.5 | 4<br>1.0   | 307        | 535<br>0.4 | 7<br>1.3   | 542<br>0.4 | 488<br>0.4        | 0.0        |            | 459<br>0.4 | 0.0                                     | 27.7       | 100000000000000000000000000000000000000 | 3<br>0.1   | 358<br>0.3 |
| Qualified interpreter<br>translated, transcribed, and/or<br>scribed student's signed<br>responses | 5<br>0.0   | 0<br>0.0   | 5<br>0.0   | 2<br>0.0   |            |            | 10<br>0.0  |            |            |                   |            | 5<br>0.0   | 2<br>0.0   | 0.0                                     |            | 18<br>0.0                               |            |            |
| Qualified interpreter<br>translated, transcribed, and/or<br>scribed ELL student responses         | 0.0        | 0.0        | 8<br>0.0   | 11<br>0.0  | 0.0        |            | 17<br>0.0  | 0.0        | = "        | 1 1 1 1 1 1 1 1 1 |            |            | 17<br>0.0  | 0.0                                     |            | 15<br>0.0                               |            | 0.0        |
| Keyboard, word processor, or computer   | 17<br>0.0  | N/A<br>N/A | 17<br>0.0  | 37<br>0.0  | N/A<br>N/A |            | 88<br>0.1  | N/A<br>N/A |            | 2.0               | 200        | 2/2/11     | 86<br>0.1  | 3739.30                                 |            |   | 32,23      |            |
| Brailler/Notetaker  | 0.0        | N/A<br>N/A | 2<br>0.0   | 3<br>0.0   | 7.4        |            | 5<br>0.0   | 0.40       | 5<br>0.0   | 4<br>0.0          | N/A<br>N/A | 4<br>0.0   | 3<br>0.0   | N/A<br>N/A                              |            | 4<br>0.0                                | N/A<br>N/A |            |
| Augmentative communication device   | 5<br>0.0   | 0.0        | 5<br>0.0   | 0.0        | 0.0        | 40.7       | 0.0        | 0.0        |            | 0.0               | 0.0        | 0.0        | 2<br>0.0   | 0.0                                     | 2<br>0.0   | 0.0                                     | 0.0        | 0.0        |
| Audio recording of student responses  | 0.0        | 0.0        | 1<br>0.0   | 0.0        |            |            | 1<br>0.0   | 0.0        |            | 0.0               |            | 0.0        | 0.0        | 1 |            | 0.0                                     | 0.0        | 2.57       |
| Computer Assistive<br>Technology  | 2<br>0.0   | N/A<br>N/A | 2<br>0.0   | 2<br>0.0   | N/A<br>N/A |            | 4<br>0.0   | N/A<br>N/A | 4<br>0.0   | 6<br>0.0          | 32,250.00  | 6<br>0.0   | 5<br>0.0   | N/A<br>N/A                              |            |   | N/A<br>N/A |            |
| Translation dictionary for ELL student  | 45<br>0.0  | 0.0        | 45<br>0.0  | 47<br>0.0  | 0.0        | 193        | 53<br>0.0  | 0.0        | 1 7 7 7    |                   | -          | 63<br>0.0  | 65<br>0.1  | 0.0                                     | 10.7       | 0.00                                    |            | 79<br>0.1  |
| Other (per Accommodations Guidelines)   | 183<br>0.1 | 5<br>2.0   | 188<br>0.2 | 245<br>0.2 | 4          |            | 183<br>0.1 | 0.0        | 19,00      | 73<br>0.1         |            | 1,00,00    | 59<br>0.0  | 4 90 37                                 |            | 100                                     | 0.0        |            |

#### Incidence of Response Accommodations Received on the 2014 PSSA: Reading

| 100 440 000  | 1            | Grade 3    |              |            | Grade 4    |            | - 3        | Grade 5    |   |       | Grade 6    | j.         | 1 9        | Grade 7                                 | 1          | 13         | Grade 8    | 3               |
|--|--------------|------------|--------------|------------|------------|------------|------------|------------|---|-------|------------|------------|------------|---|------------|------------|------------|-----------------|
| Type of Response   | PPT          | CBT        | Total        | PPT        | CBT        | Total      | PPT        | CBT        | Total                                   | PPT   | CBT        | Total      | PPT        | СВТ                                     | Total      | PPT        | CBT        | Total           |
| Accommodation  | N/Pct        | N/Pct      | N/Pct        | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct                                   | N/Pct | N/Pct      | N/Pct      | N/Pct      | N/Pct                                   | N/Pct      | N/Pct      | N/Pct      | N/Pct           |
| Test administrator marked<br>multiple-choice responses at<br>student's direction | 227<br>0.2   | 0.4        | 228<br>0.2   | 568<br>0.4 | 3<br>0.8   | 571<br>0.5 | 487<br>0.4 | 0.0        | 487<br>0.4                              | 10.00 |            | 235<br>0.2 | 146<br>0.1 | 0.0                                     | 146<br>0.1 | 200        | 0.0        | 0.1<br>0.1      |
| Test administrator scribed open-ended responses at student's direction           | 1,008<br>0.8 | 3<br>1.2   | 1,011<br>0.8 | 844<br>0.7 | 3<br>0.8   | 847<br>0.7 | 667<br>0.5 | 0.0        | 667<br>0.5                              | 1000  | 100        | 412<br>0.3 | 260<br>0.2 | 100                                     | 261<br>0.2 | 184<br>0.1 | 18<br>0.6  | 1000            |
| Test administrator transcribed student responses                                 | 361<br>0.3   | 4<br>1.6   | 365<br>0.3   | 710<br>0.6 | 4<br>1.0   | 714<br>0.6 | 724<br>0.6 | 7<br>1.3   | 731<br>0.6                              | 100   | 100        | 200        | 1          | 0.0                                     | 584<br>0.4 | 1,000      | - 7        | 499<br>0.4      |
| Keyboard, word processor, or computer  | 31<br>0.0    | N/A<br>N/A |              | 83<br>0.1  | N/A<br>N/A |            | 1,74,74    | N/A<br>N/A |   | 100   | 1306       |            | 196<br>0.2 | 100000000000000000000000000000000000000 | 1 4 4      | 0.254      | 1.00       |                 |
| Brailler/Notetaker   | 3<br>0.0     | N/A<br>N/A | - L.W.       | 4<br>0.0   | N/A<br>N/A |            | 0.0        | N/A<br>N/A | 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m | 0.0   | N/A<br>N/A |            | 4<br>0.0   | N/A<br>N/A                              | 100 - 100  | 0.0        | N/A<br>N/A | The same of the |
| Augmentative communication device  | 5<br>0.0     | 0.0        | 5<br>0.0     | 1<br>0.0   | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                                     | 0.0   | 0.0        | - T        | 0.0        | 0.0                                     | 0.0        | 2<br>0.0   | 0.0        | 0.0             |
| Audio recording of student responses   | 2<br>0.0     | 0.0        | 0.0          | 0.0        | 0.0        | 0<br>0.0   | 1<br>0.0   | 0.0        | 1<br>0.0                                | 0.0   |            | 0.0        | 0.0        | 0.0                                     | 0<br>0.0   | 0.0        | 0.0        | 0.0             |
| Computer Assistive<br>Technology   | 2<br>0.0     | N/A<br>N/A |              | 2<br>0.0   | N/A<br>N/A |            | 6<br>0.0   | N/A<br>N/A |   | 9     | 2.19.75    |            | 13<br>0.0  | 2.8.7                                   |            | 100        | N/A<br>N/A |                 |
| Other (per Accommodations Guidelines)  | 123<br>0.1   | 0.0        | 123<br>0.1   | 192<br>0.2 | 0.0        | 192<br>0.2 | 149<br>0.1 | 0.0        | - 1.5                                   |       | 4 - 24     | -3.8       | 59<br>0.0  | 1 2                                     | 60<br>0.0  |            | 4.50       | . 39<br>0.0     |

#### Incidence of Response Accommodations Received on the 2014 PSSA: Science

| Land American   | 1          | Grade 4    |            | 9          | Grade 8    |            |
|---|------------|------------|------------|------------|------------|------------|
| Type of Response  | PPT        | CBT        | Total      | PPT        | CBT        | Total      |
| Accommodation   | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct      |
| Test administrator marked multiple-choice responses at student's direction                        | 523<br>0.4 | 0.0        | 523<br>0.4 | 100<br>0.1 | 0.0        | 100<br>0.1 |
| Test administrator scribed<br>open-ended responses at<br>student's direction                      | 746<br>0.6 | 0.0        | 746<br>0.6 | 145<br>0.1 | 19<br>0.5  | 164<br>0.1 |
| Test administrator transcribed student responses  | 416<br>0.3 | 0.0        | 416<br>0.3 | 300<br>0.2 | 3<br>0.1   | 303<br>0.2 |
| Qualified interpreter<br>translated, transcribed, and/or<br>scribed student's signed<br>responses | 5<br>0.0   | 0.0        | 5<br>0.0   | 5<br>0.0   | 0.0        | 0.0        |
| Qualified interpreter<br>translated, transcribed, and/or<br>scribed ELL student responses         | 12<br>0.0  | 0.0        | 12<br>0.0  | 6<br>0.0   | 0.0        | 0.0        |
| Keyboard, word processor, or computer   | 30<br>0.0  | N/A<br>N/A | 30<br>0.0  | 119<br>0.1 | N/A<br>N/A | 119<br>0.1 |
| Brailler/Notetaker  | 2<br>0.0   | N/A<br>N/A | 0.0        | 2<br>0.0   | N/A<br>N/A | 0.0        |
| Augmentative communication device   | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Audio recording of student responses  | 0.0        | 0.0        | 0.0        | 1<br>0.0   | 0.0        | 0.0        |
| Computer Assistive<br>Technology  | 0.0        | N/A<br>N/A | 0.0        | 5<br>0.0   | N/A<br>N/A | 0.0        |
| Translation dictionary for ELL student  | 39<br>0.0  | 0.0        | 39<br>0.0  | 62<br>0.0  | 0<br>0.0   | 62<br>0.0  |
| Other (per Accommodations<br>Guidelines)  | 143<br>0.1 | 0.0        | 143<br>0.1 | 15<br>0.0  | 1<br>0.0   | 16<br>0.0  |

#### Incidence of Response Accommodations Received on the 2014 PSSA: Writing

| The state of the s |            | Grade 5  |            |            | Grade 8    |            |
|--|------------|----------|------------|------------|------------|------------|
| Type of Response   | PPT        | СВТ      | Total      | PPT        | CBT        | Total      |
| Accommodation  | N/Pct      | N/Pct    | N/Pct      | N/Pct      | N/Pct      | N/Pct      |
| Test administrator marked<br>multiple-choice responses at<br>student's direction   | 132<br>0.1 | 0<br>0.0 | 132<br>0.1 | 51<br>0.0  | 0.0        | 51<br>0.0  |
| Test administrator transcribed student responses   | 887<br>0.7 | 0.0      | 887<br>0.7 | 561<br>0.4 | 0.0        | 561<br>0.4 |
| Keyboard, word processor, or computer  | 382<br>0.3 | 1        | 382<br>0.3 | 369<br>0.3 | N/A<br>N/A | 369<br>0,3 |
| Brailler/Notetaker   | 5<br>0.0   | 100000   | 5<br>0.0   | 4<br>0.0   | N/A<br>N/A | 4<br>0.0   |
| Augmentative communication device  | 2<br>0.0   | 0.0      | 2<br>0.0   | 0.0        | 0.0        | 0.0        |
| Audio recording of student responses   | 4<br>0.0   | 0.0      | 4<br>0.0   | 0.0        | 0.0        | 0.0        |
| Computer Assistive<br>Technology   | 16<br>0.0  | 4.5.23   | 16<br>0.0  | 12<br>0.0  | N/A<br>N/A | 12<br>0.0  |
| Other (per Accommodations Guidelines)  | 102<br>0.1 | 0<br>0.0 | 102<br>0.1 | 28<br>0.0  | 1<br>0.0   | 29<br>0.0  |

#### Incidence of Setting Accommodations Received on the 2014 PSSA: Mathematics

| La constantina                           |                | Grade 3    |            |            | Grade 4       |        |                | Grade 5 |                |               | Grade 6     |            | , A        | Grade 7     |            | PPT 70 0.1 475 0.4 12,500 9.7 472 | Grade 8                                    |                      |
|--|----------------|------------|------------|------------|---------------|--------|----------------|---------|----------------|---------------|-------------|------------|------------|-------------|------------|-----------------------------------|--|----------------------|
| Type of Setting                          | PPT            | CBT        | Total      | PPT        | СВТ           | Total  | PPT            | CBT     | Total          | PPT           | CBT         | Total      | PPT        | CBT         | Total      | PPT                               | CBT  | Total                |
| Accommodation                            | N/Pct          | N/Pct      | N/Pct      | N/Pct      | N/Pct         | N/Pct  | N/Pct          | N/Pct   | N/Pct          | N/Pct         | N/Pct       | N/Pct      | N/Pct      | N/Pct       | N/Pct      | N/Pct                             | N/Pct 0 0 1 0.0 6 4 1 0.1 0 388 7 13.5 2 2 | N/Pct                |
| Hospital/home setting                    | 39<br>0.0      | 0.0        | 39<br>0.0  |            |               |        |                |         | 100            | 1755          | 0<br>0.0    | 53<br>0.0  | -77        | 0<br>0.0    | 1.0        | 1,000                             | 0<br>0.0                                   | 70<br>0.1            |
| One-on-one setting                       | 845<br>0.7     | 4<br>1.6   | 849<br>0.7 | 850<br>0.7 | 77.79         |        |                |         | 746<br>0.6     | 2.75          | 6<br>0.4    |            | 463<br>0.4 | 2<br>0.1    | 465<br>0.4 | 10000                             |  | 479<br>0.4           |
| Small group setting                      | 16,555<br>13.3 | 68<br>27.6 | 2.4%       | 0.000      | 1 1 1 1 1 1 1 | -14-22 | 16,755<br>13.3 |         | and the second | 1 - 500 - 500 | 222<br>15.8 | Tallow and | 2.00       | 234<br>11.4 |            |                                   | 388<br>13.5                                | complete distriction |
| Other (per Accommodations<br>Guidelines) | 273<br>0.2     | 0.0        | 273<br>0.2 | 10000      | 0.0           | G.7.4  |                | 0.0     | 321<br>0.3     | 412<br>0.3    | 1<br>0.1    | 413<br>0.3 | 1000       | 2<br>0.1    | 1,000      | 472<br>0.4                        | 2<br>0.1                                   | 474<br>0.4           |

#### Incidence of Setting Accommodations Received on the 2014 PSSA: Reading

| A. C. |                | Grade 3 | 3              |              | Grade 4    |               | 13        | Grade 5     |            |                | Grade 6     |            | 9     | Grade 7     | À          | 19        | Grade 8                                    | }             |
|---|----------------|---------|----------------|--------------|------------|---------------|-----------|-------------|------------|----------------|-------------|------------|-------|-------------|------------|-----------|--|---------------|
| Type of Setting Accommodation             | PPT            | CBT     | Total          | PPT          | CBT        | Total         | PPT       | CBT         | Total      | PPT            | СВТ         | Total      | PPT   | CBT         | Total      | PPT       | CBT  | Total         |
| Accommodation                             | N/Pct          | N/Pct   | N/Pct          | N/Pct        | N/Pct      | N/Pct         | N/Pct     | N/Pct       | N/Pct      | N/Pct          | N/Pct       | N/Pct      | N/Pct | N/Pct       | N/Pct      | N/Pct     | N/Pct 2 0 0 0.0 9 2 1 0.1 8 389 7 13.6 8 2 | N/Pct         |
| Hospital/home setting                     | 38<br>0.0      | (3,700) | 38<br>0.0      |              | 0,0        | 41<br>0.0     | 39<br>0.0 | 0.0         | 39<br>0.0  | 40.5           | 1000        | 54<br>0.0  |       | 0,0         | 41<br>0.0  | 62<br>0.0 | The state of the state of                  | 62<br>0.0     |
| One-on-one setting                        | 954<br>0.8     | 4       | 958            | 946          |            | 949<br>0.7    |           | 2           | 812        | 657            | 5<br>0.4    | 662        | 470   | 1030        | 472        | 459       | 1035                                       | 463           |
| Small group setting                       | 16,234<br>13.0 | 1 2 2 3 | 0.000.00.00.00 | 1000 F 100 V | 66<br>16.7 | 100 0 000 100 | 2000,000  | 103<br>18.7 |            | 13,937<br>11.2 | 217<br>15.5 | 10000      |       | 231<br>11.3 |            |           | 389<br>13.6                                | 5,000,000,000 |
| Other (per Accommodations<br>Guidelines)  | 290<br>0.2     | 10000   | 290<br>0.2     | 10000        | 0.0        | 368<br>0.3    | 3/44 - 21 | 0.0         | 336<br>0.3 |                | 100-5-1     | 416<br>0.3 |       | 2<br>0.1    | 402<br>0.3 | 10000     |  | 470<br>0,4    |

#### Incidence of Setting Accommodations Received on the 2014 PSSA: Science

| ospital/home setting ne-on-one setting mall group setting ther (per Accommodations | 1 9            | Grade 4  |                | - 1           | Grade 8                                  |               |
|--|----------------|----------|----------------|---------------|--|---------------|
| Type of Setting  | PPT            | CBT      | Total          | PPT           | CBT                                      | Total         |
| Accommodation  | N/Pct          | N/Pct    | N/Pct          | N/Pct         | N/Pct                                    | N/Pct         |
| Hospital/home setting  | 32<br>0.0      | 0.0      | 32<br>0.0      | 65<br>0.1     | 0.0                                      | 65<br>0.0     |
| One-on-one setting   | 797<br>0.6     | 0<br>0.0 | 797<br>0.6     | 413<br>0.3    | 0.0                                      | 414<br>0.3    |
| Small group setting  | 15,432<br>12.2 | X        | 15,506<br>12.2 | 11,380<br>9.0 | X III III III II II II II II II II II II | 11,801<br>9.0 |
| Other (per Accommodations<br>Guidelines)   | 214<br>0.2     | 100      | 214<br>0.2     | 422<br>0.3    | 0.0                                      | 423<br>0.3    |

#### Incidence of Setting Accommodations Received on the 2014 PSSA: Writing

| The second                            | 1              | Grade 5   |                | 10            | Grade 8     |               |
|---------------------------------------|----------------|-----------|----------------|---------------|-------------|---------------|
| Type of Setting Accommodation         | PPT            | СВТ       | Total          | PPT           | СВТ         | Total         |
| Accommodation                         | N/Pct          | N/Pct     | N/Pct          | N/Pct         | N/Pct       | N/Pct         |
| Hospital/home setting                 | 32<br>0.0      | 0.0       | 32<br>0.0      | 44<br>0.0     | 0.0         | 44<br>0.0     |
| One-on-one setting                    | 600<br>0.5     | 0.0       | 600<br>0.5     | 374<br>0.3    | 0.0         | 375<br>0.3    |
| Small group setting                   | 13,616<br>11.0 | 9m / 50 m | 13,709<br>11.0 | 10,828<br>8.5 | 352<br>12.3 | 11,180<br>8.6 |
| Other (per Accommodations Guidelines) | 233<br>0.2     |           | 233<br>0.2     | 435<br>0.3    | 2<br>0.1    | 437<br>0.3    |

#### Incidence of Timing Accommodations Received on the 2014 PSSA: Mathematics

| Luciano                               | 10           | Grade 3  | 3          |            | Grade 4    |            |              | Grade 5 |            |          | Grade 6    |              |                                       | Grade 7   |            | 1 19  | Grade 8 | 5           |
|---------------------------------------|--------------|----------|------------|------------|------------|------------|--------------|---------|------------|----------|------------|--------------|---------------------------------------|-----------|------------|---|---------|-------------|
| Type of Timing                        | PPT          | СВТ      | Total      | PPT        | CBT        | Total      | PPT          | CBT     | Total      | PPT      | СВТ        | Total        | PPT                                   | CBT       | Total      | PPT   | СВТ     | Total       |
| Accommodation                         | N/Pct        | N/Pct    | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct        | N/Pct   | N/Pct      | N/Pct    | N/Pct      | N/Pct        | N/Pct                                 | N/Pct     | N/Pct      | N/Pct   | N/Pct   | N/Pct       |
| Extended time                         | 5,753<br>4.6 | 2000 9   |            | 10.00      | F-100      | 1000       | 100          | 2000    | 1000       | 17500000 | 127<br>9.0 | 100          | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 5.00      | 200        | 10 TO | 770.00  | 1 2 2 2 2 2 |
| Frequent breaks                       | 3,763<br>3.0 | 100      | 2.000      | 2007.20    | 51<br>12.8 | 3,000      | 3,729<br>3.0 |         | San Street |          | 100<br>7.1 | 2,777<br>2.2 | 1,821<br>1.4                          | 93<br>4.5 | 2 A 2 2 3  | 200   | 1 2 2   | 2.42        |
| Changed test schedule                 | 537<br>0.4   | 4<br>1.6 | 541<br>0.4 | 100000     | - G1       | 544<br>0.4 |              | 0.4     | 552<br>0.4 | 1000     |            | 452<br>0.4   | 451<br>0.4                            | 0.0       | 451<br>0.3 | 2007  |         | 481<br>0.4  |
| Other (per Accommodations Guidelines) | 66<br>0.1    | 0.0      | 66<br>0.1  | 107<br>0.1 | 0.0        | 107<br>0.1 | 133<br>0.1   | 0.0     | 133<br>0.1 | 1000     | 0.1        | 120<br>0.1   | 94<br>0.1                             | 0.0       | 94<br>0.1  | 2.0   | 0.00    | 96<br>0.1   |

#### Incidence of Timing Accommodations Received on the 2014 PSSA: Reading

|                                       | 19           | Grade 3    |            | - 9     | Grade 4   |            | 9       | Grade 5  |            | 1              | Grade 6   |            | V                 | Grade 7   |                | 130            | Grade 8    | 3          |
|---------------------------------------|--------------|------------|------------|---------|-----------|------------|---------|----------|------------|----------------|-----------|------------|-------------------|-----------|----------------|----------------|------------|------------|
| Type of Timing                        | PPT          | CBT        | Total      | PPT     | CBT       | Total      | PPT     | СВТ      | Total      | PPT            | CBT       | Total      | PPT               | CBT       | Total          | PPT            | СВТ        | Total      |
| Accommodation                         | N/Pct        | N/Pct      | N/Pct      | N/Pct   | N/Pct     | N/Pct      | N/Pct   | N/Pct    | N/Pct      | N/Pct          | N/Pct     | N/Pct      | N/Pct             | N/Pct     | N/Pct          | N/Pct          | N/Pct      | N/Pct      |
| Extended time                         | 5,172<br>4.2 | 46<br>18.7 | D74220     | 2 45 44 | 707.5. 20 | 1000       | 1000    |          |            | 10.50          | 100       | 100        | 2.4               |           | F 100 E 100 PM | Barrier Street | 100.00     | 1000       |
| Frequent breaks                       | 3,794<br>3.0 |            | -7.        | 2000    | 1         | 48.5       | 2000    | 7.00     | 1.545.00   |                | 96<br>6.8 | 1.20       |                   | 92<br>4.5 | 200            | 1,442<br>1.1   | 129<br>4.5 | 2000       |
| Changed test schedule                 | 537<br>0.4   | 4<br>1.6   | 541<br>0.4 |         | 0<br>0.0  | 555<br>0.4 | Table 1 | 2<br>0.4 | 580<br>0.5 | and the second |           | 461<br>0.4 | 40.00             | 0.0       | 444<br>0.3     |                | 2<br>0.1   | 493<br>0.4 |
| Other (per Accommodations Guidelines) | 58<br>0.0    |            | 58<br>0.0  |         | 0.0       | 91<br>0.1  | 15000   | 0.0      | 107<br>0.1 | 75.7           | 1<br>0.1  | 106<br>0.1 | 1 The second 1977 | 0.0       | 93<br>0.1      | 200            | 2<br>0.1   | 95<br>0.1  |

#### Incidence of Timing Accommodations Received on the 2014 PSSA: Science

|  | 1 9          | Grade 4   |              | 1         | Grade 8    |   |
|--|--------------|-----------|--------------|-----------|------------|---|
| Type of Timing                           | PPT          | CBT       | Total        | PPT       | CBT        | Total                                   |
| Accommodation                            | N/Pct        | N/Pct     | N/Pct        | N/Pct     | N/Pct      | N/Pct                                   |
| Extended time                            | 4,467<br>3.5 | 56<br>6.5 | A            |           | 227<br>5.6 | 1 |
| Frequent breaks                          | 2,736<br>2.2 | 7 - 7 - 1 | 2,780<br>2.2 | 100       | 100        |   |
| Changed test schedule                    | 285<br>0.2   | 1         | 285<br>0.2   | 200 3     | 2<br>0.0   | 279<br>0.2                              |
| Other (per Accommodations<br>Guidelines) | 65<br>0.1    | 10.00     | 65<br>0.1    | 49<br>0.0 |            | 51<br>0.0                               |

#### Incidence of Timing Accommodations Received on the 2014 PSSA: Writing

|                                       | 1            | Grade 5          |              | 3                 | Grade 8    |              |
|---------------------------------------|--------------|------------------|--------------|-------------------|------------|--------------|
| Type of Timing                        | PPT          | CBT              | Total        | PPT               | CBT        | Total        |
| Accommodation                         | N/Pct        | N/Pct            | N/Pct        | N/Pct             | N/Pct      | N/Pct        |
| Extended time                         | 6,105<br>4.9 | 100 000 300      | 6,178<br>5.0 | 100 P 100 P 100 P | 208<br>7.3 | 11.1.1       |
| Frequent breaks                       | 2,368<br>1.9 | III III. 7500 MA | 2,414<br>1.9 | 1,003<br>0.8      | 118<br>4.1 | 1,121<br>0.9 |
| Changed test schedule                 | 375<br>0.3   | 0<br>0.0         | 375<br>0.3   | 355<br>0.3        | 100        | 357<br>0.3   |
| Other (per Accommodations Guidelines) | 80<br>0.1    | 0.0              | 80<br>0.1    | 54<br>0.0         | 2<br>0.1   | 56<br>0.0    |

## Appendix K:

Accommodation Rate for Non-IEP and IEP Students

#### Accommodation Rate for Non-IEP and IEP Students on the 2014 PSSA: Mathematics

|                  | 3              | Grade 3    |         | 3           | Grade 4     | ļ i          | 3                     | Grade 5   | ,              | 1                                       | Grade 6     |                | 3               | Grade 7            |          | 1 3             | Grade 8     | 3               |
|------------------|----------------|------------|---------|-------------|-------------|--------------|-----------------------|-----------|----------------|---|-------------|----------------|-----------------|--------------------|----------|-----------------|-------------|-----------------|
| Student Subgroup | PPT            | CBT        | Total   | PPT         | СВТ         | Total        | PPT                   | СВТ       | Total          | PPT                                     | СВТ         | Total          | PPT             | СВТ                | Total    | PPT             | СВТ         | Total           |
|                  | N/Pct          | N/Pct      | N/Pct   | N/Pct       | N/Pct       | N/Pct        | N/Pct                 | N/Pct     | N/Pct          | N/Pct                                   | N/Pct       | N/Pct          | N/Pct           | N/Pct              | N/Pct    | N/Pct           | N/Pct       | N/Pct           |
| Non-IEP Students | 105,408        | 132        | 105,540 | 106,299     | 251         | 106,550      | 106,169               | 367       | 106,536        | 105,475                                 | 1,036       | 106,511        | 108,634         | 1,561              | 110,195  | 108,979         | 2,215       | 111,194         |
| Non-Accommodated | 95,076<br>90.2 |            |         | F 500       | 244<br>97.2 |              | 1 TO 1 TO 1 TO 1 TO 1 | 1 3 60 7  |                | 100000000000000000000000000000000000000 | 34.5        |                | 101,728<br>93.6 | region at the same |          | 103,150<br>94.7 | 1000        | 105,298<br>94.7 |
| Accommodated     | 10,332<br>9.8  | 11<br>8.3  | 45,000  | 20,000,000  | 7<br>2.8    | 9,859<br>9.3 | March of Calif        | 28<br>7.6 | 27 - 6 - 2 - 2 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   | 46<br>4.4   | 2/252          | 6,906<br>6.4    | 1                  |          | - 4.04-7        | -0.70       | -,              |
| IEP Students     | 19,048         | 114        | 19,162  | 20,215      | 146         | 20,361       | 19,974                | 183       | 20,157         | 19,249                                  | 368         | 19,617         | 19,503          | 491                | 19,994   | 19,512          | 657         | 20,169          |
| Non-Accommodated | 7,257<br>38.1  | 21<br>18.4 | 1.4=1.7 | 1.0000012   | E. Land     | 17.6.00      | 1                     | 1000000   | CAREE          | 1.400.00                                |             | 6,402<br>32.6  | 10.000          |                    |          | 10.00           | 176<br>26.8 |                 |
| Accommodated     | 11,791<br>61.9 | 93<br>81.6 |         | CONTRACTOR. | 109<br>74.7 |              | 100 0 CONT.           |           | 10.250         | Contraction of                          | 304<br>82.6 | 13,215<br>67.4 | 2000            | 5.6.4              | C. L. C. | 0.00            | 481<br>73.2 |                 |

#### Accommodation Rate for Non-IEP and IEP Students on the 2014 PSSA: Reading

|                  |                | Grade 3 | 1              |   | Grade 4 |               |                | Grade 5    | i       |         | Grade 6 | j               |   | Grade 7    |                   |                          | Grade 8                                 | 1               |
|------------------|----------------|---------|----------------|---|---------|---------------|----------------|------------|---------|---------|---------|-----------------|---|------------|-------------------|--------------------------|---|-----------------|
| Student Subgroup | PPT            | CBT     | Total          | PPT                                     | CBT     | Total         | PPT            | CBT        | Total   | PPT     | CBT     | Total           | PPT                                     | CBT        | Total             | PPT                      | CBT                                     | Total           |
|                  | N/Pct          | N/Pct   | N/Pct          | N/Pct                                   | N/Pct   | N/Pct         | N/Pct          | N/Pct      | N/Pct   | N/Pct   | N/Pct   | N/Pct           | N/Pct                                   | N/Pct      | N/Pct             | N/Pct                    | N/Pct                                   | N/Pct           |
| Non-IEP Students | 105,405        | 132     | 105,537        | 106,308                                 | 251     | 106,559       | 106,121        | 368        | 106,489 | 105,427 | 1,036   | 106,463         | 108,540                                 | 1,559      | 110,099           | 108,881                  | 2,213                                   | 111,094         |
| Non-Accommodated | 96,990<br>92.0 | 400     | 1000           | 100000000000000000000000000000000000000 | - 3000  | 1000          |                | 1000       |         | 1000    |         | 100 100 100 100 | 100,734<br>92.8                         |            | 102,267<br>92.9   | 1000                     | 110000000000000000000000000000000000000 | 102,824<br>92.6 |
| Accommodated     | 8,415<br>8.0   | 190.74  | 8,424<br>8.0   | 10,572<br>9.9                           |         | 10,579<br>9.9 |                | 22.00      | ,       | 100000  |         | 8,968<br>8.4    | 100                                     | 7          | 1000              | - C                      | 10000                                   | 7 7 7 7         |
| IEP Students     | 19,008         | 114     | 19,122         | 20,183                                  | 145     | 20,328        | 19,967         | 183        | 20,150  | 19,215  | 366     | 19,581          | 19,464                                  | 490        | 19,954            | 19,467                   | 657                                     | 20,124          |
| Non-Accommodated | 7,506<br>39.5  | W100100 | 7,557<br>39.5  | 7,024<br>34.8                           |         | . 7           |                | 84<br>45.9 |         | 1.000   |         | 100             | 1275. 7                                 | 5,75,875,4 |                   | the second of the second | Sept. Co. of                            | Carrier State   |
| Accommodated     | 11,502<br>60.5 | 1000    | 11,565<br>60.5 | 3.75                                    | 10.00   |               | 13,846<br>69.3 | 99<br>54.1 | ,       |         | 40.00   | 1000            | 100000000000000000000000000000000000000 | 100        | The second second | 3.5                      | 100                                     | 1000            |

#### Accommodation Rate for Non-IEP and IEP Students on the 2014 PSSA: Science

|                  |                | Grade 4     |   | 3                 | Grade 8       |                 |
|------------------|----------------|-------------|---|-------------------|---------------|-----------------|
| Student Subgroup | PPT            | CBT         | Total   | PPT               | CBT           | Total           |
|                  | N/Pct          | N/Pct       | N/Pct   | N/Pct             | N/Pct         | N/Pct           |
| Non-IEP Students | 106,072        | 687         | 106,759   | 107,615           | 3,308         | 110,923         |
| Non-Accommodated | 98,763<br>93.1 | 670<br>97.5 | 99,433<br>93.1  | 103,711<br>96.4   | 3,244<br>98.1 | 106,955<br>96.4 |
| Accommodated     | 7,309<br>6.9   | 17<br>2.5   | 7,326<br>6.9  |                   | 33.37         | 100             |
| IEP Students     | 20,174         | 172         | 20,346  | 19,225            | 770           | 19,995          |
| Non-Accommodated | 7,805<br>38.7  | 60<br>34.9  | 20 to 10 to |                   | 242<br>31.4   | 8,678<br>43.4   |
| Accommodated     | 12,369<br>61.3 | 10/10/20    | 12,481<br>61.3  | The second second | 528<br>68.6   |                 |

#### Accommodation Rate for Non-IEP and IEP Students on the 2014 PSSA: Writing

|                  | 3              | Grade 5    |   | 3             | Grade 8       |                 |
|------------------|----------------|------------|---|---------------|---------------|-----------------|
| Student Subgroup | PPT            | CBT        | Total   | PPT           | CBT           | Total           |
|                  | N/Pct          | N/Pct      | N/Pct   | N/Pct         | N/Pct         | N/Pct           |
| Non-IEP Students | 105,240        | 243        | 105,483   | 108,329       | 2,264         | 110,593         |
| Non-Accommodated | 97,929<br>93.1 | 100        | 98,131<br>93.0  |               | 2,211<br>97.7 | 105,068<br>95.0 |
| Accommodated     | 7,311<br>6.9   | 41<br>16.9 | 7,352<br>7.0  | 1 50.15       | 53<br>2.3     |                 |
| IEP Students     | 19,064         | 119        | 19,183  | 19,120        | 589           | 19,709          |
| Non-Accommodated | 7,358<br>38.6  | 200 00 000 | 4776  | 8,628<br>45.1 | 228<br>38.7   | milital between |
| Accommodated     | 11,706<br>61.4 | 100000     | a. 2. 2. 2. 2. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. | 1000          | 361<br>61.3   | 10,853<br>55.1  |

# Appendix L:

Incidence of Accommodations Received by IEP and ELL Students

#### Incidence of IEP and ELL Students Receiving Selected Accommodation on the 2014 PSSA: Mathematics

|                                      |              |            |              | Cla            | ssification | of Student     | s Regardin    | g IEP and E | LL            |             |             |             |
|--------------------------------------|--------------|------------|--------------|----------------|-------------|----------------|---------------|-------------|---------------|-------------|-------------|-------------|
| Accommodation Received               | Gen          | eral Educa | tion         | IEP            | and non-E   | LL             | ELL           | and non-II  | EP            | Bot         | h IEP and E | ELL         |
|                                      | PPT          | CBT        | Total        | PPT            | CBT         | Total          | PPT           | CBT         | Total         | PPT         | CBT         | Total       |
| Grade 3                              | N/Pct        | N/Pct      | N/Pct        | N/Pct          | N/Pct       | N/Pct          | N/Pct         | N/Pct       | N/Pct         | N/Pct       | N/Pct       | N/Pct       |
| Some test items/questions read aloud | 2,559        | 2          | 2,561        | 3,580          | 9           | 3,589          | 794           | 0           | 794           | 195         | 0           | 195         |
|                                      | 2.5          | 1.5        | 2.5          | 19.5           | 8.0         | 19.5           | 23.1          | 0.0         | 23.1          | 27.3        | 0.0         | 27.3        |
| All test items/questions read aloud  | 1,202        | 7          | 1,209        | 5,119          | 41          | 5,160          | 196           | 0           | 196           | 205         | 1           | 206         |
|                                      | 1.2          | 5.4        | 1.2          | 27.9           | 36.3        | 28.0           | 5.7           | 0.0         | 5.7           | 28.7        | 100.0       | 28.8        |
| Small group setting                  | 4,777<br>4.7 | 9<br>6.9   | 4,786<br>4.7 | 10,082<br>55.0 | 58<br>51.3  | 10,140<br>55.0 | 1,220<br>35.5 | 0.0         | 1,220<br>35.5 | 476<br>66.7 | 1<br>100.0  | 477<br>66.7 |
| Extended time                        | 2,746        | 8          | 2,754        | 2,694          | 39          | 2,733          | 203           | 0           | 203           | 110         | 0           | 110         |
|                                      | 2.7          | 6.2        | 2.7          | 14.7           | 34.5        | 14.8           | 5.9           | 0.0         | 5.9           | 15.4        | 0.0         | 15.4        |
| Frequent breaks                      | 574          | 8          | 582          | 2,994          | 44          | 3,038          | 80            | 0           | 80            | 115         | 0           | 115         |
|                                      | 0.6          | 6.2        | 0.6          | 16.3           | 38.9        | 16.5           | 2.3           | 0.0         | 2.3           | 16.1        | 0.0         | 16.1        |
| Number assessed                      | 101,973      | 130        | 102,103      | 18,334         | 113         | 18,447         | 3,435         | 2           | 3,437         | 714         | 1           | 715         |
| Grade 4                              | N/Pct        | N/Pct      | N/Pct        | N/Pct          | N/Pct       | N/Pct          | N/Pct         | N/Pct       | N/Pct         | N/Pct       | N/Pct       | N/Pct       |
| Some test items/questions read aloud | 2,190        | 0          | 2,190        | 4,618          | 12          | 4,630          | 520           | 0           | 520           | 234         | 0           | 234         |
|                                      | 2.1          | 0.0        | 2.1          | 23.7           | 8.3         | 23.6           | 21.2          | 0.0         | 21.2          | 33.2        | 0.0         | 33.1        |
| All test items/questions read aloud  | 883          | 3          | 886          | 5,056          | 63          | 5,119          | 151           | 0           | 151           | 190         | 2           | 192         |
|                                      | 0.9          | 1.2        | 0.9          | 25.9           | 43.8        | 26.0           | 6.1           | 0.0         | 6.1           | 27.0        | 100.0       | 27.2        |
| Small group setting                  | 4,290        | 3          | 4,293        | 11,556         | 62          | 11,618         | 810           | 0           | 810           | 483         | 1           | 484         |
|                                      | 4.1          | 1.2        | 4.1          | 59.2           | 43.1        | 59.1           | 33.0          | 0.0         | 33.0          | 68.5        | 50.0        | 68.5        |
| Extended time                        | 3,310        | 4          | 3,314        | 3,046          | 44          | 3,090          | 154           | 0           | 154           | 112         | 1           | 113         |
|                                      | 3.2          | 1.6        | 3.2          | 15.6           | 30.6        | 15.7           | 6.3           | 0.0         | 6.3           | 15.9        | 50.0        | 16.0        |
| Frequent breaks                      | 500          | 1          | 501          | 3,239          | 49          | 3,288          | 60            | 0           | 60            | 108         | 1           | 109         |
|                                      | 0.5          | 0.4        | 0.5          | 16.6           | 34.0        | 16.7           | 2.4           | 0.0         | 2.4           | 15.3        | 50.0        | 15.4        |
| Number assessed                      | 103,842      | 250        | 104,092      | 19,510         | 144         | 19,654         | 2,457         | 1           | 2,458         | 705         | 2           | 707         |

#### Incidence of IEP and ELL Students Receiving Selected Accommodation on the 2014 PSSA: Mathematics (continued)

|                                      | Classification of Students Regarding IEP and ELL |            |              |                 |             |                |             |            |             |             |             |             |
|--------------------------------------|--|------------|--------------|-----------------|-------------|----------------|-------------|------------|-------------|-------------|-------------|-------------|
| Accommodation Received               | Gen  | eral Educa | tion         | IEP and non-ELL |             |                | ELL         | and non-l  | EP          | Bot         | h IEP and E | ш           |
|                                      | PPT  | CBT        | Total        | PPT             | CBT         | Total          | PPT         | CBT        | Total       | PPT         | CBT         | Total       |
| Grade 5                              | N/Pct  | N/Pct      | N/Pct        | N/Pct           | N/Pct       | N/Pct          | N/Pct       | N/Pct      | N/Pct       | N/Pct       | N/Pct       | N/Pct       |
| Some test items/questions read aloud | 1,608<br>1.5                                     | 3<br>0.8   | 1,611<br>1.5 | 5,126<br>26.6   | 25<br>14.3  | 5,151<br>26.5  | 415<br>19.8 | 1<br>50.0  | 416<br>19,8 | 253<br>36.5 | 4<br>50.0   | 257<br>36.7 |
| All test items/questions read aloud  | 604<br>0.6                                       | 3<br>0.8   | 607<br>0.6   | 3,998<br>20.7   | 63<br>36.0  | 4,061<br>20.9  | 110<br>5.3  | 0.0        | 110<br>5.2  | 147<br>21.2 | 3<br>37.5   | 150<br>21.4 |
| Small group setting                  | 3,512<br>3.4                                     | 13<br>3.6  | 3,525<br>3.4 | 12,102<br>62.8  | 84<br>48.0  | 12,186<br>62.6 | 667<br>31.8 | 1<br>50.0  | 668<br>31.9 | 474<br>68.4 | 5<br>62.5   | 479<br>68.3 |
| Extended time                        | 4,893<br>4.7                                     | 12<br>3.3  | 4,905<br>4.7 | 3,367<br>17.5   | 56<br>32.0  | 3,423<br>17.6  | 157<br>7.5  | 0.0        | 157<br>7.5  | 121<br>17.5 | 4<br>50.0   | 125<br>17.8 |
| Frequent breaks                      | 412<br>0.4                                       | 0<br>0.0   | 412<br>0.4   | 3,177<br>16.5   | 54<br>30.9  | 3,231<br>16.6  | 46<br>2.2   | 0.0        | 46<br>2.2   | 94<br>13.6  | 2<br>25.0   | 96<br>13.7  |
| Number assessed                      | 104,074  | 365        | 104,439      | 19,281          | 175         | 19,456         | 2,095       | 2          | 2,097       | 693         | 8           | 701         |
| Grade 6                              | N/Pct  | N/Pct      | N/Pct        | N/Pct           | N/Pct       | N/Pct          | N/Pct       | N/Pct      | N/Pct       | N/Pct       | N/Pct       | N/Pct       |
| Some test items/questions read aloud | 862<br>0.8                                       | 1<br>0.1   | 863<br>0.8   | 4,498<br>24.3   | 61<br>17.0  | 4,559<br>24.1  | 258<br>12.8 | 7<br>36.8  | 265<br>13.1 | 188<br>26.6 | 2<br>20.0   | 190<br>26.5 |
| All test items/questions read aloud  | 299<br>0.3                                       | 3<br>0.3   | 302<br>0.3   | 2,458<br>13.3   | 65<br>18.2  | 2,523<br>13.3  | 49<br>2.4   | 1<br>5.3   | 50<br>2.5   | 64<br>9.0   | 1<br>10.0   | 65<br>9.1   |
| Small group setting                  | 2,120<br>2.0                                     | 16<br>1.6  | 2,136<br>2.0 | 11,177<br>60.3  | 188<br>52.5 | 11,365<br>60.1 | 418<br>20.8 | 12<br>63.2 | 430<br>21.2 | 387<br>54.7 | 6<br>60.0   | 393<br>54.7 |
| Extended time                        | 3,878<br>3.7                                     | 20<br>2.0  | 3,898<br>3.7 | 2,818<br>15.2   | 103<br>28.8 | 2,921<br>15.5  | 116<br>5.8  | 3<br>15.8  | 119<br>5.9  | 85<br>12.0  | 1<br>10.0   | 86<br>12.0  |
| Frequent breaks                      | 215<br>0.2                                       | 4<br>0.4   | 219<br>0.2   | 2,373<br>12.8   | 92<br>25.7  | 2,465<br>13.0  | 31<br>1.5   | 3<br>15.8  | 34<br>1.7   | 58<br>8.2   | 1<br>10.0   | 59<br>8.2   |
| Number assessed                      | 103,464  | 1,017      | 104,481      | 18,541          | 358         | 18,899         | 2,011       | 19         | 2,030       | 708         | 10          | 718         |

#### Incidence of IEP and ELL Students Receiving Selected Accommodation on the 2014 PSSA: Mathematics (continued)

|                                      | Classification of Students Regarding IEP and ELL |            |         |        |           |        |       |            |       |       |             |       |
|--------------------------------------|--|------------|---------|--------|-----------|--------|-------|------------|-------|-------|-------------|-------|
| Accommodation Received               | Gen  | eral Educa | tion    | IEP    | and non-E | LL     | ELL   | and non-II | EP    | Bot   | h IEP and E | ELL.  |
|                                      | PPT  | CBT        | Total   | PPT    | CBT       | Total  | PPT   | CBT        | Total | PPT   | СВТ         | Total |
| Grade 7                              | N/Pct  | N/Pct      | N/Pct   | N/Pct  | N/Pct     | N/Pct  | N/Pct | N/Pct      | N/Pct | N/Pct | N/Pct       | N/Pct |
| Some test items/questions read aloud | 321  | 3          | 324     | 3,101  | 76        | 3,177  | 131   | 6          | 137   | 149   | 7           | 156   |
|                                      | 0.3  | 0.2        | 0.3     | 16.5   | 15.9      | 16.5   | 6.3   | 31.6       | 6.5   | 20.0  | 50.0        | 20.6  |
| All test items/questions read aloud  | 164  | 4          | 168     | 1,362  | 58        | 1,420  | 29    | 0          | 29    | 55    | 0           | 55    |
|                                      | 0.2  | 0.3        | 0.2     | 7.3    | 12.2      | 7.4    | 1.4   | 0.0        | 1.4   | 7.4   | 0.0         | 7.3   |
| Small group setting                  | 1,550  | 15         | 1,565   | 10,682 | 200       | 10,882 | 368   | 9          | 377   | 382   | 10          | 392   |
|                                      | 1.5  | 1.0        | 1.4     | 56.9   | 41.9      | 56.6   | 17.6  | 47.4       | 17.9  | 51.3  | 71.4        | 51.7  |
| Extended time                        | 4,588  | 14         | 4,602   | 2,635  | 140       | 2,775  | 163   | 4          | 167   | 99    | 2           | 101   |
|                                      | 4.3  | 0.9        | 4.3     | 14.0   | 29.4      | 14.4   | 7.8   | 21.1       | 7.9   | 13.3  | 14.3        | 13.3  |
| Frequent breaks                      | 130  | 3          | 133     | 1,608  | 87        | 1,695  | 27    | 3          | 30    | 56    | 0           | 56    |
|                                      | 0.1  | 0.2        | 0.1     | 8.6    | 18.2      | 8.8    | 1.3   | 15.8       | 1.4   | 7.5   | 0.0         | 7.4   |
| Number assessed                      | 106,544  | 1,542      | 108,086 | 18,759 | 477       | 19,236 | 2,090 | 19         | 2,109 | 744   | 14          | 758   |
| Grade 8                              | N/Pct  | N/Pct      | N/Pct   | N/Pct  | N/Pct     | N/Pct  | N/Pct | N/Pct      | N/Pct | N/Pct | N/Pct       | N/Pct |
| Some test items/questions read aloud | 208  | 2          | 210     | 2,266  | 126       | 2,392  | 93    | 4          | 97    | 111   | 6           | 117   |
|                                      | 0.2  | 0.1        | 0.2     | 12.0   | 19.6      | 12.3   | 4.6   | 30.8       | 4.8   | 15.9  | 40.0        | 16.4  |
| All test items/questions read aloud  | 81   | 7          | 88      | 1,026  | 89        | 1,115  | 18    | 0          | 18    | 32    | 0           | 32    |
|                                      | 0.1  | 0.3        | 0.1     | 5.5    | 13.9      | 5.7    | 0.9   | 0.0        | 0.9   | 4.6   | 0.0         | 4.5   |
| Small group setting                  | 1,434  | 42         | 1,476   | 10,453 | 331       | 10,784 | 321   | 6          | 327   | 292   | 9           | 301   |
|                                      | 1.3  | 1.9        | 1.4     | 55.6   | 51.6      | 55.4   | 16.0  | 46.2       | 16.2  | 41.9  | 60.0        | 42.3  |
| Extended time                        | 3,650  | 25         | 3,675   | 2,323  | 208       | 2,531  | 187   | 0          | 187   | 68    | 5           | 73    |
|                                      | 3.4  | 1.1        | 3.4     | 12.3   | 32.4      | 13.0   | 9.3   | 0.0        | 9.3   | 9.8   | 33.3        | 10.3  |
| Frequent breaks                      | 133  | 11         | 144     | 1,246  | 112       | 1,358  | 6     | 0          | 6     | 32    | 3           | 35    |
|                                      | 0.1  | 0.5        | 0.1     | 6.6    | 17.4      | 7.0    | 0.3   | 0.0        | 0.3   | 4.6   | 20.0        | 4.9   |
| Number assessed                      | 106,978  | 2,202      | 109,180 | 18,815 | 642       | 19,457 | 2,001 | 13         | 2,014 | 697   | 15          | 712   |

#### Incidence of IEP and ELL Students Receiving Selected Accommodation on the 2014 PSSA: Reading

|                        | Classification of Students Regarding IEP and ELL |             |              |                 |            |                |               |            |               |             |             |             |
|------------------------|--|-------------|--------------|-----------------|------------|----------------|---------------|------------|---------------|-------------|-------------|-------------|
| Accommodation Received | Gen  | eral Educat | tion         | IEP and non-ELL |            |                | ELL           | and non-II | EP            | Bot         | h IEP and E | u           |
|                        | PPT  | CBT         | Total        | PPT             | CBT        | Total          | PPT           | CBT        | Total         | PPT         | CBT         | Total       |
| Grade 3                | N/Pct  | N/Pct       | N/Pct        | N/Pct           | N/Pct      | N/Pct          | N/Pct         | N/Pct      | N/Pct         | N/Pct       | N/Pct       | N/Pct       |
| Small group setting    | 4,655<br>4.6                                     | 9<br>6.9    | 4,664<br>4.6 | 9,913<br>54.2   | 56<br>49.6 | 9,969<br>54.1  | 1,207<br>35.3 | 0<br>0.0   | 1,207<br>35.3 | 459<br>64.6 | 1<br>100.0  | 460<br>64.7 |
| Extended time          | 2,269<br>2.2                                     | 8<br>6.2    | 2,277<br>2.2 | 2,621<br>14.3   | 38<br>33.6 | 2,659<br>14.4  | 172<br>5.0    | 0.0        | 172<br>5.0    | 110<br>15.5 | 0<br>0.0    | 110<br>15.5 |
| Frequent breaks        | 577<br>0.6                                       | 8<br>6.2    | 585<br>0.6   | 3,025<br>16.5   | 43<br>38.1 | 3,068<br>16.7  | 81<br>2.4     | 0<br>0.0   | 81<br>2.4     | 111<br>15.6 | 0<br>0.0    | 111<br>15.6 |
| Number assessed        | 101,983  | 130         | 102,113      | 18,298          | 113        | 18,411         | 3,422         | 2          | 3,424         | 710         | 1           | 711         |
| Grade 4                | N/Pct  | N/Pct       | N/Pct        | N/Pct           | N/Pct      | N/Pct          | N/Pct         | N/Pct      | N/Pct         | N/Pct       | N/Pct       | N/Pct       |
| Small group setting    | 4,260<br>4.1                                     | 3<br>1.2    | 4,263<br>4.1 | 11,340<br>58.2  | 62<br>43.4 | 11,402<br>58.1 | 801<br>32.8   | 0<br>0.0   | 801<br>32.8   | 473<br>67.3 | 1<br>50.0   | 474<br>67.2 |
| Extended time          | 5,173<br>5.0                                     | 4<br>1.6    | 5,177<br>5.0 | 3,274<br>16.8   | 44<br>30.8 | 3,318<br>16.9  | 184<br>7.5    | 0.0        | 184<br>7.5    | 108<br>15.4 | 1<br>50.0   | 109<br>15.5 |
| Frequent breaks        | 525<br>0.5                                       | 1<br>0.4    | 526<br>0.5   | 3,299<br>16.9   | 49<br>34.3 | 3,348<br>17.1  | 58<br>2.4     | 0.0        | 58<br>2.4     | 112<br>15.9 | 1<br>50.0   | 113<br>16.0 |
| Number assessed        | 103,866  | 250         | 104,116      | 19,480          | 143        | 19,623         | 2,442         | 1          | 2,443         | 703         | 2           | 705         |
| Grade 5                | N/Pct  | N/Pct       | N/Pct        | N/Pct           | N/Pct      | N/Pct          | N/Pct         | N/Pct      | N/Pct         | N/Pct       | N/Pct       | N/Pct       |
| Small group setting    | 3,529<br>3.4                                     | 13<br>3.6   | 3,542<br>3.4 | 11,934<br>61.9  | 84<br>48.0 | 12,018<br>61.8 | 642<br>30.9   | 1<br>50.0  | 643<br>30.9   | 469<br>67.6 | 5<br>62.5   | 474<br>67.5 |
| Extended time          | 7,592<br>7.3                                     | 21<br>5.7   | 7,613<br>7.3 | 3,752<br>19.5   | 55<br>31.4 | 3,807<br>19.6  | 183<br>8.8    | 0.0        | 183<br>8.8    | 142<br>20.5 | 4<br>50.0   | 146<br>20.8 |
| Frequent breaks        | 412<br>0.4                                       | 0<br>0.0    | 412<br>0.4   | 3,220<br>16.7   | 53<br>30.3 | 3,273<br>16.8  | 46<br>2.2     | 0.0        | 46<br>2.2     | 99<br>14.3  | 2<br>25.0   | 101<br>14.4 |
| Number assessed        | 104,045  | 366         | 104,411      | 19,273          | 175        | 19,448         | 2,076         | 2          | 2,078         | 694         | 8           | 702         |

#### Incidence of IEP and ELL Students Receiving Selected Accommodation on the 2014 PSSA: Reading (continued)

|                        | Classification of Students Regarding IEP and ELL |            |         |        |           |        |       |            |       |       |             |       |
|------------------------|--|------------|---------|--------|-----------|--------|-------|------------|-------|-------|-------------|-------|
| Accommodation Received | Gen  | eral Educa | tion    | IEP    | and non-E | LL     | ELL   | and non-li | EP    | Bot   | h IEP and E | LL    |
|                        | PPT  | CBT        | Total   | PPT    | CBT       | Total  | PPT   | CBT        | Total | PPT   | CBT         | Total |
| Grade 6                | N/Pct  | N/Pct      | N/Pct   | N/Pct  | N/Pct     | N/Pct  | N/Pct | N/Pct      | N/Pct | N/Pct | N/Pct       | N/Pct |
| Small group setting    | 2,135  | 13         | 2,148   | 11,019 | 186       | 11,205 | 398   | 12         | 410   | 385   | 6           | 391   |
|                        | 2.1  | 1.3        | 2.1     | 59.5   | 52.2      | 59.4   | 19.9  | 63.2       | 20.3  | 54.6  | 60.0        | 54.7  |
| Extended time          | 6,198  | 13         | 6,211   | 2,982  | 103       | 3,085  | 165   | 4          | 169   | 80    | 1           | 81    |
|                        | 6.0  | 1.3        | 5.9     | 16.1   | 28.9      | 16.4   | 8.2   | 21.1       | 8.4   | 11.3  | 10.0        | 11.3  |
| Frequent breaks        | 218  | 4          | 222     | 2,356  | 88        | 2,444  | 31    | 3          | 34    | 58    | 1           | 59    |
|                        | 0.2  | 0.4        | 0.2     | 12.7   | 24.7      | 13.0   | 1.5   | 15.8       | 1.7   | 8.2   | 10.0        | 8.3   |
| Number assessed        | 103,425  | 1,017      | 104,442 | 18,510 | 356       | 18,866 | 2,002 | 19         | 2,021 | 705   | 10          | 715   |
| Grade 7                | N/Pct  | N/Pct      | N/Pct   | N/Pct  | N/Pct     | N/Pct  | N/Pct | N/Pct      | N/Pct | N/Pct | N/Pct       | N/Pct |
| Small group setting    | 1,568  | 15         | 1,583   | 10,618 | 197       | 10,815 | 352   | 9          | 361   | 374   | 10          | 384   |
|                        | 1.5  | 1.0        | 1.5     | 56.7   | 41.4      | 56.3   | 16.9  | 47.4       | 17.2  | 50.7  | 71.4        | 51.1  |
| Extended time          | 5,649  | 9          | 5,658   | 2,563  | 137       | 2,700  | 174   | 3          | 177   | 84    | 3           | 87    |
|                        | 5.3  | 0.6        | 5.2     | 13.7   | 28.8      | 14.1   | 8.4   | 15.8       | 8.4   | 11.4  | 21.4        | 11.6  |
| Frequent breaks        | 133  | 3          | 136     | 1,616  | 86        | 1,702  | 27    | 3          | 30    | 57    | 0           | 57    |
|                        | 0.1  | 0.2        | 0.1     | 8.6    | 18.1      | 8.9    | 1.3   | 15.8       | 1.4   | 7.7   | 0.0         | 7.6   |
| Number assessed        | 106,460  | 1,540      | 108,000 | 18,727 | 476       | 19,203 | 2,080 | 19         | 2,099 | 737   | 14          | 751   |
| Grade 8                | N/Pct  | N/Pct      | N/Pct   | N/Pct  | N/Pct     | N/Pct  | N/Pct | N/Pct      | N/Pct | N/Pct | N/Pct       | N/Pct |
| Small group setting    | 1,439  | 42         | 1,481   | 10,406 | 332       | 10,738 | 320   | 6          | 326   | 293   | 9           | 302   |
|                        | 1.3  | 1.9        | 1.4     | 55.4   | 51.7      | 55.3   | 16.1  | 46.2       | 16.3  | 42.0  | 60.0        | 42.4  |
| Extended time          | 6,139  | 16         | 6,155   | 2,589  | 212       | 2,801  | 222   | 0          | 222   | 82    | 5           | 87    |
|                        | 5.7  | 0.7        | 5.6     | 13.8   | 33.0      | 14.4   | 11.2  | 0.0        | 11.1  | 11.8  | 33.3        | 12.2  |
| Frequent breaks        | 142  | 11         | 153     | 1,262  | 115       | 1,377  | 6     | 0          | 6     | 32    | 3           | 35    |
|                        | 0.1  | 0.5        | 0.1     | 6.7    | 17.9      | 7.1    | 0.3   | 0.0        | 0.3   | 4.6   | 20.0        | 4.9   |
| Number assessed        | 106,896  | 2,200      | 109,096 | 18,770 | 642       | 19,412 | 1,985 | 13         | 1,998 | 697   | 15          | 712   |

#### Incidence of IEP and ELL Students Receiving Selected Accommodation on the 2014 PSSA: Science

|                                      | Classification of Students Regarding IEP and ELL |            |              |               |            |               |            |            |            |            |             |            |
|--------------------------------------|--|------------|--------------|---------------|------------|---------------|------------|------------|------------|------------|-------------|------------|
| Accommodation Received               | Gen  | eral Educa | tion         | IEP           | and non-E  | LL            | ELL        | and non-li | EP         | Bot        | h IEP and E | IL.        |
|                                      | PPT  | CBT        | Total        | PPT           | CBT        | Total         | PPT        | CBT        | Total      | PPT        | CBT         | Total      |
| Grade 4                              | N/Pct  | N/Pct      | N/Pct        | N/Pct         | N/Pct      | N/Pct         | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct       | N/Pct      |
| Some test items/questions read aloud | 1,644  | 8          | 1,652        | 3,745         | 16         | 3,761         | 469        | 0          | 469        | 201        | 0           | 201        |
|                                      | 1.6  | 1.2        | 1.6          | 19.3          | 9.4        | 19.2          | 16.9       | 0.0        | 16.9       | 27.7       | 0.0         | 27.7       |
| All test items/questions read aloud  | 654  | 11         | 665          | 4,785         | 47         | 4,832         | 180        | 0          | 180        | 202        | 1           | 203        |
|                                      | 0.6  | 1.6        | 0.6          | 24.6          | 27.5       | 24.6          | 6.5        | 0.0        | 6.5        | 27.9       | 100.0       | 28.0       |
| Small group setting                  | 3,327  | 12         | 3,339        | 10,722        | 61         | 10,783        | 908        | 0          | 908        | 475        | 1           | 476        |
|                                      | 3.2  | 1.8        | 3.2          | 55.1          | 35.7       | 55.0          | 32.7       | 0.0        | 32.7       | 65.5       | 100.0       | 65.6       |
| Extended time                        | 2,008<br>1.9                                     | 11<br>1.6  | 2,019<br>1.9 | 2,242<br>11.5 | 44<br>25.7 | 2,286<br>11.7 | 128<br>4.6 | 0.0        | 128<br>4.6 | 89<br>12.3 | 1<br>100.0  | 90<br>12.4 |
| Frequent breaks                      | 310  | 2          | 312          | 2,311         | 41         | 2,352         | 54         | 0          | 54         | 61         | 1           | 62         |
|                                      | 0.3  | 0.3        | 0.3          | 11.9          | 24.0       | 12.0          | 1.9        | 0.0        | 1.9        | 8.4        | 100.0       | 8.5        |
| Number assessed                      | 103,298  | 685        | 103,983      | 19,449        | 171        | 19,620        | 2,774      | 2          | 2,776      | 725        | 1           | 726        |
| Grade 8                              | N/Pct  | N/Pct      | N/Pct        | N/Pct         | N/Pct      | N/Pct         | N/Pct      | N/Pct      | N/Pct      | N/Pct      | N/Pct       | N/Pct      |
| Some test items/questions read aloud | 133  | 0          | 133          | 1,338         | 122        | 1,460         | 66         | 4          | 70         | 66         | 7           | 73         |
|                                      | 0.1  | 0,0        | 0.1          | 7.2           | 16.2       | 7.6           | 3.0        | 25.0       | 3.1        | 9.3        | 46.7        | 10.1       |
| All test items/questions read aloud  | 35   | 8          | 43           | 974           | 81         | 1,055         | 18         | 0          | 18         | 34         | 0           | 34         |
|                                      | 0.0  | 0.2        | 0.0          | 5.3           | 10.7       | 5.5           | 0.8        | 0.0        | 0.8        | 4.8        | 0.0         | 4.7        |
| Small group setting                  | 1,288  | 41         | 1,329        | 9,479         | 365        | 9,844         | 329        | 6          | 335        | 284        | 9           | 293        |
|                                      | 1.2  | 1.2        | 1.2          | 51.2          | 48.3       | 51.1          | 14.7       | 37.5       | 14.9       | 40.2       | 60.0        | 40.6       |
| Extended time                        | 1,950  | 15         | 1,965        | 1,773         | 206        | 1,979         | 211        | 1          | 212        | 74         | 5           | 79         |
|                                      | 1.9  | 0.5        | 1.8          | 9,6           | 27.3       | 10.3          | 9.5        | 6.3        | 9.4        | 10.5       | 33.3        | 10.9       |
| Frequent breaks                      | 79   | 11         | 90           | 898           | 121        | 1,019         | 15         | 1          | 16         | 30         | 3           | 33         |
|                                      | 0.1  | 0.3        | 0.1          | 4.8           | 16.0       | 5,3           | 0.7        | 6.3        | 0.7        | 4.2        | 20.0        | 4.6        |
| Number assessed                      | 105,383  | 3,292      | 108,675      | 18,518        | 755        | 19,273        | 2,232      | 16         | 2,248      | 707        | 15          | 722        |

#### Incidence of IEP and ELL Students Receiving Selected Accommodation on the 2014 PSSA: Writing

|   | Classification of Students Regarding IEP and ELL |             |              |                |             |                |             |           |             |             |             |             |
|---|--|-------------|--------------|----------------|-------------|----------------|-------------|-----------|-------------|-------------|-------------|-------------|
| Accommodation Received                            | Gen  | eral Educat | tion         | IEP            | and non-E   | LL             | ELL         | and non-l | EP          | Bot         | h IEP and E | LL          |
|   | PPT  | CBT         | Total        | PPT            | СВТ         | Total          | PPT         | CBT       | Total       | PPT         | CBT         | Total       |
| Grade 5   | N/Pct  | N/Pct       | N/Pct        | N/Pct          | N/Pct       | N/Pct          | N/Pct       | N/Pct     | N/Pct       | N/Pct       | N/Pct       | N/Pct       |
| Some test<br>items/questions/prompt read<br>aloud | 483<br>0.5                                       | 13<br>5.4   | 496<br>0.5   | 3,693<br>20.0  | 25<br>21.9  | 3,718<br>20.0  | 208<br>10.8 | 1<br>50.0 | 209<br>10.8 | 179<br>29.4 | 4<br>80.0   | 183<br>29.9 |
| All test items/questions/prompt read aloud        | 165<br>0.2                                       | 0<br>0.0    | 165<br>0.2   | 1,179<br>6.4   | 38<br>33.3  | 1,217<br>6.6   | 42<br>2.2   | 0<br>0.0  | 42<br>2.2   | 35<br>5.8   | 1<br>20.0   | 36<br>5.9   |
| Small group setting                               | 2,436<br>2.4                                     | 13<br>5.4   | 2,449<br>2.4 | 10,251<br>55.5 | 74<br>64.9  | 10,325<br>55.6 | 539<br>28.0 | 1<br>50.0 | 540<br>28.0 | 390<br>64.1 | 5<br>100.0  | 395<br>64.4 |
| Extended time                                     | 3,798<br>3.7                                     | 20<br>8.3   | 3,818<br>3.7 | 2,138<br>11.6  | 49<br>43.0  | 2,187<br>11.8  | 95<br>4.9   | 0<br>0.0  | 95<br>4.9   | 74<br>12.2  | 4<br>80.0   | 78<br>12.7  |
| Frequent breaks                                   | 238<br>0.2                                       | 0<br>0.0    | 238<br>0.2   | 2,025<br>11.0  | 44<br>38.6  | 2,069<br>11.1  | 35<br>1.8   | 0<br>0.0  | 35<br>1.8   | 70<br>11.5  | 2<br>40.0   | 72<br>11.7  |
| Number assessed                                   | 103,312  | 241         | 103,553      | 18,456         | 114         | 18,570         | 1,928       | 2         | 1,930       | 608         | 5           | 613         |
| Grade 8   | N/Pct  | N/Pct       | N/Pct        | N/Pct          | N/Pct       | N/Pct          | N/Pct       | N/Pct     | N/Pct       | N/Pct       | N/Pct       | N/Pct       |
| Some test<br>items/questions/prompt read<br>aloud | 52<br>0.0  | 0<br>0.0    | 52<br>0.0    | 1,371<br>7.4   | 75<br>13.1  | 1,446<br>7.6   | 47<br>2.4   | 4<br>26.7 | 51<br>2.6   | 49<br>7.6   | 6<br>40.0   | 55<br>8.3   |
| All test items/questions/prompt read aloud        | 6<br>0.0   | 6<br>0.3    | 12<br>0.0    | 344<br>1.9     | 35<br>6.1   | 379<br>2.0     | 13<br>0.7   | 0<br>0.0  | 13<br>0.7   | 10<br>1.5   | 1<br>6.7    | 11<br>1.7   |
| Small group setting                               | 1,147<br>1.1                                     | 41<br>1.8   | 1,188<br>1.1 | 9,173<br>49.7  | 294<br>51.2 | 9,467<br>49.7  | 252<br>13.1 | 8<br>53.3 | 260<br>13.4 | 256<br>39.5 | 9<br>60.0   | 265<br>40.0 |
| Extended time                                     | 3,746<br>3.5                                     | 13<br>0.6   | 3,759<br>3.5 | 1,738<br>9.4   | 190<br>33.1 | 1,928<br>10.1  | 105<br>5.4  | 0<br>0.0  | 105<br>5.4  | 48<br>7.4   | 5<br>33.3   | 53<br>8.0   |
| Frequent breaks                                   | 75<br>0.1  | 11<br>0.5   | 86<br>0.1    | 897<br>4.9     | 104<br>18.1 | 1,001<br>5.3   | 8<br>0.4    | 0<br>0.0  | 8<br>0.4    | 23<br>3.5   | 3<br>20.0   | 26<br>3.9   |
| Number assessed                                   | 106,399  | 2,249       | 108,648      | 18,472         | 574         | 19,046         | 1,930       | 15        | 1,945       | 648         | 15          | 663         |

# Appendix M:

## Cut Scores and Scale Transformations

| Column<br>Heading | Definition                     |
|-------------------|--------------------------------|
| LOSS              | Lowest Obtainable Scaled Score |

Appendix M: Cut Scores and Scale Transformations

|              |       |                   |      | Scal  | led Score C | Cuts |         | Logit Cuts | 3      |
|--------------|-------|-------------------|------|-------|-------------|------|---------|------------|--------|
|              | Grade | Scaling           | LOSS | Basic | Prof.       | Adv. | Basic   | Prof.      | Adv.   |
|              | 3     | 128.81X + 964.24  | 750  | 1044  | 1180        | 1370 | 0.6192  | 1.6750     | 3.1501 |
| S            | 4     | 200.00X + 1183.52 | 700  | 1156  | 1246        | 1445 | -0.1376 | 0.3124     | 1.3074 |
| ıati         | 5     | 189.80X + 1134.10 | 700  | 1158  | 1312        | 1483 | 0.1259  | 0.9373     | 1.8383 |
| Mathematics  | 6     | 200.00X + 1201.54 | 700  | 1174  | 1298        | 1476 | -0.1377 | 0.4823     | 1.3723 |
| ath          | 7     | 200.00X + 1225.28 | 700  | 1183  | 1298        | 1472 | -0.2114 | 0.3636     | 1.2336 |
| $\mathbf{Z}$ | 8     | 177.53X + 1182.30 | 700  | 1171  | 1284        | 1446 | -0.0637 | 0.5729     | 1.4854 |
|              | 11    | 206.42X + 1203.10 | 700  | 1167  | 1304        | 1509 | -0.1749 | 0.4888     | 1.4819 |
|              | 3     | 123.80X + 1207.70 | 1000 | 1168  | 1235        | 1442 | -0.3207 | 0.2205     | 1.8926 |
|              | 4     | 200.00X + 1156.30 | 700  | 1112  | 1255        | 1469 | -0.2215 | 0.4935     | 1.5635 |
| Reading      | 5     | 198.80X + 1094.60 | 700  | 1137  | 1275        | 1497 | 0.2133  | 0.9074     | 2.0241 |
| adi          | 6     | 200.00X + 1168.96 | 700  | 1121  | 1278        | 1456 | -0.2398 | 0.5452     | 1.4352 |
| Re           | 7     | 200.00X + 1194.40 | 700  | 1131  | 1279        | 1470 | -0.3170 | 0.4230     | 1.3780 |
|              | 8     | 234.82X + 1113.70 | 700  | 1146  | 1280        | 1473 | 0.1376  | 0.7082     | 1.5301 |
|              | 11    | 245.45X + 1115.20 | 700  | 1112  | 1257        | 1492 | -0.0130 | 0.5777     | 1.5351 |
| ce           | 7     | 176.75X + 1225.65 | 1050 | 1150  | 1275        | 1483 | -0.4280 | 0.2792     | 1.4560 |
| Science      | 8     | 191.54X + 1196.64 | 925  | 1150  | 1275        | 1464 | -0.2435 | 0.4091     | 1.3958 |
|              | 11    | 101.81X + 1194.69 | 1050 | 1150  | 1275        | 1347 | -0.4390 | 0.7888     | 1.4960 |
| Writing      | 7     | 100.00X + 1071.44 | 700  | 745   | 1236        | 1909 | -3.2644 | 1.6456     | 8.3756 |
| riti         | 8     | 100.00X + 1123.84 | 700  | 914   | 1236        | 1748 | -2.0984 | 1.1216     | 6.2416 |
| M            | 11    | 100.00X + 1244.30 | 700  | 952   | 1236        | 1806 | -2.9230 | -0.0830    | 5.6170 |

# Appendix N:

### Raw-to-Scaled Score Conversion Tables

| Column<br>Heading | Definition                   |
|-------------------|------------------------------|
| Raw               | Raw score                    |
| Meas              | Rasch measure                |
| MeasSE            | Rasch measure standard error |
| SS                | Scaled score                 |
| SSSE              | Scaled score standard error  |
| Freq              | Frequency                    |
| Freq%             | Frequency percent            |
| Cum               | Cumulative frequency         |
| Cum%              | Cumulative frequency percent |
| Pct               | Percentile                   |

| N / C . 41. |      | 42   | C     | ١ | 1  |
|-------------|------|------|-------|---|----|
| Math        | ıemz | HICS | CTENO | œ | .1 |

| Raw      | matics Gra<br>Meas | MeasSE | SS          | SSSE     | Freq | Freq% | Cum      | Cum% | Pct |
|----------|--------------------|--------|-------------|----------|------|-------|----------|------|-----|
| Kaw<br>0 | -4.9878            | 1.8340 | <b>75</b> 0 | 236      | -    | 0.0   | Cum<br>0 | 0.0  |     |
|          |                    |        | 750<br>750  |          | 0    |       | 0        |      | 0   |
| 1        | -3.7626            | 1.0151 |             | 131      | 0    | 0.0   |          | 0.0  | 0   |
| 2        | -3.0390            | 0.7284 | 750<br>750  | 94       | 0    | 0.0   | 0        | 0.0  | 0   |
| 3        | -2.6028            | 0.6034 | 750<br>750  | 78       | 0    | 0.0   | 0        | 0.0  | 0   |
| 4        | -2.2842            | 0.5301 | 750         | 68       | 1    | 0.0   | 1        | 0.0  | 1   |
| 5        | -2.0299            | 0.4809 | 750<br>750  | 62<br>57 | 1    | 0.0   | 2        | 0.0  | 1   |
| 6        | -1.8162            | 0.4453 | 750<br>754  | 57       | 4    | 0.0   | 6        | 0.0  | 1   |
| 7        | -1.6303            | 0.4181 | 754         | 54       | 15   | 0.0   | 21       | 0.0  | 1   |
| 8        | -1.4647            | 0.3966 | 776         | 51       | 28   | 0.0   | 49       | 0.0  | 1   |
| 9        | -1.3144            | 0.3791 | 795         | 49       | 71   | 0.1   | 120      | 0.1  | 1   |
| 10       | -1.1762            | 0.3647 | 813         | 47       | 91   | 0.1   | 211      | 0.2  | 1   |
| 11       | -1.0476            | 0.3526 | 829         | 45       | 141  | 0.1   | 352      | 0.3  | 1   |
| 12       | -0.9269            | 0.3424 | 845         | 44       | 244  | 0.2   | 596      | 0.5  | 1   |
| 13       | -0.8128            | 0.3335 | 860         | 43       | 274  | 0.2   | 870      | 0.7  | 1   |
| 14       | -0.7042            | 0.3259 | 874         | 42       | 404  | 0.3   | 1274     | 1.0  | 1   |
| 15       | -0.6001            | 0.3193 | 887         | 41       | 488  | 0.4   | 1762     | 1.4  | 1   |
| 16       | -0.5001            | 0.3135 | 900         | 40       | 542  | 0.4   | 2304     | 1.8  | 2   |
| 17       | -0.4034            | 0.3084 | 912         | 40       | 570  | 0.5   | 2874     | 2.3  | 2   |
| 18       | -0.3098            | 0.3039 | 924         | 39       | 644  | 0.5   | 3518     | 2.8  | 3   |
| 19       | -0.2187            | 0.2999 | 936         | 39       | 678  | 0.5   | 4196     | 3.4  | 3   |
| 20       | -0.1298            | 0.2964 | 948         | 38       | 709  | 0.6   | 4905     | 3.9  | 4   |
| 21       | -0.0429            | 0.2933 | 959         | 38       | 731  | 0.6   | 5636     | 4.5  | 4   |
| 22       | 0.0423             | 0.2905 | 970         | 37       | 738  | 0.6   | 6374     | 5.1  | 5   |
| 23       | 0.1260             | 0.2881 | 980         | 37       | 849  | 0.7   | 7223     | 5.8  | 5   |
| 24       | 0.2083             | 0.2859 | 991         | 37       | 874  | 0.7   | 8097     | 6.5  | 6   |
| 25       | 0.2895             | 0.2840 | 1002        | 37       | 894  | 0.7   | 8991     | 7.2  | 7   |
| 26       | 0.3697             | 0.2824 | 1012        | 36       | 950  | 0.8   | 9941     | 8.0  | 8   |
| 27       | 0.4490             | 0.2809 | 1022        | 36       | 965  | 0.8   | 10906    | 8.7  | 8   |
| 28       | 0.5276             | 0.2796 | 1032        | 36       | 1015 | 0.8   | 11921    | 9.6  | 9   |
| 29       | 0.6054             | 0.2786 | 1042        | 36       | 977  | 0.8   | 12898    | 10.3 | 10  |
| 30       | 0.6828             | 0.2776 | 1052        | 36       | 1045 | 0.8   | 13943    | 11.2 | 11  |
| 31       | 0.7596             | 0.2769 | 1062        | 36       | 1076 | 0.9   | 15019    | 12.0 | 12  |
| 32       | 0.8361             | 0.2763 | 1072        | 36       | 1151 | 0.9   | 16170    | 13.0 | 13  |
| 33       | 0.9123             | 0.2758 | 1082        | 36       | 1223 | 1.0   | 17393    | 13.9 | 13  |
| 34       | 0.9883             | 0.2755 | 1092        | 35       | 1310 | 1.1   | 18703    | 15.0 | 14  |
| 35       | 1.0641             | 0.2753 | 1101        | 35       | 1337 | 1.1   | 20040    | 16.1 | 16  |
| 36       | 1.1398             | 0.2752 | 1111        | 35       | 1438 | 1.2   | 21478    | 17.2 | 17  |
| 37       | 1.2156             | 0.2752 | 1121        | 35       | 1441 | 1.2   | 22919    | 18.4 | 18  |
| 38       | 1.2914             | 0.2754 | 1131        | 35       | 1499 | 1.2   | 24418    | 19.6 | 19  |
| 39       | 1.3673             | 0.2758 | 1140        | 36       | 1569 | 1.3   | 25987    | 20.8 | 20  |
| 40       | 1.4435             | 0.2762 | 1150        | 36       | 1623 | 1.3   | 27610    | 22.1 | 21  |
| 41       | 1.5199             | 0.2768 | 1160        | 36       | 1703 | 1.4   | 29313    | 23.5 | 23  |
| 42       | 1.5968             | 0.2776 | 1170        | 36       | 1804 | 1.4   | 31117    | 25.0 | 24  |
| 43       | 1.6741             | 0.2785 | 1180        | 36       | 1876 | 1.5   | 32993    | 26.5 | 26  |
| 44       | 1.7520             | 0.2797 | 1190        | 36       | 1875 | 1.5   | 34868    | 28.0 | 27  |
| 45       | 1.8305             | 0.2810 | 1200        | 36       | 1981 | 1.6   | 36849    | 29.5 | 29  |
| 46       | 1.9099             | 0.2815 | 1210        | 36       | 2021 | 1.6   | 38870    | 31.2 | 30  |
| 47       | 1.9902             | 0.2823 | 1210        | 37       | 2021 | 1.7   | 40954    | 32.8 | 32  |
| 48       | 2.0716             | 0.2843 | 1221        | 37       | 2278 | 1.7   | 43232    | 34.7 | 34  |
|          |                    |        |             |          |      |       |          |      |     |
| 49       | 2.1542             | 0.2886 | 1242        | 37       | 2391 | 1.9   | 45623    | 36.6 | 36  |

| - | 50 | 2.2382 | 0.2912 | 1253 | 38  | 2462 | 2.0 | 48085  | 38.6  | 38 |
|---|----|--------|--------|------|-----|------|-----|--------|-------|----|
|   | 51 | 2.3239 | 0.2942 | 1264 | 38  | 2538 | 2.0 | 50623  | 40.6  | 40 |
|   | 52 | 2.4114 | 0.2976 | 1275 | 38  | 2592 | 2.1 | 53215  | 42.7  | 42 |
|   | 53 | 2.5011 | 0.3014 | 1286 | 39  | 2708 | 2.2 | 55923  | 44.8  | 44 |
|   | 54 | 2.5932 | 0.3058 | 1298 | 39  | 2782 | 2.2 | 58705  | 47.1  | 46 |
|   | 55 | 2.6882 | 0.3107 | 1311 | 40  | 2944 | 2.4 | 61649  | 49.4  | 48 |
|   | 56 | 2.7865 | 0.3163 | 1323 | 41  | 3152 | 2.5 | 64801  | 52.0  | 51 |
|   | 57 | 2.8885 | 0.3226 | 1336 | 42  | 3278 | 2.6 | 68079  | 54.6  | 53 |
|   | 58 | 2.9948 | 0.3298 | 1350 | 42  | 3516 | 2.8 | 71595  | 57.4  | 56 |
|   | 59 | 3.1062 | 0.3380 | 1364 | 44  | 3601 | 2.9 | 75196  | 60.3  | 59 |
|   | 60 | 3.2236 | 0.3474 | 1379 | 45  | 3813 | 3.1 | 79009  | 63.4  | 62 |
|   | 61 | 3.3480 | 0.3582 | 1395 | 46  | 4020 | 3.2 | 83029  | 66.6  | 65 |
|   | 62 | 3.4807 | 0.3708 | 1413 | 48  | 4144 | 3.3 | 87173  | 69.9  | 68 |
|   | 63 | 3.6237 | 0.3857 | 1431 | 50  | 4403 | 3.5 | 91576  | 73.4  | 72 |
|   | 64 | 3.7792 | 0.4035 | 1451 | 52  | 4537 | 3.6 | 96113  | 77.1  | 75 |
|   | 65 | 3.9507 | 0.4253 | 1473 | 55  | 4756 | 3.8 | 100869 | 80.9  | 79 |
|   | 66 | 4.1429 | 0.4527 | 1498 | 58  | 4794 | 3.8 | 105663 | 84.7  | 83 |
|   | 67 | 4.3637 | 0.4884 | 1526 | 63  | 4651 | 3.7 | 110314 | 88.5  | 87 |
|   | 68 | 4.6255 | 0.5376 | 1560 | 69  | 4371 | 3.5 | 114685 | 92.0  | 90 |
| _ | 69 | 4.9526 | 0.6109 | 1602 | 79  | 3843 | 3.1 | 118528 | 95.0  | 94 |
|   | 70 | 5.3986 | 0.7358 | 1660 | 95  | 3196 | 2.6 | 121724 | 97.6  | 96 |
|   | 71 | 6.1345 | 1.0219 | 1754 | 132 | 2071 | 1.7 | 123795 | 99.3  | 98 |
|   | 72 | 7.3704 | 1.8387 | 1914 | 237 | 907  | 0.7 | 124702 | 100.0 | 99 |
|   |    |        |        |      |     |      |     |        |       |    |

| Mat | heme    | atics | Grad  | Δ 4 |
|-----|---------|-------|-------|-----|
| via | 1161112 | 11165 | TI AU |     |

|        | matics Gra         |                  | aa         | aaar     | Б          | T 0/  | C          | Ω 0/       | D :    |
|--------|--------------------|------------------|------------|----------|------------|-------|------------|------------|--------|
| Raw    | Meas               | MeasSE           | SS         | SSSE     | Freq       | Freq% | Cum        | Cum%       | Pct    |
| 0      | -5.7400            | 1.8324           | 700        | 366      | 0          | 0.0   | 0          | 0.0        | 0      |
| 1      | -4.5191            | 1.0121           | 700        | 202      | 2          | 0.0   | 2          | 0.0        | 1      |
| 2      | -3.8015            | 0.7243           | 700        | 145      | 0          | 0.0   | 2          | 0.0        | 1      |
| 3      | -3.3713            | 0.5985           | 700        | 120      | 1          | 0.0   | 3          | 0.0        | 1      |
|        | -3.0587            | 0.5245           | 700        | 105      | 1          | 0.0   | 4          | 0.0        | 1      |
|        | -2.8104            | 0.4746           | 700        | 95       | 5          | 0.0   | 9          | 0.0        | 1<br>1 |
| 6<br>7 | -2.6027            | 0.4384           | 700        | 88       | 12<br>25   | 0.0   | 21<br>46   | 0.0        | 1      |
| 8      | -2.4229            | 0.4106           | 700<br>731 | 82<br>78 | 54         | 0.0   |            | 0.0        |        |
| 9      | -2.2634            | 0.3886           | 760        |          | 75         | 0.0   | 100        | 0.1<br>0.1 | 1      |
| 10     | -2.1196<br>-1.9878 | 0.3706<br>0.3557 | 786        | 74<br>71 | 130        | 0.1   | 175<br>305 | 0.1        | 1      |
| 10     | -1.9678            | 0.3337           | 810        | 69       | 207        | 0.1   | 512        | 0.2        | 1      |
| 12     | -1.7520            | 0.3430           | 833        |          | 321        | 0.2   | 833        | 0.4        | 1      |
| 13     | -1.7320            | 0.3322           | 855        | 66<br>65 | 373        | 0.3   | 1206       | 1.0        | 1      |
| 13     |                    | 0.3228           | 875        | 63       | 373<br>499 | 0.3   | 1705       | 1.0        |        |
| 15     | -1.5433<br>-1.4466 | 0.3146           | 894        | 61       | 576        | 0.4   | 2281       | 1.8        | 1 2    |
| 16     | -1.4400            | 0.3073           | 913        | 60       | 674        | 0.5   | 2955       | 2.3        | 2      |
| 17     | -1.3342            | 0.3009           | 930        | 59       | 702        | 0.5   | 3657       | 2.3        | 3      |
| 18     | -1.2034            | 0.2932           | 930        | 58       | 736        | 0.6   | 4393       | 3.5        | 3      |
| 19     | -1.1798            | 0.2854           | 964        | 57       | 764        | 0.6   | 5157       | 4.1        | 4      |
| 20     | -1.0168            | 0.2813           | 980        | 56       | 812        | 0.6   | 5969       | 4.7        | 4      |
| 21     | -0.9387            | 0.2775           | 996        | 56       | 881        | 0.7   | 6850       | 5.4        | 5      |
| 22     | -0.8627            | 0.2741           | 1011       | 55       | 866        | 0.7   | 7716       | 6.1        | 6      |
| 23     | -0.7884            | 0.2741           | 1011       | 54       | 911        | 0.7   | 8627       | 6.8        | 6      |
| 24     | -0.7157            | 0.2683           | 1040       | 54       | 947        | 0.7   | 9574       | 7.5        | 7      |
| 25     | -0.6444            | 0.2657           | 1055       | 53       | 1017       | 0.8   | 10591      | 8.3        | 8      |
| 26     | -0.5744            | 0.2635           | 1069       | 53       | 1042       | 0.8   | 11633      | 9.2        | 9      |
| 27     | -0.5055            | 0.2614           | 1082       | 52       | 1095       | 0.9   | 12728      | 10.0       | 10     |
| 28     | -0.4377            | 0.2596           | 1096       | 52       | 1127       | 0.9   | 13855      | 10.9       | 10     |
| 29     | -0.3708            | 0.2579           | 1109       | 52       | 1224       | 1.0   | 15079      | 11.9       | 11     |
| 30     | -0.3046            | 0.2565           | 1123       | 51       | 1217       | 1.0   | 16296      | 12.8       | 12     |
| 31     | -0.2391            | 0.2552           | 1136       | 51       | 1308       | 1.0   | 17604      | 13.9       | 13     |
| 32     | -0.1743            | 0.2542           | 1149       | 51       | 1336       | 1.1   | 18940      | 14.9       | 14     |
| 33     | -0.1099            | 0.2533           | 1162       | 51       | 1466       | 1.2   | 20406      | 16.1       | 16     |
| 34     | -0.0459            | 0.2526           | 1174       | 51       | 1453       | 1.1   | 21859      | 17.2       | 17     |
| 35     | 0.0177             | 0.2521           | 1187       | 50       | 1527       | 1.2   | 23386      | 18.4       | 18     |
| 36     | 0.0812             | 0.2517           | 1200       | 50       | 1537       | 1.2   | 24923      | 19.6       | 19     |
| 37     | 0.1446             | 0.2516           | 1212       | 50       | 1736       | 1.4   | 26659      | 21.0       | 20     |
| 38     | 0.2078             | 0.2517           | 1225       | 50       | 1681       | 1.3   | 28340      | 22.3       | 22     |
| 39     | 0.2712             | 0.2519           | 1238       | 50       | 1792       | 1.4   | 30132      | 23.7       | 23     |
| 40     | 0.3348             | 0.2524           | 1250       | 50       | 1873       | 1.5   | 32005      | 25.2       | 24     |
| 41     | 0.3987             | 0.2531           | 1263       | 51       | 1851       | 1.5   | 33856      | 26.7       | 26     |
| 42     | 0.4629             | 0.2540           | 1276       | 51       | 2048       | 1.6   | 35904      | 28.3       | 27     |
| 43     | 0.5277             | 0.2551           | 1289       | 51       | 2026       | 1.6   | 37930      | 29.9       | 29     |
| 44     | 0.5931             | 0.2565           | 1302       | 51       | 2175       | 1.7   | 40105      | 31.6       | 31     |
| 45     | 0.6593             | 0.2582           | 1315       | 52       | 2244       | 1.8   | 42349      | 33.4       | 32     |
| 46     | 0.7265             | 0.2601           | 1329       | 52       | 2386       | 1.9   | 44735      | 35.2       | 34     |
| 47     | 0.7947             | 0.2624           | 1342       | 52       | 2477       | 2.0   | 47212      | 37.2       | 36     |
| 48     | 0.8642             | 0.2649           | 1356       | 53       | 2664       | 2.1   | 49876      | 39.3       | 38     |
| 49     | 0.9352             | 0.2678           | 1371       | 54       | 2604       | 2.1   | 52480      | 41.4       | 40     |
|        |                    |                  |            |          |            |       |            |            |        |

| 50     | 1.0077 | 0.2711 | 1385 | 54  | 2883 | 2.3 | 55363  | 43.6  | 42 |
|--------|--------|--------|------|-----|------|-----|--------|-------|----|
| 51     | 1.0822 | 0.2748 | 1400 | 55  | 2875 | 2.3 | 58238  | 45.9  | 45 |
| 52     | 1.1588 | 0.2789 | 1415 | 56  | 3051 | 2.4 | 61289  | 48.3  | 47 |
| 53     | 1.2379 | 0.2835 | 1431 | 57  | 3158 | 2.5 | 64447  | 50.8  | 50 |
| 54     | 1.3197 | 0.2887 | 1447 | 58  | 3280 | 2.6 | 67727  | 53.4  | 52 |
| 55     | 1.4046 | 0.2944 | 1464 | 59  | 3306 | 2.6 | 71033  | 56.0  | 55 |
| 56     | 1.4932 | 0.3009 | 1482 | 60  | 3494 | 2.8 | 74527  | 58.7  | 57 |
| 57     | 1.5859 | 0.3081 | 1501 | 62  | 3676 | 2.9 | 78203  | 61.6  | 60 |
| 58     | 1.6833 | 0.3163 | 1520 | 63  | 3818 | 3.0 | 82021  | 64.6  | 63 |
| <br>59 | 1.7863 | 0.3256 | 1541 | 65  | 3740 | 2.9 | 85761  | 67.6  | 66 |
| 60     | 1.8957 | 0.3362 | 1563 | 67  | 4008 | 3.2 | 89769  | 70.7  | 69 |
| 61     | 2.0127 | 0.3483 | 1586 | 70  | 4003 | 3.2 | 93772  | 73.9  | 72 |
| 62     | 2.1389 | 0.3624 | 1611 | 72  | 4139 | 3.3 | 97911  | 77.1  | 76 |
| 63     | 2.2762 | 0.3790 | 1639 | 76  | 4139 | 3.3 | 102050 | 80.4  | 79 |
| <br>64 | 2.4272 | 0.3989 | 1669 | 80  | 4180 | 3.3 | 106230 | 83.7  | 82 |
| 65     | 2.5958 | 0.4230 | 1703 | 85  | 4134 | 3.3 | 110364 | 87.0  | 85 |
| 66     | 2.7873 | 0.4533 | 1741 | 91  | 3853 | 3.0 | 114217 | 90.0  | 88 |
| 67     | 3.0102 | 0.4924 | 1786 | 98  | 3579 | 2.8 | 117796 | 92.8  | 91 |
| 68     | 3.2783 | 0.5457 | 1839 | 109 | 3081 | 2.4 | 120877 | 95.2  | 94 |
| <br>69 | 3.6173 | 0.6236 | 1907 | 125 | 2546 | 2.0 | 123423 | 97.3  | 96 |
| 70     | 4.0838 | 0.7532 | 2000 | 151 | 1982 | 1.6 | 125405 | 98.8  | 98 |
| 71     | 4.8525 | 1.0417 | 2154 | 208 | 1089 | 0.9 | 126494 | 99.7  | 99 |
| 72     | 6.1216 | 1.8533 | 2408 | 371 | 417  | 0.3 | 126911 | 100.0 | 99 |

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|-----|------|-------|-------|----|---|
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|     | natics Gra |        |      |      |      |       |       |      |     |
|-----|------------|--------|------|------|------|-------|-------|------|-----|
| Raw | Meas       | MeasSE | SS   | SSSE | Freq | Freq% | Cum   | Cum% | Pct |
| 0   | -5.1150    | 1.8331 | 700  | 348  | 0    | 0.0   | 0     | 0.0  | 0   |
| 1   | -3.8924    | 1.0131 | 700  | 192  | 0    | 0.0   | 0     | 0.0  | 0   |
| 2   | -3.1730    | 0.7253 | 700  | 138  | 0    | 0.0   | 0     | 0.0  | 0   |
| 3   | -2.7415    | 0.5993 | 700  | 114  | 0    | 0.0   | 0     | 0.0  | 0   |
| 4   | -2.4281    | 0.5251 | 700  | 100  | 0    | 0.0   | 0     | 0.0  | 0   |
| 5   | -2.1793    | 0.4750 | 720  | 90   | 4    | 0.0   | 4     | 0.0  | 1   |
| 6   | -1.9715    | 0.4384 | 760  | 83   | 15   | 0.0   | 19    | 0.0  | 1   |
| 7   | -1.7918    | 0.4103 | 794  | 78   | 17   | 0.0   | 36    | 0.0  | 1   |
| 8   | -1.6328    | 0.3879 | 824  | 74   | 40   | 0.0   | 76    | 0.1  | 1   |
| 9   | -1.4895    | 0.3697 | 851  | 70   | 97   | 0.1   | 173   | 0.1  | 1   |
| 10  | -1.3586    | 0.3545 | 876  | 67   | 176  | 0.1   | 349   | 0.3  | 1   |
| 11  | -1.2376    | 0.3416 | 899  | 65   | 272  | 0.2   | 621   | 0.5  | 1   |
| 12  | -1.1247    | 0.3306 | 921  | 63   | 441  | 0.3   | 1062  | 0.8  | 1   |
| 13  | -1.0186    | 0.3210 | 941  | 61   | 616  | 0.5   | 1678  | 1.3  | 1   |
| 14  | -0.9183    | 0.3127 | 960  | 59   | 697  | 0.6   | 2375  | 1.9  | 2   |
| 15  | -0.8228    | 0.3055 | 978  | 58   | 855  | 0.7   | 3230  | 2.5  | 2   |
| 16  | -0.7314    | 0.2991 | 995  | 57   | 1050 | 0.8   | 4280  | 3.4  | 3   |
| 17  | -0.6438    | 0.2934 | 1012 | 56   | 1111 | 0.9   | 5391  | 4.3  | 4   |
| 18  | -0.5591    | 0.2884 | 1028 | 55   | 1165 | 0.9   | 6556  | 5.2  | 5   |
| 19  | -0.4773    | 0.2839 | 1044 | 54   | 1300 | 1.0   | 7856  | 6.2  | 6   |
| 20  | -0.3978    | 0.2800 | 1059 | 53   | 1385 | 1.1   | 9241  | 7.3  | 7   |
| 21  | -0.3204    | 0.2765 | 1073 | 52   | 1319 | 1.0   | 10560 | 8.3  | 8   |
| 22  | -0.2448    | 0.2734 | 1088 | 52   | 1365 | 1.1   | 11925 | 9.4  | 9   |
| 23  | -0.1708    | 0.2707 | 1102 | 51   | 1481 | 1.2   | 13406 | 10.6 | 10  |
| 24  | -0.0982    | 0.2683 | 1115 | 51   | 1502 | 1.2   | 14908 | 11.8 | 11  |
| 25  | -0.0268    | 0.2662 | 1129 | 51   | 1483 | 1.2   | 16391 | 12.9 | 12  |
| 26  | 0.0435     | 0.2643 | 1142 | 50   | 1587 | 1.3   | 17978 | 14.2 | 14  |
| 27  | 0.1130     | 0.2627 | 1156 | 50   | 1570 | 1.2   | 19548 | 15.4 | 15  |
| 28  | 0.1816     | 0.2614 | 1169 | 50   | 1624 | 1.3   | 21172 | 16.7 | 16  |
| 29  | 0.2497     | 0.2603 | 1181 | 49   | 1673 | 1.3   | 22845 | 18.0 | 17  |
| 30  | 0.3172     | 0.2594 | 1194 | 49   | 1671 | 1.3   | 24516 | 19.4 | 19  |
| 31  | 0.3843     | 0.2587 | 1207 | 49   | 1703 | 1.3   | 26219 | 20.7 | 20  |
| 32  | 0.4511     | 0.2582 | 1220 | 49   | 1773 | 1.4   | 27992 | 22.1 | 21  |
| 33  | 0.5176     | 0.2579 | 1232 | 49   | 1789 | 1.4   | 29781 | 23.5 | 23  |
| 34  | 0.5841     | 0.2577 | 1245 | 49   | 1812 | 1.4   | 31593 | 24.9 | 24  |
| 35  | 0.6505     | 0.2578 | 1258 | 49   | 1839 | 1.5   | 33432 | 26.4 | 26  |
| 36  | 0.7170     | 0.2580 | 1270 | 49   | 2016 | 1.6   | 35448 | 28.0 | 27  |
| 37  | 0.7837     | 0.2584 | 1283 | 49   | 1937 | 1.5   | 37385 | 29.5 | 29  |
| 38  | 0.8506     | 0.2590 | 1296 | 49   | 2045 | 1.6   | 39430 | 31.1 | 30  |
| 39  | 0.9179     | 0.2598 | 1308 | 49   | 2156 | 1.7   | 41586 | 32.8 | 32  |
| 40  | 0.9856     | 0.2607 | 1321 | 49   | 2134 | 1.7   | 43720 | 34.5 | 34  |
| 41  | 1.0539     |        | 1334 | 50   | 2195 | 1.7   | 45915 | 36.2 | 35  |
| 42  | 1.1228     | 0.2632 | 1347 | 50   | 2166 | 1.7   | 48081 | 38.0 | 37  |
| 43  | 1.1925     | 0.2648 | 1360 | 50   | 2293 | 1.8   | 50374 | 39.8 | 39  |
| 44  | 1.2631     | 0.2665 | 1374 | 51   | 2333 | 1.8   | 52707 | 41.6 | 41  |
| 45  | 1.3346     | 0.2685 | 1387 | 51   | 2355 | 1.9   | 55062 | 43.5 | 43  |
| 46  | 1.4073     | 0.2707 | 1401 | 51   | 2380 | 1.9   | 57442 | 45.3 | 44  |
| 47  | 1.4813     | 0.2732 | 1415 | 52   | 2514 | 2.0   | 59956 | 47.3 | 46  |
| 48  | 1.5567     | 0.2760 | 1430 | 52   | 2540 | 2.0   | 62496 | 49.3 | 48  |
| 49  | 1.6337     | 0.2791 | 1444 | 53   | 2584 | 2.0   | 65080 | 51.4 | 50  |

| 50 | 1.7125 | 0.2824 | 1459 | 54  | 2695 | 2.1 | 67775  | 53.5  | 52 |
|----|--------|--------|------|-----|------|-----|--------|-------|----|
| 51 | 1.7933 | 0.2862 | 1474 | 54  | 2681 | 2.1 | 70456  | 55.6  | 55 |
| 52 | 1.8764 | 0.2904 | 1490 | 55  | 2763 | 2.2 | 73219  | 57.8  | 57 |
| 53 | 1.9621 | 0.2950 | 1507 | 56  | 2761 | 2.2 | 75980  | 60.0  | 59 |
| 54 | 2.0506 | 0.3001 | 1523 | 57  | 2877 | 2.3 | 78857  | 62.2  | 61 |
| 55 | 2.1424 | 0.3059 | 1541 | 58  | 2973 | 2.3 | 81830  | 64.6  | 63 |
| 56 | 2.2378 | 0.3123 | 1559 | 59  | 3067 | 2.4 | 84897  | 67.0  | 66 |
| 57 | 2.3376 | 0.3195 | 1578 | 61  | 3160 | 2.5 | 88057  | 69.5  | 68 |
| 58 | 2.4423 | 0.3277 | 1598 | 62  | 3256 | 2.6 | 91313  | 72.1  | 71 |
| 59 | 2.5527 | 0.3370 | 1619 | 64  | 3292 | 2.6 | 94605  | 74.7  | 73 |
| 60 | 2.6698 | 0.3476 | 1641 | 66  | 3400 | 2.7 | 98005  | 77.4  | 76 |
| 61 | 2.7948 | 0.3599 | 1665 | 68  | 3338 | 2.6 | 101343 | 80.0  | 79 |
| 62 | 2.9295 | 0.3743 | 1690 | 71  | 3512 | 2.8 | 104855 | 82.8  | 81 |
| 63 | 3.0758 | 0.3912 | 1718 | 74  | 3410 | 2.7 | 108265 | 85.5  | 84 |
| 64 | 3.2366 | 0.4113 | 1748 | 78  | 3284 | 2.6 | 111549 | 88.0  | 87 |
| 65 | 3.4157 | 0.4358 | 1782 | 83  | 3215 | 2.5 | 114764 | 90.6  | 89 |
| 66 | 3.6185 | 0.4661 | 1821 | 88  | 3131 | 2.5 | 117895 | 93.1  | 92 |
| 67 | 3.8535 | 0.5048 | 1865 | 96  | 2798 | 2.2 | 120693 | 95.3  | 94 |
| 68 | 4.1340 | 0.5567 | 1919 | 106 | 2314 | 1.8 | 123007 | 97.1  | 96 |
| 69 | 4.4844 | 0.6317 | 1985 | 120 | 1796 | 1.4 | 124803 | 98.5  | 98 |
| 70 | 4.9586 | 0.7562 | 2075 | 144 | 1195 | 0.9 | 125998 | 99.5  | 99 |
| 71 | 5.7268 | 1.0383 | 2221 | 197 | 538  | 0.4 | 126536 | 99.9  | 99 |
| 72 | 6.9869 | 1.8481 | 2460 | 351 | 157  | 0.1 | 126693 | 100.0 | 99 |
|    |        |        |      |     |      |     |        |       |    |

| N / I - 4 | 1    | 4      | C 1   |     |
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| Raw      | natics Gra<br>Meas | MeasSE           | SS           | SSSE     | Freq         | Freq%      | Cum            | Cum%         | Pct      |
|----------|--------------------|------------------|--------------|----------|--------------|------------|----------------|--------------|----------|
| 0        | -5.6741            | 1.8331           | 700          | 367      | 0            | 0.0        | 0              | 0.0          | 0        |
| 1        | -4.4513            | 1.0133           | 700          | 203      | 0            | 0.0        | 0              | 0.0          | 0        |
| 2        | -3.7312            | 0.7260           | 700          | 145      | 0            | 0.0        | 0              | 0.0          | 0        |
| 3        | -3.2986            | 0.6004           | 700          | 120      | 0            | 0.0        | 0              | 0.0          | 0        |
| 4        | -2.9837            | 0.5266           | 700          | 105      | 1            | 0.0        | 1              | 0.0          | 1        |
| 5        | -2.7332            | 0.4769           | 700          | 95       | 3            | 0.0        | 4              | 0.0          | 1        |
| 6        | -2.5234            | 0.4408           | 700          | 88       | 0            | 0.0        | 4              | 0.0          | 1        |
| 7        | -2.3416            | 0.4130           | 733          | 83       | 9            | 0.0        | 13             | 0.0          | 1        |
| 8        | -2.1802            | 0.3910           | 766          | 78       | 21           | 0.0        | 34             | 0.0          | 1        |
| 9        | -2.0344            | 0.3731           | 795          | 75       | 39           | 0.0        | 73             | 0.1          | 1        |
| 10       | -1.9009            | 0.3582           | 821          | 72       | 67           | 0.1        | 140            | 0.1          | 1        |
| 11       | -1.7772            | 0.3456           | 846          | 69       | 132          | 0.1        | 272            | 0.2          | 1        |
| 12       | -1.6615            | 0.3348           | 869          | 67       | 177          | 0.1        | 449            | 0.4          | 1        |
| 13       | -1.5526            | 0.3254           | 891          | 65       | 232          | 0.2        | 681            | 0.5          | 1        |
| 14       | -1.4494            | 0.3173           | 912          | 63       | 377          | 0.3        | 1058           | 0.8          | 1        |
| 15       | -1.3510            | 0.3102           | 931          | 62       | 415          | 0.3        | 1473           | 1.2          | 1        |
| 16       | -1.2567            | 0.3039           | 950          | 61       | 547          | 0.4        | 2020           | 1.6          | 1        |
| 17       | -1.1661            | 0.2984           | 968          | 60       | 664          | 0.5        | 2684           | 2.1          | 2        |
| 18       | -1.0785            | 0.2935           | 986          | 59       | 759          | 0.6        | 3443           | 2.7          | 2        |
| 19       | -0.9937            | 0.2892           | 1003         | 58       | 807          | 0.6        | 4250           | 3.4          | 3        |
| 20       | -0.9112            | 0.2853           | 1019         | 57       | 891          | 0.7        | 5141           | 4.1          | 4        |
| 21       | -0.8308            | 0.2819           | 1035         | 56       | 933          | 0.7        | 6074           | 4.8          | 4        |
| 22       | -0.7522            | 0.2789           | 1051         | 56       | 1027         | 0.8        | 7101           | 5.6          | 5        |
| 23       | -0.6751            | 0.2763           | 1067         | 55       | 1079         | 0.9        | 8180           | 6.5          | 6        |
| 24       | -0.5994            | 0.2740           | 1082         | 55       | 1164         | 0.9        | 9344           | 7.4          | 7        |
| 25       | -0.5249            | 0.2720           | 1097         | 54       | 1294         | 1.0        | 10638          | 8.4          | 8        |
| 26       | -0.4514            | 0.2703           | 1111         | 54       | 1259         | 1.0        | 11897          | 9.4          | 9        |
| 27       | -0.3787            | 0.2688           | 1126         | 54       | 1404         | 1.1        | 13301          | 10.5         | 10       |
| 28       | -0.3068            | 0.2676           | 1140         | 54       | 1389         | 1.1        | 14690          | 11.6         | 11       |
| 29       | -0.2355            | 0.2666           | 1154         | 53       | 1516         | 1.2        | 16206          | 12.8         | 12       |
| 30       | -0.1646            | 0.2659           | 1169         | 53       | 1621         | 1.3        | 17827          | 14.1         | 13       |
| 31       | -0.0940            | 0.2653           | 1183         | 53       | 1668         | 1.3        | 19495          | 15.5         | 15       |
| 32       | -0.0238            | 0.2649           | 1197         | 53       | 1722         | 1.4        | 21217          | 16.8         | 16       |
| 33       | 0.0463             | 0.2647           | 1211         | 53       | 1806         | 1.4        | 23023          | 18.3         | 18       |
| 34       | 0.1164             | 0.2648           | 1225         | 53       | 1854         | 1.5        | 24877          | 19.7         | 19       |
| 35       | 0.1866             |                  | 1239         | 53       | 1978         | 1.6        | 26855          | 21.3         | 21       |
| 36       | 0.2569             | 0.2653           | 1253         | 53       | 2005         | 1.6        | 28860          | 22.9         | 22       |
| 37       | 0.3274             | 0.2659           | 1267         | 53       | 2020         | 1.6        | 30880          | 24.5         | 24       |
| 38       | 0.3983             | 0.2666           | 1281         | 53       | 2168         | 1.7        | 33048          | 26.2         | 25       |
| 39       | 0.4696             | 0.2676           | 1295         | 54       | 2359         | 1.9        | 35407          | 28.1         | 27       |
| 40       | 0.5415             | 0.2687           | 1310         | 54<br>54 | 2301         | 1.8        | 37708          | 29.9         | 29       |
| 41       | 0.6140             | 0.2700           | 1324         | 54       | 2401         | 1.9        | 40109          | 31.8         | 31       |
| 42       | 0.6874             | 0.2716           | 1339         | 54<br>55 | 2534         | 2.0        | 42643          | 33.8         | 33       |
| 43       | 0.7616             | 0.2733           | 1354         | 55<br>55 | 2377         | 1.9        | 45020          | 35.7         | 35       |
| 44 45    | 0.8368             | 0.2753           | 1369         | 55       | 2656         | 2.1        | 47676          | 37.8         | 37       |
| 45<br>46 | 0.9132             | 0.2775<br>0.2800 | 1384<br>1400 | 56<br>56 | 2666<br>2759 | 2.1<br>2.2 | 50342          | 39.9<br>42.1 |          |
| 46<br>47 | 0.9910<br>1.0702   | 0.2800           |              | 50<br>57 | 2831         | 2.2        | 53101<br>55932 | 42.1<br>44.3 | 41<br>43 |
| 48       |                    |                  | 1416         | 57<br>57 | 2799         | 2.2        |                | 44.3<br>46.6 |          |
| 48<br>49 | 1.1510             | 0.2859           | 1432         | 57<br>58 |              | 2.2        | 58731          |              | 45<br>48 |
| 49       | 1.2337             | 0.2893           | 1448         | 38       | 2990         | 2.4        | 61721          | 48.9         | 48       |

| _ | 50 | 1.3184 | 0.2930 | 1465 | 59  | 2946 | 2.3 | 64667  | 51.3  | 50 |
|---|----|--------|--------|------|-----|------|-----|--------|-------|----|
|   | 51 | 1.4054 | 0.2971 | 1483 | 59  | 3120 | 2.5 | 67787  | 53.7  | 53 |
|   | 52 | 1.4950 | 0.3016 | 1501 | 60  | 3132 | 2.5 | 70919  | 56.2  | 55 |
|   | 53 | 1.5874 | 0.3065 | 1519 | 61  | 3125 | 2.5 | 74044  | 58.7  | 57 |
| _ | 54 | 1.6829 | 0.3118 | 1538 | 62  | 3047 | 2.4 | 77091  | 61.1  | 60 |
|   | 55 | 1.7820 | 0.3177 | 1558 | 64  | 3053 | 2.4 | 80144  | 63.5  | 62 |
|   | 56 | 1.8849 | 0.3240 | 1579 | 65  | 3378 | 2.7 | 83522  | 66.2  | 65 |
|   | 57 | 1.9921 | 0.3309 | 1600 | 66  | 3301 | 2.6 | 86823  | 68.8  | 68 |
|   | 58 | 2.1040 | 0.3383 | 1622 | 68  | 3377 | 2.7 | 90200  | 71.5  | 70 |
|   | 59 | 2.2212 | 0.3465 | 1646 | 69  | 3384 | 2.7 | 93584  | 74.2  | 73 |
|   | 60 | 2.3443 | 0.3554 | 1670 | 71  | 3411 | 2.7 | 96995  | 76.9  | 76 |
|   | 61 | 2.4742 | 0.3656 | 1696 | 73  | 3456 | 2.7 | 100451 | 79.6  | 78 |
|   | 62 | 2.6121 | 0.3773 | 1724 | 75  | 3474 | 2.8 | 103925 | 82.4  | 81 |
|   | 63 | 2.7596 | 0.3915 | 1753 | 78  | 3434 | 2.7 | 107359 | 85.1  | 84 |
|   | 64 | 2.9198 | 0.4094 | 1786 | 82  | 3218 | 2.6 | 110577 | 87.7  | 86 |
|   | 65 | 3.0967 | 0.4330 | 1821 | 87  | 3128 | 2.5 | 113705 | 90.2  | 89 |
|   | 66 | 3.2976 | 0.4651 | 1861 | 93  | 3034 | 2.4 | 116739 | 92.6  | 91 |
|   | 67 | 3.5344 | 0.5103 | 1908 | 102 | 2589 | 2.1 | 119328 | 94.6  | 94 |
|   | 68 | 3.8276 | 0.5764 | 1967 | 115 | 2325 | 1.8 | 121653 | 96.5  | 96 |
|   | 69 | 4.2166 | 0.6772 | 2045 | 135 | 1901 | 1.5 | 123554 | 98.0  | 97 |
|   | 70 | 4.7852 | 0.8428 | 2159 | 169 | 1479 | 1.2 | 125033 | 99.1  | 99 |
|   | 71 | 5.7566 | 1.1631 | 2353 | 233 | 899  | 0.7 | 125932 | 99.8  | 99 |
|   | 72 | 7.2385 | 1.9396 | 2649 | 388 | 196  | 0.2 | 126128 | 100.0 | 99 |
|   |    |        |        |      |     |      |     |        |       |    |

| Mat   | hems | tice ( | Grad   | ٥ 7  |
|-------|------|--------|--------|------|
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| Raw      | matics Gra<br>Meas | MeasSE           | SS           | SSSE     | Freq         | Freq% | Cum            | Cum%         | Pct      |
|----------|--------------------|------------------|--------------|----------|--------------|-------|----------------|--------------|----------|
| 0        | -5.2665            | 1.8326           | 700          | 367      | 0            | 0.0   | 0              | 0.0          | 0        |
| 1        | -4.0450            | 1.0125           | 700          | 203      | 0            | 0.0   | 0              | 0.0          | 0        |
| 2        | -3.3266            | 0.7248           | 700          | 145      | 0            | 0.0   | 0              | 0.0          | 0        |
| 3        | -2.8959            | 0.5989           | 700          | 120      | 0            | 0.0   | 0              | 0.0          | 0        |
| 4        | -2.5828            | 0.5248           | 709          | 105      | 1            | 0.0   | 1              | 0.0          | 1        |
| 5        | -2.3342            | 0.4749           | 758          | 95       | 8            | 0.0   | 9              | 0.0          | 1        |
| 6        | -2.1262            | 0.4386           | 800          | 88       | 12           | 0.0   | 21             | 0.0          | 1        |
| 7        | -1.9463            | 0.4107           | 836          | 82       | 26           | 0.0   | 47             | 0.0          | 1        |
| 8        | -1.7869            | 0.3885           | 868          | 78       | 48           | 0.0   | 95             | 0.1          | 1        |
| 9        | -1.6431            | 0.3704           | 897          | 74       | 120          | 0.1   | 215            | 0.2          | 1        |
| 10       | -1.5116            | 0.3553           | 923          | 71       | 185          | 0.1   | 400            | 0.3          | 1        |
| 11       | -1.3899            | 0.3425           | 947          | 69       | 318          | 0.2   | 718            | 0.6          | 1        |
| 12       | -1.2764            | 0.3316           | 970          | 66       | 459          | 0.4   | 1177           | 0.9          | 1        |
| 13       | -1.1697            | 0.3220           | 991          | 64       | 623          | 0.5   | 1800           | 1.4          | 1        |
| 14       | -1.0687            | 0.3137           | 1012         | 63       | 778          | 0.6   | 2578           | 2.0          | 2        |
| 15       | -0.9726            | 0.3064           | 1031         | 61       | 860          | 0.7   | 3438           | 2.6          | 2        |
| 16       | -0.8808            | 0.2999           | 1049         | 60       | 1047         | 0.8   | 4485           | 3.4          | 3        |
| 17       | -0.7926            | 0.2941           | 1067         | 59       | 1253         | 1.0   | 5738           | 4.4          | 4        |
| 18       | -0.7077            | 0.2889           | 1084         | 58       | 1277         | 1.0   | 7015           | 5.4          | 5        |
| 19       | -0.6255            | 0.2843           | 1100         | 57       | 1393         | 1.1   | 8408           | 6.5          | 6        |
| 20       | -0.5459            | 0.2801           | 1116         | 56       | 1478         | 1.1   | 9886           | 7.6          | 7        |
| 21       | -0.4685            | 0.2764           | 1132         | 55       | 1533         | 1.2   | 11419          | 8.8          | 8        |
| 22       | -0.3930            | 0.2731           | 1147         | 55       | 1591         | 1.2   | 13010          | 10.0         | 9        |
| 23       | -0.3193            | 0.2701           | 1161         | 54       | 1657         | 1.3   | 14667          | 11.3         | 11       |
| 24       | -0.2470            | 0.2675           | 1176         | 54       | 1750         | 1.3   | 16417          | 12.6         | 12       |
| 25       | -0.1761            | 0.2652           | 1190         | 53       | 1775         | 1.4   | 18192          | 14.0         | 13       |
| 26       | -0.1063            | 0.2632           | 1204         | 53       | 1783         | 1.4   | 19975          | 15.3         | 15       |
| 27       | -0.0375            | 0.2615           | 1218         | 52       | 1771         | 1.4   | 21746          | 16.7         | 16       |
| 28       | 0.0305             | 0.2600           | 1231         | 52       | 1970         | 1.5   | 23716          | 18.2         | 17       |
| 29       | 0.0978             | 0.2588           | 1245         | 52       | 1920         | 1.5   | 25636          | 19.7         | 19       |
| 30       | 0.1645             | 0.2578           | 1258         | 52       | 1986         | 1.5   | 27622          | 21.2         | 20       |
| 31       | 0.2308             | 0.2571           | 1271         | 51       | 2003         | 1.5   | 29625          | 22.8         | 22       |
| 32<br>33 | 0.2968             | 0.2566           | 1285         | 51       | 2041<br>2048 | 1.6   | 31666<br>33714 | 24.3         | 24       |
|          | 0.3625             | 0.2564           | 1298         | 51<br>51 |              | 1.6   |                | 25.9         | 25       |
| 34       | 0.4282             | 0.2563<br>0.2565 | 1311<br>1324 | 51<br>51 | 2213<br>2125 | 1.7   | 35927<br>38052 | 27.6<br>29.2 | 27<br>28 |
| 36       | 0.4939             | 0.2568           | 1324         | 51       | 2249         | 1.7   | 40301          | 31.0         | 30       |
| 37       | 0.6259             | 0.2574           | 1350         | 51       | 2261         | 1.7   | 42562          | 32.7         | 32       |
| 38       | 0.6923             | 0.2581           | 1364         | 52       | 2364         | 1.8   | 44926          | 34.5         | 34       |
| 39       | 0.7592             | 0.2591           | 1377         | 52       | 2337         | 1.8   | 47263          | 36.3         | 35       |
| 40       | 0.8266             | 0.2602           | 1391         | 52       | 2446         | 1.9   | 49709          | 38.2         | 37       |
| 41       | 0.8946             | 0.2615           | 1404         | 52       | 2390         | 1.8   | 52099          | 40.0         | 39       |
| 42       | 0.9634             | 0.2630           | 1418         | 53       | 2476         | 1.9   | 54575          | 41.9         | 41       |
| 43       | 1.0330             | 0.2647           | 1432         | 53       | 2538         | 1.9   | 57113          | 43.9         | 43       |
| 44       | 1.1035             | 0.2665           | 1446         | 53       | 2539         | 2.0   | 59652          | 45.8         | 45       |
| 45       | 1.1751             | 0.2686           | 1460         | 54       | 2674         | 2.1   | 62326          | 47.9         | 47       |
| 46       | 1.2478             | 0.2708           | 1475         | 54       | 2621         | 2.0   | 64947          | 49.9         | 49       |
| 47       | 1.3218             | 0.2732           | 1490         | 55       | 2694         | 2.1   | 67641          | 52.0         | 51       |
| 48       | 1.3972             | 0.2759           | 1505         | 55       | 2719         | 2.1   | 70360          | 54.0         | 53       |
| 49       | 1.4740             | 0.2787           | 1520         | 56       | 2687         | 2.1   | 73047          | 56.1         | 55       |
|          | . ,                |                  |              |          |              |       |                |              |          |

|   | 50 | 1.5526 | 0.2818 | 1536 | 56  | 2702 | 2.1 | 75749  | 58.2  | 57 |
|---|----|--------|--------|------|-----|------|-----|--------|-------|----|
|   | 51 | 1.6329 | 0.2851 | 1552 | 57  | 2810 | 2.2 | 78559  | 60.3  | 59 |
|   | 52 | 1.7152 | 0.2887 | 1568 | 58  | 2917 | 2.2 | 81476  | 62.6  | 61 |
|   | 53 | 1.7996 | 0.2926 | 1585 | 59  | 2899 | 2.2 | 84375  | 64.8  | 64 |
|   | 54 | 1.8865 | 0.2969 | 1603 | 59  | 2915 | 2.2 | 87290  | 67.0  | 66 |
|   | 55 | 1.9761 | 0.3016 | 1621 | 60  | 2961 | 2.3 | 90251  | 69.3  | 68 |
|   | 56 | 2.0687 | 0.3069 | 1639 | 61  | 2857 | 2.2 | 93108  | 71.5  | 70 |
|   | 57 | 2.1646 | 0.3128 | 1658 | 63  | 3098 | 2.4 | 96206  | 73.9  | 73 |
|   | 58 | 2.2645 | 0.3195 | 1678 | 64  | 3071 | 2.4 | 99277  | 76.3  | 75 |
| _ | 59 | 2.3690 | 0.3272 | 1699 | 65  | 2998 | 2.3 | 102275 | 78.6  | 77 |
|   | 60 | 2.4789 | 0.3361 | 1721 | 67  | 3004 | 2.3 | 105279 | 80.9  | 80 |
|   | 61 | 2.5954 | 0.3466 | 1744 | 69  | 3037 | 2.3 | 108316 | 83.2  | 82 |
|   | 62 | 2.7197 | 0.3591 | 1769 | 72  | 3115 | 2.4 | 111431 | 85.6  | 84 |
|   | 63 | 2.8540 | 0.3743 | 1796 | 75  | 2987 | 2.3 | 114418 | 87.9  | 87 |
|   | 64 | 3.0010 | 0.3931 | 1825 | 79  | 2862 | 2.2 | 117280 | 90.1  | 89 |
|   | 65 | 3.1646 | 0.4166 | 1858 | 83  | 2800 | 2.2 | 120080 | 92.2  | 91 |
|   | 66 | 3.3505 | 0.4469 | 1895 | 89  | 2615 | 2.0 | 122695 | 94.2  | 93 |
|   | 67 | 3.5677 | 0.4869 | 1939 | 97  | 2250 | 1.7 | 124945 | 96.0  | 95 |
|   | 68 | 3.8310 | 0.5419 | 1991 | 108 | 1922 | 1.5 | 126867 | 97.4  | 97 |
|   | 69 | 4.1671 | 0.6224 | 2059 | 124 | 1540 | 1.2 | 128407 | 98.6  | 98 |
|   | 70 | 4.6338 | 0.7545 | 2152 | 151 | 1020 | 0.8 | 129427 | 99.4  | 99 |
|   | 71 | 5.4062 | 1.0440 | 2307 | 209 | 559  | 0.4 | 129986 | 99.8  | 99 |
|   | 72 | 6.6790 | 1.8548 | 2561 | 371 | 203  | 0.2 | 130189 | 100.0 | 99 |

| Mathematics   | Grade 8 |
|---------------|---------|
| Manicillatics | Grauc o |

| Raw | matics Gra<br>Meas | MeasSE           | SS           | SSSE     | Freq         | Freq% | Cum            | Cum% | Pct      |
|-----|--------------------|------------------|--------------|----------|--------------|-------|----------------|------|----------|
| 0   | -5.5278            | 1.8334           | 700          | 325      | 0            | 0.0   | 0              | 0.0  | 0        |
| 1   | -4.3044            | 1.0137           | 700          | 180      | 0            | 0.0   | 0              | 0.0  | 0        |
| 2   | -3.5837            | 0.7262           | 700          | 129      | 0            | 0.0   | 0              | 0.0  | 0        |
| 3   | -3.1510            | 0.6005           | 700          | 107      | 2            | 0.0   | 2              | 0.0  | 1        |
| 4   | -2.8360            | 0.5265           | 700          | 93       | 0            | 0.0   | 2              | 0.0  | 1        |
| 5   | -2.5857            | 0.4767           | 723          | 85       | 6            | 0.0   | 8              | 0.0  | 1        |
| 6   | -2.3761            | 0.4404           | 760          | 78       | 15           | 0.0   | 23             | 0.0  | 1        |
| 7   | -2.1947            | 0.4126           | 793          | 73       | 30           | 0.0   | 53             | 0.0  | 1        |
| 8   | -2.0337            | 0.3905           | 821          | 69       | 64           | 0.0   | 117            | 0.1  | 1        |
| 9   | -1.8884            | 0.3725           | 847          | 66       | 118          | 0.1   | 235            | 0.2  | 1        |
| 10  | -1.7553            | 0.3575           | 871          | 63       | 169          | 0.1   | 404            | 0.3  | 1        |
| 11  | -1.6320            | 0.3449           | 893          | 61       | 291          | 0.2   | 695            | 0.5  | 1        |
| 12  | -1.5168            | 0.3341           | 913          | 59       | 409          | 0.3   | 1104           | 0.8  | 1        |
| 13  | -1.4084            | 0.3248           | 932          | 58       | 612          | 0.5   | 1716           | 1.3  | 1        |
| 14  | -1.3055            | 0.3167           | 951          | 56       | 738          | 0.6   | 2454           | 1.9  | 2        |
| 15  | -1.2074            | 0.3097           | 968          | 55       | 792          | 0.6   | 3246           | 2.5  | 2        |
| 16  | -1.1135            | 0.3035           | 985          | 54       | 946          | 0.7   | 4192           | 3.2  | 3        |
| 17  | -1.0231            | 0.2980           | 1001         | 53       | 1060         | 0.8   | 5252           | 4.0  | 4        |
| 18  | -0.9358            | 0.2932           | 1016         | 52       | 1173         | 0.9   | 6425           | 4.9  | 4        |
| 19  | -0.8511            | 0.2889           | 1031         | 51       | 1165         | 0.9   | 7590           | 5.8  | 5        |
| 20  | -0.7687            | 0.2851           | 1046         | 51       | 1262         | 1.0   | 8852           | 6.7  | 6        |
| 21  | -0.6884            | 0.2818           | 1060         | 50       | 1255         | 1.0   | 10107          | 7.7  | 7        |
| 22  | -0.6099            | 0.2788           | 1074         | 49       | 1276         | 1.0   | 11383          | 8.7  | 8        |
| 23  | -0.5329            | 0.2762           | 1088         | 49       | 1287         | 1.0   | 12670          | 9.6  | 9        |
| 24  | -0.4572            | 0.2740           | 1101         | 49       | 1352         | 1.0   | 14022          | 10.7 | 10       |
| 25  | -0.3827            | 0.2720           | 1114         | 48       | 1238         | 0.9   | 15260          | 11.6 | 11       |
| 26  | -0.3092            | 0.2703           | 1127         | 48       | 1286         | 1.0   | 16546          | 12.6 | 12       |
| 27  | -0.2365            | 0.2689           | 1140         | 48       | 1305         | 1.0   | 17851          | 13.6 | 13       |
| 28  | -0.1645            | 0.2677           | 1153         | 48       | 1376         | 1.0   | 19227          | 14.6 | 14       |
| 29  | -0.0931            | 0.2668           | 1166         | 47       | 1325         | 1.0   | 20552          | 15.6 | 15       |
| 30  | -0.0221            | 0.2660           | 1178         | 47       | 1362         | 1.0   | 21914          | 16.7 | 16       |
| 31  | 0.0485             | 0.2655           | 1191         | 47       | 1444         | 1.1   | 23358          | 17.8 | 17       |
| 32  | 0.1189             | 0.2651           | 1203         | 47       | 1512         | 1.2   | 24870          | 18.9 | 18       |
| 33  | 0.1891             | 0.2650           | 1216<br>1228 | 47       | 1538         | 1.2   | 26408          | 20.1 | 20       |
| 34  | 0.2593<br>0.3296   | 0.2650<br>0.2652 | 1241         | 47<br>47 | 1616<br>1545 | 1.2   | 28024<br>29569 | 21.3 | 21<br>22 |
| 36  | 0.3290             | 0.2655           | 1253         | 47       | 1684         | 1.3   | 31253          | 23.8 | 23       |
| 37  | 0.4706             | 0.2660           | 1266         | 47       | 1673         | 1.3   | 32926          | 25.1 | 24       |
| 38  | 0.5415             | 0.2666           | 1278         | 47       | 1805         | 1.3   | 34731          | 26.4 | 26       |
| 39  | 0.6128             | 0.2674           | 1276         | 47       | 1876         | 1.4   | 36607          | 27.9 | 27       |
| 40  | 0.6846             | 0.2684           | 1304         | 48       | 1915         | 1.5   | 38522          | 29.3 | 29       |
| 41  | 0.7569             | 0.2695           | 1317         | 48       | 2108         | 1.6   | 40630          | 30.9 | 30       |
| 42  | 0.8298             | 0.2707           | 1330         | 48       | 2109         | 1.6   | 42739          | 32.5 | 32       |
| 43  | 0.9035             | 0.2721           | 1343         | 48       | 2243         | 1.7   | 44982          | 34.2 | 33       |
| 44  | 0.9779             | 0.2721           | 1356         | 49       | 2300         | 1.8   | 47282          | 36.0 | 35       |
| 45  | 1.0532             | 0.2753           | 1369         | 49       | 2446         | 1.9   | 49728          | 37.9 | 37       |
| 46  | 1.1294             | 0.2771           | 1383         | 49       | 2515         | 1.9   | 52243          | 39.8 | 39       |
| 47  | 1.2068             | 0.2791           | 1397         | 50       | 2547         | 1.9   | 54790          | 41.7 | 41       |
| 48  | 1.2853             | 0.2814           | 1410         | 50       | 2672         | 2.0   | 57462          | 43.7 | 43       |
| 49  | 1.3652             | 0.2839           | 1425         | 50       | 2792         | 2.1   | 60254          | 45.9 | 45       |
|     |                    |                  |              |          |              |       | •              |      |          |

| _ | 50 | 1.4465 | 0.2866 | 1439 | 51  | 2831 | 2.2 | 63085  | 48.0  | 47 |
|---|----|--------|--------|------|-----|------|-----|--------|-------|----|
|   | 51 | 1.5295 | 0.2896 | 1454 | 51  | 2857 | 2.2 | 65942  | 50.2  | 49 |
|   | 52 | 1.6143 | 0.2929 | 1469 | 52  | 2967 | 2.3 | 68909  | 52.5  | 51 |
|   | 53 | 1.7012 | 0.2966 | 1484 | 53  | 3146 | 2.4 | 72055  | 54.9  | 54 |
|   | 54 | 1.7904 | 0.3008 | 1500 | 53  | 3240 | 2.5 | 75295  | 57.3  | 56 |
| - | 55 | 1.8822 | 0.3054 | 1516 | 54  | 3158 | 2.4 | 78453  | 59.7  | 59 |
|   | 56 | 1.9771 | 0.3106 | 1533 | 55  | 3301 | 2.5 | 81754  | 62.2  | 61 |
|   | 57 | 2.0754 | 0.3165 | 1551 | 56  | 3320 | 2.5 | 85074  | 64.8  | 63 |
|   | 58 | 2.1776 | 0.3232 | 1569 | 57  | 3472 | 2.6 | 88546  | 67.4  | 66 |
|   | 59 | 2.2845 | 0.3308 | 1588 | 59  | 3451 | 2.6 | 91997  | 70.0  | 69 |
|   | 60 | 2.3968 | 0.3397 | 1608 | 60  | 3531 | 2.7 | 95528  | 72.7  | 71 |
|   | 61 | 2.5156 | 0.3499 | 1629 | 62  | 3592 | 2.7 | 99120  | 75.5  | 74 |
|   | 62 | 2.6422 | 0.3620 | 1651 | 64  | 3692 | 2.8 | 102812 | 78.3  | 77 |
|   | 63 | 2.7784 | 0.3764 | 1676 | 67  | 3784 | 2.9 | 106596 | 81.1  | 80 |
|   | 64 | 2.9266 | 0.3939 | 1702 | 70  | 3880 | 3.0 | 110476 | 84.1  | 83 |
|   | 65 | 3.0901 | 0.4156 | 1731 | 74  | 3826 | 2.9 | 114302 | 87.0  | 86 |
|   | 66 | 3.2741 | 0.4433 | 1764 | 79  | 3791 | 2.9 | 118093 | 89.9  | 88 |
|   | 67 | 3.4866 | 0.4800 | 1801 | 85  | 3551 | 2.7 | 121644 | 92.6  | 91 |
|   | 68 | 3.7407 | 0.5311 | 1846 | 94  | 3135 | 2.4 | 124779 | 95.0  | 94 |
|   | 69 | 4.0621 | 0.6077 | 1903 | 108 | 2659 | 2.0 | 127438 | 97.0  | 96 |
|   | 70 | 4.5073 | 0.7378 | 1982 | 131 | 2067 | 1.6 | 129505 | 98.6  | 98 |
|   | 71 | 5.2522 | 1.0300 | 2115 | 183 | 1312 | 1.0 | 130817 | 99.6  | 99 |
|   | 72 | 6.5048 | 1.8472 | 2337 | 328 | 546  | 0.4 | 131363 | 100.0 | 99 |
|   |    |        |        |      |     |      |     |        |       |    |

| 0 -5.4351 1.8379 1000 228 0 0.0 0.0 0 0.0 0.0 1 1 -4.2001 1.0218 1000 126 0 0.0 0 0.0 0 0.0 0 0 0 0 0 0 0 0 0 0  | Raw | g Grade 3<br>Meas | MeasSE | SS   | SSSE | Freq | Freq% | Cum    | Cum%  | Pct |
|--|-----|-------------------|--------|------|------|------|-------|--------|-------|-----|
| 1         -4.2001         1.0218         1000         126         0         0.0         0         0.0         0           2         -3.4629         0.7375         1000         91         7         0.0         2         0.0         1           3         -3.0136         0.6141         1000         67         44         0.0         68         0.1         1           4         -2.6822         0.5419         1000         67         44         0.0         68         0.1         1           5         -2.4155         0.4935         1000         57         211         0.2         375         0.3         1           7         -1.9918         0.4319         1000         53         357         0.3         732         0.6         1           8         -1.8145         0.4109         1000         51         600         0.5         1332         1.1         1           9         -1.6528         0.3939         1003         49         869         0.7         2201         1.8         1           10         -1.5032         0.3800         1022         47         1133         0.9         3334   |     |                   |        |      |      | _    |       |        |       | 0   |
| 2 -3.4629 0.7375 1000 91 7 0.0 7 0.0 13 3 -3.0136 0.6141 1000 76 17 0.0 24 0.0 14 -2.6822 0.5419 1000 67 44 0.0 68 0.1 1   |     |                   |        |      |      |      |       |        |       | 0   |
| 3 -3.0136 0.6141 1000 76 17 0.0 24 0.0 1 4 -2.6822 0.5419 1000 67 44 0.0 68 0.1 1 5 -2.4155 0.4935 1000 61 96 0.1 164 0.1 1 6 -2.1896 0.4585 1000 57 211 0.2 375 0.3 1 7 -1.9918 0.4319 1000 53 357 0.3 732 0.6 1 8 -1.8145 0.4109 1000 51 600 0.5 1332 1.1 1 9 -1.6528 0.3939 1003 49 869 0.7 2201 1.8 1 10 -1.5032 0.3800 1022 47 1133 0.9 3334 2.7 22 11 -1.3633 0.3684 1039 46 1525 1.2 4889 3.9 3.9 12 -1.2312 0.3587 1055 44 1665 1.3 6524 5.2 5 13 -1.1055 0.3505 1071 43 1852 1.5 8376 6.7 66 14 -0.9851 0.3436 1086 43 1997 1.6 10373 8.3 8.3 8 15 -0.8691 0.3377 1100 42 2162 1.7 12535 10.1 9 16 -0.7567 0.3329 1114 41 2164 1.7 14699 11.8 11 17 -0.6473 0.3288 1128 41 2268 1.8 16967 13.6 13 18 -0.5403 0.3256 1141 40 2359 1.9 19326 15.5 15 19 -0.4352 0.3230 1154 40 2314 1.9 21640 17.4 16 20 -0.3316 0.3211 1167 40 2460 2.0 24100 19.3 18 21 -0.2289 0.3198 1179 40 2539 2.0 26639 21.4 20 -0.2289 0.3191 1192 40 2513 2.0 29152 2.34 22 -0.1269 0.3191 1192 40 2513 2.0 29152 2.34 22 -0.0251 0.3191 1205 40 2521 2.0 31673 25.4 24 0.0769 0.3196 1217 40 2696 2.2 34369 27.6 26 0.2828 0.3225 1243 40 2753 2.2 39758 31.9 31 27 0.3875 0.3251 1282 41 3106 2.5 45838 36.8 36 29 0.6030 0.3221 1269 41 3106 2.5 45838 36.8 36 29 0.6030 0.3321 1269 41 3106 2.5 45838 36.8 36 30 0.7149 0.3369 1296 42 3561 2.9 52695 42.3 43 3 3 1.0750 0.3371 1374 47 5090 4.1 75038 60.2 38 31 1.3 0.8303 0.3427 1310 42 3917 3.1 56612 45.4 44 32 0.9500 0.3496 1325 43 44 4380 3.5 65188 52.3 31 31 0.8303 0.3427 1310 42 3917 3.1 56612 45.4 44 33 1.08303 0.3427 1310 42 3917 3.1 56612 45.4 44 33 1.08303 0.3427 1310 42 3917 3.1 56612 45.4 44 33 1.08503 0.3496 1325 43 44 96 3.3 6040 4.8 92501 74.2 72 39 2.0269 0.4552 1243 40 2753 2.2 39758 31.9 39 30 0.7149 0.3369 1296 42 3361 2.9 52695 42.3 41 3266 1.6 4913 3.1 0.8303 0.3427 1310 42 3917 3.1 56612 45.4 44 33 1.08503 0.3496 1325 43 44 96 3.3 6040 4.8 92501 74.2 72 39 2.0269 0.4552 1459 56 6433 5.2 98934 79.4 77 40 2.2482 0.4869 1486 60 6405 5.1 105339 84.5 44 2.28125 0.5835 1556 72 5480 44 117051 93.9 99.1 98 44 3.3199 0.6626 1604 82 |     |                   |        |      |      |      |       |        |       | 1   |
| 4         -2.6822         0.5419         1000         67         44         0.0         68         0.1         1           5         -2.4155         0.4935         1000         61         96         0.1         164         0.1         1           6         -2.1896         0.4885         1000         57         211         0.2         375         0.3         1           7         -1.9918         0.4319         1000         53         357         0.3         732         0.6         1           8         -1.8145         0.4109         1000         51         600         0.5         1332         1.1         1           9         -1.6528         0.3939         1003         49         869         0.7         2201         1.8         1           10         -1.5032         0.3800         1022         47         1133         0.9         3334         2.7         2           11         -1.3633         0.3684         1039         46         1525         1.2         4859         3.9         3           12         -1.1055         0.3505         1071         43         1852         1.5         8376 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td>  |     |                   |        |      |      |      |       |        |       | 1   |
| 5         -2.4155         0.4935         1000         61         96         0.1         164         0.1         1           6         -2.1896         0.4585         1000         57         211         0.2         375         0.3         1           7         -1.9918         0.4319         1000         53         357         0.3         732         0.6         1           8         -1.8145         0.4109         1000         51         600         0.5         1332         1.1         1           9         -1.6528         0.3939         1003         49         869         0.7         2201         1.8         1           10         -1.5632         0.3800         1022         47         1133         0.9         3334         2.7         2           11         -1.3633         0.3684         1039         46         1525         1.2         4889         3.9         3           12         -1.2312         0.3587         1055         44         1665         1.3         6524         5.2         5           13         -1.1055         0.3436         1086         43         1997         1.6         103   |     |                   |        |      |      |      |       |        |       | 1   |
| 6         -2.1896         0.4585         1000         57         211         0.2         375         0.3         11           7         -1.9918         0.4319         1000         53         357         0.3         732         0.6         1           8         -1.8145         0.4109         1000         51         600         0.5         1332         1.1         1           9         -1.6528         0.3939         1003         49         869         0.7         2201         1.8         1           10         -1.5032         0.3800         1022         47         1133         0.9         3334         2.7         22           11         -1.3633         0.3684         1039         46         1525         1.2         4859         3.9         3           12         -1.2312         0.3505         1071         43         1852         1.5         8376         6.7         6           13         -1.1055         0.3303         106         43         1997         1.6         10373         8.3         8           15         -0.8691         0.3377         1100         42         2162         1.7         <   |     |                   |        |      |      |      |       |        |       | 1   |
| 7         -1.9918         0.4319         1000         53         357         0.3         732         0.6         1           8         -1.8145         0.4109         1000         51         600         0.5         1332         1.1         1           9         -1.6528         0.3939         1003         49         869         0.7         2201         1.8         1           10         -1.5032         0.3800         1022         47         1133         0.9         3334         2.7         2           11         -1.3633         0.3684         1039         46         1525         1.2         4859         3.9         3           12         -1.2312         0.3587         1055         44         1665         1.3         6524         5.2         5           13         -1.1055         0.3436         1086         43         1997         1.6         10373         8.3         8           15         -0.8691         0.3377         1100         42         2162         1.7         12535         10.1         9           16         -0.7567         0.3329         1114         41         2164         1.7   |     |                   |        |      |      |      |       |        |       | 1   |
| 8         -1.8145         0.4109         1000         51         600         0.5         1332         1.1         1           9         -1.6528         0.3939         1003         49         869         0.7         2201         1.8         1           10         -1.5032         0.3800         1022         47         1133         0.9         3334         2.7         2           11         -1.3633         0.3684         1039         46         1525         1.2         4859         3.9         3           12         -1.2312         0.3587         1055         44         1665         1.3         6524         5.2         5           13         -1.1055         0.3585         1071         43         1852         1.5         8376         6.7         6           14         -0.9851         0.33436         1086         43         1997         1.6         10373         8.3         8           15         -0.8691         0.3377         1100         42         2162         1.7         12535         10.1         9           16         -0.7567         0.3329         1114         41         2164         1.7   |     |                   |        |      |      |      |       |        |       | 1   |
| 9 -1.6528  |     |                   |        |      |      |      |       |        |       | 1   |
| 10   |     |                   |        |      |      |      |       |        |       |     |
| 11         -1.3633         0.3684         1039         46         1525         1.2         4859         3.9         33           12         -1.2312         0.3587         1055         44         1665         1.3         6524         5.2         5           13         -1.1055         0.35805         1071         43         1852         1.5         8376         6.7         6           14         -0.9851         0.3436         1086         43         1997         1.6         10373         8.3         8           15         -0.8691         0.3377         1100         42         2162         1.7         12535         10.1         9           16         -0.7567         0.3329         1114         41         2164         1.7         14699         11.8         11           17         -0.6473         0.3288         1128         41         2268         1.8         16967         13.6         13           18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3230         1154         40         2314   |     |                   |        |      |      |      |       |        |       | 2   |
| 12         -1.2312         0.3587         1055         44         1665         1.3         6524         5.2         55           13         -1.1055         0.3505         1071         43         1852         1.5         8376         6.7         6           14         -0.9851         0.3436         1086         43         1997         1.6         10373         8.3         8           15         -0.8691         0.3377         1100         42         2162         1.7         12535         10.1         9           16         -0.7567         0.3328         1128         41         2164         1.7         14699         11.8         11           17         -0.6473         0.3286         1128         41         2268         1.8         16967         13.6         13           18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3220         1154         40         2314         1.9         21640         17.4         16           20         -0.3316         0.3211         1167         40         2539   |     |                   |        |      |      |      |       |        |       | 3   |
| 13         -1.1055         0.3505         1071         43         1852         1.5         8376         6.7         66           14         -0.9851         0.3436         1086         43         1997         1.6         10373         8.3         8           15         -0.8691         0.3377         1100         42         2162         1.7         12535         10.1         9           16         -0.7567         0.3329         1114         41         2164         1.7         14699         11.8         11           17         -0.6473         0.3288         1128         41         2268         1.8         16967         13.6         13           18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3230         1154         40         2314         1.9         21640         17.4         16           20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2513  |     |                   |        |      |      |      |       |        |       | 5   |
| 14         -0.9851         0.3436         1086         43         1997         1.6         10373         8.3         8           15         -0.8691         0.3377         1100         42         2162         1.7         12535         10.1         9           16         -0.7567         0.3329         1114         41         2164         1.7         14699         11.8         11           17         -0.6473         0.3288         1128         41         2268         1.8         16967         13.6         13           18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3230         1154         40         2314         1.9         21640         17.4         16           20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513  |     |                   |        |      |      |      |       |        |       | 6   |
| 15         -0.8691         0.3377         1100         42         2162         1.7         12535         10.1         99           16         -0.7567         0.3329         1114         41         2164         1.7         14699         11.8         11           17         -0.6473         0.3288         1128         41         2268         1.8         16967         13.6         13           18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3230         1154         40         2314         1.9         21604         17.4         16           20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3191         1205         40         2521 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>8</td>  |     |                   |        |      |      |      |       |        |       | 8   |
| 16         -0.7567         0.3329         1114         41         2164         1.7         14699         11.8         11           17         -0.6473         0.3288         1128         41         2268         1.8         16967         13.6         13           18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3230         1154         40         2314         1.9         21640         17.4         16           20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3191         1205         40         2521         2.0         31673         25.4         24           24         0.0769         0.3196         1217         40         2696  |     |                   |        |      |      |      |       |        |       | 9   |
| 17         -0.6473         0.3288         1128         41         2268         1.8         16967         13.6         13           18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3230         1154         40         2314         1.9         21640         17.4         16           20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3191         1205         40         2521         2.0         31673         25.4         24           24         0.0769         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636   |     |                   |        |      |      |      |       |        |       | 11  |
| 18         -0.5403         0.3256         1141         40         2359         1.9         19326         15.5         15           19         -0.4352         0.3230         1154         40         2314         1.9         21640         17.4         16           20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3191         1205         40         2521         2.0         31673         25.4         24           24         0.0769         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753  |     |                   |        |      |      |      |       |        |       | 13  |
| 19         -0.4352         0.3230         1154         40         2314         1.9         21640         17.4         16           20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3191         1205         40         2521         2.0         31673         25.4         24           24         0.0769         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974   |     |                   |        |      |      |      |       |        |       | 15  |
| 20         -0.3316         0.3211         1167         40         2460         2.0         24100         19.3         18           21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974         2.4         42732         34.3         33           28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296  |     |                   |        |      |      |      |       |        |       | 16  |
| 21         -0.2289         0.3198         1179         40         2539         2.0         26639         21.4         20           22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3191         1205         40         2521         2.0         31673         25.4         24           24         0.0769         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974         2.4         42732         34.3         33           28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296   |     |                   |        |      |      |      |       |        |       | 18  |
| 22         -0.1269         0.3191         1192         40         2513         2.0         29152         23.4         22           23         -0.0251         0.3191         1205         40         2521         2.0         31673         25.4         24           24         0.0769         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974         2.4         42732         34.3         33           28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296         2.6         49134         39.4         38           30         0.7149         0.3369         1296         42         3561  |     |                   |        |      |      |      |       |        |       | 20  |
| 23         -0.0251         0.3191         1205         40         2521         2.0         31673         25.4         24           24         0.0769         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974         2.4         42732         34.3         33           28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296         2.6         49134         39.4         38           30         0.7149         0.3369         1296         42         3561         2.9         52695         42.3         41           31         0.8303         0.3427         1310         42         3917   |     |                   |        |      |      |      |       |        |       | 22  |
| 24         0.0769         0.3196         1217         40         2696         2.2         34369         27.6         26           25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974         2.4         42732         34.3         33           28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296         2.6         49134         39.4         38           30         0.7149         0.3369         1296         42         3561         2.9         52695         42.3         41           31         0.8303         0.3427         1310         42         3917         3.1         56612         45.4         44           32         0.9500         0.3496         1325         43         4196  |     |                   |        |      |      |      |       |        |       | 24  |
| 25         0.1794         0.3207         1230         40         2636         2.1         37005         29.7         29           26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974         2.4         42732         34.3         33           28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296         2.6         49134         39.4         38           30         0.7149         0.3369         1296         42         3561         2.9         52695         42.3         41           31         0.8303         0.3427         1310         42         3917         3.1         56612         45.4         44           32         0.9500         0.3496         1325         43         4196         3.4         60808         48.8         47           33         1.0750         0.3578         1341         44         4380  |     |                   |        |      |      |      |       |        |       | 26  |
| 26         0.2828         0.3225         1243         40         2753         2.2         39758         31.9         31           27         0.3875         0.3250         1256         40         2974         2.4         42732         34.3         33           28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296         2.6         49134         39.4         38           30         0.7149         0.3369         1296         42         3561         2.9         52695         42.3         41           31         0.8303         0.3427         1310         42         3917         3.1         56612         45.4         44           32         0.9500         0.3496         1325         43         4196         3.4         60808         48.8         47           33         1.0750         0.3578         1341         44         4380         3.5         65188         52.3         51           34         1.2065         0.3675         1357         45         4760  |     |                   |        |      |      |      |       |        |       | 29  |
| 27     0.3875     0.3250     1256     40     2974     2.4     42732     34.3     33       28     0.4941     0.3281     1269     41     3106     2.5     45838     36.8     36       29     0.6030     0.3321     1282     41     3296     2.6     49134     39.4     38       30     0.7149     0.3369     1296     42     3561     2.9     52695     42.3     41       31     0.8303     0.3427     1310     42     3917     3.1     56612     45.4     44       32     0.9500     0.3496     1325     43     4196     3.4     60808     48.8     47       33     1.0750     0.3578     1341     44     4380     3.5     65188     52.3     51       34     1.2065     0.3675     1357     45     4760     3.8     69948     56.1     54       35     1.3457     0.3791     1374     47     5090     4.1     75038     60.2     58       36     1.4945     0.3929     1393     49     5469     4.4     80507     64.6     62       37     1.6553     0.4096     1413     51     5954  |     |                   |        |      |      |      |       |        |       | 31  |
| 28         0.4941         0.3281         1269         41         3106         2.5         45838         36.8         36           29         0.6030         0.3321         1282         41         3296         2.6         49134         39.4         38           30         0.7149         0.3369         1296         42         3561         2.9         52695         42.3         41           31         0.8303         0.3427         1310         42         3917         3.1         56612         45.4         44           32         0.9500         0.3496         1325         43         4196         3.4         60808         48.8         47           33         1.0750         0.3578         1341         44         4380         3.5         65188         52.3         51           34         1.2065         0.3675         1357         45         4760         3.8         69948         56.1         54           35         1.3457         0.3791         1374         47         5090         4.1         75038         60.2         58           36         1.4945         0.3929         1393         49         5469  |     |                   |        |      |      |      |       |        |       | 33  |
| 29         0.6030         0.3321         1282         41         3296         2.6         49134         39.4         38           30         0.7149         0.3369         1296         42         3561         2.9         52695         42.3         41           31         0.8303         0.3427         1310         42         3917         3.1         56612         45.4         44           32         0.9500         0.3496         1325         43         4196         3.4         60808         48.8         47           33         1.0750         0.3578         1341         44         4380         3.5         65188         52.3         51           34         1.2065         0.3675         1357         45         4760         3.8         69948         56.1         54           35         1.3457         0.3791         1374         47         5090         4.1         75038         60.2         58           36         1.4945         0.3929         1393         49         5469         4.4         80507         64.6         62           37         1.6553         0.4096         1413         51         5954  |     |                   |        |      |      |      |       |        |       | 36  |
| 30         0.7149         0.3369         1296         42         3561         2.9         52695         42.3         41           31         0.8303         0.3427         1310         42         3917         3.1         56612         45.4         44           32         0.9500         0.3496         1325         43         4196         3.4         60808         48.8         47           33         1.0750         0.3578         1341         44         4380         3.5         65188         52.3         51           34         1.2065         0.3675         1357         45         4760         3.8         69948         56.1         54           35         1.3457         0.3791         1374         47         5090         4.1         75038         60.2         58           36         1.4945         0.3929         1393         49         5469         4.4         80507         64.6         62           37         1.6553         0.4096         1413         51         5954         4.8         86461         69.4         67           38         1.8313         0.4300         1434         53         6040  |     |                   |        |      |      |      |       |        |       | 38  |
| 31     0.8303     0.3427     1310     42     3917     3.1     56612     45.4     44       32     0.9500     0.3496     1325     43     4196     3.4     60808     48.8     47       33     1.0750     0.3578     1341     44     4380     3.5     65188     52.3     51       34     1.2065     0.3675     1357     45     4760     3.8     69948     56.1     54       35     1.3457     0.3791     1374     47     5090     4.1     75038     60.2     58       36     1.4945     0.3929     1393     49     5469     4.4     80507     64.6     62       37     1.6553     0.4096     1413     51     5954     4.8     86461     69.4     67       38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>41</td>   |     |                   |        |      |      |      |       |        |       | 41  |
| 32     0.9500     0.3496     1325     43     4196     3.4     60808     48.8     47       33     1.0750     0.3578     1341     44     4380     3.5     65188     52.3     51       34     1.2065     0.3675     1357     45     4760     3.8     69948     56.1     54       35     1.3457     0.3791     1374     47     5090     4.1     75038     60.2     58       36     1.4945     0.3929     1393     49     5469     4.4     80507     64.6     62       37     1.6553     0.4096     1413     51     5954     4.8     86461     69.4     67       38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480 <td></td> <td></td> <td></td> <td></td> <td>42</td> <td></td> <td></td> <td></td> <td>45.4</td> <td>44</td>  |     |                   |        |      | 42   |      |       |        | 45.4  | 44  |
| 33     1.0750     0.3578     1341     44     4380     3.5     65188     52.3     51       34     1.2065     0.3675     1357     45     4760     3.8     69948     56.1     54       35     1.3457     0.3791     1374     47     5090     4.1     75038     60.2     58       36     1.4945     0.3929     1393     49     5469     4.4     80507     64.6     62       37     1.6553     0.4096     1413     51     5954     4.8     86461     69.4     67       38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>47</td>  |     |                   |        |      |      |      |       |        |       | 47  |
| 34     1.2065     0.3675     1357     45     4760     3.8     69948     56.1     54       35     1.3457     0.3791     1374     47     5090     4.1     75038     60.2     58       36     1.4945     0.3929     1393     49     5469     4.4     80507     64.6     62       37     1.6553     0.4096     1413     51     5954     4.8     86461     69.4     67       38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387<   |     |                   |        |      |      |      |       | 65188  |       | 51  |
| 35     1.3457     0.3791     1374     47     5090     4.1     75038     60.2     58       36     1.4945     0.3929     1393     49     5469     4.4     80507     64.6     62       37     1.6553     0.4096     1413     51     5954     4.8     86461     69.4     67       38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951   | 34  | 1.2065            | 0.3675 | 1357 | 45   | 4760 | 3.8   | 69948  |       | 54  |
| 37     1.6553     0.4096     1413     51     5954     4.8     86461     69.4     67       38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99  |     |                   |        |      |      |      |       |        |       | 58  |
| 37     1.6553     0.4096     1413     51     5954     4.8     86461     69.4     67       38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99  | 36  | 1.4945            | 0.3929 | 1393 | 49   | 5469 | 4.4   | 80507  | 64.6  | 62  |
| 38     1.8313     0.4300     1434     53     6040     4.8     92501     74.2     72       39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99  |     |                   |        |      |      | 5954 |       |        |       | 67  |
| 39     2.0269     0.4552     1459     56     6433     5.2     98934     79.4     77       40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99  |     | 1.8313            |        |      |      | 6040 |       |        | 74.2  | 72  |
| 40     2.2482     0.4869     1486     60     6405     5.1     105339     84.5     82       41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99  |     |                   |        |      |      |      |       |        |       | 77  |
| 41     2.5049     0.5281     1518     65     6232     5.0     111571     89.5     87       42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99   |     |                   |        |      |      |      |       |        |       | 82  |
| 42     2.8125     0.5835     1556     72     5480     4.4     117051     93.9     92       43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99  |     |                   |        |      |      |      |       |        |       | 87  |
| 43     3.1979     0.6626     1604     82     4055     3.3     121106     97.1     96       44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99   |     |                   |        |      |      |      |       |        |       | 92  |
| 44     3.7182     0.7901     1668     98     2387     1.9     123493     99.1     98       45     4.5453     1.0692     1770     132     951     0.8     124444     99.8     99  |     |                   |        |      |      |      |       |        |       | 96  |
| 45 4.5453 1.0692 1770 132 951 0.8 124444 99.8 99   |     |                   |        |      |      |      |       |        |       | 98  |
|  |     |                   |        |      |      |      |       |        |       | 99  |
|  | 46  | 5.8536            | 1.8675 | 1932 | 231  | 215  | 0.2   | 124659 | 100.0 | 99  |

| Reading Grade 4 |
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|     | g Grade 4          |        | ~~         | aaa=     | _            |       | ~            | ~ ~        |     |
|-----|--------------------|--------|------------|----------|--------------|-------|--------------|------------|-----|
| Raw | Meas               | MeasSE | SS         | SSSE     | Freq         | Freq% | Cum          | Cum%       | Pct |
| 0   | -5.4281            | 1.8335 | 700        | 367      | 1            | 0.0   | 1            | 0.0        | 1   |
| 1   | -4.2040            | 1.0143 | 700        | 203      | 5            | 0.0   | 6            | 0.0        | 1   |
| 2   | -3.4818            | 0.7275 | 700        | 146      | 2            | 0.0   | 8            | 0.0        | 1   |
| 3   | -3.0469            | 0.6025 | 700        | 121      | 8            | 0.0   | 16           | 0.0        | 1   |
| 4   | -2.7294            | 0.5292 | 700        | 106      | 37           | 0.0   | 53           | 0.0        | 1   |
| 5   | -2.4759            | 0.4801 | 700        | 96       | 73           | 0.1   | 126          | 0.1        | 1   |
| 6   | -2.2629            | 0.4446 | 704        | 89       | 145          | 0.1   | 271          | 0.2        | 1   |
| 7   | -2.0775            | 0.4175 | 741        | 84       | 267          | 0.2   | 538          | 0.4        | 1   |
| 8   | -1.9122            | 0.3962 | 774        | 79<br>76 | 357          | 0.3   | 895          | 0.7        | 1   |
| 9   | -1.7622            | 0.3790 | 804        | 76       | 543          | 0.4   | 1438         | 1.1        | 1   |
| 10  | -1.6240            | 0.3649 | 832        | 73       | 644          | 0.5   | 2082         | 1.6        | 1   |
| 11  | -1.4953            | 0.3531 | 857        | 71       | 862          | 0.7   | 2944         | 2.3        | 2   |
| 12  | -1.3741            | 0.3431 | 881        | 69       | 980          | 0.8   | 3924         | 3.1        | 3   |
| 13  | -1.2594            | 0.3347 | 904        | 67       | 1096         | 0.9   | 5020<br>6221 | 4.0        | 4   |
| 14  | -1.1498            | 0.3275 | 926<br>947 | 66<br>64 | 1201<br>1205 | 0.9   | 7426         | 4.9<br>5.9 | 5   |
| 16  | -1.0446<br>-0.9430 | 0.3214 | 968        | 63       | 1320         | 1.0   | 8746         | 5.9<br>6.9 | 6   |
| 17  | -0.9430            | 0.3101 | 987        | 62       | 1392         | 1.0   | 10138        | 8.0        | 7   |
| 18  | -0.7486            | 0.3117 | 1007       | 62       | 1498         | 1.1   | 11636        | 9.2        | 9   |
| 19  | -0.7480            | 0.3048 | 1007       | 61       | 1598         | 1.3   | 13234        | 10.4       | 10  |
| 20  | -0.5627            | 0.3022 | 1044       | 60       | 1590         | 1.3   | 14824        | 11.7       | 11  |
| 21  | -0.3027            | 0.3022 | 1062       | 60       | 1660         | 1.3   | 16484        | 13.0       | 12  |
| 22  | -0.3825            | 0.2985 | 1080       | 60       | 1719         | 1.4   | 18203        | 14.3       | 14  |
| 23  | -0.2938            | 0.2973 | 1098       | 59       | 1757         | 1.4   | 19960        | 15.7       | 15  |
| 24  | -0.2057            | 0.2966 | 1115       | 59       | 1940         | 1.5   | 21900        | 17.3       | 16  |
| 25  | -0.1178            | 0.2962 | 1133       | 59       | 2050         | 1.6   | 23950        | 18.9       | 18  |
| 26  | -0.0301            | 0.2963 | 1150       | 59       | 2268         | 1.8   | 26218        | 20.7       | 20  |
| 27  | 0.0578             | 0.2968 | 1168       | 59       | 2307         | 1.8   | 28525        | 22.5       | 22  |
| 28  | 0.1462             | 0.2977 | 1186       | 60       | 2517         | 2.0   | 31042        | 24.5       | 23  |
| 29  | 0.2352             | 0.2990 | 1203       | 60       | 2742         | 2.2   | 33784        | 26.6       | 26  |
| 30  | 0.3251             | 0.3007 | 1221       | 60       | 2905         | 2.3   | 36689        | 28.9       | 28  |
| 31  | 0.4161             | 0.3029 | 1240       | 61       | 3099         | 2.4   | 39788        | 31.4       | 30  |
| 32  | 0.5086             | 0.3055 | 1258       | 61       | 3286         | 2.6   | 43074        | 33.9       | 33  |
| 33  | 0.6029             | 0.3086 | 1277       | 62       | 3622         | 2.9   | 46696        | 36.8       | 35  |
| 34  | 0.6992             | 0.3123 | 1296       | 62       | 3938         | 3.1   | 50634        | 39.9       | 38  |
| 35  | 0.7981             | 0.3166 | 1316       | 63       | 4197         | 3.3   | 54831        | 43.2       | 42  |
| 36  | 0.8999             | 0.3216 | 1336       | 64       | 4471         | 3.5   | 59302        | 46.7       | 45  |
| 37  | 1.0051             | 0.3273 | 1357       | 65       | 4649         | 3.7   | 63951        | 50.4       | 49  |
| 38  | 1.1143             | 0.3339 | 1379       | 67       | 5029         | 4.0   | 68980        | 54.4       | 52  |
| 39  | 1.2283             | 0.3415 | 1402       | 68       | 5323         | 4.2   | 74303        | 58.6       | 56  |
| 40  | 1.3479             | 0.3503 | 1426       | 70       | 5563         | 4.4   | 79866        | 62.9       | 61  |
| 41  | 1.4742             | 0.3607 | 1451       | 72       | 5849         | 4.6   | 85715        | 67.6       | 65  |
| 42  | 1.6085             | 0.3728 | 1478       | 75       | 5854         | 4.6   | 91569        | 72.2       | 70  |
| 43  | 1.7528             | 0.3872 | 1507       | 77       | 6024         | 4.7   | 97593        | 76.9       | 75  |
| 44  | 1.9093             | 0.4046 | 1538       | 81       | 5988         | 4.7   | 103581       | 81.6       | 79  |
| 45  | 2.0815             | 0.4260 | 1573       | 85       | 5575         | 4.4   | 109156       | 86.0       | 84  |
| 46  | 2.2742             | 0.4531 | 1611       | 91       | 5075         | 4.0   | 114231       | 90.0       | 88  |
| 47  | 2.4952             | 0.4885 | 1655       | 98       | 4422         | 3.5   | 118653       | 93.5       | 92  |
| 48  | 2.7570             | 0.5373 | 1708       | 107      | 3572         | 2.8   | 122225       | 96.3       | 95  |
| 49  | 3.0834             | 0.6100 | 1773       | 122      | 2429         | 1.9   | 124654       | 98.2       | 97  |
| 50  | 3.5277             | 0.7341 | 1862       | 147      | 1484         | 1.2   | 126138       | 99.4       | 99  |
| 51  | 4.2599             | 1.0194 | 2008       | 204      | 598          | 0.5   | 126736       | 99.9       | 99  |
| 52  | 5.4914             | 1.8365 | 2255       | 367      | 151          | 0.1   | 126887       | 100.0      | 99  |

| Reading Gra | ae | 5 |
|-------------|----|---|
|-------------|----|---|

|     | g Grade 5 |        |      |      |      |       |        |       |     |
|-----|-----------|--------|------|------|------|-------|--------|-------|-----|
| Raw | Meas      | MeasSE | SS   | SSSE | Freq | Freq% | Cum    | Cum%  | Pct |
| 0   | -5.4550   | 1.8377 | 700  | 365  | 0    | 0.0   | 0      | 0.0   | 0   |
| 1   | -4.2207   | 1.0212 | 700  | 203  | 1    | 0.0   | 1      | 0.0   | 1   |
| 2   | -3.4853   | 0.7360 | 700  | 146  | 2    | 0.0   | 3      | 0.0   | 1   |
| 3   | -3.0386   | 0.6116 | 700  | 122  | 1    | 0.0   | 4      | 0.0   | 1   |
| 4   | -2.7107   | 0.5385 | 700  | 107  | 26   | 0.0   | 30     | 0.0   | 1   |
| 5   | -2.4479   | 0.4892 | 700  | 97   | 38   | 0.0   | 68     | 0.1   | 1   |
| 6   | -2.2265   | 0.4533 | 700  | 90   | 85   | 0.1   | 153    | 0.1   | 1   |
| 7   | -2.0337   | 0.4259 | 700  | 85   | 147  | 0.1   | 300    | 0.2   | 1   |
| 8   | -1.8618   | 0.4042 | 724  | 80   | 274  | 0.2   | 574    | 0.5   | 1   |
| 9   | -1.7056   | 0.3865 | 756  | 77   | 384  | 0.3   | 958    | 0.8   | 1   |
| 10  | -1.5619   | 0.3720 | 784  | 74   | 524  | 0.4   | 1482   | 1.2   | 1   |
| 11  | -1.4282   | 0.3598 | 811  | 72   | 679  | 0.5   | 2161   | 1.7   | 1   |
| 12  | -1.3025   | 0.3496 | 836  | 70   | 830  | 0.7   | 2991   | 2.4   | 2   |
| 13  | -1.1833   | 0.3409 | 859  | 68   | 992  | 0.8   | 3983   | 3.1   | 3   |
| 14  | -1.0697   | 0.3335 | 882  | 66   | 1021 | 0.8   | 5004   | 4.0   | 4   |
| 15  | -0.9607   | 0.3271 | 904  | 65   | 1215 | 1.0   | 6219   | 4.9   | 4   |
| 16  | -0.8554   | 0.3218 | 925  | 64   | 1287 | 1.0   | 7506   | 5.9   | 5   |
| 17  | -0.7534   | 0.3172 | 945  | 63   | 1365 | 1.1   | 8871   | 7.0   | 6   |
| 18  | -0.6540   | 0.3172 | 965  | 62   | 1465 | 1.2   | 10336  | 8.2   | 8   |
| 19  | -0.5567   | 0.3103 | 984  | 62   | 1498 | 1.2   | 11834  | 9.3   | 9   |
| 20  | -0.4613   | 0.3078 | 1003 | 61   | 1560 | 1.2   | 13394  | 10.6  | 10  |
| 21  | -0.3672   | 0.3058 | 1022 | 61   | 1665 | 1.3   | 15059  | 11.9  | 11  |
| 22  | -0.2742   | 0.3043 | 1040 | 60   | 1736 | 1.4   | 16795  | 13.3  | 13  |
| 23  | -0.1819   | 0.3034 | 1058 | 60   | 1838 | 1.5   | 18633  | 14.7  | 14  |
| 24  | -0.1019   | 0.3029 | 1077 | 60   | 1876 | 1.5   | 20509  | 16.2  | 15  |
| 25  | 0.0017    | 0.3029 | 1077 | 60   | 2043 | 1.6   | 22552  | 17.8  | 17  |
| 26  | 0.0017    | 0.3029 | 1113 | 60   | 2229 | 1.8   | 24781  | 17.8  | 19  |
| 27  | 0.0930    | 0.3033 | 1113 | 60   | 2327 | 1.8   | 27108  | 21.4  | 20  |
| 28  | 0.1838    | 0.3042 | 1150 | 61   | 2472 | 2.0   | 29580  | 23.4  | 22  |
| 29  | 0.2788    | 0.3030 | 1169 | 61   | 2664 | 2.0   | 32244  | 25.5  | 24  |
| 30  | 0.3727    | 0.3074 | 1188 | 62   | 2996 | 2.4   | 35240  | 27.8  | 27  |
|     |           | 0.3098 |      | 62   |      | 2.4   |        | 30.4  |     |
| 31  | 0.5647    |        | 1207 |      | 3215 |       | 38455  |       | 29  |
| 32  | 0.6635    | 0.3160 | 1227 | 63   | 3547 | 2.8   | 42002  | 33.2  | 32  |
| 33  | 0.7647    | 0.3201 | 1247 | 64   | 3866 | 3.1   | 45868  | 36.2  | 35  |
| 34  | 0.8685    | 0.3247 | 1267 | 65   | 4098 | 3.2   | 49966  | 39.5  | 38  |
| 35  | 0.9757    | 0.3301 | 1289 | 66   | 4603 | 3.6   | 54569  | 43.1  | 41  |
| 36  | 1.0867    | 0.3363 | 1311 | 67   | 4885 | 3.9   | 59454  | 46.9  | 45  |
| 37  | 1.2021    | 0.3434 | 1334 | 68   | 5254 | 4.1   | 64708  | 51.1  | 49  |
| 38  | 1.3228    | 0.3516 | 1358 | 70   | 5568 | 4.4   | 70276  | 55.5  | 53  |
| 39  | 1.4497    | 0.3609 | 1383 | 72   | 6109 | 4.8   | 76385  | 60.3  | 58  |
| 40  | 1.5837    | 0.3717 | 1409 | 74   | 6406 | 5.1   | 82791  | 65.4  | 63  |
| 41  | 1.7264    | 0.3841 | 1438 | 76   | 6516 | 5.1   | 89307  | 70.5  | 68  |
| 42  | 1.8794    | 0.3985 | 1468 | 79   | 6632 | 5.2   | 95939  | 75.8  | 73  |
| 43  | 2.0449    | 0.4154 | 1501 | 83   | 6528 | 5.2   | 102467 | 80.9  | 78  |
| 44  | 2.2256    | 0.4354 | 1537 | 87   | 6252 | 4.9   | 108719 | 85.8  | 83  |
| 45  | 2.4255    | 0.4593 | 1577 | 91   | 5427 | 4.3   | 114146 | 90.1  | 88  |
| 46  | 2.6498    | 0.4887 | 1621 | 97   | 4570 | 3.6   | 118716 | 93.7  | 92  |
| 47  | 2.9064    | 0.5258 | 1672 | 105  | 3449 | 2.7   | 122165 | 96.5  | 95  |
| 48  | 3.2082    | 0.5752 | 1732 | 114  | 2258 | 1.8   | 124423 | 98.3  | 97  |
| 49  | 3.5788    | 0.6468 | 1806 | 129  | 1348 | 1.1   | 125771 | 99.3  | 99  |
| 50  | 4.0711    | 0.7671 | 1904 | 152  | 611  | 0.5   | 126382 | 99.8  | 99  |
| 51  | 4.8540    | 1.0444 | 2060 | 208  | 206  | 0.2   | 126588 | 100.0 | 99  |
| 52  | 6.1220    | 1.8507 | 2312 | 368  | 51   | 0.0   | 126639 | 100.0 | 99  |
|     |           |        |      |      |      |       |        |       |     |

| Raw | Meas    | MeasSE | SS           | SSSE | Freq         | Freq%      | Cum            | Cum%         | Pct      |
|-----|---------|--------|--------------|------|--------------|------------|----------------|--------------|----------|
| 0   | -5.6675 | 1.8408 | 700          | 368  | 0            | 0.0        | 0              | 0.0          | (        |
| 1   | -4.4255 | 1.0264 | 700          | 205  | 0            | 0.0        | 0              | 0.0          | C        |
| 2   | -3.6800 | 0.7425 | 700          | 149  | 4            | 0.0        | 4              | 0.0          | 1        |
| 3   | -3.2242 | 0.6187 | 700          | 124  | 10           | 0.0        | 14             | 0.0          | 1        |
| 4   | -2.8879 | 0.5459 | 700          | 109  | 20           | 0.0        | 34             | 0.0          | 1        |
| 5   | -2.6173 | 0.4969 | 700          | 99   | 44           | 0.0        | 78             | 0.1          | 1        |
| 6   | -2.3886 | 0.4612 | 700          | 92   | 100          | 0.1        | 178            | 0.1          | 1        |
| 7   | -2.1887 | 0.4339 | 731          | 87   | 178          | 0.1        | 356            | 0.3          | 1        |
| 8   | -2.0100 | 0.4122 | 767          | 82   | 318          | 0.3        | 674            | 0.5          | 1        |
| 9   | -1.8475 | 0.3946 | 799          | 79   | 464          | 0.4        | 1138           | 0.9          | 1        |
| 10  | -1.6977 | 0.3800 | 829          | 76   | 647          | 0.5        | 1785           | 1.4          | 1        |
| 11  | -1.5580 | 0.3678 | 857          | 74   | 858          | 0.7        | 2643           | 2.1          | 2        |
| 12  | -1.4266 | 0.3574 | 884          | 71   | 1007         | 0.8        | 3650           | 2.9          | 2        |
| 13  | -1.3021 | 0.3486 | 909          | 70   | 1300         | 1.0        | 4950           | 3.9          | 3        |
| 14  | -1.1833 | 0.3410 | 932          | 68   | 1286         | 1.0        | 6236           | 4.9          | 4        |
| 15  | -1.0693 | 0.3344 | 955          | 67   | 1474         | 1.2        | 7710           | 6.1          | 6        |
| 16  | -0.9594 | 0.3288 | 977          | 66   | 1482         | 1.2        | 9192           | 7.3          | 7        |
| 17  | -0.8529 | 0.3240 | 998          | 65   | 1708         | 1.4        | 10900          | 8.6          | 8        |
| 18  | -0.7493 | 0.3198 | 1019         | 64   | 1672         | 1.3        | 12572          | 10.0         | 9        |
| 19  | -0.6481 | 0.3164 | 1039         | 63   | 1767         | 1.4        | 14339          | 11.4         | 11       |
| 20  | -0.5490 | 0.3135 | 1059         | 63   | 1914         | 1.5        | 16253          | 12.9         | 12       |
| 21  | -0.4515 | 0.3111 | 1079         | 62   | 1999         | 1.6        | 18252          | 14.5         | 14       |
| 22  | -0.4513 | 0.3092 | 1079         | 62   | 2133         | 1.7        | 20385          | 16.2         | 15       |
| 23  | -0.2601 | 0.3079 | 1117         | 62   | 2258         | 1.8        | 22643          | 18.0         | 17       |
| 24  | -0.2661 | 0.3070 | 1136         | 61   | 2276         | 1.8        | 24919          | 19.8         | 19       |
| 25  | -0.1037 | 0.3065 | 1155         | 61   | 2431         | 1.9        | 27350          | 21.7         | 21       |
| 26  | 0.0224  | 0.3065 | 1173         | 61   | 2486         | 2.0        | 29836          | 23.7         | 23       |
| 27  | 0.0224  | 0.3070 | 1173         | 61   | 2701         | 2.1        | 32537          | 25.8         | 25       |
| 28  | 0.1103  | 0.3080 | 1211         | 62   | 2768         | 2.2        | 35305          | 28.0         | 27       |
| 29  | 0.3062  | 0.3094 | 1211         | 62   | 2991         | 2.4        | 38296          | 30.4         | 29       |
| 30  | 0.4025  | 0.3113 | 1249         | 62   | 3097         | 2.5        | 41393          | 32.8         | 32       |
| 31  | 0.4023  | 0.3113 | 1269         | 63   | 3285         | 2.6        | 44678          | 35.4         | 34       |
| 32  | 0.5995  | 0.3137 | 1289         | 63   | 3375         | 2.7        | 48053          | 38.1         | 37       |
| 33  | 0.7010  | 0.3108 | 1309         | 64   | 3589         | 2.7        | 51642          | 41.0         | 40       |
| 34  | 0.7010  | 0.3247 | 1330         | 65   | 3880         | 3.1        | 55522          | 44.0         | 43       |
| 35  | 0.8030  | 0.3247 | 1351         | 66   | 4155         | 3.3        | 59677          | 47.3         | 43       |
| 36  | 1.0227  | 0.3298 | 1374         | 67   | 4416         | 3.5        | 64093          | 50.8         | 49       |
| 37  | 1.0227  | 0.3337 | 1374         | 69   | 4581         | 3.6        | 68674          | 54.5         | 53       |
| 38  | 1.1377  | 0.3420 | 1421         | 70   | 4961         | 3.9        | 73635          | 58.4         | 56       |
| 39  | 1.3837  | 0.3503 | 1446         | 70   | 5237         | 4.2        | 78872          | 62.6         | 60       |
| 40  | 1.5169  | 0.3397 | 1472         | 74   | 5491         | 4.4        | 84363          | 66.9         | 65       |
| 41  |         |        |              | 74   |              |            |                |              |          |
| 42  | 1.6586  | 0.3828 | 1501<br>1531 |      | 5902<br>5817 | 4.7<br>4.6 | 90265<br>96082 | 71.6<br>76.2 | 69<br>74 |
| 42  | 1.8108  | 0.3975 |              | 80   |              |            |                |              | 74<br>79 |
|     | 1.9755  | 0.4147 | 1564         | 83   | 5932         | 4.7        | 102014         | 80.9         |          |
| 44  | 2.1559  | 0.4352 | 1600         | 87   | 5632         | 4.5        | 107646         | 85.4         | 83       |
| 45  | 2.3559  | 0.4601 | 1640         | 92   | 5186         | 4.1        | 112832         | 89.5         | 87       |
| 46  | 2.5815  | 0.4907 | 1685         | 98   | 4449         | 3.5        | 117281         | 93.0         | 91       |
| 47  | 2.8410  | 0.5295 | 1737         | 106  | 3542         | 2.8        | 120823         | 95.9         | 94       |
| 48  | 3.1480  | 0.5809 | 1799         | 116  | 2456         | 1.9        | 123279         | 97.8         | 97       |
| 49  | 3.5269  | 0.6546 | 1874         | 131  | 1547         | 1.2        | 124826         | 99.0         | 98       |
| 50  | 4.0313  | 0.7762 | 1975         | 155  | 792          | 0.6        | 125618         | 99.7         | 99       |
| 51  | 4.8303  | 1.0530 | 2135         | 211  | 351          | 0.3        | 125969         | 99.9         | 99       |
| 52  | 6.1118  | 1.8562 | 2391         | 371  | 75           | 0.1        | 126044         | 100.0        | 99       |

| Raw      | Meas    | MeasSE | SS   | SSSE | Freq | Freq% | Cum    | Cum%  | Pct |
|----------|---------|--------|------|------|------|-------|--------|-------|-----|
| 0        | -5.6252 | 1.8438 | 700  | 369  | 0    | 0.0   | 0      | 0.0   | (   |
| 1        | -4.3764 | 1.0305 | 700  | 206  | 0    | 0.0   | 0      | 0.0   | (   |
| 2        | -3.6238 | 0.7464 | 700  | 149  | 3    | 0.0   | 3      | 0.0   | 1   |
| 3        | -3.1631 | 0.6220 | 700  | 124  | 10   | 0.0   | 13     | 0.0   | ]   |
| 4        | -2.8233 | 0.5485 | 700  | 110  | 13   | 0.0   | 26     | 0.0   | 1   |
| 5        | -2.5503 | 0.4989 | 700  | 100  | 31   | 0.0   | 57     | 0.0   |     |
| 6        | -2.3198 | 0.4628 | 730  | 93   | 85   | 0.1   | 142    | 0.1   | 1   |
| 7        | -2.1186 | 0.4352 | 771  | 87   | 137  | 0.1   | 279    | 0.2   | 1   |
| 8        | -1.9389 | 0.4133 | 807  | 83   | 205  | 0.2   | 484    | 0.4   |     |
| 9        | -1.7755 | 0.3956 | 839  | 79   | 356  | 0.3   | 840    | 0.6   | 1   |
| 10       | -1.6249 | 0.3810 | 869  | 76   | 497  | 0.4   | 1337   | 1.0   |     |
| 11       | -1.4845 | 0.3687 | 898  | 74   | 646  | 0.5   | 1983   | 1.5   | ]   |
| 12       | -1.3525 | 0.3583 | 924  | 72   | 810  | 0.6   | 2793   | 2.1   | 2   |
| 13       | -1.2273 | 0.3495 | 949  | 70   | 1003 | 0.8   | 3796   | 2.9   | 3   |
| 14       | -1.1079 | 0.3419 | 973  | 68   | 1134 | 0.9   | 4930   | 3.8   |     |
| 15       | -0.9933 | 0.3354 | 996  | 67   | 1244 | 1.0   | 6174   | 4.7   |     |
| 16       | -0.8827 | 0.3334 | 1018 | 66   | 1378 | 1.1   | 7552   | 5.8   |     |
| 17       | -0.8827 | 0.3249 | 1018 | 65   | 1494 | 1.1   | 9046   |       |     |
|          |         |        |      |      | 1537 |       |        | 7.0   |     |
| 18       | -0.6714 | 0.3207 | 1060 | 64   |      | 1.2   | 10583  | 8.1   |     |
| 19       | -0.5697 | 0.3172 | 1080 | 63   | 1650 | 1.3   | 12233  | 9.4   | 1,4 |
| 20       | -0.4701 | 0.3142 | 1100 | 63   | 1783 | 1.4   | 14016  | 10.8  | 10  |
| 21       | -0.3721 | 0.3117 | 1120 | 62   | 1901 | 1.5   | 15917  | 12.2  | 11  |
| 22       | -0.2756 | 0.3097 | 1139 | 62   | 2053 | 1.6   | 17970  | 13.8  | 13  |
| 23       | -0.1802 | 0.3081 | 1158 | 62   | 2098 | 1.6   | 20068  | 15.4  | 1:  |
| 24       | -0.0857 | 0.3069 | 1177 | 61   | 2270 | 1.7   | 22338  | 17.2  | 10  |
| 25       | 0.0083  | 0.3062 | 1196 | 61   | 2488 | 1.9   | 24826  | 19.1  | 18  |
| 26       | 0.1019  | 0.3058 | 1215 | 61   | 2546 | 2.0   | 27372  | 21.0  | 20  |
| 27       | 0.1954  | 0.3058 | 1233 | 61   | 2854 | 2.2   | 30226  | 23.2  | 22  |
| 28       | 0.2890  | 0.3062 | 1252 | 61   | 2920 | 2.2   | 33146  | 25.5  | 24  |
| 29       | 0.3830  | 0.3070 | 1271 | 61   | 3184 | 2.4   | 36330  | 27.9  | 2'  |
| 30       | 0.4776  | 0.3082 | 1290 | 62   | 3514 | 2.7   | 39844  | 30.6  | 29  |
| 31       | 0.5730  | 0.3097 | 1309 | 62   | 3701 | 2.8   | 43545  | 33.5  | 32  |
| 32       | 0.6695  | 0.3118 | 1328 | 62   | 3772 | 2.9   | 47317  | 36.4  | 3:  |
| 33       | 0.7675  | 0.3143 | 1348 | 63   | 4156 | 3.2   | 51473  | 39.6  | 38  |
| 34       | 0.8672  | 0.3173 | 1368 | 63   | 4451 | 3.4   | 55924  | 43.0  | 4   |
| 35       | 0.9690  | 0.3209 | 1388 | 64   | 4621 | 3.6   | 60545  | 46.6  | 4:  |
| 36       | 1.0733  | 0.3251 | 1409 | 65   | 4963 | 3.8   | 65508  | 50.4  | 4   |
| 37       | 1.1806  | 0.3300 | 1431 | 66   | 4993 | 3.8   | 70501  | 54.2  | 52  |
| 38       | 1.2914  | 0.3358 | 1453 | 67   | 5288 | 4.1   | 75789  | 58.3  | 5   |
| 39       | 1.4063  | 0.3426 | 1476 | 69   | 5415 | 4.2   | 81204  | 62.4  | 60  |
| 40       | 1.5263  | 0.3505 | 1500 | 70   | 5516 | 4.2   | 86720  | 66.7  | 6:  |
| 41       | 1.6524  | 0.3599 | 1525 | 72   | 5676 | 4.4   | 92396  | 71.0  | 69  |
| 42       | 1.7859  | 0.3711 | 1552 | 74   | 5739 | 4.4   | 98135  | 75.5  | 7.  |
| 43       | 1.9284  | 0.3845 | 1580 | 77   | 5517 | 4.2   | 103652 | 79.7  | 78  |
| 44       | 2.0826  | 0.4011 | 1611 | 80   | 5219 | 4.0   | 103032 | 83.7  | 8:  |
|          |         |        |      |      |      |       |        |       |     |
| 45<br>46 | 2.2515  | 0.4217 | 1645 | 84   | 4965 | 3.8   | 113836 | 87.5  | 80  |
| 46       | 2.4402  | 0.4481 | 1682 | 90   | 4423 | 3.4   | 118259 | 90.9  | 89  |
| 47       | 2.6562  | 0.4830 | 1726 | 97   | 3857 | 3.0   | 122116 | 93.9  | 9:  |
| 48       | 2.9123  | 0.5317 | 1777 | 106  | 3208 | 2.5   | 125324 | 96.4  | 9:  |
| 49       | 3.2324  | 0.6046 | 1841 | 121  | 2330 | 1.8   | 127654 | 98.2  | 9'  |
| 50       | 3.6699  | 0.7293 | 1928 | 146  | 1482 | 1.1   | 129136 | 99.3  | 99  |
| 51       | 4.3950  | 1.0159 | 2073 | 203  | 701  | 0.5   | 129837 | 99.8  | 99  |
| 52       | 5.6215  | 1.8346 | 2319 | 367  | 216  | 0.2   | 130053 | 100.0 | 99  |

| Reading Grade 8 |
|-----------------|
|-----------------|

|                 | g Grade 8          |                  | aa           | adar       | TC.          | T 0/  | C              | C 0/         | D 4    |
|-----------------|--------------------|------------------|--------------|------------|--------------|-------|----------------|--------------|--------|
| Raw             | Meas               | MeasSE           | SS           | SSSE       | Freq         | Freq% | Cum            | Cum%         | Pct    |
| 0               | -4.8327            | 1.8342           | 700          | 431        | 1            | 0.0   | 1              | 0.0          | 1      |
| 1               | -3.6070            | 1.0155           | 700          | 238        | 1 3          | 0.0   | 2<br>5         | 0.0          | 1      |
| 2 3             | -2.8825            | 0.7291<br>0.6044 | 700<br>700   | 171<br>142 | 3            | 0.0   | 8              | 0.0          | 1      |
| 4               | -2.4453<br>-2.1254 | 0.5314           | 700          | 125        | 15           | 0.0   | 23             | 0.0          | 1<br>1 |
| 5               | -2.1234            | 0.3314           | 700          | 113        | 35           | 0.0   | 58             | 0.0          | 1      |
| 6               | -1.6540            | 0.4627           | 700          | 105        | 79           | 0.0   | 137            | 0.0          | 1      |
| 7               | -1.4661            | 0.4474           | 769          | 99         | 161          | 0.1   | 298            | 0.1          | 1      |
| 8               | -1.2982            | 0.4200           | 809          | 94         | 252          | 0.1   | 550            | 0.4          | 1      |
| 9               | -1.1454            | 0.3827           | 845          | 90         | 415          | 0.2   | 965            | 0.7          | 1      |
| 10              | -1.0043            | 0.3688           | 878          | 87         | 593          | 0.5   | 1558           | 1.2          | 1      |
| 11              | -0.8726            | 0.3573           | 909          | 84         | 761          | 0.6   | 2319           | 1.8          | 1      |
| 12              | -0.7484            | 0.3477           | 938          | 82         | 918          | 0.7   | 3237           | 2.5          | 2      |
| 13              | -0.6304            | 0.3395           | 966          | 80         | 1110         | 0.8   | 4347           | 3.3          | 3      |
| 14              | -0.5176            | 0.3326           | 992          | 78         | 1150         | 0.9   | 5497           | 4.2          | 4      |
| 15              | -0.4090            | 0.3267           | 1018         | 77         | 1338         | 1.0   | 6835           | 5.2          | 5      |
| 16              | -0.3039            | 0.3217           | 1042         | 76         | 1397         | 1.1   | 8232           | 6.3          | 6      |
| 17              | -0.2018            | 0.3175           | 1066         | 75         | 1491         | 1.1   | 9723           | 7.4          | 7      |
| 18              | -0.1021            | 0.3139           | 1090         | 74         | 1486         | 1.1   | 11209          | 8.5          | 8      |
| 19              | -0.0046            | 0.3110           | 1113         | 73         | 1631         | 1.2   | 12840          | 9.8          | 9      |
| 20              | 0.0914             | 0.3086           | 1135         | 72         | 1642         | 1.3   | 14482          | 11.0         | 10     |
| 21              | 0.1860             | 0.3067           | 1157         | 72         | 1775         | 1.4   | 16257          | 12.4         | 12     |
| 22              | 0.2796             | 0.3053           | 1179         | 72         | 1834         | 1.4   | 18091          | 13.8         | 13     |
| 23              | 0.3726             | 0.3043           | 1201         | 71         | 2031         | 1.5   | 20122          | 15.3         | 15     |
| 24              | 0.4649             | 0.3038           | 1223         | 71         | 2044         | 1.6   | 22166          | 16.9         | 16     |
| 25              | 0.5572             | 0.3036           | 1245         | 71         | 2259         | 1.7   | 24425          | 18.6         | 18     |
| 26              | 0.6494             | 0.3039           | 1266         | 71         | 2381         | 1.8   | 26806          | 20.4         | 20     |
| 27              | 0.7419             | 0.3045           | 1288         | 72         | 2454         | 1.9   | 29260          | 22.3         | 21     |
| 28              | 0.8349             | 0.3055           | 1310         | 72         | 2689         | 2.0   | 31949          | 24.3         | 23     |
| 29              | 0.9287             | 0.3070           | 1332         | 72         | 3083         | 2.3   | 35032          | 26.7         | 26     |
| 30              | 1.0235             | 0.3089           | 1354         | 73         | 3284         | 2.5   | 38316          | 29.2         | 28     |
| 31              | 1.1196             | 0.3112           | 1377         | 73         | 3573         | 2.7   | 41889          | 31.9         | 31     |
| 32              | 1.2173             | 0.3140           | 1400         | 74         | 3928         | 3.0   | 45817          | 34.9         | 33     |
| 33              | 1.3169             | 0.3173           | 1423         | 75         | 4228         | 3.2   | 50045          | 38.1         | 37     |
| 34              | 1.4188             | 0.3211           | 1447         | 75         | 4543         | 3.5   | 54588          | 41.6         | 40     |
| 35              | 1.5233             | 0.3256           | 1471         | 76<br>70   | 4880         | 3.7   | 59468          | 45.3         | 43     |
| 36              | 1.6310             | 0.3307           | 1497         | 78<br>70   | 5169         | 3.9   | 64637          | 49.3         | 47     |
| 37              | 1.7423             | 0.3366           | 1523         | 79         | 5612         | 4.3   | 70249          | 53.5         | 51     |
| 38              | 1.8578             | 0.3434           | 1550         | 81         | 6039         | 4.6   | 76288          | 58.1         | 56     |
| <u>39</u><br>40 | 1.9784<br>2.1049   | 0.3512           | 1578         | 82<br>85   | 6211<br>6284 | 4.7   | 82499<br>88783 | 62.9<br>67.7 | 61     |
| 40              | 2.1049             | 0.3708           | 1608<br>1639 | 83<br>87   | 6397         | 4.8   | 95180          | 72.5         | 70     |
| 42              | 2.2384             | 0.3708           | 1673         | 90         | 6321         | 4.9   | 101501         | 77.4         | 75     |
| 43              | 2.5327             | 0.3977           | 1708         | 93         | 6174         | 4.7   | 107675         | 82.1         | 80     |
| 44              | 2.5327             | 0.3977           | 1747         | 98         | 5675         | 4.7   | 113350         | 86.4         | 84     |
| 45              | 2.8791             | 0.4370           | 1790         | 103        | 5018         | 3.8   | 118368         | 90.2         | 88     |
| 46              | 3.0816             | 0.4642           | 1837         | 109        | 4293         | 3.3   | 122661         | 93.5         | 92     |
| 47              | 3.3132             | 0.4997           | 1892         | 117        | 3290         | 2.5   | 125951         | 96.0         | 95     |
| 48              | 3.5865             | 0.5484           | 1956         | 129        | 2404         | 1.8   | 128355         | 97.8         | 97     |
| 49              | 3.9255             | 0.6208           | 2035         | 146        | 1609         | 1.2   | 129964         | 99.0         | 98     |
| 50              | 4.3837             | 0.7439           | 2143         | 175        | 842          | 0.6   | 130806         | 99.7         | 99     |
| 51              | 5.1311             | 1.0272           | 2319         | 241        | 331          | 0.3   | 131137         | 99.9         | 99     |
| 52              | 6.3740             | 1.8411           | 2610         | 432        | 81           | 0.1   | 131218         | 100.0        | 99     |

| $\alpha$ . |      | $\boldsymbol{\alpha}$ |    | 4 |
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| Science | Grade 4 |        |      |      |      |       |       |      |     |
|---------|---------|--------|------|------|------|-------|-------|------|-----|
| Raw     | Meas    | MeasSE | SS   | SSSE | Freq | Freq% | Cum   | Cum% | Pct |
| 0       | -5.7051 | 1.8337 | 1050 | 324  | 1    | 0.0   | 1     | 0.0  | 1   |
| 1       | -4.4809 | 1.0144 | 1050 | 179  | 1    | 0.0   | 2     | 0.0  | 1   |
| 2       | -3.7589 | 0.7272 | 1050 | 129  | 0    | 0.0   | 2     | 0.0  | 1   |
| 3       | -3.3247 | 0.6017 | 1050 | 106  | 1    | 0.0   | 3     | 0.0  | 1   |
| 4       | -3.0083 | 0.5279 | 1050 | 93   | 1    | 0.0   | 4     | 0.0  | 1   |
| 5       | -2.7565 | 0.4782 | 1050 | 85   | 2    | 0.0   | 6     | 0.0  | 1   |
| 6       | -2.5454 | 0.4420 | 1050 | 78   | 4    | 0.0   | 10    | 0.0  | 1   |
| 7       | -2.3625 | 0.4143 | 1050 | 73   | 6    | 0.0   | 16    | 0.0  | 1   |
| 8       | -2.2002 | 0.3922 | 1050 | 69   | 26   | 0.0   | 42    | 0.0  | 1   |
| 9       | -2.0536 | 0.3742 | 1050 | 66   | 36   | 0.0   | 78    | 0.1  | 1   |
| 10      | -1.9193 | 0.3592 | 1050 | 63   | 58   | 0.0   | 136   | 0.1  | 1   |
| 11      | -1.7949 | 0.3465 | 1050 | 61   | 130  | 0.1   | 266   | 0.2  | 1   |
| 12      | -1.6786 | 0.3357 | 1050 | 59   | 203  | 0.2   | 469   | 0.4  | 1   |
| 13      | -1.5691 | 0.3262 | 1050 | 58   | 267  | 0.2   | 736   | 0.6  | 1   |
| 14      | -1.4654 | 0.3180 | 1050 | 56   | 365  | 0.3   | 1101  | 0.9  | 1   |
| 15      | -1.3666 | 0.3108 | 1050 | 55   | 455  | 0.4   | 1556  | 1.2  | 1   |
| 16      | -1.2720 | 0.3045 | 1050 | 54   | 590  | 0.5   | 2146  | 1.7  | 1   |
| 17      | -1.1810 | 0.2988 | 1050 | 53   | 649  | 0.5   | 2795  | 2.2  | 2   |
| 18      | -1.0933 | 0.2938 | 1050 | 52   | 784  | 0.6   | 3579  | 2.8  | 3   |
| 19      | -1.0083 | 0.2893 | 1050 | 51   | 826  | 0.6   | 4405  | 3.5  | 3   |
| 20      | -0.9257 | 0.2853 | 1062 | 50   | 929  | 0.7   | 5334  | 4.2  | 4   |
| 21      | -0.8453 | 0.2818 | 1076 | 50   | 994  | 0.8   | 6328  | 5.0  | 5   |
| 22      | -0.7669 | 0.2786 | 1090 | 49   | 1027 | 0.8   | 7355  | 5.8  | 5   |
| 23      | -0.6901 | 0.2758 | 1104 | 49   | 1076 | 0.8   | 8431  | 6.6  | 6   |
| 24      | -0.6146 | 0.2733 | 1117 | 48   | 1140 | 0.9   | 9571  | 7.5  | 7   |
| 25      | -0.5406 | 0.2711 | 1130 | 48   | 1166 | 0.9   | 10737 | 8.4  | 8   |
| 26      | -0.4676 |        | 1143 | 48   | 1170 | 0.9   | 11907 | 9.4  | 9   |
| 27      | -0.3956 | 0.2675 | 1156 | 47   | 1249 | 1.0   | 13156 | 10.4 | 10  |
| 28      | -0.3245 | 0.2661 | 1168 | 47   | 1208 | 1.0   | 14364 | 11.3 | 11  |
| 29      | -0.2540 | 0.2649 | 1181 | 47   | 1279 | 1.0   | 15643 | 12.3 | 12  |
| 30      | -0.1841 | 0.2639 | 1193 | 47   | 1358 | 1.1   | 17001 | 13.4 | 13  |
| 31      | -0.1147 | 0.2631 | 1205 | 47   | 1432 | 1.1   | 18433 | 14.5 | 14  |
| 32      | -0.0456 | 0.2626 | 1218 | 46   | 1443 | 1.1   | 19876 | 15.6 | 15  |
| 33      | 0.0233  | 0.2622 | 1230 | 46   | 1511 | 1.2   | 21387 | 16.8 | 16  |
| 34      | 0.0920  | 0.2621 | 1242 | 46   | 1618 | 1.3   | 23005 | 18.1 | 17  |
| 35      | 0.1607  | 0.2621 | 1254 | 46   | 1610 | 1.3   | 24615 | 19.4 | 19  |
| 36      | 0.2294  | 0.2623 | 1266 | 46   | 1821 | 1.4   | 26436 | 20.8 | 20  |
| 37      | 0.2983  | 0.2628 | 1278 | 46   | 1771 | 1.4   | 28207 | 22.2 | 21  |
| 38      | 0.3675  | 0.2634 | 1291 | 47   | 2007 | 1.6   | 30214 | 23.8 | 23  |
| 39      | 0.4371  | 0.2643 | 1303 | 47   | 2090 | 1.6   | 32304 | 25.4 | 25  |
| 40      | 0.5072  | 0.2653 | 1315 | 47   | 2205 | 1.7   | 34509 | 27.1 | 26  |
| 41      | 0.5780  | 0.2666 | 1328 | 47   | 2372 | 1.9   | 36881 | 29.0 | 28  |
| 42      | 0.6495  | 0.2682 | 1340 | 47   | 2406 | 1.9   | 39287 | 30.9 | 30  |
| 43      | 0.7218  | 0.2700 | 1353 | 48   | 2574 | 2.0   | 41861 | 32.9 | 32  |
| 44      | 0.7953  | 0.2720 | 1366 | 48   | 2708 | 2.1   | 44569 | 35.1 | 34  |
| 45      | 0.8699  | 0.2744 | 1379 | 49   | 2864 | 2.3   | 47433 | 37.3 | 36  |
| 46      | 0.9459  | 0.2771 | 1393 | 49   | 3049 | 2.4   | 50482 | 39.7 | 39  |
| 47      | 1.0235  | 0.2801 | 1407 | 50   | 3149 | 2.5   | 53631 | 42.2 | 41  |
| 48      | 1.1029  | 0.2836 | 1421 | 50   | 3492 | 2.7   | 57123 | 44.9 | 44  |
| 49      | 1.1844  | 0.2874 | 1435 | 51   | 3595 | 2.8   | 60718 | 47.8 | 46  |
| 77      | 1.1077  | 0.2017 | 1733 | 31   | 5575 | 2.0   | 50710 | 77.0 | 70  |

Appendix N: Raw-to-Scaled-Score Conversion Tables

| 50 | 1.2683 | 0.2918 | 1450 | 52  | 3632 | 2.9 | 64350  | 50.6  | 49 |
|----|--------|--------|------|-----|------|-----|--------|-------|----|
| 51 | 1.3548 | 0.2967 | 1465 | 52  | 3838 | 3.0 | 68188  | 53.6  | 52 |
| 52 | 1.4445 | 0.3022 | 1481 | 53  | 4067 | 3.2 | 72255  | 56.8  | 55 |
| 53 | 1.5376 | 0.3085 | 1497 | 55  | 4174 | 3.3 | 76429  | 60.1  | 58 |
| 54 | 1.6350 | 0.3156 | 1515 | 56  | 4305 | 3.4 | 80734  | 63.5  | 62 |
| 55 | 1.7371 | 0.3237 | 1533 | 57  | 4440 | 3.5 | 85174  | 67.0  | 65 |
| 56 | 1.8449 | 0.3330 | 1552 | 59  | 4476 | 3.5 | 89650  | 70.5  | 69 |
| 57 | 1.9593 | 0.3438 | 1572 | 61  | 4645 | 3.7 | 94295  | 74.2  | 72 |
| 58 | 2.0818 | 0.3565 | 1594 | 63  | 4547 | 3.6 | 98842  | 77.8  | 76 |
| 59 | 2.2141 | 0.3715 | 1617 | 66  | 4534 | 3.6 | 103376 | 81.3  | 80 |
| 60 | 2.3587 | 0.3895 | 1643 | 69  | 4404 | 3.5 | 107780 | 84.8  | 83 |
| 61 | 2.5188 | 0.4115 | 1671 | 73  | 4327 | 3.4 | 112107 | 88.2  | 86 |
| 62 | 2.6994 | 0.4394 | 1703 | 78  | 3872 | 3.0 | 115979 | 91.2  | 90 |
| 63 | 2.9081 | 0.4757 | 1740 | 84  | 3566 | 2.8 | 119545 | 94.1  | 93 |
| 64 | 3.1574 | 0.5255 | 1784 | 93  | 2967 | 2.3 | 122512 | 96.4  | 95 |
| 65 | 3.4713 | 0.5996 | 1839 | 106 | 2169 | 1.7 | 124681 | 98.1  | 97 |
| 66 | 3.9030 | 0.7254 | 1916 | 128 | 1464 | 1.2 | 126145 | 99.2  | 99 |
| 67 | 4.6223 | 1.0130 | 2043 | 179 | 782  | 0.6 | 126927 | 99.9  | 99 |
| 68 | 5.8447 | 1.8329 | 2259 | 324 | 178  | 0.1 | 127105 | 100.0 | 99 |

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| Science | Grade 8 |        |       |      |      |       |        |      |     |
|---------|---------|--------|-------|------|------|-------|--------|------|-----|
| Raw     | Meas    | MeasSE | SS    | SSSE | Freq | Freq% | Cum    | Cum% | Pct |
| 0       | -5.8351 | 1.8312 | 925   | 351  | 1    | 0.0   | 1      | 0.0  | 1   |
| 1       | -4.6170 | 1.0101 | 925   | 193  | 0    | 0.0   | 1      | 0.0  | 1   |
| 2       | -3.9033 | 0.7215 | 925   | 138  | 2    | 0.0   | 3      | 0.0  | 1   |
| 3       | -3.4771 | 0.5951 | 925   | 114  | 0    | 0.0   | 3      | 0.0  | 1   |
| 4       | -3.1686 | 0.5206 | 925   | 100  | 4    | 0.0   | 7      | 0.0  | 1   |
| 5       | -2.9244 | 0.4703 | 925   | 90   | 1    | 0.0   | 8      | 0.0  | 1   |
| 6       | -2.7207 | 0.4337 | 925   | 83   | 8    | 0.0   | 16     | 0.0  | 1   |
| 7       | -2.5451 | 0.4056 | 925   | 78   | 12   | 0.0   | 28     | 0.0  | 1   |
| 8       | -2.3898 | 0.3832 | 925   | 73   | 42   | 0.0   | 70     | 0.1  | 1   |
| 9       | -2.2501 | 0.3650 | 925   | 70   | 79   | 0.1   | 149    | 0.1  | 1   |
| 10      | -2.1224 | 0.3498 | 925   | 67   | 146  | 0.1   | 295    | 0.2  | 1   |
| 11      | -2.0046 | 0.3370 | 925   | 65   | 237  | 0.2   | 532    | 0.4  | 1   |
| 12      | -1.8948 | 0.3260 | 925   | 62   | 359  | 0.3   | 891    | 0.7  | 1   |
| 13      | -1.7918 | 0.3164 | 925   | 61   | 533  | 0.4   | 1424   | 1.1  | 1   |
| 14      | -1.6943 | 0.3081 | 925   | 59   | 709  | 0.5   | 2133   | 1.6  | 1   |
| 15      | -1.6016 | 0.3008 | 925   | 58   | 851  | 0.7   | 2984   | 2.3  | 2   |
| 16      | -1.5130 | 0.2944 | 925   | 56   | 952  | 0.7   | 3936   | 3.0  | 3   |
| 17      | -1.4281 | 0.2887 | 925   | 55   | 1120 | 0.9   | 5056   | 3.9  | 3   |
| 18      | -1.3462 | 0.2836 | 939   | 54   | 1218 | 0.9   | 6274   | 4.8  | 4   |
| 19      | -1.2670 | 0.2791 | 954   | 53   | 1304 | 1.0   | 7578   | 5.8  | 5   |
| 20      | -1.1903 | 0.2751 | 969   | 53   | 1312 | 1.0   | 8890   | 6.8  | 6   |
| 21      | -1.1157 | 0.2715 | 983   | 52   | 1373 | 1.0   | 10263  | 7.8  | 7   |
| 22      | -1.0428 | 0.2683 | 997   | 51   | 1361 | 1.0   | 11624  | 8.9  | 8   |
| 23      | -0.9716 | 0.2654 | 1011  | 51   | 1397 | 1.1   | 13021  | 9.9  | 9   |
| 24      | -0.9019 | 0.2629 | 1024  | 50   | 1432 | 1.1   | 14453  | 11.0 | 10  |
| 25      | -0.8333 | 0.2607 | 1037  | 50   | 1454 | 1.1   | 15907  | 12.2 | 12  |
| 26      | -0.7658 | 0.2588 | 1050  | 50   | 1530 | 1.2   | 17437  | 13.3 | 13  |
| 27      | -0.6993 | 0.2571 | 1063  | 49   | 1476 | 1.1   | 18913  | 14.4 | 14  |
| 28      | -0.6336 | 0.2556 | 1075  | 49   | 1514 | 1.2   | 20427  | 15.6 | 15  |
| 29      | -0.5686 | 0.2544 | 1088  | 49   | 1508 | 1.2   | 21935  | 16.8 | 16  |
| 30      | -0.5041 | 0.2535 | 1100  | 49   | 1597 | 1.2   | 23532  | 18.0 | 17  |
| 31      | -0.4400 | 0.2527 | 1112  | 48   | 1609 | 1.2   | 25141  | 19.2 | 19  |
| 32      | -0.3763 | 0.2521 | 1125  | 48   | 1601 | 1.2   | 26742  | 20.4 | 20  |
| 33      | -0.3128 | 0.2518 | 1137  | 48   | 1600 | 1.2   | 28342  | 21.6 | 21  |
| 34      | -0.2495 | 0.2516 | 1149  | 48   | 1667 | 1.3   | 30009  | 22.9 | 22  |
| 35      | -0.1862 | 0.2517 | 1161  | 48   | 1768 | 1.4   | 31777  | 24.3 | 24  |
| 36      | -0.1228 | 0.2519 | 1173  | 48   | 1866 | 1.4   | 33643  | 25.7 | 25  |
| 37      | -0.0592 | 0.2524 | 1185  | 48   | 1890 | 1.4   | 35533  | 27.1 | 26  |
| 38      | 0.0046  | 0.2531 | 1198  | 48   | 2028 | 1.5   | 37561  | 28.7 | 28  |
| 39      | 0.0689  | 0.2540 | 1210  | 49   | 2091 | 1.6   | 39652  | 30.3 | 29  |
| 40      | 0.1337  | 0.2551 | 1222  | 49   | 2097 | 1.6   | 41749  | 31.9 | 31  |
| 41      | 0.1991  | 0.2564 | 1235  | 49   | 2321 | 1.8   | 44070  | 33.7 | 33  |
| 42      | 0.2652  | 0.2580 | 1247  | 49   | 2397 | 1.8   | 46467  | 35.5 | 35  |
| 43      | 0.3322  | 0.2598 | 1260  | 50   | 2509 | 1.9   | 48976  | 37.4 | 36  |
| 44      | 0.4003  | 0.2620 | 1273  | 50   | 2735 | 2.1   | 51711  | 39.5 | 38  |
| 45      | 0.4695  | 0.2644 | 1287  | 51   | 2739 | 2.1   | 54450  | 41.6 | 41  |
| 46      | 0.5401  | 0.2671 | 1300  | 51   | 2918 | 2.2   | 57368  | 43.8 | 43  |
| 47      | 0.6123  | 0.2702 | 1314  | 52   | 3168 | 2.4   | 60536  | 46.2 | 45  |
| 48      | 0.6863  | 0.2738 | 1328  | 52   | 3360 | 2.6   | 63896  | 48.8 | 48  |
| 49      | 0.7623  | 0.2777 | 1343  | 53   | 3478 | 2.7   | 67374  | 51.5 | 50  |
| 17      | 5.7525  | J.2777 | 15.15 | 55   | 2170 | 2.,   | 5,5, F | 51.5 | 50  |

Appendix N: Raw-to-Scaled-Score Conversion Tables

| 50 | 0.8406 | 0.2821 | 1358 | 54  | 3764 | 2.9 | 71138  | 54.3  | 53 |
|----|--------|--------|------|-----|------|-----|--------|-------|----|
| 51 | 0.9216 | 0.2871 | 1373 | 55  | 3957 | 3.0 | 75095  | 57.4  | 56 |
| 52 | 1.0056 | 0.2928 | 1389 | 56  | 4122 | 3.1 | 79217  | 60.5  | 59 |
| 53 | 1.0932 | 0.2991 | 1406 | 57  | 4314 | 3.3 | 83531  | 63.8  | 62 |
| 54 | 1.1848 | 0.3064 | 1424 | 59  | 4482 | 3.4 | 88013  | 67.2  | 66 |
| 55 | 1.2811 | 0.3146 | 1442 | 60  | 4677 | 3.6 | 92690  | 70.8  | 69 |
| 56 | 1.3830 | 0.3241 | 1462 | 62  | 4768 | 3.6 | 97458  | 74.4  | 73 |
| 57 | 1.4916 | 0.3350 | 1482 | 64  | 4836 | 3.7 | 102294 | 78.1  | 76 |
| 58 | 1.6081 | 0.3479 | 1505 | 67  | 4789 | 3.7 | 107083 | 81.8  | 80 |
| 59 | 1.7342 | 0.3630 | 1529 | 70  | 4836 | 3.7 | 111919 | 85.5  | 84 |
| 60 | 1.8726 | 0.3813 | 1555 | 73  | 4536 | 3.5 | 116455 | 89.0  | 87 |
| 61 | 2.0263 | 0.4036 | 1585 | 77  | 3893 | 3.0 | 120348 | 91.9  | 90 |
| 62 | 2.2003 | 0.4318 | 1618 | 83  | 3356 | 2.6 | 123704 | 94.5  | 93 |
| 63 | 2.4023 | 0.4685 | 1657 | 90  | 2880 | 2.2 | 126584 | 96.7  | 96 |
| 64 | 2.6448 | 0.5188 | 1703 | 99  | 2057 | 1.6 | 128641 | 98.3  | 97 |
| 65 | 2.9515 | 0.5935 | 1762 | 114 | 1290 | 1.0 | 129931 | 99.2  | 99 |
| 66 | 3.3758 | 0.7202 | 1843 | 138 | 672  | 0.5 | 130603 | 99.8  | 99 |
| 67 | 4.0875 | 1.0092 | 1980 | 193 | 265  | 0.2 | 130868 | 100.0 | 99 |
| 68 | 5.3043 | 1.8307 | 2213 | 351 | 50   | 0.0 | 130918 | 100.0 | 99 |

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| writing | g Grade 5 |        |      |      |      |       |       |      |     |
|---------|-----------|--------|------|------|------|-------|-------|------|-----|
| Raw     | Meas      | MeasSE | SS   | SSSE | Freq | Freq% | Cum   | Cum% | Pct |
| 22      | -6.5539   | 1.8374 | 700  | 184  | 50   | 0.0   | 50    | 0.0  | 1   |
| 23      | -5.3196   | 1.0217 | 700  | 102  | 227  | 0.2   | 277   | 0.2  | 1   |
| 24      | -4.5818   | 0.7386 | 700  | 74   | 464  | 0.4   | 741   | 0.6  | 1   |
| 25      | -4.1298   | 0.6170 | 700  | 62   | 605  | 0.5   | 1346  | 1.1  | 1   |
| 26      | -3.7939   | 0.5471 | 700  | 55   | 633  | 0.5   | 1979  | 1.6  | 1   |
| 27      | -3.5204   | 0.5014 | 719  | 50   | 524  | 0.4   | 2503  | 2.0  | 2   |
| 28      | -3.2855   | 0.4694 | 743  | 47   | 374  | 0.3   | 2877  | 2.3  | 2   |
| 29      | -3.0765   | 0.4461 | 764  | 45   | 217  | 0.2   | 3094  | 2.5  | 2   |
| 30      | -2.8856   | 0.4287 | 783  | 43   | 142  | 0.1   | 3236  | 2.6  | 3   |
| 31      | -2.7075   | 0.4156 | 801  | 42   | 101  | 0.1   | 3337  | 2.7  | 3   |
| 32      | -2.5390   | 0.4059 | 818  | 41   | 56   | 0.0   | 3393  | 2.7  | 3   |
| 33      | -2.3772   | 0.3988 | 834  | 40   | 103  | 0.1   | 3496  | 2.8  | 3   |
| 34      | -2.2203   | 0.3939 | 849  | 39   | 264  | 0.2   | 3760  | 3.0  | 3   |
| 35      | -2.0665   | 0.3908 | 865  | 39   | 582  | 0.5   | 4342  | 3.5  | 3   |
| 36      | -1.9145   | 0.3892 | 880  | 39   | 955  | 0.8   | 5297  | 4.2  | 4   |
| 37      | -1.7632   | 0.3889 | 895  | 39   | 1109 | 0.9   | 6406  | 5.1  | 5   |
| 38      | -1.6117   | 0.3898 | 910  | 39   | 1116 | 0.9   | 7522  | 6.0  | 6   |
| 39      | -1.4591   | 0.3917 | 926  | 39   | 1043 | 0.8   | 8565  | 6.9  | 6   |
| 40      | -1.3047   | 0.3943 | 941  | 39   | 886  | 0.7   | 9451  | 7.6  | 7   |
| 41      | -1.1480   | 0.3973 | 957  | 40   | 758  | 0.6   | 10209 | 8.2  | 8   |
| 42      | -0.9888   | 0.4006 | 973  | 40   | 553  | 0.4   | 10762 | 8.6  | 8   |
| 43      | -0.8270   | 0.4038 | 989  | 40   | 395  | 0.3   | 11157 | 8.9  | 9   |
| 44      | -0.6628   | 0.4066 | 1005 | 41   | 324  | 0.3   | 11481 | 9.2  | 9   |
| 45      | -0.4966   | 0.4085 | 1022 | 41   | 409  | 0.3   | 11890 | 9.5  | 9   |
| 46      | -0.3293   | 0.4094 | 1039 | 41   | 774  | 0.6   | 12664 | 10.2 | 10  |
| 47      | -0.1618   | 0.4090 | 1055 | 41   | 1486 | 1.2   | 14150 | 11.4 | 11  |
| 48      | 0.0049    | 0.4074 | 1072 | 41   | 2354 | 1.9   | 16504 | 13.2 | 12  |
| 49      | 0.1698    | 0.4046 | 1088 | 40   | 3427 | 2.7   | 19931 | 16.0 | 15  |
| 50      | 0.3320    | 0.4008 | 1105 | 40   | 4034 | 3.2   | 23965 | 19.2 | 18  |
| 51      | 0.4909    | 0.3965 | 1121 | 40   | 4714 | 3.8   | 28679 | 23.0 | 21  |
| 52      | 0.6463    | 0.3917 | 1136 | 39   | 5109 | 4.1   | 33788 | 27.1 | 25  |
| 53      | 0.7978    | 0.3869 | 1151 | 39   | 4799 | 3.8   | 38587 | 31.0 | 29  |
| 54      | 0.9456    | 0.3821 | 1166 | 38   | 4254 | 3.4   | 42841 | 34.4 | 33  |
| 55      | 1.0900    | 0.3777 | 1180 | 38   | 3143 | 2.5   | 45984 | 36.9 | 36  |
| 56      | 1.2311    | 0.3738 | 1195 | 37   | 1662 | 1.3   | 47646 | 38.2 | 38  |
| 57      | 1.3695    | 0.3703 | 1208 | 37   | 259  | 0.2   | 47905 | 38.4 | 38  |
| 58      | 1.5056    | 0.3675 | 1222 | 37   | 413  | 0.3   | 48318 | 38.8 | 39  |
| 59      | 1.6398    | 0.3654 | 1236 | 37   | 820  | 0.7   | 49138 | 39.4 | 39  |
| 60      | 1.7728    | 0.3640 | 1249 | 36   | 1361 | 1.1   | 50499 | 40.5 | 40  |
| 61      | 1.9050    | 0.3634 | 1262 | 36   | 2163 | 1.7   | 52662 | 42.2 | 41  |
| 62      | 2.0371    | 0.3637 | 1275 | 36   | 3124 | 2.5   | 55786 | 44.7 | 43  |
| 63      | 2.1698    | 0.3650 | 1288 | 37   | 4030 | 3.2   | 59816 | 48.0 | 46  |
| 64      | 2.3038    | 0.3673 | 1302 | 37   | 4731 | 3.8   | 64547 | 51.8 | 50  |
| 65      | 2.4398    | 0.3707 | 1315 | 37   | 5290 | 4.2   | 69837 | 56.0 | 54  |
| 66      | 2.5790    | 0.3755 | 1329 | 38   | 4736 | 3.8   | 74573 | 59.8 | 58  |
| 67      | 2.7223    | 0.3819 | 1344 | 38   | 2991 | 2.4   | 77564 | 62.2 | 61  |
| 68      | 2.8712    | 0.3900 | 1359 | 39   | 208  | 0.2   | 77772 | 62.4 | 62  |
| 69      | 3.0272    | 0.4004 | 1374 | 40   | 124  | 0.1   | 77896 | 62.5 | 62  |
|         |           |        |      |      |      |       |       |      |     |

| 70  | 3.1926  | 0.4135 | 1391 | 41  | 285  | 0.2 | 78181  | 62.7  | 63 |
|-----|---------|--------|------|-----|------|-----|--------|-------|----|
| 71  | 3.3702  | 0.4300 | 1408 | 43  | 673  | 0.5 | 78854  | 63.3  | 63 |
| 72  | 3.5639  | 0.4509 | 1428 | 45  | 1184 | 0.9 | 80038  | 64.2  | 64 |
| 73  | 3.7791  | 0.4778 | 1449 | 48  | 2177 | 1.7 | 82215  | 65.9  | 65 |
| 74  | 4.0236  | 0.5126 | 1474 | 51  | 3723 | 3.0 | 85938  | 68.9  | 67 |
| 75  | 4.3092  | 0.5577 | 1502 | 56  | 5357 | 4.3 | 91295  | 73.2  | 71 |
| 76  | 4.6518  | 0.6142 | 1537 | 61  | 7796 | 6.3 | 99091  | 79.5  | 76 |
| 77  | 5.0676  | 0.6738 | 1578 | 67  | 9279 | 7.4 | 108370 | 86.9  | 83 |
| 78  | 5.5484  | 0.7043 | 1626 | 70  | 7296 | 5.9 | 115666 | 92.8  | 90 |
| 79  | 6.0319  | 0.6775 | 1675 | 68  | 81   | 0.1 | 115747 | 92.8  | 93 |
| 80  | 6.4544  | 0.6206 | 1717 | 62  | 6    | 0.0 | 115753 | 92.9  | 93 |
| 81  | 6.8059  | 0.5665 | 1752 | 57  | 8    | 0.0 | 115761 | 92.9  | 93 |
| 82  | 7.1022  | 0.5238 | 1782 | 52  | 37   | 0.0 | 115798 | 92.9  | 93 |
| 83  | 7.3593  | 0.4917 | 1807 | 49  | 75   | 0.1 | 115873 | 92.9  | 93 |
| 84  | 7.5890  | 0.4679 | 1830 | 47  | 163  | 0.1 | 116036 | 93.1  | 93 |
| 85  | 7.7994  | 0.4505 | 1851 | 45  | 376  | 0.3 | 116412 | 93.4  | 93 |
| 86  | 7.9965  | 0.4381 | 1871 | 44  | 680  | 0.5 | 117092 | 93.9  | 94 |
| 87  | 8.1846  | 0.4299 | 1890 | 43  | 1274 | 1.0 | 118366 | 94.9  | 94 |
| 88  | 8.3673  | 0.4254 | 1909 | 43  | 2231 | 1.8 | 120597 | 96.7  | 96 |
| 89  | 8.5475  | 0.4243 | 1926 | 42  | 2369 | 1.9 | 122966 | 98.6  | 98 |
| 90  | 8.7284  | 0.4266 | 1944 | 43  | 20   | 0.0 | 122986 | 98.7  | 99 |
| 91  | 8.9125  | 0.4324 | 1963 | 43  | 0    | 0.0 | 122986 | 98.7  | 99 |
| 92  | 9.1035  | 0.4423 | 1982 | 44  | 1    | 0.0 | 122987 | 98.7  | 99 |
| 93  | 9.3052  | 0.4570 | 2002 | 46  | 3    | 0.0 | 122990 | 98.7  | 99 |
| 94  | 9.5233  | 0.4781 | 2024 | 48  | 5    | 0.0 | 122995 | 98.7  | 99 |
| 95  | 9.7657  | 0.5083 | 2048 | 51  | 11   | 0.0 | 123006 | 98.7  | 99 |
| 96  | 10.0456 | 0.5524 | 2076 | 55  | 42   | 0.0 | 123048 | 98.7  | 99 |
| 97  | 10.3870 | 0.6210 | 2110 | 62  | 96   | 0.1 | 123144 | 98.8  | 99 |
| 98  | 10.8435 | 0.7414 | 2156 | 74  | 245  | 0.2 | 123389 | 99.0  | 99 |
| 99  | 11.5851 | 1.0234 | 2230 | 102 | 527  | 0.4 | 123916 | 99.4  | 99 |
| 100 | 12.8217 | 1.8383 | 2354 | 184 | 750  | 0.6 | 124666 | 100.0 | 99 |
|     |         |        |      |     |      |     |        |       |    |

**Writing Grade 8** 

|     | g Grade 8 |        |      |      |      |       |       |      |     |
|-----|-----------|--------|------|------|------|-------|-------|------|-----|
| Raw | Meas      | MeasSE | SS   | SSSE | Freq | Freq% | Cum   | Cum% | Pct |
| 22  | -7.4650   |        | 700  | 184  | 20   | 0.0   | 20    | 0.0  | 1   |
| 23  | -6.2267   | 1.0246 | 700  | 102  | 102  | 0.1   | 122   | 0.1  | 1   |
| 24  | -5.4827   | 0.7429 | 700  | 74   | 266  | 0.2   | 388   | 0.3  | 1   |
| 25  | -5.0243   | 0.6225 | 700  | 62   | 334  | 0.3   | 722   | 0.6  | 1   |
| 26  | -4.6812   | 0.5538 | 700  | 55   | 290  | 0.2   | 1012  | 0.8  | 1   |
| 27  | -4.4001   | 0.5093 | 700  | 51   | 218  | 0.2   | 1230  | 0.9  | 1   |
| 28  | -4.1569   | 0.4786 | 708  | 48   | 169  | 0.1   | 1399  | 1.1  | 1   |
| 29  | -3.9388   | 0.4566 | 730  | 46   | 62   | 0.0   | 1461  | 1.1  | 1   |
| 30  | -3.7379   | 0.4407 | 750  | 44   | 51   | 0.0   | 1512  | 1.2  | 1   |
| 31  | -3.5489   | 0.4294 | 769  | 43   | 26   | 0.0   | 1538  | 1.2  | 1   |
| 32  | -3.3681   | 0.4215 | 787  | 42   | 24   | 0.0   | 1562  | 1.2  | 1   |
| 33  | -3.1927   | 0.4165 | 805  | 42   | 71   | 0.1   | 1633  | 1.3  | 1   |
| 34  | -3.0204   | 0.4140 | 822  | 41   | 251  | 0.2   | 1884  | 1.4  | 1   |
| 35  | -2.8493   | 0.4136 | 839  | 41   | 497  | 0.4   | 2381  | 1.8  | 2   |
| 36  | -2.6777   | 0.4151 | 856  | 42   | 693  | 0.5   | 3074  | 2.4  | 2   |
| 37  | -2.5042   | 0.4182 | 873  | 42   | 718  | 0.6   | 3792  | 2.9  | 3   |
| 38  | -2.3275   | 0.4228 | 891  | 42   | 645  | 0.5   | 4437  | 3.4  | 3   |
| 39  | -2.1465   | 0.4283 | 909  | 43   | 474  | 0.4   | 4911  | 3.8  | 4   |
| 40  | -1.9605   | 0.4342 | 928  | 43   | 358  | 0.3   | 5269  | 4.0  | 4   |
| 41  | -1.7694   | 0.4399 | 947  | 44   | 201  | 0.2   | 5470  | 4.2  | 4   |
| 42  | -1.5739   | 0.4442 | 966  | 44   | 129  | 0.1   | 5599  | 4.3  | 4   |
| 43  | -1.3754   | 0.4464 | 986  | 45   | 125  | 0.1   | 5724  | 4.4  | 4   |
| 44  | -1.1763   | 0.4455 | 1006 | 45   | 234  | 0.2   | 5958  | 4.6  | 4   |
| 45  | -0.9794   | 0.4415 | 1026 | 44   | 653  | 0.5   | 6611  | 5.1  | 5   |
| 46  | -0.7874   | 0.4346 | 1045 | 43   | 1472 | 1.1   | 8083  | 6.2  | 6   |
| 47  | -0.6022   | 0.4257 | 1064 | 43   | 2381 | 1.8   | 10464 | 8.0  | 7   |
| 48  | -0.4252   | 0.4157 | 1081 | 42   | 3094 | 2.4   | 13558 | 10.4 | 9   |
| 49  | -0.2566   | 0.4055 | 1098 | 41   | 3285 | 2.5   | 16843 | 12.9 | 12  |
| 50  | -0.0962   | 0.3956 | 1114 | 40   | 3275 | 2.5   | 20118 | 15.4 | 14  |
| 51  | 0.0566    | 0.3864 | 1130 | 39   | 2761 | 2.1   | 22879 | 17.6 | 16  |
| 52  | 0.2028    | 0.3782 | 1144 | 38   | 2268 | 1.7   | 25147 | 19.3 | 18  |
| 53  | 0.3430    | 0.3710 | 1158 | 37   | 1715 | 1.3   | 26862 | 20.6 | 20  |
| 54  | 0.4783    | 0.3648 | 1172 | 36   | 1316 | 1.0   | 28178 | 21.6 | 21  |
| 55  | 0.6094    | 0.3596 | 1185 | 36   | 861  | 0.7   | 29039 | 22.3 | 22  |
| 56  | 0.7372    | 0.3554 | 1198 | 36   | 665  | 0.5   | 29704 | 22.8 | 23  |
| 57  | 0.8623    | 0.3522 | 1210 | 35   | 995  | 0.8   | 30699 | 23.6 | 23  |
| 58  | 0.9855    | 0.3499 | 1222 | 35   | 1477 | 1.1   | 32176 | 24.7 | 24  |
| 59  | 1.1074    | 0.3485 | 1235 | 35   | 2240 | 1.7   | 34416 | 26.4 | 26  |
| 60  | 1.2286    | 0.3480 | 1247 | 35   | 2934 | 2.3   | 37350 | 28.7 | 28  |
| 61  | 1.3498    | 0.3484 | 1259 | 35   | 3410 | 2.6   | 40760 | 31.3 | 30  |
| 62  | 1.4715    | 0.3497 | 1271 | 35   | 3591 | 2.8   | 44351 | 34.0 | 33  |
| 63  | 1.5946    |        | 1283 | 35   | 3587 | 2.8   | 47938 | 36.8 | 35  |
| 64  | 1.7197    | 0.3555 | 1296 | 36   | 3534 | 2.7   | 51472 | 39.5 | 38  |
| 65  | 1.8476    |        | 1309 | 36   | 2900 | 2.2   | 54372 | 41.7 | 41  |
| 66  | 1.9793    | 0.3659 | 1322 | 37   | 2108 | 1.6   | 56480 | 43.3 | 43  |
| 67  | 2.1158    |        | 1335 | 37   | 1241 | 1.0   | 57721 | 44.3 | 44  |
| 68  | 2.2584    |        | 1350 | 38   | 690  | 0.5   | 58411 | 44.8 | 45  |
| 69  | 2.4088    |        | 1365 | 39   | 914  | 0.7   | 59325 | 45.5 | 45  |

|   | 70  | 2.5690  | 0.4074 | 1381 | 41  | 1698  | 1.3 | 61023  | 46.8  | 46 |
|---|-----|---------|--------|------|-----|-------|-----|--------|-------|----|
|   | 71  | 2.7417  | 0.4244 | 1398 | 42  | 2856  | 2.2 | 63879  | 49.0  | 48 |
|   | 72  | 2.9306  | 0.4455 | 1417 | 45  | 4102  | 3.1 | 67981  | 52.2  | 51 |
|   | 73  | 3.1405  | 0.4718 | 1438 | 47  | 5661  | 4.3 | 73642  | 56.5  | 54 |
|   | 74  | 3.3786  | 0.5050 | 1462 | 51  | 7599  | 5.8 | 81241  | 62.3  | 59 |
|   | 75  | 3.6543  | 0.5464 | 1489 | 55  | 9240  | 7.1 | 90481  | 69.4  | 66 |
|   | 76  | 3.9799  | 0.5955 | 1522 | 60  | 10391 | 8.0 | 100872 | 77.4  | 73 |
|   | 77  | 4.3649  | 0.6435 | 1560 | 64  | 9756  | 7.5 | 110628 | 84.9  | 81 |
|   | 78  | 4.7984  | 0.6667 | 1604 | 67  | 6195  | 4.8 | 116823 | 89.7  | 87 |
|   | 79  | 5.2343  | 0.6471 | 1647 | 65  | 548   | 0.4 | 117371 | 90.1  | 90 |
|   | 80  | 5.6258  | 0.6022 | 1686 | 60  | 45    | 0.0 | 117416 | 90.1  | 90 |
|   | 81  | 5.9609  | 0.5562 | 1720 | 56  | 61    | 0.0 | 117477 | 90.2  | 90 |
|   | 82  | 6.2487  | 0.5180 | 1749 | 52  | 130   | 0.1 | 117607 | 90.3  | 90 |
|   | 83  | 6.5014  | 0.4884 | 1774 | 49  | 251   | 0.2 | 117858 | 90.4  | 90 |
|   | 84  | 6.7286  | 0.4661 | 1797 | 47  | 479   | 0.4 | 118337 | 90.8  | 91 |
|   | 85  | 6.9378  | 0.4495 | 1818 | 45  | 764   | 0.6 | 119101 | 91.4  | 91 |
|   | 86  | 7.1343  | 0.4378 | 1837 | 44  | 1328  | 1.0 | 120429 | 92.4  | 92 |
|   | 87  | 7.3223  | 0.4300 | 1856 | 43  | 1942  | 1.5 | 122371 | 93.9  | 93 |
|   | 88  | 7.5051  | 0.4257 | 1874 | 43  | 2683  | 2.1 | 125054 | 96.0  | 95 |
|   | 89  | 7.6857  | 0.4248 | 1892 | 42  | 2294  | 1.8 | 127348 | 97.7  | 97 |
|   | 90  | 7.8670  | 0.4272 | 1911 | 43  | 197   | 0.2 | 127545 | 97.9  | 98 |
|   | 91  | 8.0517  | 0.4331 | 1929 | 43  | 1     | 0.0 | 127546 | 97.9  | 98 |
|   | 92  | 8.2433  | 0.4430 | 1948 | 44  | 3     | 0.0 | 127549 | 97.9  | 98 |
|   | 93  | 8.4457  | 0.4577 | 1968 | 46  | 9     | 0.0 | 127558 | 97.9  | 98 |
|   | 94  | 8.6645  | 0.4789 | 1990 | 48  | 18    | 0.0 | 127576 | 97.9  | 98 |
|   | 95  | 8.9076  | 0.5090 | 2015 | 51  | 61    | 0.0 | 127637 | 98.0  | 98 |
|   | 96  | 9.1882  | 0.5531 | 2043 | 55  | 129   | 0.1 | 127766 | 98.1  | 98 |
|   | 97  | 9.5303  | 0.6216 | 2077 | 62  | 238   | 0.2 | 128004 | 98.2  | 98 |
|   | 98  | 9.9876  | 0.7419 | 2123 | 74  | 489   | 0.4 | 128493 | 98.6  | 98 |
| _ | 99  | 10.7301 | 1.0238 | 2197 | 102 | 847   | 0.7 | 129340 | 99.3  | 99 |
| _ | 100 | 11.9672 | 1.8385 | 2321 | 184 | 962   | 0.7 | 130302 | 100.0 | 99 |
|   |     |         |        |      |     |       |     |        |       |    |

## Appendix O:

# Linking Item Statistics

| Column<br>Heading | Definition                  |
|-------------------|-----------------------------|
| Type              | Item type                   |
| Form              | Form                        |
| Seq               | Sequence                    |
| Prev Form         | Previous form               |
| Prev Seq          | Previous sequence           |
| Prev P-Val        | Previous P-Value            |
| P-Val             | P-Value                     |
| Prev Meas         | Previous Rasch item measure |
| Meas              | Rasch item measure          |

|                  |          |        |          | Prev    | Prev     | Prev         | Prev         |              | Prev             |                  |
|------------------|----------|--------|----------|---------|----------|--------------|--------------|--------------|------------------|------------------|
| ID               | Type     | Form   | Seq      | Form    | Seq      | Year         | P-Val        | P-Val        | Meas             | Meas             |
| 469752           | MC       | 0      | 2        | 0       | 2        | 2013         | 0.88         | 0.85         | 0.0088           | 0.3147           |
| 286690           | MC       | 0      | 6        | 0       | 6        | 2013         | 0.93         | 0.92         | -0.7415          | -0.6329          |
| 471760           | MC       | 0      | 8        | 0       | 8        | 2013         | 0.73         | 0.72         | 1.3434           | 1.3444           |
| 663403           | MC       | 0      | 9        | 0       | 9        | 2013         | 0.83         | 0.82         | 0.5421           | 0.5298           |
| 301655           | MC       | 0      | 17       | 0       | 17       | 2013         | 0.55         | 0.50         | 2.4967           | 2.7027           |
| 513343           | MC       | 0      | 21       | 0       | 21       | 2013         | 0.82         | 0.78         | 0.7200           | 0.9206           |
| 873735           | MC       | 0      | 24       | 0       | 24       | 2013         | 0.93         | 0.92         | -0.6179          | -0.5382          |
| 254800           | MC       | 0      | 54       | 0       | 52       | 2013         | 0.91         | 0.91         | -0.5164          | -0.4796          |
| 519917           | MC       | 0      | 55       | 0       | 53       | 2013         | 0.64         | 0.65         | 2.0963           | 1.9135           |
| 360274           | MC       | 0      | 58       | 0       | 56       | 2013         | 0.90         | 0.88         | -0.1137          | -0.0295          |
| 980303           | MC       | 0      | 59       | 0       | 57       | 2013         | 0.61         | 0.61         | 2.1691           | 1.9291           |
| 675036           | MC       | 0      | 64       | 0       | 62       | 2013         | 0.82         | 0.87         | 0.6721           | 0.1379           |
| 452818           | MC       | 0      | 100      | 0       | 98       | 2013         | 0.84         | 0.84         | 0.4567           | 0.2827           |
| 582469           | MC       | 0      | 102      | 0       | 100      | 2013         | 0.94         | 0.93         | -0.8555          | -0.8260          |
| 523309           | MC       | 0      | 103      | 0       | 101      | 2013         | 0.66         | 0.66         | 1.8764           | 1.8615           |
| 819093           | MC       | 0      | 108      | 0       | 106      | 2013         | 0.89         | 0.86         | 0.0330           | 0.0839           |
| 669421           | MC       | 0      | 115      | 0       | 113      | 2013         | 0.87         | 0.84         | 0.0956           | 0.3084           |
| 117858           | MC       | 0      | 117      | 0       | 115      | 2013         | 0.90         | 0.89         | -0.0299          | -0.1279          |
| 725903           | MC       | 4      | 72       | 6;13;15 | 70       | 2013         | 0.88         | 0.86         | 0.0669           | 0.1545           |
| 238455           | MC       | 9      | 68       | 5;7     | 66       | 2013         | 0.82         | 0.80         | 0.7088           | 0.7965           |
| 998880           | MC       | 9      | 76       | 5;16;20 | 74       | 2013         | 0.65         | 0.63         | 1.8715           | 1.9324           |
| 511474           | MC       | 7      | 70       | 17;18   | 68       | 2013         | 0.77         | 0.77         | 1.0920           | 1.0511           |
| 333805           | MC       | 1      | 73       | 3;12    | 71       | 2013         | 0.89         | 0.92         | -0.0710          | -0.6659          |
| 942580           | MC       | 5      | 69       | 1;16    | 67       | 2013         | 0.88         | 0.88         | -0.0255          | 0.0128           |
| 631893           | MC       | 2      | 74       | 9       | 72       | 2013         | 0.89         | 0.88         | 0.0546           | -0.1161          |
| 767071           | MC       | 6      | 65       | 20      | 63       | 2013         | 0.50         | 0.47         | 2.7225           | 2.9502           |
| 727270           | MC       | 7      | 65       | 11      | 63       | 2013         | 0.71         | 0.70         | 1.4780           | 1.5687           |
| 155635           | MC       | 8      | 70       | 14      | 68       | 2013         | 0.55         | 0.49         | 2.4586           | 2.7939           |
| 430175           | MC       | 8      | 76       | 15      | 74       | 2013         | 0.62         | 0.63         | 2.0589           | 1.9593           |
| 799742           | MC       | 3      | 66       | 12      | 64       | 2013         | 0.85         | 0.81         | 0.4376           | 0.6517           |
| 271756           | MC       | 2      | 66       | 6       | 64       | 2013         | 0.68         | 0.69         | 1.7475           | 1.5629           |
| 894935           | MC       | 5      | 76       | 1       | 74       | 2013         | 0.51         | 0.55         | 2.5519           | 2.4410           |
| 189995           | MC       | 6      | 73       | 8       | 71       | 2013         | 0.80         | 0.77         | 0.8548           | 0.9994           |
| 287845           | MC       | 3      | 74<br>60 | 18      | 72<br>67 | 2013         | 0.63         | 0.60         | 1.9596           | 2.0709           |
| 895209           | MC<br>MC | 4      | 69<br>67 | 3<br>20 | 67<br>65 | 2013<br>2013 | 0.74<br>0.56 | 0.71<br>0.55 | 1.3017           | 1.4487           |
| 590013<br>142160 | OE       | 1<br>0 | 25       | 0       | 25       | 2013         | 0.56         | 0.55         | 2.3730<br>2.6051 | 2.3058<br>2.6069 |
| 859377           | OE<br>OE | 0      | 121      | 0       | 119      | 2013         | 0.33         | 0.32         | 1.0118           | 0.9097           |
| 037311           | OL       | U      | 141      | 0       |          | Mean         | 0.75         | 0.75         | 0.97             | 0.9097           |
|                  |          |        |          |         |          | Mican        | 0.70         | 0.75         | 0.97             | 0.90             |

|           |        |     | Prev     | Prev | Prev | Prev   |        | Prev   |        |
|-----------|--------|-----|----------|------|------|--------|--------|--------|--------|
| ID Typ    | e Form | Seq | Form     | Seq  | Year | P-Val  | P-Val  | Meas   | Meas   |
| 413467 MC | 0      | 1   | 0        | 1    | 2013 | 0.721  | 0.7184 | 0.0719 | 0.0195 |
| 337018 MC | 0      | 3   | 0        | 3    | 2013 | 0.6977 | 0.685  | 0.2164 | 0.25   |
| 313878 MC | 0      | 8   | 0        | 8    | 2013 | 0.8622 | 0.8544 | -1.006 | -0.995 |
| 864558 MC | 0      | 10  | 0        | 10   | 2013 | 0.6818 | 0.6652 | 0.3348 | 0.3115 |
| 679981 MC | 0      | 15  | 0        | 15   | 2013 | 0.6177 | 0.6157 | 0.7212 | 0.603  |
| 379825 MC | 0      | 17  | 0        | 17   | 2013 | 0.6046 | 0.5293 | 0.6965 | 1.0827 |
| 429674 MC | 0      | 20  | 0        | 20   | 2013 | 0.7946 | 0.7679 | -0.444 | -0.351 |
| 221331 MC | 0      | 21  | 0        | 21   | 2013 | 0.6669 | 0.6999 | 0.4295 | 0.1202 |
| 700531 MC | 0      | 23  | 0        | 23   | 2013 | 0.83   | 0.8194 | -0.723 | -0.641 |
| 520900 MC | 0      | 53  | 0        | 54   | 2013 | 0.5778 | 0.5784 | 0.8883 | 0.8063 |
| 993438 MC | 0      | 55  | 0        | 56   | 2013 | 0.617  | 0.6354 | 0.6763 | 0.5513 |
| 431075 MC | 0      | 56  | 0        | 57   | 2013 | 0.7598 | 0.7569 | -0.152 | -0.242 |
| 872174 MC | 0      | 57  | 0        | 58   | 2013 | 0.616  | 0.6266 | 0.6739 | 0.5106 |
| 637737 MC | 0      | 59  | 0        | 60   | 2013 | 0.6766 | 0.6768 | 0.3259 | 0.2232 |
| 367428 MC | 0      | 60  | 0        | 61   | 2013 | 0.6959 | 0.6822 | 0.239  | 0.2676 |
| 595254 MC | 0      | 96  | 0        | 98   | 2013 | 0.8804 | 0.8674 | -1.304 | -1.253 |
| 583983 MC | 0      | 97  | 0        | 99   | 2013 | 0.7144 | 0.6851 | 0.1211 | 0.2606 |
| 416139 MC | 0      | 98  | 0        | 100  | 2013 | 0.596  | 0.6096 | 0.7584 | 0.7494 |
| 838889 MC | 0      | 102 | 0        | 104  | 2013 | 0.7774 | 0.751  | -0.334 | -0.138 |
| 556430 MC | 0      | 103 | 0        | 105  | 2013 | 0.7489 | 0.7443 | -0.05  | -0.14  |
| 984999 MC | 0      | 105 | 0        | 107  | 2013 | 0.8419 | 0.8026 | -0.661 | -0.435 |
| 458381 MC | 0      | 107 | 0        | 109  | 2013 | 0.553  | 0.5503 | 1.0606 | 0.9069 |
| 552533 MC | 0      | 114 | 0        | 116  | 2013 | 0.7356 | 0.7208 | -0.041 | -0.046 |
| 389957 MC | 0      | 118 | 0        | 120  | 2013 | 0.544  | 0.604  | 1.0792 | 0.6533 |
| 923557 MC | 7      | 66  | 8;11;19  | 67   | 2013 | 0.7873 | 0.7828 | -0.353 | -0.419 |
| 265611 MC | 3      | 67  | 4;6;10   | 68   | 2013 | 0.7854 | 0.7664 | -0.356 | -0.296 |
| 124410 MC | 8      | 68  | 5;20     | 69   | 2013 | 0.8424 | 0.8434 | -0.828 | -0.898 |
| 708265 MC | 6      | 73  | 10;13;15 | 74   | 2013 | 0.7028 | 0.6559 | 0.2127 | 0.4079 |
| 241848 MC | 9      | 67  | 7;18     | 68   | 2013 | 0.5865 | 0.6147 | 0.8575 | 0.6569 |
| 491963 MC | 4      | 70  | 3;16     | 71   | 2013 | 0.7661 | 0.7591 | -0.238 | -0.239 |
| 640227 MC | 5      | 74  | 2;8;18   | 75   | 2013 | 0.7729 | 0.7742 | -0.282 | -0.322 |
| 353941 MC | 9      | 69  | 2;13     | 70   | 2013 | 0.7538 | 0.7814 | -0.148 | -0.386 |
| 596572 MC | 8      | 75  | 3        | 76   | 2013 | 0.5853 | 0.6038 | 0.8109 | 0.7156 |
| 292210 MC | 7      | 75  | 8        | 66   | 2013 | 0.708  | 0.7121 | 0.1753 | 0.0629 |
| 165433 MC | 2      | 68  | 11       | 69   | 2013 | 0.9075 | 0.9062 | -1.478 | -1.663 |
| 183725 MC | 5      | 67  | 12       | 68   | 2013 | 0.8277 | 0.7956 | -0.667 | -0.48  |
| 196245 MC | 3      | 68  | 17       | 69   | 2013 | 0.5626 | 0.5431 | 0.9741 | 1.0448 |
| 583093 MC | 1      | 68  | 1        | 69   | 2013 | 0.4939 | 0.4989 | 1.2269 | 1.1742 |
| 621075 MC | 6      | 67  | 2        | 68   | 2013 | 0.3426 | 0.2595 | 2.1079 | 2.6643 |
| 215838 MC | 4      | 65  | 10       | 66   | 2013 | 0.935  | 0.9058 | -1.915 | -1.601 |
| 374368 MC | 2      | 73  | 16       | 74   | 2013 | 0.6693 | 0.6261 | 0.4088 | 0.5219 |
| 724331 MC | 1      | 74  | 1        | 75   | 2013 | 0.7121 | 0.6924 | 0.0087 | 0.0797 |
|           |        |     |          |      | Mean | 0.70   | 0.69   | 0.10   | 0.10   |

|        |      |      |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|------|-----|------|------|------|-------|-------|---------|---------|
| ID     | Type | Form | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 122875 | MC   | 0    | 1   | 0    | 1    | 2013 | 0.70  | 0.68  | 0.3903  | 0.4880  |
| 418653 | MC   | 0    | 2   | 0    | 2    | 2012 | 0.77  | 0.75  | 0.1639  | 0.1644  |
| 217611 | MC   | 0    | 13  | 0    | 13   | 2013 | 0.86  | 0.87  | -0.6264 | -0.8217 |
| 971657 | MC   | 0    | 16  | 0    | 17   | 2012 | 0.70  | 0.65  | 0.6142  | 0.7826  |
| 853933 | MC   | 0    | 17  | 0    | 17   | 2013 | 0.77  | 0.75  | 0.0663  | 0.1892  |
| 232238 | MC   | 0    | 18  | 0    | 18   | 2013 | 0.62  | 0.60  | 0.9517  | 1.0564  |
| 815145 | MC   | 0    | 22  | 0    | 22   | 2012 | 0.53  | 0.53  | 1.5434  | 1.4527  |
| 576731 | MC   | 0    | 57  | 0    | 56   | 2013 | 0.84  | 0.84  | -0.5077 | -0.5272 |
| 844327 | MC   | 0    | 59  | 0    | 58   | 2013 | 0.75  | 0.73  | 0.2068  | 0.2737  |
| 775594 | MC   | 0    | 60  | 0    | 59   | 2013 | 0.82  | 0.82  | -0.3944 | -0.3107 |
| 893918 | MC   | 0    | 62  | 0    | 61   | 2013 | 0.61  | 0.63  | 0.9730  | 0.9815  |
| 397546 | MC   | 0    | 64  | 0    | 63   | 2013 | 0.64  | 0.66  | 0.7035  | 0.7669  |
| 747711 | MC   | 0    | 98  | 0    | 98   | 2013 | 0.70  | 0.70  | 0.4759  | 0.4786  |
| 228514 | MC   | 0    | 104 | 0    | 104  | 2013 | 0.69  | 0.69  | 0.5420  | 0.5806  |
| 192808 | MC   | 0    | 106 | 0    | 106  | 2013 | 0.84  | 0.82  | -0.4487 | -0.3696 |
| 680498 | MC   | 0    | 110 | 0    | 110  | 2013 | 0.66  | 0.64  | 0.7038  | 0.7140  |
| 200037 | MC   | 0    | 111 | 0    | 110  | 2012 | 0.69  | 0.66  | 0.7045  | 0.6583  |
| 754663 | MC   | 0    | 113 | 0    | 112  | 2012 | 0.81  | 0.85  | -0.0907 | -0.5487 |
| 424351 | MC   | 0    | 116 | 0    | 115  | 2012 | 0.83  | 0.82  | -0.2592 | -0.3974 |
| 367532 | MC   | 0    | 121 | 0    | 120  | 2012 | 0.65  | 0.62  | 0.9357  | 1.0771  |
| 425225 | MC   | 3    | 71  | 16   | 70   | 2013 | 0.70  | 0.74  | 0.4708  | 0.2608  |
| 309375 | MC   | 4    | 69  | 19   | 68   | 2013 | 0.69  | 0.74  | 0.5133  | 0.2129  |
| 672459 | MC   | 2    | 69  | 11   | 68   | 2013 | 0.51  | 0.57  | 1.4859  | 1.2137  |
| 886968 | MC   | 4    | 75  | 6    | 74   | 2013 | 0.34  | 0.36  | 2.3432  | 2.4257  |
| 715368 | MC   | 5    | 76  | 1    | 75   | 2013 | 0.47  | 0.52  | 1.5526  | 1.5511  |
| 676151 | MC   | 6    | 71  | 12   | 70   | 2013 | 0.54  | 0.55  | 1.3159  | 1.3802  |
| 371751 | MC   | 1    | 77  | 17   | 76   | 2013 | 0.65  | 0.65  | 0.7620  | 0.7312  |
| 957672 | MC   | 9    | 74  | 6    | 73   | 2013 | 0.48  | 0.52  | 1.6309  | 1.5694  |
| 894633 | MC   | 8    | 67  | 9    | 66   | 2013 | 0.64  | 0.61  | 0.8174  | 1.0066  |
| 746127 | MC   | 7    | 70  | 15   | 69   | 2013 | 0.49  | 0.46  | 1.5922  | 1.8778  |
| 799232 | MC   | 2    | 77  | 18   | 76   | 2013 | 0.51  | 0.51  | 1.4535  | 1.5613  |
| 685276 | MC   | 3    | 74  | 3    | 73   | 2013 | 0.64  | 0.64  | 0.7706  | 0.8602  |
| 166797 | MC   | 5    | 72  | 9    | 71   | 2013 | 0.46  | 0.52  | 1.7816  | 1.5380  |
| 704106 | MC   | 9    | 71  | 18   | 70   | 2013 | 0.61  | 0.65  | 0.9604  | 0.8151  |
| 712211 | MC   | 7    | 74  | 8    | 73   | 2013 | 0.70  | 0.70  | 0.4516  | 0.5066  |
| 323536 | MC   | 8    | 73  | 6    | 72   | 2013 | 0.41  | 0.35  | 1.9692  | 2.4688  |
| 917077 | MC   | 1    | 73  | 7    | 72   | 2013 | 0.55  | 0.56  | 1.2797  | 1.2217  |
| 272867 | MC   | 6    | 75  | 7    | 74   | 2013 | 0.51  | 0.64  | 1.4856  | 0.8473  |
| 370529 | OE   | 0    | 122 | 0    | 122  | 2013 | 0.36  | 0.36  | 2.2674  | 2.4304  |
|        |      |      |     |      |      | Mean | 0.63  | 0.64  | 0.81    | 0.80    |

|        |      |          |     | Prev | Prev | Prev | Prev  | Prev  |         |         |
|--------|------|----------|-----|------|------|------|-------|-------|---------|---------|
| ID     | Type | Form     | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 694712 | MC   | 0        | 1   | 0    | 1    | 2013 | 0.70  | 0.69  | 0.1563  | 0.2865  |
| 412145 | MC   | 0        | 2   | 0    | 2    | 2013 | 0.75  | 0.78  | -0.1435 | -0.2234 |
| 440139 | MC   | 0        | 11  | 0    | 11   | 2013 | 0.77  | 0.75  | -0.1984 | -0.0436 |
| 443753 | MC   | 0        | 17  | 0    | 17   | 2013 | 0.78  | 0.76  | -0.3463 | -0.1434 |
| 786314 | MC   | 0        | 19  | 0    | 19   | 2013 | 0.49  | 0.49  | 1.4019  | 1.3268  |
| 964620 | MC   | 0        | 23  | 0    | 23   | 2012 | 0.53  | 0.56  | 1.2370  | 1.1203  |
| 387053 | MC   | 0        | 24  | 0    | 24   | 2012 | 0.57  | 0.60  | 1.0440  | 0.8296  |
| 225357 | MC   | 0        | 51  | 0    | 51   | 2013 | 0.70  | 0.67  | 0.1008  | 0.2883  |
| 737783 | MC   | 0        | 53  | 0    | 53   | 2013 | 0.86  | 0.85  | -1.0126 | -1.0291 |
| 954958 | MC   | 0        | 54  | 0    | 54   | 2012 | 0.58  | 0.57  | 0.9929  | 0.9631  |
| 710745 | MC   | 0        | 59  | 0    | 59   | 2013 | 0.81  | 0.80  | -0.6279 | -0.4024 |
| 473751 | MC   | 0        | 95  | 0    | 95   | 2012 | 0.93  | 0.91  | -1.6863 | -1.6832 |
| 725977 | MC   | 0        | 96  | 0    | 96   | 2013 | 0.87  | 0.87  | -1.0887 | -1.0248 |
| 597296 | MC   | 0        | 101 | 0    | 101  | 2012 | 0.47  | 0.54  | 1.5755  | 1.1991  |
| 495719 | MC   | 0        | 102 | 0    | 102  | 2013 | 0.88  | 0.91  | -1.2351 | -1.5919 |
| 685308 | MC   | 0        | 103 | 0    | 103  | 2013 | 0.60  | 0.59  | 0.7700  | 0.8233  |
| 839487 | MC   | 0        | 106 | 0    | 106  | 2013 | 0.63  | 0.62  | 0.6268  | 0.6328  |
| 980667 | MC   | 0        | 108 | 0    | 109  | 2012 | 0.77  | 0.78  | -0.1031 | -0.2629 |
| 913782 | MC   | 0        | 109 | 0    | 109  | 2013 | 0.86  | 0.87  | -0.9613 | -1.1071 |
| 345097 | MC   | 0        | 112 | 0    | 112  | 2013 | 0.57  | 0.52  | 0.9371  | 1.2466  |
| 567630 | MC   | 5;14     | 70  | 5    | 70   | 2011 | 0.63  | 0.63  | 0.7875  | 0.6467  |
| 638517 | MC   | 7;10     | 71  | 6    | 71   | 2013 | 0.46  | 0.48  | 1.4874  | 1.4383  |
| 243080 | MC   | 1;8      | 72  | 4    | 72   | 2013 | 0.88  | 0.85  | -1.2489 | -0.9898 |
| 970600 | MC   | 4;15     | 65  | 7    | 65   | 2013 | 0.64  | 0.67  | 0.5552  | 0.4001  |
| 296941 | MC   | 1;8      | 67  | 7    | 67   | 2013 | 0.45  | 0.50  | 1.5523  | 1.3180  |
| 733205 | MC   | 3;16     | 63  | 5    | 63   | 2013 | 0.66  | 0.65  | 0.4102  | 0.4914  |
| 192047 | MC   | 2;12     | 64  | 3    | 64   | 2013 | 0.76  | 0.75  | -0.1931 | -0.1197 |
| 891680 | MC   | 6;9;20   | 67  | 5    | 67   | 2013 | 0.73  | 0.73  | 0.0383  | 0.0211  |
| 284332 | MC   | 2;12     | 68  | 2    | 68   | 2013 | 0.69  | 0.71  | 0.2712  | 0.1572  |
| 926746 | MC   | 3;16     | 70  | 3    | 70   | 2013 | 0.93  |       | -1.8416 |         |
| 200442 | MC   | 6;9;20   | 72  | 2    | 72   | 2013 | 0.90  |       | -1.3653 |         |
| 702875 | MC   | 4;15     | 72  | 9    | 72   | 2013 | 0.80  |       | -0.4989 |         |
| 838401 | MC   | 11;17;18 | 72  | 5    | 72   | 2013 | 0.57  | 0.63  | 0.9544  | 0.6536  |
| 231385 | MC   | 13;19    | 65  | 3    | 65   | 2013 | 0.66  | 0.62  |         |         |
| 521588 | MC   | 13;19    | 71  | 7    | 71   | 2013 | 0.58  | 0.61  | 0.8774  | 0.7516  |
| 720166 | MC   | 5;14     | 63  | 3    | 63   | 2013 | 0.81  |       | -0.5289 |         |
| 911392 | MC   | 7;10     | 65  | 6    | 65   | 2013 | 0.75  |       | -0.1444 |         |
| 874990 | MC   | 11;17;18 | 63  | 1    | 63   | 2013 | 0.81  |       | -0.5693 |         |
| 175706 | OE   | 0        | 26  | 0    | 26   | 2013 | 0.41  | 0.39  |         | 2.3668  |
|        |      |          |     |      |      | Mean | 0.70  | 0.70  | 0.12    | 0.11    |

|        |      |        |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|--------|-----|------|------|------|-------|-------|---------|---------|
| ID     | Type | Form   | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 984768 | MC   | 0      | 1   | 0    | 1    | 2012 | 0.80  | 0.78  | -0.3882 | -0.3526 |
| 409847 | MC   | 0      | 2   | 0    | 2    | 2012 | 0.82  | 0.81  | -0.4893 | -0.4911 |
| 813466 | MC   | 0      | 3   | 0    | 3    | 2012 | 0.76  |       | -0.0863 |         |
| 563947 | MC   | 0      | 7   | 0    | 7    | 2013 | 0.74  | 0.75  | -0.0783 | -0.0081 |
| 962921 | MC   | 0      | 8   | 0    | 8    | 2013 | 0.62  | 0.61  | 0.6700  | 0.5962  |
| 953328 | MC   | 0      | 9   | 0    | 9    | 2013 | 0.78  | 0.78  | -0.3502 | -0.2564 |
| 961851 | MC   | 0      | 20  | 0    | 20   | 2013 | 0.47  | 0.47  | 1.5542  | 1.4425  |
| 544758 | MC   | 0      | 21  | 0    | 21   | 2013 | 0.67  | 0.67  | 0.3950  | 0.3875  |
| 661497 | MC   | 0      | 53  | 0    | 53   | 2013 | 0.74  | 0.76  | -0.0026 | -0.1523 |
| 604894 | MC   | 0      | 55  | 0    | 55   | 2013 | 0.59  | 0.60  | 0.8611  | 0.7960  |
| 220604 | MC   | 0      | 94  | 0    | 94   | 2012 | 0.75  | 0.75  | 0.0120  | -0.1921 |
| 156412 | MC   | 0      | 98  | 0    | 98   | 2013 | 0.78  | 0.80  | -0.2703 | -0.4982 |
| 766990 | MC   | 0      | 102 | 0    | 102  | 2012 | 0.80  |       | -0.4093 |         |
| 773381 | MC   | 0      | 103 | 0    | 103  | 2013 | 0.76  | 0.75  | -0.1748 | -0.2092 |
| 292260 | MC   | 0      | 108 | 0    | 108  | 2013 | 0.72  | 0.76  | 0.1527  | -0.1700 |
| 576228 | MC   | 0      | 110 | 0    | 110  | 2013 | 0.73  | 0.72  | 0.0104  | 0.0407  |
| 132775 | MC   | 0      | 115 | 0    | 115  | 2013 | 0.53  | 0.51  | 1.2375  | 1.2942  |
| 788527 | MC   | 7;20   | 71  | 8    | 71   | 2013 | 0.86  |       | -1.0209 |         |
| 699865 | MC   | 2;3;15 | 68  | 3    | 68   | 2013 | 0.84  |       | -0.8156 |         |
| 883492 | MC   | 10;12  | 64  | 9    | 64   | 2013 | 0.66  | 0.69  | 0.4559  | 0.2914  |
| 639934 | MC   | 1;19   | 72  | 6    | 72   | 2013 | 0.40  | 0.40  | 1.8540  | 1.8226  |
| 401175 | MC   | 4;6;14 | 69  | 1    | 69   | 2013 | 0.52  | 0.62  | 1.1362  | 0.6780  |
| 139076 | MC   | 7;20   | 66  | 3    | 66   | 2013 | 0.51  | 0.48  | 1.2577  | 1.4123  |
| 647149 | MC   | 2;3;15 | 62  | 2    | 62   | 2013 | 0.63  | 0.61  | 0.6037  | 0.7502  |
| 946828 | MC   | 17;18  | 69  | 5    | 69   | 2013 | 0.43  | 0.38  | 1.6802  | 1.9832  |
| 380081 | MC   | 9;16   | 68  | 8    | 68   | 2013 | 0.73  | 0.73  | -0.0031 | 0.0497  |
| 117162 | MC   | 5;11   | 69  | 7    | 69   | 2013 | 0.75  | 0.71  | -0.0749 | 0.1806  |
| 477095 | MC   | 8;13   | 64  | 4    | 64   | 2013 | 0.70  | 0.70  | 0.2087  | 0.2208  |
| 130947 | MC   | 4;6;14 | 66  | 1    | 66   | 2013 | 0.37  | 0.34  | 2.0007  | 2.2078  |
| 356004 | MC   | 8;13   | 67  | 7    | 67   | 2013 | 0.24  | 0.26  | 2.8171  | 2.7525  |
| 105804 | MC   | 9;16   | 64  | 8    | 64   | 2013 | 0.74  | 0.78  | -0.0584 | -0.3426 |
| 664667 | MC   | 5;11   | 66  | 9    | 66   | 2013 | 0.63  | 0.64  | 0.6614  | 0.5581  |
| 597701 | MC   | 1;19   | 66  | 4    | 66   | 2013 | 0.78  | 0.78  | -0.2806 | -0.4036 |
| 625607 | MC   | 17;18  | 66  | 6    | 66   | 2013 | 0.77  |       | -0.2423 |         |
| 622721 | MC   | 10;12  | 70  | 9    | 70   | 2013 | 0.80  |       | -0.3887 |         |
| 970842 | OE   | 0      | 26  | 0    | 26   | 2013 | 0.41  | 0.43  | 1.7194  | 1.6261  |
| 694550 | OE   | 0      | 117 | 0    | 117  | 2013 | 0.56  | 0.53  | 1.2264  | 1.3763  |
|        |      |        |     |      |      | Mean | 0.66  | 0.66  | 0.42    | 0.41    |

|                  |          |               |          | Prev   | Prev     | Prev         | Prev         |              | Prev             |         |
|------------------|----------|---------------|----------|--------|----------|--------------|--------------|--------------|------------------|---------|
| ID               | Type     | Form          | Seq      | Form   | Seq      | Year         | P-Val        | P-Val        | Meas             | Meas    |
| 778422           | MC       | 0             | 1        | 0      | 2        | 2012         | 0.90         | 0.88         | -1.2079          | -1.2487 |
| 658440           | MC       | 0             | 2        | 0      | 2        | 2013         | 0.57         | 0.56         | 0.9827           | 1.1746  |
| 498857           | MC       | 0             | 8        | 0      | 8        | 2013         | 0.64         | 0.65         | 0.6453           | 0.7184  |
| 992574           | MC       | 0             | 10       | 0      | 10       | 2013         | 0.70         | 0.72         | 0.2657           | 0.1593  |
| 565441           | MC       | 0             | 12       | 0      | 12       | 2013         | 0.82         | 0.79         | -0.5733          | -0.3150 |
| 676077           | MC       | 0             | 13       | 0      | 13       | 2012         | 0.47         | 0.52         | 1.6225           | 1.3816  |
| 509340           | MC       | 0             | 18       | 0      | 18       | 2013         | 0.76         | 0.78         | -0.0095          | -0.2065 |
| 257210           | MC       | 0             | 21       | 0      | 21       | 2012         | 0.47         | 0.50         | 1.6557           | 1.5589  |
| 993641           | MC       | 0             | 57       | 0      | 57       | 2012         | 0.85         | 0.84         | -0.6926          | -0.7510 |
| 584381           | MC       | 0             | 60       | 0      | 60       | 2012         | 0.82         | 0.77         | -0.4254          | -0.0279 |
| 112008           | MC       | 0             | 61       | 0      | 61       | 2012         | 0.61         | 0.64         | 0.8933           | 0.7070  |
| 355499           | MC       | 0             | 94       | 0      | 94       | 2012         | 0.82         | 0.79         | -0.4765          | -0.2373 |
| 834155           | MC       | 0             | 98       | 0      | 98       | 2013         | 0.74         | 0.74         | 0.0080           | 0.1686  |
| 111557           | MC       | 0             | 102      | 0      | 102      | 2012         | 0.80         | 0.78         | -0.3245          | -0.3075 |
| 956071           | MC       | 0             | 105      | 0      | 105      | 2013         | 0.50         | 0.62         | 1.3248           | 0.8304  |
| 860734           | MC       | 0             | 106      | 0      | 106      | 2013         | 0.82         | 0.80         | -0.5364          | -0.2992 |
| 779369           | MC       | 0             | 107      | 0      | 107      | 2012         | 0.78         | 0.81         | -0.1298          | -0.5000 |
| 953556           | MC       | 0             | 109      | 0      | 109      | 2013         | 0.83         | 0.82         | -0.6081          | -0.5143 |
| 503627           | MC       | 0             | 111      | 0      | 111      | 2012         | 0.76         | 0.80         | 0.0123           | -0.3327 |
| 112071           | MC       | 0             | 117      | 0      | 117      | 2012         | 0.88         | 0.88         | -1.0495          | -0.9749 |
| 344814           | MC       | 13;18         | 68       | 1      | 68       | 2013         | 0.66         | 0.72         | 0.4680           | 0.2545  |
| 850619           | MC       | 9;10          | 68       | 7      | 68       | 2013         | 0.77         | 0.79         | -0.1617          | -0.2546 |
| 984208           | MC       | 19;20         | 69       | 2      | 69       | 2013         | 0.76         | 0.79         | -0.1243          | -0.2516 |
| 720723           | MC       | 6;11          | 63       | 3      | 63       | 2013         | 0.58         | 0.59         | 0.9397           | 1.0810  |
| 119505           | MC       | 2;7;12        | 66       | 9      | 66       | 2013         | 0.83         | 0.79         | -0.5924          | -0.2723 |
| 736416           | MC       | 1;3           | 65       | 6      | 65       | 2013         | 0.77         |              | -0.1903          | -0.7398 |
| 290208           | MC       | 14;15         | 63       | 4      | 63       | 2013         | 0.66         | 0.74         | 0.5221           | 0.1393  |
| 429494           | MC       | 5;17          | 73       | 6      | 73       | 2013         | 0.74         | 0.70         |                  | 0.3749  |
| 975224           | MC       | 19;20         | 63       | 7      | 63       | 2013         | 0.82         |              | -0.5126          |         |
| 780009           | MC       | 4;8;16        | 70       | 1      | 70       | 2013         | 0.79         |              | -0.3921          |         |
| 772493           | MC       | 9;10          | 73       | 8      | 73       | 2013         | 0.79         |              | -0.2669          |         |
| 857749           | MC       | 13;18         | 73       | 3      | 73       | 2013         | 0.77         |              | -0.1535          | 0.0788  |
| 713265           | MC       | 6;11          | 68       | 5      | 68       | 2013         | 0.75         |              | -0.0452          | 0.0789  |
| 674903           | MC       | 1;3           | 72       | 5      | 72       | 2013         | 0.60         | 0.66         | 0.8517           | 0.5706  |
| 540785           | MC       | 2;7;12        | 70       | 2      | 70       | 2013         | 0.42         | 0.41         | 1.7872           | 2.0752  |
| 260948<br>286559 | MC<br>MC | 14;15<br>5;17 | 70<br>67 | 7<br>5 | 70<br>67 | 2013<br>2013 | 0.56<br>0.53 | 0.62<br>0.57 | 1.0595<br>1.2332 | 0.8834  |
| 391024           | MC<br>MC | 4;8;16        | 66       | 3      | 66       | 2013         | 0.33         |              | -0.1096          | 1.1345  |
| 562517           | OE       | 4,8,10        | 26       | 0      | 26       | 2013         | 0.76         | 0.78         | 1.7240           | 1.9387  |
| 302317           | UE       | U             | 20       | U      | 20       | Mean         | 0.44         | 0.42         | 0.19             | 0.18    |
|                  |          |               |          |        |          | MICAII       | 0.71         | 0.72         | 0.19             | 0.10    |

|        |      |        |     | Prev    | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|--------|-----|---------|------|------|-------|-------|---------|---------|
| PubID  | Type | Form   | Seq | Form    | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 227069 | MC   | 0      | 35  | 0       | 35   | 2013 | 0.62  | 0.60  | 0.2213  | 0.3190  |
| 221842 | MC   | 0      | 37  | 0       | 36   | 2013 | 0.75  | 0.74  | -0.4280 | -0.3603 |
| 420408 | MC   | 0      | 38  | 0       | 37   | 2013 | 0.78  | 0.77  | -0.6259 | -0.5211 |
| 243649 | MC   | 0      | 39  | 0       | 38   | 2013 | 0.76  | 0.74  | -0.3879 | -0.3010 |
| 367922 | MC   | 0      | 40  | 0       | 39   | 2013 | 0.65  | 0.66  | 0.2392  | 0.1509  |
| 565461 | MC   | 0      | 41  | 0       | 40   | 2013 | 0.76  | 0.75  | -0.4949 | -0.4314 |
| 502971 | MC   | 0      | 42  | 0       | 41   | 2013 | 0.72  | 0.72  | -0.1551 | -0.1736 |
| 254463 | MC   | 0      | 43  | 0       | 43   | 2013 | 0.63  | 0.63  | 0.4323  | 0.3359  |
| 725011 | MC   | 0      | 122 | 0       | 120  | 2013 | 0.85  | 0.85  | -1.5580 | -1.5135 |
| 473939 | MC   | 0      | 123 | 0       | 121  | 2013 | 0.68  | 0.68  | 0.0183  | -0.0231 |
| 560275 | MC   | 0      | 124 | 0       | 123  | 2013 | 0.60  | 0.59  | 0.4488  | 0.4523  |
| 663978 | MC   | 0      | 125 | 0       | 124  | 2013 | 0.70  | 0.68  | 0.0164  | -0.0133 |
| 408330 | MC   | 0      | 126 | 0       | 125  | 2013 | 0.87  | 0.86  | -1.3661 | -1.2824 |
| 425466 | MC   | 0      | 127 | 0       | 126  | 2013 | 0.82  | 0.82  | -0.8772 | -0.9320 |
| 133694 | MC   | 1 to 5 | 80  | 1 to 20 | 78   | 2013 | 0.66  | 0.62  | 0.1570  | 0.3023  |
| 629142 | MC   | 1 to 5 | 79  | 1 to 20 | 77   | 2013 | 0.54  | 0.52  | 0.8306  | 0.8699  |
| 653437 | MC   | 1 to 5 | 78  | 1 to 20 | 76   | 2013 | 0.75  | 0.72  | -0.3884 | -0.2493 |
| 155970 | MC   | 1 to 5 | 82  | 1 to 20 | 80   | 2013 | 0.71  | 0.69  | -0.1091 | -0.1223 |
| 452627 | MC   | 1 to 5 | 84  | 1 to 20 | 82   | 2013 | 0.55  | 0.54  | 0.7864  | 0.7414  |
| 412268 | MC   | 1 to 5 | 81  | 1 to 20 | 79   | 2013 | 0.77  | 0.76  | -0.5069 | -0.5408 |
| 863036 | MC   | 1 to 5 | 85  | 1 to 20 | 83   | 2013 | 0.59  | 0.57  | 0.5922  | 0.6154  |
| 814418 | MC   | 1 to 5 | 83  | 1 to 20 | 81   | 2013 | 0.85  | 0.84  | -1.1693 | -1.1910 |
| 263141 | MC   | 6 to 9 | 82  | 1 to 10 | 80   | 2013 | 0.72  | 0.72  | -0.2126 | -0.2093 |
| 953947 | MC   | 6 to 9 | 81  | 1 to 10 | 79   | 2013 | 0.56  | 0.56  | 0.7141  | 0.7143  |
| 206864 | MC   | 6 to 9 | 83  | 1 to 10 | 81   | 2013 | 0.68  | 0.65  | 0.0240  | 0.1857  |
| 463075 | MC   | 6 to 9 | 79  | 1 to 10 | 77   | 2013 | 0.82  |       | -0.9620 |         |
| 486678 | MC   | 6 to 9 | 78  | 1 to 10 | 76   | 2013 | 0.77  |       | -0.5590 |         |
| 740323 | MC   | 6 to 9 | 80  | 1 to 10 | 78   | 2013 | 0.77  | 0.77  | -0.5858 | -0.5778 |
| 552250 | MC   | 6 to 9 | 84  | 1 to 10 | 82   | 2013 | 0.68  | 0.67  | 0.0326  | 0.0498  |
| 688099 | MC   | 6 to 9 | 85  | 1 to 10 | 83   | 2013 | 0.49  | 0.48  | 1.0772  | 1.1560  |
| 104223 | OE   | 0      | 129 | 0       | 129  | 2013 | 0.52  | 0.52  | 0.8141  | 0.7726  |
|        |      |        |     |         |      | Mean | 0.70  | 0.69  | -0.13   | -0.11   |

|        |      |        |     | Prev     | Prev | Prev Prev Prev 1 |       | Prev  |         |         |
|--------|------|--------|-----|----------|------|------------------|-------|-------|---------|---------|
| PubID  | Type | Form   | Seq | Form     | Seq  | Year             | P-Val | P-Val | Meas    | Meas    |
| 708540 | MC   | 0      | 44  | 0        | 44   | 2013             | 0.57  | 0.61  | 0.6197  | 0.3070  |
| 883614 | MC   | 0      | 45  | 0        | 45   | 2013             | 0.82  | 0.80  | -0.8290 | -0.7030 |
| 939681 | MC   | 0      | 46  | 0        | 46   | 2013             | 0.61  | 0.58  | 0.5485  | 0.5045  |
| 654724 | MC   | 0      | 47  | 0        | 47   | 2013             | 0.79  | 0.77  | -0.6803 | -0.5910 |
| 854674 | MC   | 0      | 48  | 0        | 48   | 2013             | 0.76  | 0.75  | -0.4513 | -0.3533 |
| 672759 | MC   | 0      | 49  | 0        | 49   | 2013             | 0.72  | 0.72  | -0.2582 | -0.2222 |
| 764523 | MC   | 0      | 50  | 0        | 50   | 2013             | 0.56  | 0.56  | 0.7491  | 0.8649  |
| 731885 | MC   | 0      | 132 | 0        | 132  | 2013             | 0.60  | 0.60  | 0.4893  | 0.3712  |
| 986107 | MC   | 0      | 133 | 0        | 133  | 2013             | 0.70  | 0.68  | -0.1309 | -0.0288 |
| 463444 | MC   | 0      | 134 | 0        | 134  | 2013             | 0.70  | 0.70  | -0.0801 | -0.0999 |
| 751467 | MC   | 0      | 135 | 0        | 135  | 2013             | 0.52  | 0.50  | 0.9407  | 0.9262  |
| 784267 | MC   | 0      | 136 | 0        | 136  | 2013             | 0.54  | 0.58  | 0.6417  | 0.6728  |
| 439585 | MC   | 0      | 137 | 0        | 137  | 2013             | 0.64  | 0.62  | 0.2250  | 0.3216  |
| 129718 | MC   | 0      | 138 | 0        | 138  | 2013             | 0.77  | 0.76  | -0.4506 | -0.4059 |
| 238608 | MC   | 6 to 9 | 80  | 1 to 10  | 81   | 2013             | 0.60  | 0.57  | 0.4808  | 0.6678  |
| 300963 | MC   | 6 to 9 | 79  | 1 to 10  | 80   | 2013             | 0.78  | 0.79  | -0.5812 | -0.6270 |
| 460994 | MC   | 6 to 9 | 83  | 1 to 10  | 84   | 2013             | 0.66  | 0.66  | 0.1353  | 0.1463  |
| 344704 | MC   | 6 to 9 | 84  | 1 to 10  | 85   | 2013             | 0.85  | 0.86  | -1.1351 | -1.2563 |
| 648875 | MC   | 6 to 9 | 78  | 1 to 10  | 79   | 2013             | 0.81  | 0.81  | -0.7991 | -0.7958 |
| 271213 | MC   | 6 to 9 | 82  | 1 to 10  | 83   | 2013             | 0.80  | 0.79  | -0.7586 | -0.6548 |
| 592663 | MC   | 6 to 9 | 81  | 1 to 10  | 82   | 2013             | 0.82  | 0.83  | -0.9184 | -0.9833 |
| 123022 | MC   | 6 to 9 | 77  | 1 to 10  | 78   | 2013             | 0.45  | 0.46  | 1.2769  | 1.2015  |
| 759480 | MC   | 1 to 5 | 80  | 11 to 20 | 81   | 2013             | 0.87  | 0.85  | -1.3602 | -1.1684 |
| 900812 | MC   | 1 to 5 | 77  | 11 to 20 | 78   | 2013             | 0.82  | 0.82  | -0.8749 | -0.9442 |
| 528286 | MC   | 1 to 5 | 78  | 11 to 20 | 79   | 2013             | 0.84  | 0.84  | -1.0628 | -1.0841 |
| 618002 | MC   | 1 to 5 | 79  | 11 to 20 | 80   | 2013             | 0.64  | 0.64  | 0.2611  | 0.2171  |
| 578503 | MC   | 1 to 5 | 81  | 11 to 20 | 82   | 2013             | 0.64  | 0.62  | 0.2744  | 0.3190  |
| 369749 | MC   | 1 to 5 | 82  | 11 to 20 | 83   | 2013             | 0.55  | 0.53  | 0.7403  | 0.8178  |
| 133219 | MC   | 1 to 5 | 84  | 11 to 20 | 85   | 2013             | 0.83  | 0.81  | -0.9856 | -0.8728 |
| 936696 | MC   | 1 to 5 | 83  | 11 to 20 | 84   | 2013             | 0.54  | 0.55  | 0.7829  | 0.6903  |
| 608524 | OE   | 0      | 51  | 0        | 52   | 2013             | 0.67  | 0.66  | -0.0050 | 0.0484  |
| 928682 | OE   | 0      | 139 | 0        | 140  | 2013             | 0.54  | 0.53  | 0.7292  | 0.7630  |
|        |      |        |     |          |      | Mean             | 0.69  | 0.68  | -0.08   | -0.06   |

|        |      |        |     | Prev     | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|--------|-----|----------|------|------|-------|-------|---------|---------|
| PubID  | Type | Form   | Seq | Form     | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 668391 | MC   | 0      | 45  | 0        | 44   | 2013 | 0.63  | 0.61  | 0.5333  | 0.5844  |
| 325098 | MC   | 0      | 46  | 0        | 45   | 2013 | 0.81  | 0.79  | -0.7513 | -0.6003 |
| 635347 | MC   | 0      | 47  | 0        | 46   | 2013 | 0.80  | 0.79  | -0.5488 | -0.5037 |
| 609030 | MC   | 0      | 48  | 0        | 47   | 2013 | 0.73  | 0.72  | -0.0546 | -0.0017 |
| 333336 | MC   | 0      | 49  | 0        | 48   | 2013 | 0.65  | 0.64  | 0.4907  | 0.5710  |
| 682227 | MC   | 0      | 50  | 0        | 49   | 2013 | 0.68  | 0.68  | 0.2842  | 0.1754  |
| 193815 | MC   | 0      | 51  | 0        | 50   | 2013 | 0.53  | 0.47  | 1.0029  | 1.2156  |
| 535902 | MC   | 0      | 52  | 0        | 51   | 2013 | 0.87  | 0.88  | -1.0500 | -1.0668 |
| 701665 | MC   | 0      | 133 | 0        | 132  | 2013 | 0.65  | 0.64  | 0.3519  | 0.4189  |
| 975221 | MC   | 0      | 134 | 0        | 133  | 2013 | 0.74  | 0.76  | -0.0947 | -0.3080 |
| 574862 | MC   | 0      | 135 | 0        | 134  | 2013 | 0.69  | 0.68  | 0.1756  | 0.2526  |
| 419875 | MC   | 0      | 136 | 0        | 135  | 2013 | 0.53  | 0.55  | 1.0154  | 0.8727  |
| 542019 | MC   | 0      | 137 | 0        | 137  | 2013 | 0.60  | 0.62  | 0.6939  | 0.5374  |
| 537149 | MC   | 0      | 138 | 0        | 139  | 2013 | 0.68  | 0.69  | 0.2295  | 0.1279  |
| 240596 | MC   | 6 to 9 | 84  | 1 to 10  | 83   | 2013 | 0.70  | 0.71  | 0.0743  | 0.0166  |
| 316080 | MC   | 6 to 9 | 81  | 1 to 10  | 80   | 2013 | 0.75  | 0.74  | -0.1810 | -0.1467 |
| 211022 | MC   | 6 to 9 | 80  | 1 to 10  | 79   | 2013 | 0.47  | 0.47  | 1.3179  | 1.3042  |
| 413897 | MC   | 6 to 9 | 86  | 1 to 10  | 85   | 2013 | 0.68  | 0.68  | 0.1935  | 0.2252  |
| 893276 | MC   | 6 to 9 | 83  | 1 to 10  | 82   | 2013 | 0.87  | 0.86  | -1.1517 | -1.0580 |
| 944661 | MC   | 6 to 9 | 82  | 1 to 10  | 81   | 2013 | 0.73  | 0.73  | -0.0998 | -0.1003 |
| 762101 | MC   | 6 to 9 | 79  | 1 to 10  | 78   | 2013 | 0.58  | 0.57  | 0.7725  | 0.8246  |
| 414008 | MC   | 6 to 9 | 85  | 1 to 10  | 84   | 2013 | 0.54  | 0.54  | 0.9598  | 0.9447  |
| 897782 | MC   | 1 to 5 | 79  | 11 to 20 | 78   | 2013 | 0.74  |       | -0.1069 |         |
| 874871 | MC   | 1 to 5 | 83  | 11 to 20 | 82   | 2013 | 0.74  | 0.74  | -0.1032 | -0.1337 |
| 497968 | MC   | 1 to 5 | 86  | 11 to 20 | 85   | 2013 | 0.75  |       | -0.2042 |         |
| 802898 | MC   | 1 to 5 | 80  | 11 to 20 | 79   | 2013 | 0.82  |       | -0.6545 |         |
| 880493 | MC   | 1 to 5 | 81  | 11 to 20 | 80   | 2013 | 0.49  | 0.49  | 1.2978  | 1.1878  |
| 391700 | MC   | 1 to 5 | 85  | 11 to 20 | 84   | 2013 | 0.65  | 0.65  | 0.4575  | 0.3627  |
| 998708 | MC   | 1 to 5 | 82  | 11 to 20 | 81   | 2013 | 0.90  |       | -1.4207 |         |
| 411647 | MC   | 1 to 5 | 84  | 11 to 20 | 83   | 2013 | 0.65  | 0.65  | 0.4358  | 0.3744  |
| 150904 | OE   | 0      | 53  | 0        | 52   | 2013 | 0.58  | 0.57  | 0.7484  | 0.7613  |
| 868828 | OE   | 0      | 139 | 0        | 140  | 2013 | 0.47  | 0.47  | 1.2520  | 1.3265  |
|        |      |        |     |          |      | Mean | 0.68  | 0.67  | 0.18    | 0.18    |

|        |      |          |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|----------|-----|------|------|------|-------|-------|---------|---------|
| PubID  | Type | Form     | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 781196 | MC   | 0        | 43  | 0    | 43   | 2013 | 0.73  | 0.71  | -0.4079 | -0.4831 |
| 179259 | MC   | 0        | 44  | 0    | 44   | 2013 | 0.86  | 0.84  | -1.0969 | -1.1198 |
| 329529 | MC   | 0        | 45  | 0    | 45   | 2013 | 0.57  | 0.57  | 0.4738  | 0.5586  |
| 439265 | MC   | 0        | 46  | 0    | 46   | 2013 | 0.65  | 0.65  | 0.2009  | 0.2606  |
| 231121 | MC   | 0        | 47  | 0    | 47   | 2013 | 0.62  | 0.61  | 0.3428  | 0.4273  |
| 194915 | MC   | 0        | 48  | 0    | 48   | 2013 | 0.55  | 0.53  | 0.7465  | 0.9232  |
| 909043 | MC   | 0        | 119 | 0    | 119  | 2013 | 0.65  | 0.64  | 0.2050  | 0.2230  |
| 922509 | MC   | 0        | 120 | 0    | 120  | 2013 | 0.82  | 0.81  | -0.9182 | -0.9548 |
| 420028 | MC   | 0        | 121 | 0    | 121  | 2013 | 0.58  | 0.56  | 0.6152  | 0.7269  |
| 272064 | MC   | 0        | 122 | 0    | 122  | 2013 | 0.74  | 0.73  | -0.4200 | -0.4314 |
| 796952 | MC   | 0        | 123 | 0    | 123  | 2013 | 0.47  | 0.46  | 1.0817  | 1.1536  |
| 815163 | MC   | 0        | 124 | 0    | 124  | 2013 | 0.85  | 0.84  | -1.1181 | -1.1409 |
| 120427 | MC   | 0        | 125 | 0    | 125  | 2013 | 0.77  | 0.76  | -0.4733 | -0.4682 |
| 545467 | MC   | 11 to 20 | 75  | 2    | 83   | 2013 | 0.83  | 0.81  | -0.9687 | -0.8381 |
| 643441 | MC   | 11 to 20 | 80  | 2    | 90   | 2013 | 0.55  | 0.57  | 0.7190  | 0.6367  |
| 310909 | MC   | 11 to 20 | 78  | 2    | 87   | 2013 | 0.81  | 0.82  | -0.8181 | -0.9072 |
| 685349 | MC   | 11 to 20 | 79  | 2    | 89   | 2013 | 0.71  | 0.74  | -0.1377 | -0.3420 |
| 785357 | MC   | 11 to 20 | 77  | 2    | 86   | 2013 | 0.70  | 0.73  | -0.0592 | -0.3008 |
| 592058 | MC   | 11 to 20 | 82  | 2    | 92   | 2013 | 0.63  | 0.64  | 0.2863  | 0.2547  |
| 903416 | MC   | 11 to 20 | 81  | 2    | 91   | 2013 | 0.57  | 0.56  | 0.5758  | 0.7135  |
| 736776 | MC   | 1 to 10  | 76  | 6    | 84   | 2013 | 0.40  | 0.43  | 1.4681  | 1.3788  |
| 918673 | MC   | 1 to 10  | 77  | 6    | 85   | 2013 | 0.70  | 0.71  | -0.0968 | -0.2111 |
| 214360 | MC   | 1 to 10  | 80  | 6    | 88   | 2013 | 0.70  | 0.73  | -0.0680 | -0.3198 |
| 271402 | MC   | 1 to 10  | 79  | 6    | 87   | 2013 | 0.75  | 0.77  | -0.4123 | -0.6087 |
| 729246 | MC   | 1 to 10  | 81  | 6    | 89   | 2013 | 0.79  | 0.81  | -0.6674 | -0.8703 |
| 226511 | MC   | 1 to 10  | 78  | 6    | 86   | 2013 | 0.90  | 0.91  | -1.7323 | -1.8771 |
| 800769 | MC   | 1 to 10  | 82  | 6    | 91   | 2013 | 0.77  | 0.75  | -0.5072 | -0.4668 |
| 164014 | MC   | 1 to 10  | 75  | 6    | 83   | 2013 | 0.85  | 0.87  | -1.1666 | -1.4106 |
| 854740 | MC   | 11 to 20 | 76  | 2    | 85   | 2013 | 0.75  | 0.74  | -0.3763 | -0.3099 |
| 936206 | OE   | 0        | 49  | 0    | 49   | 2013 | 0.57  | 0.56  | 0.4355  | 0.5064  |
| 272514 | OE   | 0        | 126 | 0    | 126  | 2013 | 0.56  | 0.56  | 0.4625  | 0.5489  |
|        |      |          |     |      |      | Mean | 0.69  | 0.69  | -0.12   | -0.15   |

|        |      |          |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|----------|-----|------|------|------|-------|-------|---------|---------|
| PubID  | Type | Form     | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 190974 | MC   | 0        | 33  | 0    | 33   | 2013 | 0.70  | 0.69  | -0.0577 | 0.0051  |
| 185394 | MC   | 0        | 34  | 0    | 34   | 2013 | 0.66  | 0.65  | 0.1727  | 0.2893  |
| 118710 | MC   | 0        | 35  | 0    | 35   | 2013 | 0.83  | 0.85  | -0.9620 | -1.0865 |
| 744035 | MC   | 0        | 36  | 0    | 36   | 2013 | 0.62  | 0.63  | 0.3594  | 0.3651  |
| 492898 | MC   | 0        | 37  | 0    | 37   | 2013 | 0.62  | 0.61  | 0.3795  | 0.5139  |
| 392347 | MC   | 0        | 38  | 0    | 38   | 2013 | 0.59  | 0.60  | 0.6378  | 0.6238  |
| 825972 | MC   | 0        | 39  | 0    | 40   | 2013 | 0.70  | 0.68  | 0.0485  | 0.1216  |
| 751432 | MC   | 0        | 132 | 0    | 131  | 2013 | 0.58  | 0.59  | 0.5994  | 0.5241  |
| 719128 | MC   | 0        | 133 | 0    | 132  | 2013 | 0.61  | 0.59  | 0.4815  | 0.5773  |
| 738834 | MC   | 0        | 134 | 0    | 133  | 2013 | 0.70  | 0.71  | -0.0185 | -0.0252 |
| 835943 | MC   | 0        | 135 | 0    | 134  | 2013 | 0.66  | 0.68  | 0.2461  | 0.2239  |
| 271336 | MC   | 0        | 136 | 0    | 135  | 2013 | 0.88  | 0.88  | -1.3589 | -1.3729 |
| 574582 | MC   | 0        | 137 | 0    | 136  | 2013 | 0.55  | 0.52  | 0.8341  | 1.0707  |
| 145769 | MC   | 1 to 10  | 77  | 2    | 86   | 2013 | 0.69  | 0.72  | 0.0036  | -0.0964 |
| 220066 | MC   | 1 to 10  | 75  | 2    | 84   | 2013 | 0.55  | 0.48  | 0.7939  | 1.1837  |
| 457503 | MC   | 1 to 10  | 76  | 2    | 85   | 2013 | 0.77  | 0.79  | -0.4346 | -0.5678 |
| 751921 | MC   | 1 to 10  | 79  | 2    | 88   | 2013 | 0.87  | 0.88  | -1.2614 | -1.3622 |
| 246392 | MC   | 1 to 10  | 78  | 2    | 87   | 2013 | 0.76  | 0.79  | -0.3713 | -0.5421 |
| 298431 | MC   | 1 to 10  | 81  | 2    | 91   | 2013 | 0.53  | 0.58  | 0.8563  | 0.6697  |
| 680613 | MC   | 1 to 10  | 80  | 2    | 90   | 2013 | 0.52  | 0.58  | 0.9469  | 0.6975  |
| 178148 | MC   | 11 to 20 | 74  | 7    | 83   | 2013 | 0.71  | 0.75  | -0.0836 | -0.2590 |
| 324863 | MC   | 11 to 20 | 79  | 7    | 89   | 2013 | 0.82  | 0.85  | -0.8329 | -1.0093 |
| 256893 | MC   | 11 to 20 | 77  | 7    | 87   | 2013 | 0.64  | 0.68  | 0.3089  | 0.1403  |
| 747544 | MC   | 11 to 20 | 78  | 7    | 88   | 2013 | 0.62  | 0.62  | 0.4271  | 0.4773  |
| 426783 | MC   | 11 to 20 | 76  | 7    | 85   | 2013 | 0.77  | 0.77  | -0.4170 | -0.4234 |
| 160367 | MC   | 11 to 20 | 81  | 7    | 91   | 2013 | 0.57  | 0.55  | 0.7015  | 0.8142  |
| 979903 | MC   | 11 to 20 | 80  | 7    | 90   | 2013 | 0.64  | 0.65  | 0.3164  | 0.2979  |
| 249512 | MC   | 11 to 20 | 75  | 7    | 84   | 2013 | 0.79  | 0.78  | -0.6102 | -0.4841 |
| 765209 | MC   | 1 to 10  | 74  | 2    | 83   | 2013 | 0.92  | 0.93  | -1.9258 |         |
| 282855 | OE   | 0        | 40  | 0    | 41   | 2013 | 0.58  | 0.56  | 0.0639  | 0.2081  |
| 750832 | OE   | 0        | 139 | 0    | 139  | 2013 | 0.54  | 0.54  | 0.6749  | 0.7682  |
|        |      |          |     |      |      | Mean | 0.68  | 0.68  | 0.02    | 0.01    |

Reading Grade 8

|        |      |          |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|----------|-----|------|------|------|-------|-------|---------|---------|
| PubID  | Type | Form     | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 741839 | MC   | 0        | 27  | 0    | 27   | 2013 | 0.78  | 0.77  | -0.0227 | 0.0501  |
| 490058 | MC   | 0        | 28  | 0    | 28   | 2013 | 0.77  | 0.76  | 0.0235  | 0.2014  |
| 837247 | MC   | 0        | 29  | 0    | 29   | 2013 | 0.67  | 0.68  | 0.6591  | 0.6903  |
| 233947 | MC   | 0        | 31  | 0    | 32   | 2013 | 0.82  | 0.82  | -0.2320 | -0.2170 |
| 761475 | MC   | 0        | 32  | 0    | 33   | 2013 | 0.90  | 0.90  | -0.9728 | -1.0042 |
| 686884 | MC   | 0        | 33  | 0    | 34   | 2013 | 0.64  | 0.62  | 1.1393  | 1.1567  |
| 704916 | MC   | 0        | 132 | 0    | 132  | 2013 | 0.50  | 0.45  | 1.5619  | 1.8622  |
| 433712 | MC   | 0        | 133 | 0    | 133  | 2013 | 0.72  | 0.72  | 0.4010  | 0.4794  |
| 608950 | MC   | 0        | 134 | 0    | 134  | 2013 | 0.73  | 0.72  | 0.3375  | 0.4940  |
| 834538 | MC   | 0        | 135 | 0    | 135  | 2013 | 0.75  | 0.75  | 0.1717  | 0.2287  |
| 543804 | MC   | 0        | 136 | 0    | 136  | 2013 | 0.77  | 0.77  | 0.0983  | 0.1900  |
| 907745 | MC   | 0        | 137 | 0    | 137  | 2013 | 0.39  | 0.39  | 2.1031  | 2.1812  |
| 307964 | MC   | 0        | 138 | 0    | 138  | 2013 | 0.75  | 0.75  | 0.1952  | 0.2418  |
| 930586 | MC   | 1 to 10  | 76  | 4    | 84   | 2013 | 0.65  | 0.67  | 0.8018  | 0.7499  |
| 403700 | MC   | 1 to 10  | 79  | 4    | 87   | 2013 | 0.80  | 0.83  | -0.0909 | -0.2759 |
| 276204 | MC   | 1 to 10  | 81  | 4    | 91   | 2013 | 0.66  | 0.69  | 0.7830  | 0.6334  |
| 620506 | MC   | 1 to 10  | 82  | 4    | 92   | 2013 | 0.69  | 0.70  | 0.6269  | 0.5950  |
| 902533 | MC   | 1 to 10  | 77  | 4    | 85   | 2013 | 0.76  | 0.77  | 0.1577  | 0.1219  |
| 317932 | MC   | 1 to 10  | 80  | 4    | 89   | 2013 | 0.52  | 0.53  | 1.4792  | 1.4970  |
| 165705 | MC   | 1 to 10  | 75  | 4    | 83   | 2013 | 0.50  | 0.52  | 1.5897  | 1.5153  |
| 493358 | MC   | 1 to 10  | 78  | 4    | 86   | 2013 | 0.76  | 0.79  | 0.1552  | -0.0306 |
| 163020 | MC   | 11 to 20 | 77  | 9    | 87   | 2013 | 0.78  | 0.81  | 0.0686  | -0.1312 |
| 799707 | MC   | 11 to 20 | 81  | 9    | 91   | 2013 | 0.74  | 0.78  | 0.2908  | 0.1014  |
| 281704 | MC   | 11 to 20 | 82  | 9    | 92   | 2013 | 0.76  | 0.80  | 0.1470  | -0.0429 |
| 543473 | MC   | 11 to 20 | 79  | 9    | 89   | 2013 | 0.64  | 0.61  | 0.8526  | 1.0668  |
| 169939 | MC   | 11 to 20 | 75  | 9    | 83   | 2013 | 0.78  | 0.77  | 0.0570  | 0.1216  |
| 233686 | MC   | 11 to 20 | 80  | 9    | 90   | 2013 | 0.60  | 0.65  | 1.0749  | 0.8825  |
| 226587 | MC   | 11 to 20 | 76  | 9    | 85   | 2013 | 0.78  | 0.78  | 0.0546  | 0.1201  |
| 849389 | MC   | 11 to 20 | 78  | 9    | 88   | 2013 | 0.61  | 0.61  | 1.0540  | 1.0616  |
| 608739 | OE   | 0        | 34  | 0    | 35   | 2013 | 0.53  | 0.55  | 1.3568  | 1.2478  |
| 920262 | OE   | 0        | 139 | 0    | 139  | 2013 | 0.53  | 0.54  | 1.2688  | 1.3222  |
|        |      |          |     |      |      | Mean | 0.69  | 0.69  | 0.55    | 0.55    |

Science Grade 4

|        |      |      |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|------|-----|------|------|------|-------|-------|---------|---------|
| PubID  | Type | Form | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 859060 | MC   | 0    | 3   | 0    | 3    | 2013 | 0.82  | 0.81  | -0.7419 | -0.6652 |
| 278887 | MC   | 0    | 6   | 0    | 6    | 2013 | 0.89  | 0.89  | -1.1047 | -1.2138 |
| 126529 | MC   | 0    | 8   | 0    | 8    | 2013 | 0.83  | 0.85  | -0.8240 | -1.0367 |
| 617465 | MC   | 0    | 11  | 0    | 11   | 2013 | 0.80  | 0.83  | -0.5078 | -0.6789 |
| 792776 | MC   | 0    | 18  | 0    | 18   | 2013 | 0.49  | 0.51  | 1.1855  | 1.1865  |
| 637707 | MC   | 0    | 19  | 0    | 19   | 2013 | 0.75  | 0.77  | -0.2890 | -0.2748 |
| 631407 | MC   | 0    | 23  | 0    | 23   | 2013 | 0.84  | 0.86  | -0.8088 | -0.8476 |
| 202096 | MC   | 0    | 24  | 0    | 24   | 2013 | 0.62  | 0.62  | 0.4933  | 0.6370  |
| 873117 | MC   | 0    | 39  | 0    | 39   | 2013 | 0.71  | 0.72  | -0.1117 | -0.0865 |
| 636145 | MC   | 0    | 41  | 0    | 41   | 2013 | 0.77  |       | -0.3752 |         |
| 621121 | MC   | 0    | 45  | 0    | 45   | 2013 | 0.74  |       | -0.1425 |         |
| 351911 | MC   | 0    | 48  | 0    | 48   | 2013 | 0.87  | 0.88  | -1.1681 | -1.1898 |
| 984952 | MC   | 0    | 52  | 0    | 52   | 2013 | 0.71  | 0.72  | 0.0973  | 0.0471  |
| 967419 | MC   | 0    | 58  | 0    | 58   | 2013 | 0.67  | 0.67  | 0.3409  | 0.3531  |
| 245129 | MC   | 0    | 61  | 0    | 61   | 2013 | 0.84  | 0.82  | -0.8112 | -0.7027 |
| 792329 | MC   | 0    | 63  | 0    | 63   | 2013 | 0.64  | 0.61  | 0.4651  | 0.6209  |
| 170578 | MC   | 6    | 67  | 5    | 67   | 2013 | 0.54  | 0.55  | 0.9937  | 1.0041  |
| 607477 | MC   | 3    | 70  | 4    | 70   | 2013 | 0.76  |       | -0.2285 | 0.1536  |
| 152659 | MC   | 3    | 32  | 6    | 69   | 2011 | 0.52  | 0.45  | 1.1700  | 1.5184  |
| 785462 | MC   | 4    | 30  | 11   | 30   | 2013 | 0.69  | 0.68  | 0.2256  | 0.2887  |
| 827046 | MC   | 1    | 70  | 2    | 33   | 2013 | 0.76  |       | -0.2754 |         |
| 695038 | MC   | 5    | 70  | 9    | 70   | 2013 | 0.61  | 0.61  | 0.6731  | 0.7057  |
| 139856 | MC   | 11   | 71  | 12   | 71   | 2013 | 0.57  | 0.58  | 0.8723  | 0.8605  |
| 109448 | MC   | 7    | 68  | 11   | 68   | 2013 | 0.51  | 0.53  | 1.1424  | 1.1178  |
| 213442 | MC   | 2    | 32  | 9    | 32   | 2013 | 0.61  | 0.62  | 0.6384  | 0.6065  |
| 135048 | MC   | 10   | 34  | 1    | 34   | 2013 | 0.62  | 0.63  | 0.5186  | 0.5447  |
| 603810 | MC   | 1    | 30  | 7    | 30   | 2013 | 0.60  | 0.66  | 0.6592  | 0.3231  |
| 470077 | MC   | 5    | 34  | 12   | 34   | 2013 | 0.86  | 0.87  | -0.9620 | -1.1036 |
| 632478 | MC   | 12   | 67  | 9    | 67   | 2013 | 0.60  | 0.60  | 0.7257  | 0.7726  |
| 208030 | MC   | 7    | 31  | 1    | 31   | 2013 | 0.80  | 0.83  | -0.6191 | -0.6823 |
| 699174 | MC   | 10   | 69  | 1    | 69   | 2013 | 0.80  | 0.82  | -0.6018 | -0.6796 |
| 475058 | MC   | 6    | 34  | 4    | 71   | 2013 | 0.58  | 0.60  | 0.7405  | 0.7219  |
| 662423 | MC   | 8    | 31  | 11   | 31   | 2013 | 0.65  | 0.69  | 0.4158  | 0.2516  |
| 474520 | MC   | 9    | 71  | 9    | 71   | 2013 | 0.43  | 0.43  | 1.5526  | 1.6576  |
| 730877 | MC   | 2    | 69  | 11   | 69   | 2013 | 0.62  | 0.66  | 0.5887  | 0.4081  |
| 460113 | MC   | 11   | 30  | 4    | 30   | 2013 | 0.55  | 0.59  | 0.9383  | 0.8036  |
| 674538 | MC   | 4    | 69  | 11   | 32   | 2013 | 0.80  |       | -0.5114 |         |
| 752124 | MC   | 12   | 30  | 9    | 30   | 2013 | 0.82  |       | -0.6574 |         |
| 944928 | MC   | 9    | 31  | 9    | 31   | 2013 | 0.67  | 0.65  | 0.3182  | 0.4774  |
| 966968 | MC   | 8    | 70  | 6    | 33   | 2013 | 0.58  | 0.56  | 0.7949  | 0.9548  |
| 107340 | SCR  | 0    | 72  | 0    | 72   | 2013 | 0.56  | 0.58  | 0.8806  | 0.8528  |
| 299002 | SCR  | 0    | 73  | 0    | 73   | 2013 | 0.63  | 0.64  | 0.4981  | 0.4876  |
|        |      |      |     |      |      | Mean | 0.68  | 0.69  | 0.15    | 0.15    |

#### Science Grade 8

|        |      |      |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|------|-----|------|------|------|-------|-------|---------|---------|
| PubID  | Type | Form | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 263931 | MC   | 0    | 1   | 0    | 1    | 2013 | 0.82  | 0.83  | -1.1949 |         |
| 475280 | MC   | 0    | 2   | 0    | 2    | 2013 | 0.84  | 0.85  | -1.4300 | -1.4494 |
| 130392 | MC   | 0    | 4   | 0    | 4    | 2013 | 0.70  |       | -0.4302 |         |
| 788480 | MC   | 0    | 5   | 0    | 5    | 2013 | 0.59  | 0.59  | 0.1385  | 0.1944  |
| 486390 | MC   | 0    | 6   | 0    | 6    | 2013 | 0.75  | 0.74  | -0.7082 |         |
| 240709 | MC   | 0    | 11  | 0    | 11   | 2013 | 0.71  |       | -0.4814 |         |
| 238278 | MC   | 0    | 12  | 0    | 12   | 2013 | 0.80  |       | -1.0130 |         |
| 785295 | MC   | 0    | 14  | 0    | 14   | 2013 | 0.67  |       | -0.2984 |         |
| 931017 | MC   | 0    | 15  | 0    | 15   | 2013 | 0.71  |       | -0.4225 |         |
| 847050 | MC   | 0    | 24  | 0    | 24   | 2013 | 0.71  |       | -0.4477 |         |
| 366282 | MC   | 0    | 39  | 0    | 39   | 2013 | 0.80  |       | -1.1807 |         |
| 357714 | MC   | 0    | 44  | 0    | 44   | 2013 | 0.75  |       | -0.7523 |         |
| 982562 | MC   | 0    | 46  | 0    | 46   | 2013 | 0.73  |       | -0.7255 |         |
| 288836 | MC   | 0    | 48  | 0    | 48   | 2013 | 0.66  |       | -0.1390 |         |
| 851347 | MC   | 0    | 49  | 0    | 49   | 2013 | 0.68  |       | -0.2732 |         |
| 555840 | MC   | 0    | 59  | 0    | 59   | 2013 | 0.73  |       | -0.6701 |         |
| 416451 | MC   | 6    | 33  | 6    | 33   | 2013 | 0.36  | 0.41  | 1.3513  | 1.1593  |
| 336669 | MC   | 9    | 70  | 3    | 70   | 2013 | 0.52  | 0.55  | 0.5166  | 0.4600  |
| 463092 | MC   | 3    | 71  | 3    | 71   | 2013 | 0.60  | 0.62  | 0.1501  | 0.0694  |
| 174171 | MC   | 12   | 72  | 2    | 34   | 2013 | 0.52  | 0.51  | 0.5698  | 0.6173  |
| 754104 | MC   | 2    | 32  | 3    | 32   | 2013 | 0.68  |       | -0.3205 |         |
| 994229 | MC   | 8    | 73  | 3    | 73   | 2013 | 0.59  | 0.61  | 0.1694  | 0.0806  |
| 117232 | MC   | 4    | 34  | 7    | 72   | 2013 | 0.48  | 0.54  | 0.7865  | 0.5101  |
| 886449 | MC   | 5    | 70  | 1    | 70   | 2013 | 0.70  |       | -0.4322 |         |
| 161866 | MC   | 5    | 35  | 8    | 35   | 2013 | 0.64  | 0.66  | -0.0542 | -0.1547 |
| 592347 | MC   | 10   | 35  | 6    | 73   | 2013 | 0.54  | 0.57  | 0.4608  | 0.3214  |
| 670899 | MC   | 12   | 33  | 7    | 33   | 2013 | 0.56  | 0.57  | 0.3470  | 0.3399  |
| 306248 | MC   | 11   | 32  | 4    | 32   | 2013 | 0.61  | 0.66  | 0.0746  | -0.1362 |
| 954841 | MC   | 7    | 34  | 12   | 34   | 2013 | 0.67  | 0.50  | -0.2228 | 0.6626  |
| 667555 | MC   | 7    | 73  | 2    | 73   | 2013 | 0.67  | 0.68  | -0.2565 | -0.2490 |
| 345086 | MC   | 1    | 33  | 2    | 33   | 2013 | 0.51  | 0.50  | 0.5984  | 0.6064  |
| 882081 | MC   | 10   | 70  | 6    | 70   | 2013 | 0.56  | 0.54  | 0.3285  | 0.4858  |
| 887071 | MC   | 1    | 72  | 6    | 72   | 2013 | 0.53  | 0.56  | 0.4971  | 0.3317  |
| 820471 | MC   | 4    | 72  | 12   | 72   | 2013 | 0.69  |       | -0.3278 |         |
| 273941 | MC   | 11   | 71  | 11   | 71   | 2013 | 0.60  |       | 0.1317  |         |
| 275546 | MC   | 3    | 34  | 3    | 34   | 2013 | 0.65  |       | -0.1130 | 0.0272  |
| 368452 | MC   | 8    | 32  | 10   | 32   | 2013 | 0.64  |       | -0.0504 |         |
| 238324 | MC   | 9    | 34  | 7    | 34   | 2013 | 0.56  | 0.63  |         | 0.0051  |
| 253386 | MC   | 2    | 70  | 9    | 32   | 2013 | 0.50  | 0.48  | 0.6380  | 0.7966  |
| 901437 | MC   | 6    | 73  | 6    | 35   | 2013 | 0.54  | 0.53  | 0.4270  | 0.5588  |
| 966808 | SCR  | 0    | 38  | 0    | 38   | 2013 | 0.48  | 0.47  | 0.7654  | 0.8151  |
| 832619 | SCR  | 0    | 75  | 0    | 75   | 2013 | 0.58  | 0.54  | 0.2412  | 0.4772  |
|        |      |      |     |      |      | Mean | 0.63  | 0.64  | -0.08   | -0.08   |

#### **Writing Grade 5**

|        |      |      |     | Prev | Prev | Prev | Prev  |       | Prev    |         |
|--------|------|------|-----|------|------|------|-------|-------|---------|---------|
| PubID  | Туре | Form | Seq | Form | Seq  | Year | P-Val | P-Val | Meas    | Meas    |
| 118533 | MC   | 1    | 1   | 3    | 13   | 2009 | 0.85  | 0.86  | -0.6318 | -0.8342 |
| 597893 | MC   | 1    | 2   | 3    | 14   | 2009 | 0.86  | 0.88  | -0.7630 | -1.0630 |
| 431220 | MC   | 1    | 3   | 3    | 15   | 2009 | 0.59  | 0.68  | 1.5355  | 1.0267  |
| 613475 | MC   | 1    | 4   | 3    | 16   | 2009 | 0.64  | 0.66  | 1.1652  | 1.1318  |
| 176942 | MC   | 1    | 5   | 6    | 13   | 2009 | 0.61  | 0.65  | 1.4075  | 1.2462  |
| 401704 | MC   | 1    | 6   | 6    | 14   | 2009 | 0.52  | 0.59  | 2.0063  | 1.7205  |
| 343537 | MC   | 1    | 7   | 6    | 15   | 2009 | 0.68  | 0.71  | 0.9266  | 0.7798  |
| 547148 | MC   | 1    | 8   | 6    | 16   | 2009 | 0.66  | 0.68  | 1.0896  | 0.9964  |
| 728403 | MC   | 1    | 9   | 1    | 13   | 2009 | 0.72  | 0.70  | 0.6151  | 0.8613  |
| 657763 | MC   | 1    | 10  | 1    | 14   | 2009 | 0.82  | 0.82  | -0.2500 | -0.3434 |
| 336952 | MC   | 1    | 11  | 1    | 15   | 2009 | 0.61  | 0.65  | 1.3632  | 1.2556  |
| 745699 | MC   | 1    | 12  | 1    | 16   | 2009 | 0.72  | 0.72  | 0.5550  | 0.6846  |
| 502220 | WP   | 1    | 13  | 4    | 21   | 2012 | 0.67  | 0.63  | 1.7233  | 2.7710  |
| 502220 | WP   | 1    | 13  | 4    | 21   | 2012 | 0.66  | 0.62  | 1.9892  | 2.9769  |
| 401156 | WP   | 1    | 14  | 0    | 23   | 2011 | 0.64  | 0.61  | 2.7019  | 3.0410  |
| 401156 | WP   | 1    | 14  | 0    | 23   | 2011 | 0.64  | 0.61  | 2.6811  | 3.0682  |
|        |      |      |     |      |      | Mean | 0.68  | 0.69  | 1.13    | 1.21    |

#### Writing Grade 8

|        |      |      |     | Prev | Prev | Prev | Prev  |       | Prev   |        |
|--------|------|------|-----|------|------|------|-------|-------|--------|--------|
| PubID  | Type | Form | Seq | Form | Seq  | Year | P-Val | P-Val | Meas   | Meas   |
| 100048 | MC   | 1    | 1   | 2    | 13   | 2013 | 0.76  | 0.77  | 0.6561 | 0.4446 |
| 759431 | MC   | 1    | 2   | 2    | 14   | 2013 | 0.74  | 0.75  | 0.8616 | 0.6314 |
| 301527 | MC   | 1    | 3   | 2    | 15   | 2013 | 0.62  | 0.62  | 1.7930 | 1.6969 |
| 329565 | MC   | 1    | 4   | 2    | 16   | 2013 | 0.73  | 0.72  | 0.9171 | 0.9170 |
| 873175 | MC   | 1    | 5   | 2    | 6    | 2012 | 0.51  | 0.48  | 2.5534 | 2.7813 |
| 376527 | MC   | 1    | 6   | 2    | 5    | 2012 | 0.77  | 0.79  | 0.5706 | 0.2962 |
| 238868 | MC   | 1    | 7   | 2    | 8    | 2012 | 0.52  | 0.53  | 2.4914 | 2.4093 |
| 374496 | MC   | 1    | 8   | 2    | 7    | 2012 | 0.70  | 0.70  | 1.1139 | 1.1094 |
| 699346 | MC   | 1    | 9   | 5    | 5    | 2013 | 0.64  | 0.63  | 1.6641 | 1.6824 |
| 354546 | MC   | 1    | 10  | 5    | 6    | 2013 | 0.73  | 0.70  | 0.9609 | 1.1189 |
| 928356 | MC   | 1    | 11  | 5    | 7    | 2013 | 0.69  | 0.61  | 1.2641 | 1.7694 |
| 445588 | MC   | 1    | 12  | 5    | 8    | 2013 | 0.64  | 0.62  | 1.6658 | 1.7130 |
| 127031 | WP   | 1    | 13  | 5    | 22   | 2011 | 0.70  | 0.69  | 1.4205 | 1.6622 |
| 127031 | WP   | 1    | 13  | 5    | 22   | 2011 | 0.69  | 0.69  | 1.8534 | 1.7499 |
| 738344 | WP   | 1    | 14  | 2    | 23   | 2013 | 0.67  | 0.66  | 2.0491 | 2.2255 |
| 738344 | WP   | 1    | 14  | 2    | 23   | 2013 | 0.66  | 0.66  | 2.2495 | 2.3099 |
|        |      |      |     |      |      | Mean | 0.67  | 0.66  | 1.51   | 1.53   |

# Appendix P:

# Reliabilities

| Column  |                               |
|---------|-------------------------------|
| Heading | Definition                    |
| Strand  | Strand (Tot.=total)           |
| Group   | Subgroup                      |
| Pts.    | Points possible               |
| Len.    | Length                        |
| N       | N                             |
| Mean    | Mean                          |
| SD      | Standard deviation            |
| r       | Reliability coefficient       |
| SEM     | Standard error of measurement |
| Items   | Item types present            |

|     | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|--------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 124702 | 51.9 | 14.71 | 0.95 | 3.3 | MC*OE |
| all | A      | All   | 40   | 37   | 124702 | 28.1 | 9.09  | 0.93 | 2.5 | MC*OE |
| ver | В      | All   | 10   | 10   | 124702 | 6.9  | 2.61  | 0.80 | 1.2 | MC    |
| Ó   | С      | All   | -    | -    | -      | -    | -     | -    | -   | -     |
|     | D      | All   | 11   | 8    | 124702 | 7.7  | 2.27  | 0.60 | 1.4 | MC*OE |
|     | Е      | All   | 11   | 8    | 124702 | 9.2  | 2.14  | 0.68 | 1.2 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 72   | 63   | 63862 | 52.1 | 14.93 | 0.95 | 3.3 | MC*OE |
|        | 10ι.   | Female | 72   | 63   | 60758 | 51.8 | 14.47 | 0.95 | 3.4 | MC*OE |
|        | A      | Male   | 40   | 37   | 63862 | 28.2 | 9.18  | 0.93 | 2.5 | MC*OE |
|        | A      | Female | 40   | 37   | 60758 | 28.0 | 8.98  | 0.92 | 2.5 | MC*OE |
| er     | В      | Male   | 10   | 10   | 63862 | 7.2  | 2.57  | 0.80 | 1.2 | MC    |
| Gender |        | Female | 10   | 10   | 60758 | 6.6  | 2.63  | 0.79 | 1.2 | MC    |
| Ğ      |        | Male   | -    | -    | -     | -    | -     | -    | -   | -     |
|        |        | Female | -    | -    | -     | -    | -     | -    | -   | -     |
|        | D      | Male   | 11   | 8    | 63862 | 7.6  | 2.29  | 0.62 | 1.4 | MC*OE |
|        |        | Female | 11   | 8    | 60758 | 7.8  | 2.25  | 0.59 | 1.4 | MC*OE |
|        | Е      | Male   | 11   | 8    | 63862 | 9.1  | 2.21  | 0.69 | 1.2 | MC*OE |
|        | Ľ      | Female | 11   | 8    | 60758 | 9.3  | 2.06  | 0.67 | 1.2 | MC*OE |

|           | Strand | Group            | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|------------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White            | 72   | 63   | 84688 | 55.0 | 12.96 | 0.94 | 3.2 | MC*OE |
|           |        | Af. Amer.        | 72   | 63   | 18367 | 41.7 | 15.28 | 0.94 | 3.6 | MC*OE |
|           |        | Hispanic         | 72   | 63   | 12424 | 44.7 | 15.42 | 0.95 | 3.6 | MC*OE |
|           | Tot.   | Asian            | 72   | 63   | 4494  | 59.0 | 12.23 | 0.94 | 3.0 | MC*OE |
|           |        | Am. Indian       | 72   | 63   | 207   | 49.3 | 14.12 | 0.94 | 3.5 | MC*OE |
|           |        | Pacific Islander | 72   | 63   | 77    | 52.9 | 13.12 | 0.93 | 3.4 | MC*OE |
|           |        | Multi            | 72   | 63   | 4340  | 48.4 | 15.55 | 0.95 | 3.5 | MC*OE |
|           |        | White            | 40   | 37   | 84688 | 29.9 | 8.16  | 0.91 | 2.4 | MC*OE |
|           |        | Af. Amer.        | 40   | 37   | 18367 | 22.1 | 9.23  | 0.92 | 2.7 | MC*OE |
|           |        | Hispanic         | 40   | 37   | 12424 | 23.6 | 9.37  | 0.92 | 2.6 | MC*OE |
|           | A      | Asian            | 40   | 37   | 4494  | 32.4 | 7.69  | 0.92 | 2.2 | MC*OE |
|           |        | Am. Indian       | 40   | 37   | 207   | 26.2 | 8.60  | 0.91 | 2.6 | MC*OE |
|           |        | Pacific Islander | 40   | 37   | 77    | 28.4 | 8.44  | 0.91 | 2.5 | MC*OE |
|           |        | Multi            | 40   | 37   | 4340  | 25.9 | 9.49  | 0.93 | 2.6 | MC*OE |
|           |        | White            | 10   | 10   | 84688 | 7.4  | 2.43  | 0.78 | 1.1 | MC    |
|           |        | Af. Amer.        | 10   | 10   | 18367 | 5.3  | 2.57  | 0.74 | 1.3 | MC    |
|           |        | Hispanic         | 10   | 10   | 12424 | 5.9  | 2.65  | 0.77 | 1.3 | MC    |
|           | В      | Asian            | 10   | 10   | 4494  | 8.0  | 2.23  | 0.78 | 1.0 | MC    |
|           |        | Am. Indian       | 10   | 10   | 207   | 6.6  | 2.57  | 0.77 | 1.2 | MC    |
| city      |        | Pacific Islander | 10   | 10   | 77    | 7.2  | 2.37  | 0.75 | 1.2 | MC    |
| Ethnicity |        | Multi            | 10   | 10   | 4340  | 6.4  | 2.69  | 0.79 | 1.2 | MC    |
| Etl       |        | White            | -    | -    | -     | -    | -     | -    | -   | _     |
|           |        | Af. Amer.        | -    | -    | -     | -    | -     | -    | -   | _     |
|           |        | Hispanic         | -    | -    | -     | -    | -     | -    | -   | _     |
|           | C      | Asian            | -    | -    | -     | -    | -     | -    | -   | _     |
|           |        | Am. Indian       | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        | Pacific Islander | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        | Multi            | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        |                  |      |      |       |      |       |      |     |       |

|   | White            | 11 | 8 | 84688 | 8.1 | 2.06 | 0.54 | 1.4 | MC*OE |
|---|------------------|----|---|-------|-----|------|------|-----|-------|
|   | Af. Amer.        | 11 | 8 | 18367 | 6.5 | 2.45 | 0.66 | 1.4 | MC*OE |
|   | Hispanic         | 11 | 8 | 12424 | 6.7 | 2.41 | 0.65 | 1.4 | MC*OE |
| D | Asian            | 11 | 8 | 4494  | 8.7 | 1.98 | 0.53 | 1.4 | MC*OE |
|   | Am. Indian       | 11 | 8 | 207   | 7.5 | 2.25 | 0.61 | 1.4 | MC*OE |
|   | Pacific Islander | 11 | 8 | 77    | 8.1 | 2.14 | 0.50 | 1.5 | MC*OE |
|   | Multi            | 11 | 8 | 4340  | 7.3 | 2.41 | 0.64 | 1.5 | MC*OE |
|   | White            | 11 | 8 | 84688 | 9.6 | 1.76 | 0.60 | 1.1 | MC*OE |
|   | Af. Amer.        | 11 | 8 | 18367 | 7.9 | 2.67 | 0.73 | 1.4 | MC*OE |
|   | Hispanic         | 11 | 8 | 12424 | 8.3 | 2.54 | 0.73 | 1.3 | MC*OE |
| E | Asian            | 11 | 8 | 4494  | 9.9 | 1.67 | 0.62 | 1.0 | MC*OE |
|   | Am. Indian       | 11 | 8 | 207   | 8.8 | 2.32 | 0.71 | 1.2 | MC*OE |
|   | Pacific Islander | 11 | 8 | 77    | 9.3 | 1.68 | 0.49 | 1.2 | MC*OE |
|   | Multi            | 11 | 8 | 4340  | 8.8 | 2.39 | 0.71 | 1.3 | MC*OE |

|     | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 4152 | 39.1 | 15.28 | 0.94 | 3.6 | MC*OE |
| . 1 | A      | All   | 40   | 37   | 4152 | 20.2 | 9.15  | 0.91 | 2.7 | MC*OE |
| ELI | В      | All   | 10   | 10   | 4152 | 5.4  | 2.56  | 0.74 | 1.3 | MC    |
| ш   | С      | All   | -    | -    | -    | -    | -     | -    | -   | -     |
|     | D      | All   | 11   | 8    | 4152 | 6.0  | 2.43  | 0.67 | 1.4 | MC*OE |
|     | E      | All   | 11   | 8    | 4152 | 7.5  | 2.81  | 0.74 | 1.4 | MC*OE |

|   | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|-------|------|-----|-------|
|   | Tot.   | All   | 72   | 63   | 19162 | 40.7 | 16.72 | 0.95 | 3.6 | MC*OE |
|   | A      | All   | 40   | 37   | 19162 | 21.4 | 9.98  | 0.93 | 2.7 | MC*OE |
| E | В      | All   | 10   | 10   | 19162 | 5.6  | 2.75  | 0.78 | 1.3 | MC    |
|   | С      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
|   | D      | All   | 11   | 8    | 19162 | 6.1  | 2.64  | 0.69 | 1.5 | MC*OE |
|   | E      | All   | 11   | 8    | 19162 | 7.7  | 2.85  | 0.75 | 1.4 | MC*OE |

|             | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-------------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>&gt;</b> | Tot.   | All   | 72   | 63   | 59457 | 46.0 | 15.25 | 0.95 | 3.5 | MC*OE |
| sad         | A      | All   | 40   | 37   | 59457 | 24.5 | 9.32  | 0.92 | 2.6 | MC*OE |
| Dis         | В      | All   | 10   | 10   | 59457 | 6.0  | 2.66  | 0.77 | 1.3 | MC    |
| 60          | С      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
| 豆           | D      | All   | 11   | 8    | 59457 | 6.9  | 2.38  | 0.64 | 1.4 | MC*OE |
|             | Е      | All   | 11   | 8    | 59457 | 8.5  | 2.45  | 0.71 | 1.3 | MC*OE |

|     | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|--------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 126911 | 50.0 | 14.66 | 0.94 | 3.6 | MC*OE |
| all | A      | All   | 35   | 32   | 126911 | 25.1 | 7.49  | 0.90 | 2.4 | MC*OE |
| /er | В      | All   | 10   | 7    | 126911 | 6.0  | 2.63  | 0.67 | 1.5 | MC*OE |
| Ó   | С      | All   | 10   | 10   | 126911 | 6.3  | 2.51  | 0.72 | 1.3 | MC    |
|     | D      | All   | 10   | 10   | 126911 | 7.7  | 2.16  | 0.70 | 1.2 | MC    |
|     | E      | All   | 7    | 4    | 126911 | 5.0  | 1.92  | 0.52 | 1.3 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 72   | 63   | 64748 | 50.1 | 14.82 | 0.94 | 3.6 | MC*OE |
|        | 10ι.   | Female | 72   | 63   | 62088 | 49.8 | 14.49 | 0.94 | 3.6 | MC*OE |
|        | A      | Male   | 35   | 32   | 64748 | 25.2 | 7.57  | 0.90 | 2.3 | MC*OE |
|        | Α      | Female | 35   | 32   | 62088 | 24.9 | 7.39  | 0.90 | 2.4 | MC*OE |
| er     | В      | Male   | 10   | 7    | 64748 | 6.1  | 2.58  | 0.67 | 1.5 | MC*OE |
| Gender |        | Female | 10   | 7    | 62088 | 5.8  | 2.69  | 0.68 | 1.5 | MC*OE |
| Ğ      | C      | Male   | 10   | 10   | 64748 | 6.3  | 2.56  | 0.73 | 1.3 | MC    |
|        |        | Female | 10   | 10   | 62088 | 6.3  | 2.46  | 0.70 | 1.3 | MC    |
|        | D      | Male   | 10   | 10   | 64748 | 7.6  | 2.19  | 0.71 | 1.2 | MC    |
|        |        | Female | 10   | 10   | 62088 | 7.7  | 2.13  | 0.70 | 1.2 | MC    |
|        | Б      | Male   | 7    | 4    | 64748 | 4.9  | 1.93  | 0.52 | 1.3 | MC*OE |
|        | Е      | Female | 7    | 4    | 62088 | 5.1  | 1.90  | 0.51 | 1.3 | MC*OE |

| _         | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
| -         |        | White           | 72   | 63   | 87296 | 53.0 | 13.01 | 0.93 | 3.5 | MC*OE |
|           |        | Af. Amer.       | 72   | 63   | 18392 | 39.4 | 15.06 | 0.93 | 3.8 | MC*OE |
|           |        | Hispanic        | 72   | 63   | 12331 | 42.5 | 15.11 | 0.94 | 3.8 | MC*OE |
|           | Tot.   | Asian           | 72   | 63   | 4678  | 57.4 | 12.56 | 0.93 | 3.2 | MC*OE |
|           |        | Am. Indian      | 72   | 63   | 177   | 47.5 | 15.40 | 0.94 | 3.7 | MC*OE |
|           |        | Pacific Islande | 72   | 63   | 83    | 52.6 | 13.12 | 0.93 | 3.5 | MC*OE |
|           |        | Multi           | 72   | 63   | 3861  | 46.9 | 15.07 | 0.94 | 3.7 | MC*OE |
|           |        | White           | 35   | 32   | 87296 | 26.5 | 6.65  | 0.88 | 2.3 | MC*OE |
|           |        | Af. Amer.       | 35   | 32   | 18392 | 19.9 | 7.86  | 0.89 | 2.6 | MC*OE |
|           |        | Hispanic        | 35   | 32   | 12331 | 21.4 | 7.89  | 0.90 | 2.5 | MC*OE |
|           | A      | Asian           | 35   | 32   | 4678  | 28.9 | 6.20  | 0.89 | 2.0 | MC*OE |
|           |        | Am. Indian      | 35   | 32   | 177   | 23.9 | 8.03  | 0.91 | 2.4 | MC*OE |
|           |        | Pacific Islande | 35   | 32   | 83    | 27.0 | 6.47  | 0.88 | 2.2 | MC*OE |
|           |        | Multi           | 35   | 32   | 3861  | 23.6 | 7.75  | 0.90 | 2.5 | MC*OE |
|           |        | White           | 10   | 7    | 87296 | 6.4  | 2.48  | 0.64 | 1.5 | MC*OE |
|           |        | Af. Amer.       | 10   | 7    | 18392 | 4.3  | 2.49  | 0.67 | 1.4 | MC*OE |
|           |        | Hispanic        | 10   | 7    | 12331 | 4.7  | 2.55  | 0.68 | 1.4 | MC*OE |
|           | В      | Asian           | 10   | 7    | 4678  | 7.1  | 2.44  | 0.65 | 1.4 | MC*OE |
| _         |        | Am. Indian      | 10   | 7    | 177   | 5.8  | 2.66  | 0.66 | 1.6 | MC*OE |
| city      |        | Pacific Islande | 10   | 7    | 83    | 6.0  | 2.61  | 0.69 | 1.5 | MC*OE |
| Ethnicity |        | Multi           | 10   | 7    | 3861  | 5.5  | 2.64  | 0.68 | 1.5 | MC*OE |
| Ett       |        | White           | 10   | 10   | 87296 | 6.7  | 2.40  | 0.70 | 1.3 | MC    |
|           |        | Af. Amer.       | 10   | 10   | 18392 | 4.8  | 2.38  | 0.64 | 1.4 | MC    |
|           |        | Hispanic        | 10   | 10   | 12331 | 5.3  | 2.45  | 0.67 | 1.4 | MC    |
|           | C      | Asian           | 10   | 10   | 4678  | 7.2  | 2.42  | 0.74 | 1.2 | MC    |
|           |        | Am. Indian      | 10   | 10   | 177   | 5.7  | 2.46  | 0.68 | 1.4 | MC    |
|           |        | Pacific Islande | 10   | 10   | 83    | 6.7  | 2.48  | 0.72 | 1.3 | MC    |
|           |        | Multi           | 10   | 10   | 3861  | 5.9  | 2.52  | 0.70 | 1.4 | MC    |

|   | White           | 10 | 10 | 87296 | 8.0 | 1.96 | 0.67 | 1.1 | MC    |
|---|-----------------|----|----|-------|-----|------|------|-----|-------|
|   | Af. Amer.       | 10 | 10 | 18392 | 6.5 | 2.42 | 0.70 | 1.3 | MC    |
|   | Hispanic        | 10 | 10 | 12331 | 6.8 | 2.33 | 0.69 | 1.3 | MC    |
| D | Asian           | 10 | 10 | 4678  | 8.6 | 1.71 | 0.68 | 1.0 | MC    |
|   | Am. Indian      | 10 | 10 | 177   | 7.4 | 2.23 | 0.70 | 1.2 | MC    |
|   | Pacific Islande | 10 | 10 | 83    | 8.0 | 1.88 | 0.64 | 1.1 | MC    |
|   | Multi           | 10 | 10 | 3861  | 7.3 | 2.27 | 0.70 | 1.2 | MC    |
|   | White           | 7  | 4  | 87296 | 5.3 | 1.71 | 0.43 | 1.3 | MC*OE |
|   | Af. Amer.       | 7  | 4  | 18392 | 3.8 | 2.13 | 0.60 | 1.3 | MC*OE |
|   | Hispanic        | 7  | 4  | 12331 | 4.2 | 2.11 | 0.58 | 1.4 | MC*OE |
| E | Asian           | 7  | 4  | 4678  | 5.6 | 1.68 | 0.43 | 1.3 | MC*OE |
|   | Am. Indian      | 7  | 4  | 177   | 4.7 | 1.97 | 0.51 | 1.4 | MC*OE |
|   | Pacific Islande | 7  | 4  | 83    | 4.9 | 1.87 | 0.40 | 1.5 | MC*OE |
|   | Multi           | 7  | 4  | 3861  | 4.6 | 2.03 | 0.55 | 1.4 | MC*OE |

|     | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 3165 | 33.4 | 13.99 | 0.92 | 3.8 | MC*OE |
| . 1 | A      | All   | 35   | 32   | 3165 | 16.8 | 7.47  | 0.88 | 2.6 | MC*OE |
| ELI | В      | All   | 10   | 7    | 3165 | 3.6  | 2.28  | 0.65 | 1.4 | MC*OE |
| -   | С      | All   | 10   | 10   | 3165 | 4.2  | 2.14  | 0.54 | 1.4 | MC    |
|     | D      | All   | 10   | 10   | 3165 | 5.7  | 2.34  | 0.64 | 1.4 | MC    |
|     | E      | All   | 7    | 4    | 3165 | 3.1  | 2.08  | 0.63 | 1.3 | MC*OE |

|     | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|-------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 20361 | 37.9 | 16.11 | 0.94 | 3.8 | MC*OE |
|     | A      | All   | 35   | 32   | 20361 | 19.0 | 8.44  | 0.91 | 2.6 | MC*OE |
| IEP | В      | All   | 10   | 7    | 20361 | 4.2  | 2.62  | 0.70 | 1.4 | MC*OE |
|     | С      | All   | 10   | 10   | 20361 | 4.7  | 2.44  | 0.67 | 1.4 | MC    |
|     | D      | All   | 10   | 10   | 20361 | 6.1  | 2.51  | 0.71 | 1.3 | MC    |
|     | E      | All   | 7    | 4    | 20361 | 3.8  | 2.18  | 0.63 | 1.3 | MC*OE |

|             | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-------------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>&gt;</b> | Tot.   | All   | 72   | 63   | 59250 | 43.7 | 15.01 | 0.94 | 3.8 | MC*OE |
| gad         | A      | All   | 35   | 32   | 59250 | 22.0 | 7.80  | 0.90 | 2.5 | MC*OE |
| Disa        | В      | All   | 10   | 7    | 59250 | 5.0  | 2.57  | 0.67 | 1.5 | MC*OE |
| .00         | С      | All   | 10   | 10   | 59250 | 5.4  | 2.46  | 0.68 | 1.4 | MC    |
| 豆           | D      | All   | 10   | 10   | 59250 | 6.9  | 2.31  | 0.69 | 1.3 | MC    |
|             | Е      | All   | 7    | 4    | 59250 | 4.4  | 2.06  | 0.57 | 1.4 | MC*OE |

|     | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|--------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 126693 | 46.4 | 15.55 | 0.95 | 3.6 | MC*OE |
| all | A      | All   | 37   | 34   | 126693 | 24.8 | 8.42  | 0.91 | 2.5 | MC*OE |
| /er | В      | All   | 9    | 9    | 126693 | 5.4  | 2.44  | 0.74 | 1.2 | MC    |
| Ó   | С      | All   | 9    | 6    | 126693 | 5.6  | 2.33  | 0.61 | 1.5 | MC*OE |
|     | D      | All   | 12   | 9    | 126693 | 7.1  | 2.69  | 0.72 | 1.4 | MC*OE |
|     | E      | All   | 5    | 5    | 126693 | 3.5  | 1.41  | 0.64 | 0.9 | MC    |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 72   | 63   | 64476 | 46.6 | 15.75 | 0.95 | 3.5 | MC*OE |
|        | 10ι.   | Female | 72   | 63   | 62137 | 46.2 | 15.33 | 0.95 | 3.6 | MC*OE |
|        | A      | Male   | 37   | 34   | 64476 | 24.9 | 8.49  | 0.92 | 2.4 | MC*OE |
|        | A      | Female | 37   | 34   | 62137 | 24.8 | 8.33  | 0.91 | 2.5 | MC*OE |
| er     | В      | Male   | 9    | 9    | 64476 | 5.5  | 2.45  | 0.75 | 1.2 | MC    |
| Gender |        | Female | 9    | 9    | 62137 | 5.2  | 2.42  | 0.73 | 1.3 | MC    |
| Ğ      | C      | Male   | 9    | 6    | 64476 | 5.5  | 2.37  | 0.62 | 1.5 | MC*OE |
|        |        | Female | 9    | 6    | 62137 | 5.6  | 2.29  | 0.60 | 1.4 | MC*OE |
|        | D      | Male   | 12   | 9    | 64476 | 7.1  | 2.74  | 0.73 | 1.4 | MC*OE |
|        |        | Female | 12   | 9    | 62137 | 7.1  | 2.63  | 0.71 | 1.4 | MC*OE |
|        | E      | Male   | 5    | 5    | 64476 | 3.6  | 1.40  | 0.63 | 0.8 | MC    |
|        | Ľ      | Female | 5    | 5    | 62137 | 3.5  | 1.42  | 0.64 | 0.9 | MC    |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
| -         |        | White           | 72   | 63   | 88106 | 49.5 | 14.21 | 0.94 | 3.5 | MC*OE |
|           |        | Af. Amer.       | 72   | 63   | 18557 | 35.2 | 14.68 | 0.94 | 3.7 | MC*OE |
|           |        | Hispanic        | 72   | 63   | 11795 | 38.1 | 15.18 | 0.94 | 3.7 | MC*OE |
|           | Tot.   | Asian           | 72   | 63   | 4575  | 55.2 | 13.93 | 0.95 | 3.2 | MC*OE |
|           |        | Am. Indian      | 72   | 63   | 175   | 44.6 | 15.55 | 0.95 | 3.6 | MC*OE |
|           |        | Pacific Islande | 72   | 63   | 82    | 50.3 | 15.34 | 0.95 | 3.4 | MC*OE |
|           |        | Multi           | 72   | 63   | 3305  | 43.5 | 15.41 | 0.94 | 3.6 | MC*OE |
|           |        | White           | 37   | 34   | 88106 | 26.5 | 7.71  | 0.90 | 2.4 | MC*OE |
|           |        | Af. Amer.       | 37   | 34   | 18557 | 19.0 | 8.09  | 0.89 | 2.6 | MC*OE |
|           |        | Hispanic        | 37   | 34   | 11795 | 20.5 | 8.26  | 0.90 | 2.6 | MC*OE |
|           | A      | Asian           | 37   | 34   | 4575  | 29.6 | 7.27  | 0.91 | 2.2 | MC*OE |
|           |        | Am. Indian      | 37   | 34   | 175   | 24.0 | 8.50  | 0.92 | 2.5 | MC*OE |
|           |        | Pacific Islande | 37   | 34   | 82    | 27.0 | 8.12  | 0.92 | 2.3 | MC*OE |
|           |        | Multi           | 37   | 34   | 3305  | 23.2 | 8.41  | 0.91 | 2.5 | MC*OE |
|           |        | White           | 9    | 9    | 88106 | 5.8  | 2.31  | 0.72 | 1.2 | MC    |
|           |        | Af. Amer.       | 9    | 9    | 18557 | 3.8  | 2.25  | 0.67 | 1.3 | MC    |
|           |        | Hispanic        | 9    | 9    | 11795 | 4.3  | 2.40  | 0.72 | 1.3 | MC    |
|           | В      | Asian           | 9    | 9    | 4575  | 6.7  | 2.19  | 0.74 | 1.1 | MC    |
| _         |        | Am. Indian      | 9    | 9    | 175   | 5.2  | 2.47  | 0.73 | 1.3 | MC    |
| city      |        | Pacific Islande | 9    | 9    | 82    | 6.0  | 2.31  | 0.72 | 1.2 | MC    |
| Ethnicity |        | Multi           | 9    | 9    | 3305  | 5.0  | 2.43  | 0.73 | 1.3 | MC    |
| Ett       |        | White           | 9    | 6    | 88106 | 6.0  | 2.20  | 0.58 | 1.4 | MC*OE |
|           |        | Af. Amer.       | 9    | 6    | 18557 | 4.2  | 2.23  | 0.57 | 1.5 | MC*OE |
|           |        | Hispanic        | 9    | 6    | 11795 | 4.6  | 2.32  | 0.59 | 1.5 | MC*OE |
|           | C      | Asian           | 9    | 6    | 4575  | 6.5  | 2.23  | 0.62 | 1.4 | MC*OE |
|           |        | Am. Indian      | 9    | 6    | 175   | 5.2  | 2.28  | 0.57 | 1.5 | MC*OE |
|           |        | Pacific Islande | 9    | 6    | 82    | 5.9  | 2.45  | 0.67 | 1.4 | MC*OE |
|           |        | Multi           | 9    | 6    | 3305  | 5.3  | 2.33  | 0.60 | 1.5 | MC*OE |

|   | White           | 12 | 9 | 88106 | 7.5 | 2.54 | 0.70 | 1.4 | MC*OE |
|---|-----------------|----|---|-------|-----|------|------|-----|-------|
|   | Af. Amer.       | 12 | 9 | 18557 | 5.5 | 2.60 | 0.69 | 1.5 | MC*OE |
|   | Hispanic        | 12 | 9 | 11795 | 5.9 | 2.63 | 0.70 | 1.4 | MC*OE |
| D | Asian           | 12 | 9 | 4575  | 8.5 | 2.50 | 0.71 | 1.3 | MC*OE |
|   | Am. Indian      | 12 | 9 | 175   | 6.8 | 2.70 | 0.71 | 1.4 | MC*OE |
|   | Pacific Islande | 12 | 9 | 82    | 7.8 | 2.66 | 0.75 | 1.3 | MC*OE |
|   | Multi           | 12 | 9 | 3305  | 6.7 | 2.65 | 0.71 | 1.4 | MC*OE |
|   | White           | 5  | 5 | 88106 | 3.8 | 1.26 | 0.58 | 0.8 | MC    |
|   | Af. Amer.       | 5  | 5 | 18557 | 2.7 | 1.54 | 0.62 | 1.0 | MC    |
|   | Hispanic        | 5  | 5 | 11795 | 2.8 | 1.53 | 0.62 | 0.9 | MC    |
| E | Asian           | 5  | 5 | 4575  | 4.0 | 1.29 | 0.67 | 0.7 | MC    |
|   | Am. Indian      | 5  | 5 | 175   | 3.4 | 1.42 | 0.63 | 0.9 | MC    |
|   | Pacific Islande | 5  | 5 | 82    | 3.7 | 1.36 | 0.65 | 0.8 | MC    |
|   | Multi           | 5  | 5 | 3305  | 3.3 | 1.43 | 0.61 | 0.9 | MC    |

|     | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 2798 | 28.0 | 12.61 | 0.91 | 3.7 | MC*OE |
| . 1 | A      | All   | 37   | 34   | 2798 | 15.5 | 7.07  | 0.86 | 2.7 | MC*OE |
| ELI | В      | All   | 9    | 9    | 2798 | 3.1  | 2.15  | 0.65 | 1.3 | MC    |
| 111 | С      | All   | 9    | 6    | 2798 | 3.1  | 1.95  | 0.50 | 1.4 | MC*OE |
|     | D      | All   | 12   | 9    | 2798 | 4.4  | 2.41  | 0.62 | 1.5 | MC*OE |
|     | E      | All   | 5    | 5    | 2798 | 1.9  | 1.32  | 0.44 | 1.0 | MC    |

|   | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|-------|------|-----|-------|
|   | Tot.   | All   | 72   | 63   | 20157 | 33.0 | 15.36 | 0.94 | 3.7 | MC*OE |
|   | A      | All   | 37   | 34   | 20157 | 17.9 | 8.36  | 0.90 | 2.6 | MC*OE |
| Ξ | В      | All   | 9    | 9    | 20157 | 3.7  | 2.41  | 0.72 | 1.3 | MC    |
|   | С      | All   | 9    | 6    | 20157 | 3.9  | 2.29  | 0.59 | 1.5 | MC*OE |
|   | D      | All   | 12   | 9    | 20157 | 5.0  | 2.71  | 0.70 | 1.5 | MC*OE |
|   | E      | All   | 5    | 5    | 20157 | 2.5  | 1.51  | 0.60 | 1.0 | MC    |

|             | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-------------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>&gt;</b> | Tot.   | All   | 72   | 63   | 57720 | 39.4 | 15.11 | 0.94 | 3.7 | MC*OE |
| sad         | A      | All   | 37   | 34   | 57720 | 21.1 | 8.26  | 0.90 | 2.6 | MC*OE |
| Ö           | В      | All   | 9    | 9    | 57720 | 4.4  | 2.38  | 0.71 | 1.3 | MC    |
| 30.         | С      | All   | 9    | 6    | 57720 | 4.7  | 2.30  | 0.59 | 1.5 | MC*OE |
| 豆           | D      | All   | 12   | 9    | 57720 | 6.1  | 2.63  | 0.70 | 1.4 | MC*OE |
|             | E      | All   | 5    | 5    | 57720 | 3.0  | 1.50  | 0.62 | 0.9 | MC    |

|     | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|--------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 126128 | 48.0 | 14.27 | 0.94 | 3.4 | MC*OE |
| all | A      | All   | 31   | 28   | 126128 | 20.6 | 6.70  | 0.88 | 2.3 | MC*OE |
| /er | В      | All   | -    | -    | -      | -    | -     | -    | -   | -     |
| Ó   | С      | All   | 11   | 8    | 126128 | 7.2  | 2.52  | 0.76 | 1.2 | MC*OE |
|     | D      | All   | 15   | 12   | 126128 | 10.0 | 3.18  | 0.77 | 1.5 | MC*OE |
|     | Е      | All   | 15   | 15   | 126128 | 10.2 | 3.78  | 0.84 | 1.5 | MC    |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 72   | 63   | 64677 | 47.4 | 14.67 | 0.94 | 3.4 | MC*OE |
|        | 10ι.   | Female | 72   | 63   | 61347 | 48.6 | 13.81 | 0.94 | 3.4 | MC*OE |
|        | A      | Male   | 31   | 28   | 64677 | 20.6 | 6.83  | 0.89 | 2.3 | MC*OE |
|        |        | Female | 31   | 28   | 61347 | 20.7 | 6.55  | 0.88 | 2.3 | MC*OE |
| ler    | В      | Male   | -    | -    | -     | -    | -     | -    | -   | -     |
| Gender |        | Female | -    | -    | -     | -    | -     | -    | -   | -     |
| Ğ      |        | Male   | 11   | 8    | 64677 | 7.0  | 2.66  | 0.78 | 1.3 | MC*OE |
|        |        | Female | 11   | 8    | 61347 | 7.3  | 2.37  | 0.75 | 1.2 | MC*OE |
|        | D      | Male   | 15   | 12   | 64677 | 9.9  | 3.21  | 0.78 | 1.5 | MC*OE |
|        |        | Female | 15   | 12   | 61347 | 10.2 | 3.14  | 0.76 | 1.5 | MC*OE |
|        | Е      | Male   | 15   | 15   | 64677 | 9.9  | 3.85  | 0.84 | 1.5 | MC    |
|        | E      | Female | 15   | 15   | 61347 | 10.4 | 3.68  | 0.83 | 1.5 | MC    |

| Tot. Asian 72 63 18726 38.7 13.83 0.93 3.6 M Hispanic 72 63 11684 41.1 13.86 0.93 3.6 M Am. Indian 72 63 191 46.8 14.35 0.94 3.5 M Pacific Islande 72 63 78 52.1 11.56 0.92 3.3 M Multi 72 63 2737 45.4 14.42 0.94 3.5 M White 31 28 88110 21.7 6.33 0.88 2.2 M Af. Amer. 31 28 18726 16.6 6.36 0.85 2.5 M Hispanic 31 28 11684 17.7 6.42 0.86 2.4 M Am. Indian 31 28 1468 17.7 6.42 0.86 2.4 M Am. Indian 31 28 1468 17.7 6.42 0.86 2.4 M Am. Indian 31 28 191 20.0 6.57 0.87 2.4 M Pacific Islande 31 28 78 23.1 5.65 0.86 2.1 M Multi 31 28 2737 19.5 6.75 0.88 2.4 M White Hispanic Hispanic Am. Indian Am. Indian Am. Indian Am. Indian Am. Indian   | C*OE C*OE C*OE C*OE C*OE C*OE C*OE C*OE |
|---|---|
| Hispanic         72         63         11684         41.1         13.86         0.93         3.6         M           Tot.         Asian         72         63         4425         56.6         12.44         0.94         3.1         M           Am. Indian         72         63         191         46.8         14.35         0.94         3.5         M           Pacific Islande         72         63         78         52.1         11.56         0.92         3.3         M           White         31         28         88110         21.7         6.33         0.88         2.2         M           Af. Amer.         31         28         18726         16.6         6.36         0.85         2.5         M           Hispanic         31         28         11684         17.7         6.42         0.86         2.4         M           A Asian         31         28         191         20.0         6.57         0.87         2.4         M           Am. Indian         31         28         78         23.1         5.65         0.86         2.1         M           White         -         -         -         <  | C*OE C*OE C*OE C*OE C*OE C*OE C*OE C*OE |
| Tot.         Asian         72         63         4425         56.6         12.44         0.94         3.1         M           Am. Indian         72         63         191         46.8         14.35         0.94         3.5         M           Pacific Islande         72         63         78         52.1         11.56         0.92         3.3         M           Multi         72         63         2737         45.4         14.42         0.94         3.5         M           White         31         28         88110         21.7         6.33         0.88         2.2         M           Af. Amer.         31         28         18726         16.6         6.36         0.85         2.5         M           Hispanic         31         28         11684         17.7         6.42         0.86         2.4         M           A Asian         31         28         4425         24.7         5.83         0.89         2.0         M           Am. Indian         31         28         78         23.1         5.65         0.86         2.1         M           White         -         -         -   | C*OE C*OE C*OE C*OE C*OE C*OE C*OE      |
| Am. Indian         72         63         191         46.8         14.35         0.94         3.5         M           Pacific Islande         72         63         78         52.1         11.56         0.92         3.3         M           Multi         72         63         2737         45.4         14.42         0.94         3.5         M           White         31         28         88110         21.7         6.33         0.88         2.2         M           Af. Amer.         31         28         18726         16.6         6.36         0.85         2.5         M           Hispanic         31         28         11684         17.7         6.42         0.86         2.4         M           A Asian         31         28         4425         24.7         5.83         0.89         2.0         M           Am. Indian         31         28         78         23.1         5.65         0.86         2.1         M           White         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <td>C*OE<br/>C*OE<br/>C*OE<br/>C*OE<br/>C*OE</td> | C*OE<br>C*OE<br>C*OE<br>C*OE<br>C*OE    |
| Pacific Islande         72         63         78         52.1         11.56         0.92         3.3         M           Multi         72         63         2737         45.4         14.42         0.94         3.5         M           White         31         28         88110         21.7         6.33         0.88         2.2         M           Af. Amer.         31         28         18726         16.6         6.36         0.85         2.5         M           Hispanic         31         28         11684         17.7         6.42         0.86         2.4         M           A Asian         31         28         4425         24.7         5.83         0.89         2.0         M           Am. Indian         31         28         191         20.0         6.57         0.87         2.4         M           White         31         28         2737         19.5         6.75         0.88         2.4         M           White         31         32         28         2737         19.5         6.75         0.88         2.4         M           White         31         32         32         33 </td <td>C*OE<br/>C*OE<br/>C*OE<br/>C*OE</td>  | C*OE<br>C*OE<br>C*OE<br>C*OE            |
| Multi         72         63         2737         45.4         14.42         0.94         3.5         M           White         31         28         88110         21.7         6.33         0.88         2.2         M           Af. Amer.         31         28         18726         16.6         6.36         0.85         2.5         M           Hispanic         31         28         11684         17.7         6.42         0.86         2.4         M           A Asian         31         28         4425         24.7         5.83         0.89         2.0         M           Am. Indian         31         28         191         20.0         6.57         0.87         2.4         M           Pacific Islande         31         28         78         23.1         5.65         0.86         2.1         M           Multi         31         28         2737         19.5         6.75         0.88         2.4         M           White         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -  | C*OE<br>C*OE<br>C*OE                    |
| White         31         28         88110         21.7         6.33         0.88         2.2         M           Af. Amer.         31         28         18726         16.6         6.36         0.85         2.5         M           Hispanic         31         28         11684         17.7         6.42         0.86         2.4         M           A         Asian         31         28         4425         24.7         5.83         0.89         2.0         M           Am. Indian         31         28         191         20.0         6.57         0.87         2.4         M           Pacific Islande         31         28         78         23.1         5.65         0.86         2.1         M           White         -   | C*OE<br>C*OE<br>C*OE                    |
| Af. Amer. 31 28 18726 16.6 6.36 0.85 2.5 M<br>Hispanic 31 28 11684 17.7 6.42 0.86 2.4 M<br>A Asian 31 28 4425 24.7 5.83 0.89 2.0 M<br>Am. Indian 31 28 191 20.0 6.57 0.87 2.4 M<br>Pacific Islande 31 28 78 23.1 5.65 0.86 2.1 M<br>Multi 31 28 2737 19.5 6.75 0.88 2.4 M<br>White  | C*OE<br>C*OE                            |
| Hispanic 31 28 11684 17.7 6.42 0.86 2.4 M A Asian 31 28 4425 24.7 5.83 0.89 2.0 M Am. Indian 31 28 191 20.0 6.57 0.87 2.4 M Pacific Islande 31 28 78 23.1 5.65 0.86 2.1 M Multi 31 28 2737 19.5 6.75 0.88 2.4 M White  Af. Amer  Hispanic  B Asian  Am. Indian  | C*OE                                    |
| A Asian 31 28 4425 24.7 5.83 0.89 2.0 M Am. Indian 31 28 191 20.0 6.57 0.87 2.4 M Pacific Islande 31 28 78 23.1 5.65 0.86 2.1 M Multi 31 28 2737 19.5 6.75 0.88 2.4 M White Af. Amer. Hispanic B Asian Am. Indian   |   |
| Am. Indian       31       28       191       20.0       6.57       0.87       2.4       M         Pacific Islande       31       28       78       23.1       5.65       0.86       2.1       M         Multi       31       28       2737       19.5       6.75       0.88       2.4       M         White       -       -       -       -       -       -       -       -       -         Af. Amer.       -       -       -       -       -       -       -       -       -       -         B Asian       -   | C*OE                                    |
| Pacific Islande         31         28         78         23.1         5.65         0.86         2.1         M           Multi         31         28         2737         19.5         6.75         0.88         2.4         M           White         -   |   |
| Multi         31         28         2737         19.5         6.75         0.88         2.4         M           White         - <td>C*OE</td>   | C*OE                                    |
| White   | C*OE                                    |
| Af. Amer. Hispanic  Asian Am. Indian  | C*OE                                    |
| Hispanic  | -                                       |
| B Asian   | -                                       |
| Am. Indian  | -                                       |
|   | -                                       |
| Pacific Islande   | -                                       |
| Multi   | -                                       |
| $\blacksquare$ White 11 9 99110 75 226 072 12 M   | -                                       |
|   | C*OE                                    |
|   | C*OE                                    |
| 1   | C*OE                                    |
|   | C*OE                                    |
|   | C*OE                                    |
|   | C*OE                                    |
| Multi 11 8 2737 6.8 2.60 0.79 1.2 M   |   |

|   | White           | 15 | 12 | 88110 | 10.5 | 2.92 | 0.75 | 1.5 | MC*OE |
|---|-----------------|----|----|-------|------|------|------|-----|-------|
|   | Af. Amer.       | 15 | 12 | 18726 | 8.1  | 3.30 | 0.76 | 1.6 | MC*OE |
|   | Hispanic        | 15 | 12 | 11684 | 8.6  | 3.31 | 0.77 | 1.6 | MC*OE |
| D | Asian           | 15 | 12 | 4425  | 11.6 | 2.74 | 0.74 | 1.4 | MC*OE |
|   | Am. Indian      | 15 | 12 | 191   | 9.9  | 3.08 | 0.75 | 1.6 | MC*OE |
|   | Pacific Islande | 15 | 12 | 78    | 10.7 | 3.08 | 0.77 | 1.5 | MC*OE |
|   | Multi           | 15 | 12 | 2737  | 9.5  | 3.25 | 0.77 | 1.6 | MC*OE |
|   | White           | 15 | 15 | 88110 | 10.8 | 3.58 | 0.83 | 1.5 | MC    |
|   | Af. Amer.       | 15 | 15 | 18726 | 8.1  | 3.69 | 0.80 | 1.6 | MC    |
|   | Hispanic        | 15 | 15 | 11684 | 8.5  | 3.71 | 0.81 | 1.6 | MC    |
| E | Asian           | 15 | 15 | 4425  | 12.0 | 3.16 | 0.83 | 1.3 | MC    |
|   | Am. Indian      | 15 | 15 | 191   | 9.9  | 3.99 | 0.86 | 1.5 | MC    |
|   | Pacific Islande | 15 | 15 | 78    | 10.4 | 3.43 | 0.80 | 1.5 | MC    |
|   | Multi           | 15 | 15 | 2737  | 9.7  | 3.78 | 0.83 | 1.6 | MC    |

|     | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 2748 | 32.5 | 12.14 | 0.91 | 3.7 | MC*OE |
| . 1 | A      | All   | 31   | 28   | 2748 | 14.2 | 5.55  | 0.79 | 2.5 | MC*OE |
| ELI | В      | All   | -    | -    | -    | -    | -     | -    | -   | -     |
| -   | С      | All   | 11   | 8    | 2748 | 5.4  | 2.71  | 0.84 | 1.1 | MC*OE |
|     | D      | All   | 15   | 12   | 2748 | 6.4  | 3.10  | 0.72 | 1.6 | MC*OE |
|     | E      | All   | 15   | 15   | 2748 | 6.5  | 3.30  | 0.74 | 1.7 | MC    |

|   | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|-------|------|-----|-------|
|   | Tot.   | All   | 72   | 63   | 19617 | 34.2 | 13.83 | 0.93 | 3.7 | MC*OE |
|   | A      | All   | 31   | 28   | 19617 | 14.6 | 6.33  | 0.84 | 2.5 | MC*OE |
| Ξ | В      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
|   | С      | All   | 11   | 8    | 19617 | 5.6  | 2.77  | 0.83 | 1.1 | MC*OE |
|   | D      | All   | 15   | 12   | 19617 | 7.0  | 3.36  | 0.77 | 1.6 | MC*OE |
|   | E      | All   | 15   | 15   | 19617 | 7.1  | 3.61  | 0.79 | 1.7 | MC    |

|             | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-------------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>&gt;</b> | Tot.   | All   | 72   | 63   | 56875 | 42.0 | 14.01 | 0.93 | 3.6 | MC*OE |
| isad        | A      | All   | 31   | 28   | 56875 | 17.9 | 6.51  | 0.86 | 2.4 | MC*OE |
| Dis         | В      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
| .03         | С      | All   | 11   | 8    | 56875 | 6.4  | 2.60  | 0.82 | 1.1 | MC*OE |
| 豆           | D      | All   | 15   | 12   | 56875 | 8.8  | 3.28  | 0.77 | 1.6 | MC*OE |
|             | Е      | All   | 15   | 15   | 56875 | 8.8  | 3.77  | 0.82 | 1.6 | MC    |

|     | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|--------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 130189 | 44.9 | 15.41 | 0.94 | 3.7 | MC*OE |
| all | A      | All   | 22   | 19   | 130189 | 14.9 | 4.66  | 0.81 | 2.0 | MC*OE |
| /er | В      | All   | 12   | 12   | 130189 | 7.8  | 3.22  | 0.82 | 1.4 | MC    |
| Ó   | С      | All   | -    | -    | -      | -    | -     | -    | -   | -     |
|     | D      | All   | 24   | 21   | 130189 | 14.1 | 5.85  | 0.86 | 2.2 | MC*OE |
|     | E      | All   | 14   | 11   | 130189 | 8.1  | 3.08  | 0.73 | 1.6 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 72   | 63   | 66583 | 44.7 | 15.79 | 0.95 | 3.7 | MC*OE |
|        | 101.   | Female | 72   | 63   | 63523 | 45.3 | 14.98 | 0.94 | 3.7 | MC*OE |
|        | A      | Male   | 22   | 19   | 66583 | 14.6 | 4.80  | 0.82 | 2.0 | MC*OE |
|        | A      | Female | 22   | 19   | 63523 | 15.2 | 4.50  | 0.80 | 2.0 | MC*OE |
| er     | В      | Male   | 12   | 12   | 66583 | 7.7  | 3.25  | 0.82 | 1.4 | MC    |
| Gender | В      | Female | 12   | 12   | 63523 | 7.9  | 3.18  | 0.81 | 1.4 | MC    |
| Ğ      | C      | Male   | -    | -    | -     | -    | -     | -    | -   | -     |
|        |        | Female | -    | -    | -     | -    | -     | -    | -   | -     |
|        | D      | Male   | 24   | 21   | 66583 | 14.2 | 5.93  | 0.86 | 2.2 | MC*OE |
|        | D      | Female | 24   | 21   | 63523 | 14.0 | 5.76  | 0.85 | 2.2 | MC*OE |
|        | E      | Male   | 14   | 11   | 66583 | 8.1  | 3.15  | 0.74 | 1.6 | MC*OE |
|        | E      | Female | 14   | 11   | 63523 | 8.2  | 2.99  | 0.71 | 1.6 | MC*OE |

|           | Strand | Group            | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|------------------|------|------|-------|------|-------|------|-----|-------|
|           | ,      | White            | 72   | 63   | 91992 | 47.7 | 14.39 | 0.94 | 3.6 | MC*OE |
|           |        | Af. Amer.        | 72   | 63   | 18937 | 34.9 | 14.19 | 0.93 | 3.8 | MC*OE |
|           |        | Hispanic         | 72   | 63   | 11901 | 36.7 | 14.55 | 0.93 | 3.8 | MC*OE |
|           | Tot.   | Asian            | 72   | 63   | 4473  | 55.0 | 13.90 | 0.94 | 3.3 | MC*OE |
|           |        | Am. Indian       | 72   | 63   | 189   | 41.7 | 14.59 | 0.93 | 3.8 | MC*OE |
|           |        | Pacific Islande  | 72   | 63   | 96    | 46.4 | 14.79 | 0.94 | 3.7 | MC*OE |
|           |        | Multi            | 72   | 63   | 2495  | 41.3 | 15.68 | 0.94 | 3.7 | MC*OE |
|           |        | White            | 22   | 19   | 91992 | 15.6 | 4.34  | 0.79 | 2.0 | MC*OE |
|           |        | Af. Amer.        | 22   | 19   | 18937 | 12.3 | 4.78  | 0.80 | 2.2 | MC*OE |
|           |        | Hispanic         | 22   | 19   | 11901 | 12.8 | 4.73  | 0.79 | 2.2 | MC*OE |
|           | A      | Asian            | 22   | 19   | 4473  | 17.8 | 3.88  | 0.81 | 1.7 | MC*OE |
|           |        | Am. Indian       | 22   | 19   | 189   | 14.0 | 4.46  | 0.77 | 2.1 | MC*OE |
|           |        | Pacific Islande  | 22   | 19   | 96    | 15.5 | 4.66  | 0.82 | 2.0 | MC*OE |
|           |        | Multi            | 22   | 19   | 2495  | 13.8 | 4.81  | 0.81 | 2.1 | MC*OE |
|           |        | White            | 12   | 12   | 91992 | 8.3  | 3.04  | 0.81 | 1.3 | MC    |
|           |        | Af. Amer.        | 12   | 12   | 18937 | 5.9  | 3.01  | 0.75 | 1.5 | MC    |
|           |        | Hispanic         | 12   | 12   | 11901 | 6.3  | 3.15  | 0.78 | 1.5 | MC    |
|           | В      | Asian            | 12   | 12   | 4473  | 9.6  | 2.74  | 0.82 | 1.2 | MC    |
| _         |        | Am. Indian       | 12   | 12   | 189   | 7.3  | 3.19  | 0.80 | 1.4 | MC    |
| city      |        | Pacific Islande  | 12   | 12   | 96    | 8.0  | 2.98  | 0.79 | 1.4 | MC    |
| Ethnicity |        | Multi            | 12   | 12   | 2495  | 7.1  | 3.27  | 0.81 | 1.4 | MC    |
| Et        |        | White            | -    | -    | -     | -    | -     | -    |     | _     |
|           |        | Af. Amer.        | -    | -    | -     | -    | -     | -    | -   | _     |
|           |        | Hispanic         | -    | -    | -     | -    | -     | -    |     | _     |
|           | C      | Asian            | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        | Am. Indian       | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        | Pacific Islande_ | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        | Multi            | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        |                  |      |      |       |      |       |      |     |       |

|   | White           | 24 | 21 | 91992 | 15.1 | 5.57 | 0.84 | 2.2 | MC*OE |
|---|-----------------|----|----|-------|------|------|------|-----|-------|
|   | Af. Amer.       | 24 | 21 | 18937 | 10.5 | 5.18 | 0.82 | 2.2 | MC*OE |
|   | Hispanic        | 24 | 21 | 11901 | 11.1 | 5.37 | 0.83 | 2.2 | MC*OE |
| D | Asian           | 24 | 21 | 4473  | 17.8 | 5.49 | 0.86 | 2.0 | MC*OE |
|   | Am. Indian      | 24 | 21 | 189   | 13.0 | 5.46 | 0.83 | 2.3 | MC*OE |
|   | Pacific Islande | 24 | 21 | 96    | 14.6 | 5.79 | 0.85 | 2.3 | MC*OE |
|   | Multi           | 24 | 21 | 2495  | 12.9 | 5.88 | 0.86 | 2.2 | MC*OE |
|   | White           | 14 | 11 | 91992 | 8.7  | 2.88 | 0.69 | 1.6 | MC*OE |
|   | Af. Amer.       | 14 | 11 | 18937 | 6.2  | 2.89 | 0.71 | 1.5 | MC*OE |
|   | Hispanic        | 14 | 11 | 11901 | 6.6  | 2.98 | 0.73 | 1.6 | MC*OE |
| E | Asian           | 14 | 11 | 4473  | 9.8  | 2.98 | 0.71 | 1.6 | MC*OE |
|   | Am. Indian      | 14 | 11 | 189   | 7.5  | 2.96 | 0.72 | 1.6 | MC*OE |
|   | Pacific Islande | 14 | 11 | 96    | 8.3  | 2.89 | 0.71 | 1.6 | MC*OE |
|   | Multi           | 14 | 11 | 2495  | 7.5  | 3.13 | 0.74 | 1.6 | MC*OE |

|     | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 2867 | 27.5 | 12.07 | 0.90 | 3.8 | MC*OE |
| . 1 | A      | All   | 22   | 19   | 2867 | 10.2 | 4.65  | 0.78 | 2.2 | MC*OE |
| ELI | В      | All   | 12   | 12   | 2867 | 4.7  | 2.70  | 0.69 | 1.5 | MC    |
| ш   | С      | All   | -    | -    | -    | -    | -     | -    | -   | -     |
|     | D      | All   | 24   | 21   | 2867 | 7.9  | 4.23  | 0.74 | 2.1 | MC*OE |
|     | E      | All   | 14   | 11   | 2867 | 4.7  | 2.49  | 0.64 | 1.5 | MC*OE |

|     | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|-------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 19994 | 29.9 | 13.68 | 0.92 | 3.8 | MC*OE |
|     | A      | All   | 22   | 19   | 19994 | 10.5 | 4.76  | 0.79 | 2.2 | MC*OE |
| IEP | В      | All   | 12   | 12   | 19994 | 5.0  | 2.92  | 0.73 | 1.5 | MC    |
|     | С      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
|     | D      | All   | 24   | 21   | 19994 | 9.0  | 4.92  | 0.80 | 2.2 | MC*OE |
|     | E      | All   | 14   | 11   | 19994 | 5.5  | 2.80  | 0.70 | 1.5 | MC*OE |

|          | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|----------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>×</b> | Tot.   | All   | 72   | 63   | 57034 | 38.2 | 14.67 | 0.93 | 3.8 | MC*OE |
| isad     | A      | All   | 22   | 19   | 57034 | 13.1 | 4.71  | 0.79 | 2.1 | MC*OE |
| Dis      | В      | All   | 12   | 12   | 57034 | 6.5  | 3.17  | 0.79 | 1.5 | MC    |
| .03      | С      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
| 豆        | D      | All   | 24   | 21   | 57034 | 11.7 | 5.44  | 0.83 | 2.2 | MC*OE |
|          | Е      | All   | 14   | 11   | 57034 | 6.9  | 2.97  | 0.72 | 1.6 | MC*OE |

|     | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|--------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 131363 | 48.3 | 15.62 | 0.95 | 3.5 | MC*OE |
| all | A      | All   | 13   | 10   | 131363 | 8.5  | 3.07  | 0.77 | 1.5 | MC*OE |
| /er | В      | All   | -    | -    | -      | -    | -     | -    | -   | -     |
| Ó   | С      | All   | 14   | 11   | 131363 | 7.9  | 4.41  | 0.85 | 1.7 | MC*OE |
|     | D      | All   | 34   | 31   | 131363 | 24.0 | 7.78  | 0.91 | 2.3 | MC*OE |
|     | Е      | All   | 11   | 11   | 131363 | 7.9  | 2.41  | 0.73 | 1.3 | MC    |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 72   | 63   | 67170 | 47.3 | 16.08 | 0.95 | 3.6 | MC*OE |
|        | 101.   | Female | 72   | 63   | 64034 | 49.4 | 15.04 | 0.95 | 3.5 | MC*OE |
|        | A      | Male   | 13   | 10   | 67170 | 8.4  | 3.14  | 0.78 | 1.5 | MC*OE |
|        | A      | Female | 13   | 10   | 64034 | 8.6  | 3.00  | 0.77 | 1.5 | MC*OE |
| er     | В      | Male   | -    | -    | -     | -    | -     | -    | -   | -     |
| Gender | В      | Female | -    | -    | -     | -    | -     | -    | -   | -     |
| Ğ      | C      | Male   | 14   | 11   | 67170 | 7.7  | 4.34  | 0.85 | 1.7 | MC*OE |
|        |        | Female | 14   | 11   | 64034 | 8.2  | 4.46  | 0.86 | 1.7 | MC*OE |
|        | D      | Male   | 34   | 31   | 67170 | 23.3 | 8.09  | 0.92 | 2.3 | MC*OE |
|        | D      | Female | 34   | 31   | 64034 | 24.7 | 7.36  | 0.91 | 2.3 | MC*OE |
|        | Б      | Male   | 11   | 11   | 67170 | 8.0  | 2.48  | 0.75 | 1.2 | MC    |
|        | Е      | Female | 11   | 11   | 64034 | 7.9  | 2.33  | 0.71 | 1.3 | MC    |

|           | Strand | Group            | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|------------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White            | 72   | 63   | 93602 | 50.9 | 14.40 | 0.94 | 3.5 | MC*OE |
|           |        | Af. Amer.        | 72   | 63   | 19214 | 38.5 | 15.67 | 0.95 | 3.7 | MC*OE |
|           |        | Hispanic         | 72   | 63   | 11268 | 40.5 | 15.74 | 0.95 | 3.6 | MC*OE |
|           | Tot.   | Asian            | 72   | 63   | 4364  | 58.3 | 12.86 | 0.94 | 3.2 | MC*OE |
|           |        | Am. Indian       | 72   | 63   | 173   | 46.1 | 16.22 | 0.95 | 3.5 | MC*OE |
|           |        | Pacific Islande  | 72   | 63   | 118   | 52.4 | 14.76 | 0.94 | 3.5 | MC*OE |
|           |        | Multi            | 72   | 63   | 2450  | 45.1 | 15.64 | 0.95 | 3.6 | MC*OE |
|           |        | White            | 13   | 10   | 93602 | 8.9  | 2.90  | 0.75 | 1.4 | MC*OE |
|           |        | Af. Amer.        | 13   | 10   | 19214 | 6.9  | 3.09  | 0.78 | 1.4 | MC*OE |
|           |        | Hispanic         | 13   | 10   | 11268 | 7.1  | 3.14  | 0.79 | 1.5 | MC*OE |
|           | A      | Asian            | 13   | 10   | 4364  | 10.3 | 2.48  | 0.69 | 1.4 | MC*OE |
|           |        | Am. Indian       | 13   | 10   | 173   | 8.0  | 2.94  | 0.76 | 1.4 | MC*OE |
|           |        | Pacific Islande  | 13   | 10   | 118   | 9.3  | 3.07  | 0.78 | 1.4 | MC*OE |
|           |        | Multi            | 13   | 10   | 2450  | 7.9  | 3.16  | 0.78 | 1.5 | MC*OE |
|           |        | White            | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        | Af. Amer.        | -    | -    | -     | -    | -     | -    | -   | -     |
|           |        | Hispanic         | -    | -    | -     | -    | -     | -    | -   | -     |
|           | В      | Asian            | -    | -    | -     | -    | -     | -    | -   | -     |
| _         |        | Am. Indian       | -    | -    | -     | -    | -     | -    | -   | -     |
| city      |        | Pacific Islande_ | -    | -    | -     | -    | -     | -    | -   | -     |
| Ethnicity |        | Multi            | -    | -    | -     | -    | -     | -    |     | -     |
| Εŧ        |        | White            | 14   | 11   | 93602 | 8.6  | 4.23  | 0.84 | 1.7 | MC*OE |
|           |        | Af. Amer.        | 14   | 11   | 19214 | 5.6  | 4.21  | 0.86 | 1.6 | MC*OE |
|           |        | Hispanic         | 14   | 11   | 11268 | 6.0  | 4.21  | 0.85 | 1.6 | MC*OE |
|           | C      | Asian            | 14   | 11   | 4364  | 10.5 | 3.99  | 0.84 | 1.6 | MC*OE |
|           |        | Am. Indian       | 14   | 11   | 173   | 7.9  | 4.75  | 0.89 | 1.6 | MC*OE |
|           |        | Pacific Islande  | 14   | 11   | 118   | 9.0  | 4.34  | 0.84 | 1.8 | MC*OE |
|           |        | Multi            | 14   | 11   | 2450  | 7.1  | 4.42  | 0.86 | 1.7 | MC*OE |
|           |        |                  |      |      |       |      |       |      |     |       |

|   | White           | 34 | 31 | 93602 | 25.1 | 7.21 | 0.90 | 2.2 | MC*OE |
|---|-----------------|----|----|-------|------|------|------|-----|-------|
|   | Af. Amer.       | 34 | 31 | 19214 | 19.6 | 8.17 | 0.91 | 2.4 | MC*OE |
|   | Hispanic        | 34 | 31 | 11268 | 20.6 | 8.16 | 0.91 | 2.4 | MC*OE |
| D | Asian           | 34 | 31 | 4364  | 28.5 | 6.00 | 0.89 | 2.0 | MC*OE |
|   | Am. Indian      | 34 | 31 | 173   | 22.7 | 8.09 | 0.92 | 2.3 | MC*OE |
|   | Pacific Islande | 34 | 31 | 118   | 26.1 | 6.88 | 0.90 | 2.2 | MC*OE |
|   | Multi           | 34 | 31 | 2450  | 22.7 | 7.83 | 0.91 | 2.4 | MC*OE |
|   | White           | 11 | 11 | 93602 | 8.3  | 2.17 | 0.69 | 1.2 | MC    |
|   | Af. Amer.       | 11 | 11 | 19214 | 6.3  | 2.53 | 0.68 | 1.4 | MC    |
|   | Hispanic        | 11 | 11 | 11268 | 6.7  | 2.55 | 0.70 | 1.4 | MC    |
| E | Asian           | 11 | 11 | 4364  | 8.9  | 2.07 | 0.71 | 1.1 | MC    |
|   | Am. Indian      | 11 | 11 | 173   | 7.6  | 2.44 | 0.71 | 1.3 | MC    |
|   | Pacific Islande | 11 | 11 | 118   | 8.1  | 2.17 | 0.67 | 1.2 | MC    |
|   | Multi           | 11 | 11 | 2450  | 7.4  | 2.45 | 0.71 | 1.3 | MC    |

|     | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 2726 | 31.5 | 14.35 | 0.93 | 3.7 | MC*OE |
| . 1 | A      | All   | 13   | 10   | 2726 | 5.8  | 3.02  | 0.78 | 1.4 | MC*OE |
| ELI | В      | All   | -    | -    | -    | -    | -     | -    | -   | -     |
| 111 | С      | All   | 14   | 11   | 2726 | 4.6  | 3.78  | 0.84 | 1.5 | MC*OE |
|     | D      | All   | 34   | 31   | 2726 | 16.0 | 7.61  | 0.89 | 2.5 | MC*OE |
|     | E      | All   | 11   | 11   | 2726 | 5.2  | 2.43  | 0.63 | 1.5 | MC    |

|     | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|-------|------|-------|------|-----|-------|
|     | Tot.   | All   | 72   | 63   | 20169 | 32.5 | 14.93 | 0.94 | 3.7 | MC*OE |
|     | A      | All   | 13   | 10   | 20169 | 5.8  | 3.09  | 0.79 | 1.4 | MC*OE |
| IEP | В      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
|     | С      | All   | 14   | 11   | 20169 | 4.8  | 3.80  | 0.84 | 1.5 | MC*OE |
|     | D      | All   | 34   | 31   | 20169 | 16.1 | 7.77  | 0.90 | 2.5 | MC*OE |
|     | E      | All   | 11   | 11   | 20169 | 5.8  | 2.62  | 0.69 | 1.5 | MC    |

|             | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-------------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>&gt;</b> | Tot.   | All   | 72   | 63   | 55700 | 41.6 | 15.69 | 0.95 | 3.6 | MC*OE |
| sad         | A      | All   | 13   | 10   | 55700 | 7.4  | 3.12  | 0.78 | 1.5 | MC*OE |
| Dis         | В      | All   | -    | -    | -     | -    | -     | -    | -   | -     |
| .03         | С      | All   | 14   | 11   | 55700 | 6.4  | 4.25  | 0.85 | 1.6 | MC*OE |
| 豆           | D      | All   | 34   | 31   | 55700 | 20.9 | 8.09  | 0.91 | 2.4 | MC*OE |
|             | Е      | All   | 11   | 11   | 55700 | 6.9  | 2.52  | 0.70 | 1.4 | MC    |

| _      | Strand | Group | Pts. | Len. | N      | Mean | SD   | r    | SEM | Items |
|--------|--------|-------|------|------|--------|------|------|------|-----|-------|
| [E]    | Tot.   | All   | 46   | 42   | 124659 | 30.6 | 9.73 | 0.92 | 2.7 | MC*OE |
| )ve    | A      | All   | 31   | 31   | 124659 | 20.8 | 6.98 | 0.90 | 2.3 | MC    |
| $\cup$ | В      | All   | 15   | 11   | 124659 | 9.7  | 3.15 | 0.78 | 1.5 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|------|------|-----|-------|
|        | Tot.   | Male   | 46   | 42   | 63833 | 29.5 | 9.93 | 0.92 | 2.7 | MC*OE |
| er     | 101.   | Female | 46   | 42   | 60743 | 31.7 | 9.38 | 0.92 | 2.7 | MC*OE |
| Gender | Λ.     | Male   | 31   | 31   | 63833 | 20.2 | 7.11 | 0.90 | 2.3 | MC    |
| Ğ      | A<br>B | Female | 31   | 31   | 60743 | 21.5 | 6.78 | 0.89 | 2.2 | MC    |
|        |        | Male   | 15   | 11   | 63833 | 9.2  | 3.20 | 0.79 | 1.5 | MC*OE |
|        |        | Female | 15   | 11   | 60743 | 10.2 | 3.00 | 0.77 | 1.4 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD   | r    | <b>SEM</b> | Items |
|-----------|--------|-----------------|------|------|-------|------|------|------|------------|-------|
|           |        | White           | 46   | 42   | 84689 | 32.6 | 8.86 | 0.91 | 2.6        | MC*OE |
|           |        | Af. Amer.       | 46   | 42   | 18346 | 24.3 | 9.55 | 0.91 | 2.9        | MC*OE |
|           |        | Hispanic        | 46   | 42   | 12407 | 25.4 | 9.86 | 0.91 | 2.9        | MC*OE |
|           | Tot.   | Asian           | 46   | 42   | 4488  | 33.6 | 8.89 | 0.92 | 2.6        | MC*OE |
|           |        | Am. Indian      | 46   | 42   | 207   | 28.9 | 9.71 | 0.92 | 2.8        | MC*OE |
|           |        | Pacific Islande | 46   | 42   | 77    | 32.1 | 8.68 | 0.91 | 2.7        | MC*OE |
|           |        | Multi           | 46   | 42   | 4338  | 28.8 | 9.98 | 0.92 | 2.8        | MC*OE |
|           |        | White           | 31   | 31   | 84689 | 22.3 | 6.41 | 0.88 | 2.2        | MC    |
| Ş         |        | Af. Amer.       | 31   | 31   | 18346 | 16.4 | 6.70 | 0.86 | 2.5        | MC    |
| ici       |        | Hispanic        | 31   | 31   | 12407 | 17.1 | 6.94 | 0.88 | 2.4        | MC    |
| Ethnicity | A      | Asian           | 31   | 31   | 4488  | 22.8 | 6.45 | 0.89 | 2.1        | MC    |
| $\Xi$     |        | Am. Indian      | 31   | 31   | 207   | 19.7 | 6.99 | 0.89 | 2.3        | MC    |
|           |        | Pacific Islande | 31   | 31   | 77    | 22.0 | 6.44 | 0.88 | 2.2        | MC    |
|           |        | Multi           | 31   | 31   | 4338  | 19.6 | 7.10 | 0.89 | 2.3        | MC    |
|           |        | White           | 15   | 11   | 84689 | 10.3 | 2.85 | 0.75 | 1.4        | MC*OE |
|           |        | Af. Amer.       | 15   | 11   | 18346 | 8.0  | 3.31 | 0.77 | 1.6        | MC*OE |
|           |        | Hispanic        | 15   | 11   | 12407 | 8.3  | 3.36 | 0.78 | 1.6        | MC*OE |
|           | В      | Asian           | 15   | 11   | 4488  | 10.8 | 2.84 | 0.76 | 1.4        | MC*OE |
|           |        | Am. Indian      | 15   | 11   | 207   | 9.2  | 3.09 | 0.78 | 1.4        | MC*OE |
|           |        | Pacific Islande | 15   | 11   | 77    | 10.1 | 2.65 | 0.69 | 1.5        | MC*OE |
|           |        | Multi           | 15   | 11   | 4338  | 9.2  | 3.29 | 0.79 | 1.5        | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|------|------|------|------|-----|-------|
| Ţ | Tot.   | All   | 46   | 42   | 4135 | 20.2 | 8.26 | 0.86 | 3.0 | MC*OE |
| 豆 | A      | All   | 31   | 31   | 4135 | 13.4 | 5.62 | 0.80 | 2.5 | MC    |
|   | В      | All   | 15   | 11   | 4135 | 6.8  | 3.18 | 0.73 | 1.6 | MC*OE |

|          | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|----------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>⊕</b> | Tot.   | All   | 46   | 42   | 19122 | 22.4 | 10.15 | 0.92 | 2.9 | MC*OE |
| Ħ        | A      | All   | 31   | 31   | 19122 | 15.3 | 7.10  | 0.88 | 2.5 | MC    |
|          | В      | All   | 15   | 11   | 19122 | 7.1  | 3.47  | 0.79 | 1.6 | MC*OE |

| š   | Strand | Group | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|-----|--------|-------|------|------|-------|------|------|------|-----|-------|
| Ö   | Tot.   | All   | 46   | 42   | 59416 | 26.6 | 9.82 | 0.91 | 2.9 | MC*OE |
| 60. | A      | All   | 31   | 31   | 59416 | 18.0 | 6.97 | 0.88 | 2.4 | MC    |
| 田   | В      | All   | 15   | 11   | 59416 | 8.6  | 3.29 | 0.78 | 1.5 | MC*OE |

|      | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|------|--------|-------|------|------|--------|------|-------|------|-----|-------|
| eral | Tot.   | All   | 52   | 44   | 126887 | 35.1 | 10.23 | 0.91 | 3.0 | MC*OE |
| )ve  | A      | All   | 37   | 33   | 126887 | 24.5 | 7.63  | 0.89 | 2.6 | MC*OE |
|      | В      | All   | 15   | 11   | 126887 | 10.6 | 3.05  | 0.72 | 1.6 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 52   | 44   | 64717 | 33.8 | 10.55 | 0.92 | 3.0 | MC*OE |
| er     | 101.   | Female | 52   | 44   | 62095 | 36.4 | 9.71  | 0.91 | 3.0 | MC*OE |
| Gender | Λ.     | Male   | 37   | 33   | 64717 | 23.7 | 7.84  | 0.89 | 2.6 | MC*OE |
| Ğ      | A<br>B | Female | 37   | 33   | 62095 | 25.4 | 7.29  | 0.88 | 2.5 | MC*OE |
|        |        | Male   | 15   | 11   | 64717 | 10.2 | 3.15  | 0.73 | 1.6 | MC*OE |
|        |        | Female | 15   | 11   | 62095 | 11.0 | 2.87  | 0.70 | 1.6 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 52   | 44   | 87299 | 37.0 | 9.22  | 0.90 | 2.9 | MC*OE |
|           |        | Af. Amer.       | 52   | 44   | 18385 | 28.7 | 10.67 | 0.91 | 3.2 | MC*OE |
|           |        | Hispanic        | 52   | 44   | 12320 | 30.0 | 10.71 | 0.91 | 3.2 | MC*OE |
|           | Tot.   | Asian           | 52   | 44   | 4673  | 39.6 | 9.09  | 0.91 | 2.8 | MC*OE |
|           |        | Am. Indian      | 52   | 44   | 177   | 33.3 | 11.04 | 0.92 | 3.1 | MC*OE |
|           |        | Pacific Islande | 52   | 44   | 83    | 39.2 | 8.55  | 0.89 | 2.8 | MC*OE |
|           |        | Multi           | 52   | 44   | 3857  | 33.4 | 10.64 | 0.92 | 3.1 | MC*OE |
|           |        | White           | 37   | 33   | 87299 | 25.9 | 6.94  | 0.87 | 2.5 | MC*OE |
| t,        |        | Af. Amer.       | 37   | 33   | 18385 | 19.7 | 7.78  | 0.88 | 2.7 | MC*OE |
| ici       | A      | Hispanic        | 37   | 33   | 12320 | 20.7 | 7.88  | 0.88 | 2.7 | MC*OE |
| Ethnicity |        | Asian           | 37   | 33   | 4673  | 27.7 | 6.81  | 0.88 | 2.4 | MC*OE |
| 至         |        | Am. Indian      | 37   | 33   | 177   | 23.0 | 8.26  | 0.90 | 2.6 | MC*OE |
|           |        | Pacific Islande | 37   | 33   | 83    | 27.3 | 6.60  | 0.87 | 2.4 | MC*OE |
|           |        | Multi           | 37   | 33   | 3857  | 23.2 | 7.89  | 0.89 | 2.6 | MC*OE |
|           |        | White           | 15   | 11   | 87299 | 11.1 | 2.75  | 0.68 | 1.6 | MC*OE |
|           |        | Af. Amer.       | 15   | 11   | 18385 | 8.9  | 3.36  | 0.73 | 1.7 | MC*OE |
|           |        | Hispanic        | 15   | 11   | 12320 | 9.3  | 3.31  | 0.74 | 1.7 | MC*OE |
|           | В      | Asian           | 15   | 11   | 4673  | 11.9 | 2.70  | 0.71 | 1.5 | MC*OE |
|           |        | Am. Indian      | 15   | 11   | 177   | 10.3 | 3.18  | 0.73 | 1.7 | MC*OE |
|           |        | Pacific Islande | 15   | 11   | 83    | 11.8 | 2.45  | 0.66 | 1.4 | MC*OE |
|           |        | Multi           | 15   | 11   | 3857  | 10.2 | 3.19  | 0.74 | 1.6 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|------|------|------|------|-----|-------|
| Ţ | Tot.   | All   | 52   | 44   | 3148 | 22.3 | 9.24 | 0.87 | 3.3 | MC*OE |
| 豆 | A      | All   | 37   | 33   | 3148 | 15.1 | 6.58 | 0.82 | 2.8 | MC*OE |
|   | В      | All   | 15   | 11   | 3148 | 7.1  | 3.21 | 0.69 | 1.8 | MC*OE |

|          | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|----------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| 4        | Tot.   | All   | 52   | 44   | 20328 | 25.7 | 11.15 | 0.92 | 3.2 | MC*OE |
| $\equiv$ | A      | All   | 37   | 33   | 20328 | 17.7 | 8.11  | 0.89 | 2.7 | MC*OE |
|          | В      | All   | 15   | 11   | 20328 | 8.0  | 3.50  | 0.75 | 1.7 | MC*OE |

| š | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|-------|------|-----|-------|
| Ö | Tot.   | All   | 52   | 44   | 59229 | 30.9 | 10.51 | 0.91 | 3.2 | MC*OE |
| 0 | A      | All   | 37   | 33   | 59229 | 21.4 | 7.76  | 0.88 | 2.7 | MC*OE |
| 田 | В      | All   | 15   | 11   | 59229 | 9.5  | 3.23  | 0.73 | 1.7 | MC*OE |

| _    | Strand | Group | Pts. | Len. | N      | Mean | SD   | r    | SEM | Items |
|------|--------|-------|------|------|--------|------|------|------|-----|-------|
| eral | Tot.   | All   | 52   | 44   | 126639 | 35.0 | 9.59 | 0.91 | 2.9 | MC*OE |
| )ve  | A      | All   | 30   | 28   | 126639 | 20.8 | 5.67 | 0.85 | 2.2 | MC*OE |
| _    | В      | All   | 22   | 16   | 126639 | 14.2 | 4.34 | 0.81 | 1.9 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|------|------|-----|-------|
|        | Tot.   | Male   | 52   | 44   | 64446 | 33.9 | 9.91 | 0.91 | 2.9 | MC*OE |
| er     | 101.   | Female | 52   | 44   | 62113 | 36.1 | 9.10 | 0.90 | 2.9 | MC*OE |
| Gender | Λ.     | Male   | 30   | 28   | 64446 | 20.3 | 5.88 | 0.86 | 2.2 | MC*OE |
| Ğ      | A      | Female | 30   | 28   | 62113 | 21.3 | 5.39 | 0.84 | 2.2 | MC*OE |
|        | В      | Male   | 22   | 16   | 64446 | 13.6 | 4.45 | 0.82 | 1.9 | MC*OE |
|        |        | Female | 22   | 16   | 62113 | 14.8 | 4.15 | 0.80 | 1.9 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 52   | 44   | 88079 | 36.9 | 8.55  | 0.89 | 2.8 | MC*OE |
|           |        | Af. Amer.       | 52   | 44   | 18543 | 28.4 | 9.92  | 0.90 | 3.1 | MC*OE |
|           |        | Hispanic        | 52   | 44   | 11784 | 29.9 | 10.01 | 0.90 | 3.1 | MC*OE |
|           | Tot.   | Asian           | 52   | 44   | 4574  | 38.6 | 8.75  | 0.90 | 2.7 | MC*OE |
|           |        | Am. Indian      | 52   | 44   | 176   | 34.7 | 9.71  | 0.91 | 3.0 | MC*OE |
|           |        | Pacific Islande | 52   | 44   | 82    | 37.5 | 7.62  | 0.87 | 2.8 | MC*OE |
|           |        | Multi           | 52   | 44   | 3303  | 33.6 | 9.49  | 0.90 | 3.0 | MC*OE |
|           |        | White           | 30   | 28   | 88079 | 21.9 | 5.08  | 0.83 | 2.1 | MC*OE |
| t,        |        | Af. Amer.       | 30   | 28   | 18543 | 16.9 | 5.80  | 0.83 | 2.4 | MC*OE |
| ici       |        | Hispanic        | 30   | 28   | 11784 | 17.8 | 5.88  | 0.84 | 2.4 | MC*OE |
| Ethnicity | A      | Asian           | 30   | 28   | 4574  | 22.9 | 5.17  | 0.85 | 2.0 | MC*OE |
| 至         |        | Am. Indian      | 30   | 28   | 176   | 20.6 | 5.67  | 0.85 | 2.2 | MC*OE |
|           |        | Pacific Islande | 30   | 28   | 82    | 22.4 | 4.76  | 0.81 | 2.1 | MC*OE |
|           |        | Multi           | 30   | 28   | 3303  | 20.0 | 5.60  | 0.84 | 2.3 | MC*OE |
|           |        | White           | 22   | 16   | 88079 | 15.0 | 3.92  | 0.78 | 1.8 | MC*OE |
|           |        | Af. Amer.       | 22   | 16   | 18543 | 11.4 | 4.59  | 0.80 | 2.0 | MC*OE |
|           |        | Hispanic        | 22   | 16   | 11784 | 12.1 | 4.57  | 0.81 | 2.0 | MC*OE |
|           | В      | Asian           | 22   | 16   | 4574  | 15.7 | 3.98  | 0.80 | 1.8 | MC*OE |
|           |        | Am. Indian      | 22   | 16   | 176   | 14.1 | 4.49  | 0.81 | 1.9 | MC*OE |
|           |        | Pacific Islande | 22   | 16   | 82    | 15.1 | 3.27  | 0.69 | 1.8 | MC*OE |
|           |        | Multi           | 22   | 16   | 3303  | 13.6 | 4.34  | 0.80 | 2.0 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|------|------|------|------|-----|-------|
| Ţ | Tot.   | All   | 52   | 44   | 2780 | 21.5 | 8.24 | 0.84 | 3.3 | MC*OE |
| 至 | A      | All   | 30   | 28   | 2780 | 13.1 | 5.01 | 0.75 | 2.5 | MC*OE |
|   | В      | All   | 22   | 16   | 2780 | 8.4  | 3.79 | 0.70 | 2.1 | MC*OE |

|          | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|----------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <u> </u> | Tot.   | All   | 52   | 44   | 20150 | 25.7 | 10.33 | 0.91 | 3.2 | MC*OE |
| $\Xi$    | A      | All   | 30   | 28   | 20150 | 15.6 | 6.13  | 0.84 | 2.4 | MC*OE |
|          | В      | All   | 22   | 16   | 20150 | 10.1 | 4.65  | 0.81 | 2.0 | MC*OE |

| Š | Strand | Group | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|------|------|-----|-------|
| Ö | Tot.   | All   | 52   | 44   | 57682 | 30.8 | 9.87 | 0.90 | 3.1 | MC*OE |
| 0 | A      | All   | 30   | 28   | 57682 | 18.4 | 5.81 | 0.84 | 2.3 | MC*OE |
| 国 | В      | All   | 22   | 16   | 57682 | 12.4 | 4.51 | 0.80 | 2.0 | MC*OE |

|        | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|--------|--------|-------|------|------|--------|------|-------|------|-----|-------|
| [E]    | Tot.   | All   | 52   | 44   | 126044 | 34.1 | 10.15 | 0.92 | 2.9 | MC*OE |
| )ve    | A      | All   | 30   | 26   | 126044 | 20.1 | 6.05  | 0.87 | 2.2 | MC*OE |
| $\cup$ | В      | All   | 22   | 18   | 126044 | 14.0 | 4.49  | 0.82 | 1.9 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot    | Male   | 52   | 44   | 64614 | 32.8 | 10.38 | 0.92 | 2.9 | MC*OE |
| er     | Tot.   | Female | 52   | 44   | 61325 | 35.4 | 9.73  | 0.91 | 2.9 | MC*OE |
| Gender | Α.     | Male   | 30   | 26   | 64614 | 19.5 | 6.18  | 0.87 | 2.2 | MC*OE |
| Ğ      | A      | Female | 30   | 26   | 61325 | 20.8 | 5.82  | 0.86 | 2.2 | MC*OE |
|        | В      | Male   | 22   | 18   | 64614 | 13.4 | 4.58  | 0.82 | 1.9 | MC*OE |
|        | Б      | Female | 22   | 18   | 61325 | 14.6 | 4.30  | 0.81 | 1.9 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 52   | 44   | 88076 | 36.0 | 9.23  | 0.91 | 2.8 | MC*OE |
|           |        | Af. Amer.       | 52   | 44   | 18697 | 27.7 | 10.26 | 0.91 | 3.1 | MC*OE |
|           |        | Hispanic        | 52   | 44   | 11666 | 28.6 | 10.48 | 0.91 | 3.1 | MC*OE |
|           | Tot.   | Asian           | 52   | 44   | 4424  | 38.1 | 9.49  | 0.92 | 2.7 | MC*OE |
|           |        | Am. Indian      | 52   | 44   | 191   | 34.2 | 10.11 | 0.92 | 2.9 | MC*OE |
|           |        | Pacific Islande | 52   | 44   | 78    | 37.2 | 8.79  | 0.90 | 2.8 | MC*OE |
|           |        | Multi           | 52   | 44   | 2734  | 32.6 | 10.39 | 0.92 | 3.0 | MC*OE |
|           |        | White           | 30   | 26   | 88076 | 21.2 | 5.52  | 0.85 | 2.1 | MC*OE |
| t,        |        | Af. Amer.       | 30   | 26   | 18697 | 16.5 | 6.20  | 0.85 | 2.4 | MC*OE |
| ici       |        | Hispanic        | 30   | 26   | 11666 | 17.0 | 6.32  | 0.86 | 2.3 | MC*OE |
| Ethnicity | A      | Asian           | 30   | 26   | 4424  | 22.4 | 5.60  | 0.87 | 2.0 | MC*OE |
| 至         |        | Am. Indian      | 30   | 26   | 191   | 20.0 | 6.09  | 0.87 | 2.2 | MC*OE |
|           |        | Pacific Islande | 30   | 26   | 78    | 22.2 | 5.42  | 0.86 | 2.0 | MC*OE |
|           |        | Multi           | 30   | 26   | 2734  | 19.3 | 6.20  | 0.87 | 2.2 | MC*OE |
|           |        | White           | 22   | 18   | 88076 | 14.8 | 4.12  | 0.79 | 1.9 | MC*OE |
|           |        | Af. Amer.       | 22   | 18   | 18697 | 11.2 | 4.49  | 0.79 | 2.0 | MC*OE |
|           |        | Hispanic        | 22   | 18   | 11666 | 11.6 | 4.57  | 0.80 | 2.0 | MC*OE |
|           | В      | Asian           | 22   | 18   | 4424  | 15.6 | 4.26  | 0.81 | 1.8 | MC*OE |
|           |        | Am. Indian      | 22   | 18   | 191   | 14.1 | 4.41  | 0.81 | 1.9 | MC*OE |
|           |        | Pacific Islande | 22   | 18   | 78    | 15.1 | 3.83  | 0.76 | 1.9 | MC*OE |
|           |        | Multi           | 22   | 18   | 2734  | 13.3 | 4.58  | 0.82 | 2.0 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|------|------|------|------|-----|-------|
| Ţ | Tot.   | All   | 52   | 44   | 2736 | 19.6 | 7.92 | 0.84 | 3.2 | MC*OE |
| 豆 | A      | All   | 30   | 26   | 2736 | 11.7 | 4.98 | 0.76 | 2.5 | MC*OE |
|   | В      | All   | 22   | 18   | 2736 | 7.9  | 3.52 | 0.66 | 2.0 | MC*OE |

|          | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|----------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| <b>⊕</b> | Tot.   | All   | 52   | 44   | 19581 | 23.7 | 10.06 | 0.90 | 3.1 | MC*OE |
| $\Xi$    | A      | All   | 30   | 26   | 19581 | 14.1 | 6.12  | 0.85 | 2.4 | MC*OE |
|          | В      | All   | 22   | 18   | 19581 | 9.7  | 4.40  | 0.79 | 2.0 | MC*OE |

| š | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|-------|------|-----|-------|
| Ö | Tot.   | All   | 52   | 44   | 56825 | 29.8 | 10.26 | 0.91 | 3.1 | MC*OE |
| 0 | A      | All   | 30   | 26   | 56825 | 17.7 | 6.18  | 0.86 | 2.3 | MC*OE |
| 田 | В      | All   | 22   | 18   | 56825 | 12.1 | 4.51  | 0.80 | 2.0 | MC*OE |

|     | Strand | Group | Pts. | Len. | N      | Mean | SD   | r    | SEM | Items |
|-----|--------|-------|------|------|--------|------|------|------|-----|-------|
| ra  | Tot.   | All   | 52   | 44   | 130053 | 34.7 | 9.83 | 0.91 | 3.0 | MC*OE |
| )ve | A      | All   | 30   | 26   | 130053 | 20.8 | 5.83 | 0.85 | 2.2 | MC*OE |
|     | В      | All   | 22   | 18   | 130053 | 13.9 | 4.42 | 0.79 | 2.0 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 52   | 44   | 66500 | 33.1 | 10.05 | 0.91 | 3.0 | MC*OE |
| er     | 101.   | Female | 52   | 44   | 63469 | 36.4 | 9.29  | 0.90 | 3.0 | MC*OE |
| Gender | Λ.     | Male   | 30   | 26   | 66500 | 19.8 | 5.99  | 0.86 | 2.3 | MC*OE |
| Ğ      | В      | Female | 30   | 26   | 63469 | 21.8 | 5.48  | 0.84 | 2.2 | MC*OE |
|        |        | Male   | 22   | 18   | 66500 | 13.2 | 4.48  | 0.79 | 2.0 | MC*OE |
|        |        | Female | 22   | 18   | 63469 | 14.6 | 4.23  | 0.77 | 2.0 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 52   | 44   | 91921 | 36.4 | 9.08  | 0.89 | 3.0 | MC*OE |
|           |        | Af. Amer.       | 52   | 44   | 18905 | 29.1 | 9.87  | 0.90 | 3.2 | MC*OE |
|           |        | Hispanic        | 52   | 44   | 11877 | 29.5 | 10.06 | 0.90 | 3.2 | MC*OE |
|           | Tot.   | Asian           | 52   | 44   | 4472  | 38.8 | 9.25  | 0.91 | 2.8 | MC*OE |
|           |        | Am. Indian      | 52   | 44   | 189   | 32.9 | 9.80  | 0.90 | 3.1 | MC*OE |
|           |        | Pacific Islande | 52   | 44   | 96    | 36.3 | 9.40  | 0.90 | 2.9 | MC*OE |
|           |        | Multi           | 52   | 44   | 2486  | 33.1 | 10.05 | 0.91 | 3.1 | MC*OE |
|           |        | White           | 30   | 26   | 91921 | 21.8 | 5.37  | 0.84 | 2.2 | MC*OE |
| t,        |        | Af. Amer.       | 30   | 26   | 18905 | 17.6 | 5.96  | 0.84 | 2.4 | MC*OE |
| ici       |        | Hispanic        | 30   | 26   | 11877 | 17.7 | 6.07  | 0.85 | 2.4 | MC*OE |
| Ethnicity | A      | Asian           | 30   | 26   | 4472  | 23.1 | 5.50  | 0.86 | 2.0 | MC*OE |
| 至         |        | Am. Indian      | 30   | 26   | 189   | 19.7 | 5.86  | 0.85 | 2.3 | MC*OE |
|           |        | Pacific Islande | 30   | 26   | 96    | 21.9 | 5.50  | 0.85 | 2.1 | MC*OE |
|           |        | Multi           | 30   | 26   | 2486  | 19.8 | 5.99  | 0.85 | 2.3 | MC*OE |
|           |        | White           | 22   | 18   | 91921 | 14.6 | 4.15  | 0.76 | 2.0 | MC*OE |
|           |        | Af. Amer.       | 22   | 18   | 18905 | 11.5 | 4.38  | 0.77 | 2.1 | MC*OE |
|           |        | Hispanic        | 22   | 18   | 11877 | 11.8 | 4.44  | 0.78 | 2.1 | MC*OE |
|           | В      | Asian           | 22   | 18   | 4472  | 15.7 | 4.14  | 0.78 | 2.0 | MC*OE |
|           |        | Am. Indian      | 22   | 18   | 189   | 13.2 | 4.53  | 0.79 | 2.1 | MC*OE |
|           |        | Pacific Islande | 22   | 18   | 96    | 14.4 | 4.34  | 0.79 | 2.0 | MC*OE |
|           |        | Multi           | 22   | 18   | 2486  | 13.2 | 4.48  | 0.79 | 2.1 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|------|------|------|------|-----|-------|
| Ţ | Tot.   | All   | 52   | 44   | 2850 | 20.8 | 7.63 | 0.82 | 3.2 | MC*OE |
| 豆 | A      | All   | 30   | 26   | 2850 | 12.5 | 4.87 | 0.74 | 2.5 | MC*OE |
|   | В      | All   | 22   | 18   | 2850 | 8.3  | 3.37 | 0.62 | 2.1 | MC*OE |

|                | Strand | Group | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|----------------|--------|-------|------|------|-------|------|------|------|-----|-------|
| <b>⊕</b>       | Tot.   | All   | 52   | 44   | 19954 | 24.2 | 9.47 | 0.89 | 3.2 | MC*OE |
| $\blacksquare$ | A      | All   | 30   | 26   | 19954 | 14.6 | 5.83 | 0.83 | 2.4 | MC*OE |
|                | В      | All   | 22   | 18   | 19954 | 9.6  | 4.14 | 0.75 | 2.1 | MC*OE |

| ·  | Strand | Group | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|----|--------|-------|------|------|-------|------|------|------|-----|-------|
| Ö  | Tot.   | All   | 52   | 44   | 56942 | 30.5 | 9.88 | 0.90 | 3.1 | MC*OE |
| 00 | A      | All   | 30   | 26   | 56942 | 18.4 | 5.95 | 0.84 | 2.4 | MC*OE |
| 田  | В      | All   | 22   | 18   | 56942 | 12.1 | 4.38 | 0.77 | 2.1 | MC*OE |

|        |        | -     |      |      |        |      |      |      |     |       |
|--------|--------|-------|------|------|--------|------|------|------|-----|-------|
|        | Strand | Group | Pts. | Len. | N      | Mean | SD   | r    | SEM | Items |
| eral   | Tot.   | All   | 52   | 44   | 131218 | 34.6 | 9.65 | 0.90 | 3.0 | MC*OE |
| )ve    | A      | All   | 27   | 21   | 131218 | 18.0 | 5.12 | 0.83 | 2.1 | MC*OE |
| $\cup$ | В      | A11   | 25   | 23   | 131218 | 16.6 | 4.96 | 0.82 | 2.1 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|------|------|-----|-------|
|        | Tot.   | Male   | 52   | 44   | 67101 | 32.8 | 9.93 | 0.91 | 3.0 | MC*OE |
| Gender | 101.   | Female | 52   | 44   | 63958 | 36.5 | 8.95 | 0.90 | 2.9 | MC*OE |
| pu     | Λ.     | Male   | 27   | 21   | 67101 | 17.0 | 5.28 | 0.84 | 2.1 | MC*OE |
| Ğ      | A      | Female | 27   | 21   | 63958 | 19.0 | 4.73 | 0.81 | 2.1 | MC*OE |
|        | В      | Male   | 25   | 23   | 67101 | 15.7 | 5.09 | 0.83 | 2.1 | MC*OE |
|        |        | Female | 25   | 23   | 63958 | 17.5 | 4.66 | 0.81 | 2.0 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 52   | 44   | 93562 | 36.2 | 8.88  | 0.89 | 2.9 | MC*OE |
|           |        | Af. Amer.       | 52   | 44   | 19150 | 28.9 | 9.91  | 0.90 | 3.2 | MC*OE |
|           |        | Hispanic        | 52   | 44   | 11242 | 29.5 | 10.06 | 0.90 | 3.2 | MC*OE |
|           | Tot.   | Asian           | 52   | 44   | 4359  | 38.7 | 8.57  | 0.90 | 2.8 | MC*OE |
|           |        | Am. Indian      | 52   | 44   | 172   | 33.3 | 9.85  | 0.90 | 3.1 | MC*OE |
|           |        | Pacific Islande | 52   | 44   | 118   | 35.9 | 9.42  | 0.91 | 2.9 | MC*OE |
|           |        | Multi           | 52   | 44   | 2441  | 33.2 | 9.80  | 0.90 | 3.0 | MC*OE |
|           |        | White           | 27   | 21   | 93562 | 18.8 | 4.72  | 0.81 | 2.1 | MC*OE |
| city      |        | Af. Amer.       | 27   | 21   | 19150 | 15.2 | 5.34  | 0.82 | 2.3 | MC*OE |
| Ē         |        | Hispanic        | 27   | 21   | 11242 | 15.5 | 5.41  | 0.83 | 2.2 | MC*OE |
| Ethnicity | A      | Asian           | 27   | 21   | 4359  | 20.3 | 4.48  | 0.81 | 2.0 | MC*OE |
|           |        | Am. Indian      | 27   | 21   | 172   | 17.3 | 5.23  | 0.83 | 2.2 | MC*OE |
|           |        | Pacific Islande | 27   | 21   | 118   | 18.9 | 4.81  | 0.82 | 2.0 | MC*OE |
|           |        | Multi           | 27   | 21   | 2441  | 17.3 | 5.22  | 0.83 | 2.2 | MC*OE |
|           |        | White           | 25   | 23   | 93562 | 17.4 | 4.60  | 0.80 | 2.0 | MC*OE |
|           |        | Af. Amer.       | 25   | 23   | 19150 | 13.8 | 5.04  | 0.80 | 2.2 | MC*OE |
|           |        | Hispanic        | 25   | 23   | 11242 | 14.0 | 5.10  | 0.81 | 2.2 | MC*OE |
|           | В      | Asian           | 25   | 23   | 4359  | 18.3 | 4.51  | 0.81 | 2.0 | MC*OE |
|           |        | Am. Indian      | 25   | 23   | 172   | 15.9 | 4.96  | 0.81 | 2.2 | MC*OE |
|           |        | Pacific Islande | 25   | 23   | 118   | 17.0 | 5.10  | 0.84 | 2.0 | MC*OE |
|           |        | Multi           | 25   | 23   | 2441  | 15.9 | 5.02  | 0.82 | 2.1 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|------|------|------|------|-----|-------|
| Ţ | Tot.   | All   | 52   | 44   | 2710 | 21.0 | 7.52 | 0.81 | 3.3 | MC*OE |
| 豆 | A      | All   | 27   | 21   | 2710 | 11.3 | 4.37 | 0.71 | 2.4 | MC*OE |
|   | В      | All   | 25   | 23   | 2710 | 9.7  | 3.82 | 0.64 | 2.3 | MC*OE |

|    | Strand | Group | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|----|--------|-------|------|------|-------|------|------|------|-----|-------|
| J. | Tot.   | All   | 52   | 44   | 20124 | 24.2 | 9.53 | 0.89 | 3.2 | MC*OE |
| Ħ  | A      | All   | 27   | 21   | 20124 | 12.7 | 5.19 | 0.80 | 2.3 | MC*OE |
|    | В      | All   | 25   | 23   | 20124 | 11.5 | 4.87 | 0.78 | 2.3 | MC*OE |

| Š | Strand | Group | Pts. | Len. | N     | Mean | SD   | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|------|------|-----|-------|
| Ö | Tot.   | All   | 52   | 44   | 55592 | 30.4 | 9.86 | 0.90 | 3.1 | MC*OE |
| 0 | A      | All   | 27   | 21   | 55592 | 15.9 | 5.28 | 0.82 | 2.2 | MC*OE |
| 田 | В      | All   | 25   | 23   | 55592 | 14.5 | 5.05 | 0.81 | 2.2 | MC*OE |

# Science Grade 4

|        | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|--------|--------|-------|------|------|--------|------|-------|------|-----|-------|
| _      | Tot.   | All   | 68   | 63   | 127105 | 47.4 | 13.01 | 0.93 | 3.3 | MC*OE |
| eral   | A      | All   | 35   | 32   | 127105 | 24.3 | 7.08  | 0.89 | 2.4 | MC*OE |
| )ve    | В      | All   | 12   | 11   | 127105 | 8.6  | 2.55  | 0.73 | 1.3 | MC*OE |
| $\cup$ | С      | All   | 11   | 10   | 127105 | 8.0  | 2.27  | 0.66 | 1.3 | MC*OE |
|        | D      | All   | 10   | 10   | 127105 | 6.4  | 2.34  | 0.66 | 1.4 | MC    |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 68   | 63   | 64879 | 47.2 | 13.34 | 0.94 | 3.3 | MC*OE |
|        | 101.   | Female | 68   | 63   | 62133 | 47.6 | 12.65 | 0.93 | 3.3 | MC*OE |
|        | Λ      | Male   | 35   | 32   | 64879 | 24.2 | 7.22  | 0.89 | 2.4 | MC*OE |
| er     | A      | Female | 35   | 32   | 62133 | 24.5 | 6.94  | 0.88 | 2.4 | MC*OE |
| Gender | D      | Male   | 12   | 11   | 64879 | 8.6  | 2.59  | 0.73 | 1.3 | MC*OE |
| Ğ      | В      | Female | 12   | 11   | 62133 | 8.7  | 2.50  | 0.72 | 1.3 | MC*OE |
|        | C      | Male   | 11   | 10   | 64879 | 7.9  | 2.34  | 0.68 | 1.3 | MC*OE |
|        |        | Female | 11   | 10   | 62133 | 8.1  | 2.19  | 0.64 | 1.3 | MC*OE |
|        | D      | Male   | 10   | 10   | 64879 | 6.5  | 2.39  | 0.68 | 1.3 | MC    |
|        | D      | Female | 10   | 10   | 62133 | 6.3  | 2.28  | 0.64 | 1.4 | MC    |

| White<br>Af. Amer.<br>Hispanic | 68<br>68<br>68 | 63<br>63 | 87280<br>18359 | 50.7 | 11.08 | 0.92  | 3.2 | MOYOF |
|--------------------------------|----------------|----------|----------------|------|-------|-------|-----|-------|
|                                | 68             |          | 18359          |      |       | 0.7 = | 3.2 | MC*OE |
| Hispanic                       |                |          | 10337          | 36.8 | 13.24 | 0.92  | 3.7 | MC*OE |
| Thispanic                      |                | 63       | 12483          | 39.4 | 13.33 | 0.93  | 3.6 | MC*OE |
| Tot. Asian                     | 68             | 63       | 4751           | 51.4 | 12.22 | 0.94  | 3.1 | MC*OE |
| Am. Indian                     | 68             | 63       | 178            | 45.2 | 13.61 | 0.94  | 3.4 | MC*OE |
| Pacific Island                 | le 68          | 63       | 85             | 50.5 | 10.90 | 0.91  | 3.2 | MC*OE |
| Multi                          | 68             | 63       | 3854           | 44.7 | 13.42 | 0.93  | 3.4 | MC*OE |
| White                          | 35             | 32       | 87280          | 26.0 | 6.11  | 0.86  | 2.3 | MC*OE |
| Af. Amer.                      | 35             | 32       | 18359          | 18.8 | 7.17  | 0.87  | 2.6 | MC*OE |
| Hispanic                       | 35             | 32       | 12483          | 20.1 | 7.30  | 0.88  | 2.6 | MC*OE |
| A Asian                        | 35             | 32       | 4751           | 26.6 | 6.70  | 0.89  | 2.2 | MC*OE |
| Am. Indian                     | 35             | 32       | 178            | 23.3 | 7.31  | 0.89  | 2.4 | MC*OE |
| Pacific Island                 | le 35          | 32       | 85             | 25.9 | 6.25  | 0.87  | 2.3 | MC*OE |
| Multi                          | 35             | 32       | 3854           | 22.9 | 7.32  | 0.89  | 2.5 | MC*OE |
| White                          | 12             | 11       | 87280          | 9.2  | 2.16  | 0.66  | 1.3 | MC*OE |
| Af. Amer.                      | 12             | 11       | 18359          | 6.7  | 2.77  | 0.71  | 1.5 | MC*OE |
| Hispanic                       | 12             | 11       | 12483          | 7.2  | 2.71  | 0.71  | 1.5 | MC*OE |
| Hispanic B Asian  Am Indian    | 12             | 11       | 4751           | 9.3  | 2.36  | 0.72  | 1.2 | MC*OE |
| Am. Indian                     | 12             | 11       | 178            | 8.1  | 2.92  | 0.79  | 1.4 | MC*OE |
| Pacific Island                 | le 12          | 11       | 85             | 9.2  | 2.26  | 0.68  | 1.3 | MC*OE |
| Multi                          | 12             | 11       | 3854           | 8.2  | 2.65  | 0.73  | 1.4 | MC*OE |
| White                          | 11             | 10       | 87280          | 8.5  | 1.97  | 0.58  | 1.3 | MC*OE |
| Af. Amer.                      | 11             | 10       | 18359          | 6.4  | 2.47  | 0.64  | 1.5 | MC*OE |
| Hispanic                       | 11             | 10       | 12483          | 6.9  | 2.42  | 0.64  | 1.5 | MC*OE |
| C Asian                        | 11             | 10       | 4751           | 8.5  | 2.13  | 0.67  | 1.2 | MC*OE |
| Am. Indian                     | 11             | 10       | 178            | 7.7  | 2.30  | 0.65  | 1.4 | MC*OE |
| Pacific Island                 | le 11          | 10       | 85             | 8.5  | 1.57  | 0.30  | 1.3 | MC*OE |
| Multi                          | 11             | 10       | 3854           | 7.6  | 2.37  | 0.66  | 1.4 | MC*OE |

|   | White           | 10 | 10 | 87280 | 6.9 | 2.15 | 0.62 | 1.3 | MC |
|---|-----------------|----|----|-------|-----|------|------|-----|----|
|   | Af. Amer.       | 10 | 10 | 18359 | 4.9 | 2.26 | 0.59 | 1.4 | MC |
|   | Hispanic        | 10 | 10 | 12483 | 5.2 | 2.30 | 0.61 | 1.4 | MC |
| D | Asian           | 10 | 10 | 4751  | 7.0 | 2.17 | 0.64 | 1.3 | MC |
|   | Am. Indian      | 10 | 10 | 178   | 6.1 | 2.37 | 0.66 | 1.4 | MC |
|   | Pacific Islande | 10 | 10 | 85    | 6.9 | 2.22 | 0.65 | 1.3 | MC |
|   | Multi           | 10 | 10 | 3854  | 6.0 | 2.36 | 0.65 | 1.4 | MC |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|------|------|-------|------|-----|-------|
|   | Tot.   | All   | 68   | 63   | 3502 | 30.4 | 11.65 | 0.90 | 3.7 | MC*OE |
| Ţ | A      | All   | 35   | 32   | 3502 | 15.3 | 6.37  | 0.83 | 2.7 | MC*OE |
| 豆 | В      | All   | 12   | 11   | 3502 | 5.6  | 2.55  | 0.63 | 1.5 | MC*OE |
|   | С      | All   | 11   | 10   | 3502 | 5.5  | 2.38  | 0.59 | 1.5 | MC*OE |
|   | D      | All   | 10   | 10   | 3502 | 4.0  | 2.01  | 0.48 | 1.5 | MC    |

|          | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|----------|--------|-------|------|------|-------|------|-------|------|-----|-------|
|          | Tot.   | All   | 68   | 63   | 20346 | 38.3 | 14.21 | 0.94 | 3.6 | MC*OE |
| 4        | A      | All   | 35   | 32   | 20346 | 19.4 | 7.66  | 0.89 | 2.6 | MC*OE |
| $\equiv$ | В      | All   | 12   | 11   | 20346 | 7.1  | 2.89  | 0.74 | 1.5 | MC*OE |
|          | С      | All   | 11   | 10   | 20346 | 6.7  | 2.58  | 0.68 | 1.5 | MC*OE |
|          | D      | All   | 10   | 10   | 20346 | 5.1  | 2.42  | 0.65 | 1.4 | MC    |

|     | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|-------|------|-------|------|-----|-------|
| dv  | Tot.   | All   | 68   | 63   | 59347 | 41.6 | 13.37 | 0.93 | 3.5 | MC*OE |
| isa | A      | All   | 35   | 32   | 59347 | 21.2 | 7.27  | 0.88 | 2.5 | MC*OE |
| O.  | В      | All   | 12   | 11   | 59347 | 7.6  | 2.71  | 0.72 | 1.4 | MC*OE |
| Eco | С      | All   | 11   | 10   | 59347 | 7.2  | 2.41  | 0.65 | 1.4 | MC*OE |
|     | D      | All   | 10   | 10   | 59347 | 5.5  | 2.34  | 0.63 | 1.4 | MC    |

# Science Grade 8

|        | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|--------|--------|-------|------|------|--------|------|-------|------|-----|-------|
| _      | Tot.   | All   | 68   | 63   | 130918 | 45.5 | 13.81 | 0.94 | 3.5 | MC*OE |
| eral   | A      | All   | 34   | 31   | 130918 | 23.0 | 7.34  | 0.89 | 2.5 | MC*OE |
| )ve    | В      | All   | 12   | 11   | 130918 | 8.4  | 2.58  | 0.69 | 1.4 | MC*OE |
| $\cup$ | С      | All   | 10   | 10   | 130918 | 6.7  | 2.33  | 0.67 | 1.3 | MC    |
|        | D      | All   | 12   | 11   | 130918 | 7.4  | 2.89  | 0.73 | 1.5 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 68   | 63   | 66974 | 45.4 | 14.35 | 0.94 | 3.5 | MC*OE |
|        | 10ι.   | Female | 68   | 63   | 63783 | 45.6 | 13.21 | 0.93 | 3.5 | MC*OE |
|        | Λ      | Male   | 34   | 31   | 66974 | 22.8 | 7.60  | 0.90 | 2.4 | MC*OE |
| er     | A      | Female | 34   | 31   | 63783 | 23.1 | 7.03  | 0.88 | 2.5 | MC*OE |
| Gender | В      | Male   | 12   | 11   | 66974 | 8.3  | 2.63  | 0.70 | 1.4 | MC*OE |
| Ğ      | ъ      | Female | 12   | 11   | 63783 | 8.6  | 2.51  | 0.68 | 1.4 | MC*OE |
|        | C      | Male   | 10   | 10   | 66974 | 6.7  | 2.42  | 0.70 | 1.3 | MC    |
|        |        | Female | 10   | 10   | 63783 | 6.6  | 2.24  | 0.63 | 1.4 | MC    |
|        |        | Male   | 12   | 11   | 66974 | 7.5  | 2.93  | 0.75 | 1.5 | MC*OE |
|        | υ      | Female | 12   | 11   | 63783 | 7.3  | 2.83  | 0.71 | 1.5 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 68   | 63   | 93325 | 48.6 | 12.14 | 0.92 | 3.4 | MC*OE |
|           |        | Af. Amer.       | 68   | 63   | 18972 | 34.8 | 13.66 | 0.92 | 3.8 | MC*OE |
|           |        | Hispanic        | 68   | 63   | 11321 | 36.5 | 14.17 | 0.93 | 3.7 | MC*OE |
|           | Tot.   | Asian           | 68   | 63   | 4403  | 50.7 | 12.60 | 0.93 | 3.3 | MC*OE |
|           |        | Am. Indian      | 68   | 63   | 173   | 43.8 | 14.34 | 0.94 | 3.5 | MC*OE |
|           |        | Pacific Islande | 68   | 63   | 120   | 47.2 | 13.63 | 0.94 | 3.4 | MC*OE |
|           |        | Multi           | 68   | 63   | 2424  | 42.6 | 13.99 | 0.93 | 3.6 | MC*OE |
|           |        | White           | 34   | 31   | 93325 | 24.5 | 6.53  | 0.87 | 2.4 | MC*OE |
|           |        | Af. Amer.       | 34   | 31   | 18972 | 17.6 | 7.33  | 0.87 | 2.7 | MC*OE |
|           |        | Hispanic        | 34   | 31   | 11321 | 18.5 | 7.60  | 0.88 | 2.6 | MC*OE |
|           | A      | Asian           | 34   | 31   | 4403  | 26.0 | 6.54  | 0.88 | 2.3 | MC*OE |
|           |        | Am. Indian      | 34   | 31   | 173   | 22.3 | 7.64  | 0.89 | 2.5 | MC*OE |
|           |        | Pacific Islande | 34   | 31   | 120   | 23.7 | 7.17  | 0.89 | 2.4 | MC*OE |
|           |        | Multi           | 34   | 31   | 2424  | 21.5 | 7.43  | 0.88 | 2.5 | MC*OE |
|           |        | White           | 12   | 11   | 93325 | 9.0  | 2.24  | 0.62 | 1.4 | MC*OE |
| Š         |        | Af. Amer.       | 12   | 11   | 18972 | 6.7  | 2.80  | 0.68 | 1.6 | MC*OE |
| ici       | В      | Hispanic        | 12   | 11   | 11321 | 6.9  | 2.88  | 0.71 | 1.6 | MC*OE |
| Ethnicity | Б      | Asian           | 12   | 11   | 4403  | 9.0  | 2.40  | 0.67 | 1.4 | MC*OE |
| 豆         |        | Am. Indian      | 12   | 11   | 173   | 8.2  | 2.63  | 0.69 | 1.5 | MC*OE |
|           |        | Pacific Islande | 12   | 11   | 120   | 8.7  | 2.57  | 0.71 | 1.4 | MC*OE |
|           |        | Multi           | 12   | 11   | 2424  | 8.0  | 2.62  | 0.68 | 1.5 | MC*OE |
|           |        | White           | 10   | 10   | 93325 | 7.1  | 2.14  | 0.63 | 1.3 | MC    |
|           |        | Af. Amer.       | 10   | 10   | 18972 | 5.1  | 2.29  | 0.59 | 1.5 | MC    |
|           |        | Hispanic        | 10   | 10   | 11321 | 5.4  | 2.32  | 0.61 | 1.5 | MC    |
|           | C      | Asian           | 10   | 10   | 4403  | 7.4  | 2.17  | 0.67 | 1.2 | MC    |
|           |        | Am. Indian      | 10   | 10   | 173   | 6.4  | 2.38  | 0.67 | 1.4 | MC    |
|           |        | Pacific Islande | 10   | 10   | 120   | 7.2  | 2.22  | 0.66 | 1.3 | MC    |
|           |        | Multi           | 10   | 10   | 2424  | 6.2  | 2.38  | 0.66 | 1.4 | MC    |
|           |        |                 |      |      |       |      |       |      |     |       |

|   | White           | 12 | 11 | 93325 | 8.0 | 2.64 | 0.69 | 1.5 | MC*OE |
|---|-----------------|----|----|-------|-----|------|------|-----|-------|
|   | Af. Amer.       | 12 | 11 | 18972 | 5.4 | 2.76 | 0.68 | 1.6 | MC*OE |
|   | Hispanic        | 12 | 11 | 11321 | 5.7 | 2.84 | 0.70 | 1.6 | MC*OE |
| D | Asian           | 12 | 11 | 4403  | 8.3 | 2.78 | 0.73 | 1.4 | MC*OE |
|   | Am. Indian      | 12 | 11 | 173   | 7.0 | 2.92 | 0.73 | 1.5 | MC*OE |
|   | Pacific Islande | 12 | 11 | 120   | 7.6 | 2.98 | 0.75 | 1.5 | MC*OE |
|   | Multi           | 12 | 11 | 2424  | 6.8 | 2.93 | 0.73 | 1.5 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|------|------|-------|------|-----|-------|
|   | Tot.   | All   | 68   | 63   | 2970 | 25.5 | 10.47 | 0.87 | 3.8 | MC*OE |
| Ţ | A      | All   | 34   | 31   | 2970 | 13.0 | 5.89  | 0.79 | 2.7 | MC*OE |
| 豆 | В      | All   | 12   | 11   | 2970 | 4.7  | 2.44  | 0.56 | 1.6 | MC*OE |
|   | С      | All   | 10   | 10   | 2970 | 4.0  | 1.98  | 0.44 | 1.5 | MC    |
|   | D      | All   | 12   | 11   | 2970 | 3.8  | 2.11  | 0.49 | 1.5 | MC*OE |

|          | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|----------|--------|-------|------|------|-------|------|-------|------|-----|-------|
|          | Tot.   | All   | 68   | 63   | 19995 | 32.4 | 13.64 | 0.92 | 3.8 | MC*OE |
| 4        | A      | All   | 34   | 31   | 19995 | 16.0 | 7.25  | 0.86 | 2.7 | MC*OE |
| $\equiv$ | В      | All   | 12   | 11   | 19995 | 6.3  | 2.81  | 0.68 | 1.6 | MC*OE |
|          | С      | All   | 10   | 10   | 19995 | 5.0  | 2.30  | 0.60 | 1.5 | MC    |
|          | D      | All   | 12   | 11   | 19995 | 5.2  | 2.77  | 0.69 | 1.6 | MC*OE |

|     | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|-------|------|-------|------|-----|-------|
| dv  | Tot.   | All   | 68   | 63   | 55356 | 38.9 | 14.09 | 0.93 | 3.7 | MC*OE |
| isa | A      | All   | 34   | 31   | 55356 | 19.6 | 7.51  | 0.88 | 2.6 | MC*OE |
| D.  | В      | All   | 12   | 11   | 55356 | 7.4  | 2.78  | 0.70 | 1.5 | MC*OE |
| Eco | С      | All   | 10   | 10   | 55356 | 5.7  | 2.35  | 0.63 | 1.4 | MC    |
|     | D      | All   | 12   | 11   | 55356 | 6.2  | 2.88  | 0.71 | 1.6 | MC*OE |

## Writing Grade 5

|        | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|--------|--------|-------|------|------|--------|------|-------|------|-----|-------|
| eral   | Tot.   | All   | 100  | 16   | 124666 | 63.1 | 14.89 | 0.81 | 6.5 | MC*OE |
| )ve    | A      | All   | 80   | 2    | 124666 | 49.6 | 12.06 | 0.72 | 6.3 | OE    |
| $\cup$ | В      | All   | 20   | 14   | 124666 | 13.5 | 3.50  | 0.81 | 1.5 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 100  | 16   | 63101 | 60.4 | 14.89 | 0.81 | 6.5 | MC*OE |
| er     | 101.   | Female | 100  | 16   | 61501 | 65.9 | 14.36 | 0.79 | 6.6 | MC*OE |
| Gender | Δ.     | Male   | 80   | 2    | 63101 | 47.4 | 11.98 | 0.73 | 6.3 | OE    |
| Ğ      | Α      | Female | 80   | 2    | 61501 | 51.9 | 11.69 | 0.70 | 6.4 | OE    |
|        | В      | Male   | 20   | 14   | 63101 | 13.0 | 3.59  | 0.82 | 1.5 | MC*OE |
|        | D      | Female | 20   | 14   | 61501 | 14.0 | 3.32  | 0.79 | 1.5 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 100  | 16   | 87293 | 65.3 | 14.24 | 0.79 | 6.5 | MC*OE |
|           |        | Af. Amer.       | 100  | 16   | 17872 | 55.0 | 14.17 | 0.79 | 6.5 | MC*OE |
|           |        | Hispanic        | 100  | 16   | 11408 | 56.8 | 14.27 | 0.79 | 6.5 | MC*OE |
|           | Tot.   | Asian           | 100  | 16   | 4521  | 69.7 | 14.71 | 0.81 | 6.4 | MC*OE |
|           |        | Am. Indian      | 100  | 16   | 174   | 61.0 | 15.88 | 0.84 | 6.4 | MC*OE |
|           |        | Pacific Islande | 100  | 16   | 80    | 65.1 | 14.63 | 0.85 | 5.6 | MC*OE |
|           |        | Multi           | 100  | 16   | 3242  | 60.8 | 14.80 | 0.80 | 6.6 | MC*OE |
|           |        | White           | 80   | 2    | 87293 | 51.2 | 11.67 | 0.70 | 6.4 | OE    |
| £         |        | Af. Amer.       | 80   | 2    | 17872 | 43.6 | 11.41 | 0.70 | 6.3 | OE    |
| ici       |        | Hispanic        | 80   | 2    | 11408 | 45.0 | 11.48 | 0.70 | 6.3 | OE    |
| Ethnicity | A      | Asian           | 80   | 2    | 4521  | 54.6 | 12.06 | 0.73 | 6.3 | OE    |
| $\Xi$     |        | Am. Indian      | 80   | 2    | 174   | 47.8 | 13.00 | 0.77 | 6.3 | OE    |
|           |        | Pacific Islande | 80   | 2    | 80    | 50.8 | 12.20 | 0.80 | 5.5 | OE    |
|           |        | Multi           | 80   | 2    | 3242  | 47.9 | 11.98 | 0.72 | 6.4 | OE    |
|           |        | White           | 20   | 14   | 87293 | 14.1 | 3.23  | 0.79 | 1.5 | MC*OE |
|           |        | Af. Amer.       | 20   | 14   | 17872 | 11.4 | 3.51  | 0.78 | 1.6 | MC*OE |
|           |        | Hispanic        | 20   | 14   | 11408 | 11.8 | 3.53  | 0.79 | 1.6 | MC*OE |
|           | В      | Asian           | 20   | 14   | 4521  | 15.0 | 3.22  | 0.82 | 1.4 | MC*OE |
|           |        | Am. Indian      | 20   | 14   | 174   | 13.2 | 3.61  | 0.82 | 1.5 | MC*OE |
|           |        | Pacific Islande | 20   | 14   | 80    | 14.4 | 3.08  | 0.79 | 1.4 | MC*OE |
|           |        | Multi           | 20   | 14   | 3242  | 13.0 | 3.51  | 0.80 | 1.6 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|------|------|-------|------|-----|-------|
| Ţ | Tot.   | All   | 100  | 16   | 2543 | 48.0 | 13.05 | 0.74 | 6.7 | MC*OE |
| 至 | A      | All   | 80   | 2    | 2543 | 38.8 | 10.76 | 0.64 | 6.5 | OE    |
|   | В      | All   | 20   | 14   | 2543 | 9.2  | 3.06  | 0.68 | 1.7 | MC*OE |

|              | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| $\mathbf{E}$ | Tot.   | All   | 100  | 16   | 19183 | 50.8 | 14.90 | 0.81 | 6.5 | MC*OE |
| Ħ            | A      | All   | 80   | 2    | 19183 | 40.5 | 12.01 | 0.73 | 6.3 | OE    |
|              | В      | All   | 20   | 14   | 19183 | 10.3 | 3.66  | 0.79 | 1.7 | MC*OE |

| š | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|-------|------|-------|------|-----|-------|
| Ö | Tot.   | All   | 100  | 16   | 56174 | 57.2 | 14.22 | 0.79 | 6.5 | MC*OE |
| 0 | A      | All   | 80   | 2    | 56174 | 45.2 | 11.49 | 0.70 | 6.3 | OE    |
| 田 | В      | All   | 20   | 14   | 56174 | 12.0 | 3.48  | 0.78 | 1.6 | MC*OE |

#### Writing Grade 8

|        | Strand | Group | Pts. | Len. | N      | Mean | SD    | r    | SEM | Items |
|--------|--------|-------|------|------|--------|------|-------|------|-----|-------|
| eral   | Tot.   | All   | 100  | 16   | 130302 | 67.2 | 13.89 | 0.81 | 6.1 | MC*OE |
| )ve    | A      | All   | 80   | 2    | 130302 | 54.0 | 11.05 | 0.72 | 5.8 | OE    |
| $\cup$ | В      | All   | 20   | 14   | 130302 | 13.3 | 3.60  | 0.81 | 1.6 | MC*OE |

|        | Strand | Group  | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------|--------|--------|------|------|-------|------|-------|------|-----|-------|
|        | Tot.   | Male   | 100  | 16   | 66509 | 63.9 | 14.19 | 0.81 | 6.2 | MC*OE |
| er     | 101.   | Female | 100  | 16   | 63709 | 70.8 | 12.64 | 0.78 | 5.9 | MC*OE |
| Gender | Δ.     | Male   | 80   | 2    | 66509 | 51.3 | 11.35 | 0.72 | 6.0 | OE    |
| Ğ      | Α      | Female | 80   | 2    | 63709 | 56.8 | 9.99  | 0.68 | 5.7 | OE    |
|        | В      | Male   | 20   | 14   | 66509 | 12.6 | 3.62  | 0.80 | 1.6 | MC*OE |
|        | D      | Female | 20   | 14   | 63709 | 14.0 | 3.41  | 0.80 | 1.5 | MC*OE |

|           | Strand | Group           | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----------|--------|-----------------|------|------|-------|------|-------|------|-----|-------|
|           |        | White           | 100  | 16   | 93162 | 69.2 | 13.14 | 0.79 | 6.0 | MC*OE |
|           |        | Af. Amer.       | 100  | 16   | 18921 | 60.0 | 13.75 | 0.79 | 6.2 | MC*OE |
|           |        | Hispanic        | 100  | 16   | 11075 | 60.9 | 14.00 | 0.80 | 6.2 | MC*OE |
|           | Tot.   | Asian           | 100  | 16   | 4336  | 74.2 | 13.00 | 0.79 | 6.0 | MC*OE |
|           |        | Am. Indian      | 100  | 16   | 169   | 66.2 | 14.06 | 0.83 | 5.8 | MC*OE |
|           |        | Pacific Islande | 100  | 16   | 116   | 69.6 | 13.71 | 0.86 | 5.0 | MC*OE |
|           |        | Multi           | 100  | 16   | 2422  | 65.3 | 13.98 | 0.81 | 6.2 | MC*OE |
|           |        | White           | 80   | 2    | 93162 | 55.3 | 10.55 | 0.70 | 5.8 | OE    |
| Ę.        |        | Af. Amer.       | 80   | 2    | 18921 | 48.7 | 11.09 | 0.71 | 6.0 | OE    |
| iici      |        | Hispanic        | 80   | 2    | 11075 | 49.6 | 11.19 | 0.71 | 6.0 | OE    |
| Ethnicity | A      | Asian           | 80   | 2    | 4336  | 59.3 | 10.34 | 0.68 | 5.8 | OE    |
| $\Xi$     |        | Am. Indian      | 80   | 2    | 169   | 53.3 | 11.00 | 0.75 | 5.6 | OE    |
|           |        | Pacific Islande | 80   | 2    | 116   | 55.7 | 10.97 | 0.81 | 4.8 | OE    |
|           |        | Multi           | 80   | 2    | 2422  | 52.6 | 11.18 | 0.72 | 5.9 | OE    |
|           |        | White           | 20   | 14   | 93162 | 13.9 | 3.37  | 0.79 | 1.5 | MC*OE |
|           |        | Af. Amer.       | 20   | 14   | 18921 | 11.2 | 3.50  | 0.77 | 1.7 | MC*OE |
|           |        | Hispanic        | 20   | 14   | 11075 | 11.3 | 3.61  | 0.79 | 1.7 | MC*OE |
|           | В      | Asian           | 20   | 14   | 4336  | 14.9 | 3.38  | 0.82 | 1.4 | MC*OE |
|           |        | Am. Indian      | 20   | 14   | 169   | 12.9 | 3.77  | 0.83 | 1.6 | MC*OE |
|           |        | Pacific Islande | 20   | 14   | 116   | 13.9 | 3.58  | 0.83 | 1.5 | MC*OE |
|           |        | Multi           | 20   | 14   | 2422  | 12.7 | 3.56  | 0.79 | 1.6 | MC*OE |

|   | Strand | Group | Pts. | Len. | N    | Mean | SD    | r    | SEM | Items |
|---|--------|-------|------|------|------|------|-------|------|-----|-------|
| Ţ | Tot.   | All   | 100  | 16   | 2608 | 51.6 | 12.49 | 0.73 | 6.5 | MC*OE |
| 至 | A      | All   | 80   | 2    | 2608 | 43.1 | 10.61 | 0.65 | 6.3 | OE    |
|   | В      | All   | 20   | 14   | 2608 | 8.5  | 2.69  | 0.59 | 1.7 | MC*OE |

|              | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|--------------|--------|-------|------|------|-------|------|-------|------|-----|-------|
| $\mathbf{P}$ | Tot.   | All   | 100  | 16   | 19709 | 54.0 | 13.80 | 0.78 | 6.4 | MC*OE |
| Ħ            | A      | All   | 80   | 2    | 19709 | 44.4 | 11.48 | 0.71 | 6.2 | OE    |
|              | В      | All   | 20   | 14   | 19709 | 9.6  | 3.22  | 0.71 | 1.7 | MC*OE |

| š   | Strand | Group | Pts. | Len. | N     | Mean | SD    | r    | SEM | Items |
|-----|--------|-------|------|------|-------|------|-------|------|-----|-------|
| Ä   | Tot.   | All   | 100  | 16   | 54996 | 61.7 | 13.84 | 0.80 | 6.2 | MC*OE |
| 60. | A      | All   | 80   | 2    | 54996 | 50.0 | 11.14 | 0.71 | 6.0 | OE    |
| 田   | В      | All   | 20   | 14   | 54996 | 11.7 | 3.53  | 0.78 | 1.7 | MC*OE |

Appendix Q:

Historical Statistics

#### Appendix Q: Historical Statistics

|             |                     |                  | 2005 | 2006 | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   |
|-------------|---------------------|------------------|------|------|--------|--------|--------|--------|--------|--------|--------|--------|
|             | e                   | Mean             | -    | -    | 54.98  | 55.00  | 60.02  | 60.32  | 59.45  | 57.33  | 56.80  | 51.93  |
| -           | Raw<br>Score        | SD               | -    | -    | 9.66   | 9.91   | 10.63  | 9.97   | 10.81  | 12.11  | 12.55  | 14.71  |
|             |                     | Max              | -    | -    | 66     | 66     | 72     | 72     | 72     | 72     | 72     | 72     |
|             | e gd                | Mean             | -    | -    | 1314.5 | 1332.9 | 1333.0 | 1341.0 | 1345.7 | 1330.2 | 1317.2 | 1312.6 |
|             | <b>Scaled</b> Score | SD               | -    | -    | 176.6  | 184.7  | 176.0  | 164.7  | 176.6  | 185.0  | 187.6  | 199.3  |
|             | <u> </u>            | Max              | -    | -    | 1765   | 1827   | 1814   | 1816   | 1832   | 1843   | 1859   | 1914   |
|             | > v                 | Bel. Basic/Basic | -    | -    | 37     | 36     | 38     | 38     | 37     | 35     | 35     | 30     |
| ~           | Raw<br>Cuts         | Basic/Prof.      | -    | -    | 50     | 49     | 53     | 52     | 51     | 49     | 50     | 43     |
| de 🤅        |                     | Prof./Adv.       | -    | -    | 61     | 60     | 65     | 65     | 64     | 63     | 64     | 60     |
| Grade 3     | es s                | Bel. Basic/Basic | -    | -    | 0.6369 | 0.6397 | 0.6171 | 0.6277 | 0.6410 | 0.6440 | 0.6124 | 0.6828 |
|             | Theta<br>Cuts       | Basic/Prof.      | -    | -    | 1.7479 | 1.7081 | 1.7404 | 1.7186 | 1.7186 | 1.6906 | 1.7345 | 1.6741 |
| nati        |                     | Prof./Adv.       | -    | -    | 3.3362 | 3.2408 | 3.1592 | 3.2516 | 3.2193 | 3.1710 | 3.2655 | 3.2236 |
| Mathematics |                     | Bel. Basic       | -    | -    | 6.1    | 6.0    | 5.2    | 4.2    | 5.1    | 6.6    | 7.7    | 10.3   |
| /Iat        | Impact %            | Basic            | -    | -    | 15.4   | 13.5   | 13.1   | 11.3   | 11.4   | 13.3   | 15.1   | 14.6   |
| ~           | pact                | Proficient       | -    | -    | 44.2   | 38.0   | 38.1   | 41.1   | 37.3   | 36.4   | 38.9   | 35.3   |
|             | [m]                 | Advanced         | -    | -    | 34.3   | 42.5   | 43.6   | 43.4   | 46.2   | 43.6   | 38.3   | 39.7   |
|             |                     | Prof. + Adv.     | -    | -    | 78.5   | 80.5   | 81.7   | 84.5   | 83.5   | 80.0   | 77.2   | 75.0   |
|             | cs                  | N Count          | -    | -    | 125533 | 126552 | 127268 | 126676 | 124749 | 126139 | 126734 | 124702 |
|             | iphi                | % City           | -    | -    | 11.4   | 11.2   | 10.9   | 10.8   | 10.6   | 10.5   | 10.2   | 9.9    |
|             | emographics         | % White          | -    | -    | 73.1   | 72.8   | 72.5   | 71.5   | 70.8   | 70.0   | 69.1   | 67.9   |
|             | ) mo                | % Black          | -    | -    | 15.8   | 15.8   | 15.5   | 15.5   | 15.4   | 15.1   | 14.7   | 14.7   |
|             | De                  | % Hispanic       |      |      | 7.2    | 7.5    | 7.6    | 8.1    | 8.5    | 8.8    | 9.4    | 10.0   |

#### Appendix Q: Historical Statistics

|                     |                 |                  | 2005 | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|---------------------|-----------------|------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                     | ~ a             | Mean             | -    | 45.08   | 43.61   | 44.28   | 47.22   | 49.11   | 48.92   | 48.78   | 48.81   | 49.95   |
|                     | Raw<br>Score    | SD               | -    | 12.66   | 12.41   | 13.25   | 14.51   | 12.95   | 13.25   | 13.67   | 14.29   | 14.66   |
|                     |                 | Max              | -    | 66      | 66      | 66      | 72      | 72      | 72      | 72      | 72      | 72      |
|                     | e g             | Mean             | -    | 1403.0  | 1416.7  | 1445.3  | 1456.6  | 1469.6  | 1476.9  | 1475.7  | 1448.0  | 1434.0  |
|                     | Scaled<br>Score | SD               | -    | 220.6   | 221.0   | 243.0   | 234.0   | 222.4   | 221.6   | 237.7   | 254.6   | 264.0   |
|                     | <u>~~~~</u>     | Max              | -    | 2282    | 2348    | 2370    | 2405    | 2446    | 2467    | 2482    | 2455    | 2408    |
|                     | > 0             | Bel. Basic/Basic | -    | 29      | 28      | 27      | 26      | 28      | 27      | 28      | 31      | 33      |
| <del>+</del>        | Raw<br>Cuts     | Basic/Prof.      | -    | 36      | 34      | 33      | 33      | 35      | 34      | 35      | 38      | 40      |
| Mathematics Grade 4 |                 | Prof./Adv.       | -    | 50      | 47      | 47      | 49      | 50      | 50      | 50      | 52      | 54      |
| ra                  | g s             | Bel. Basic/Basic | -    | -0.1359 | -0.1029 | -0.0871 | -0.1178 | -0.1150 | -0.0872 | -0.0802 | -0.1017 | -0.1099 |
| 83                  | Theta<br>Cuts   | Basic/Prof.      | -    | 0.3124  | 0.3496  | 0.3348  | 0.3321  | 0.3378  | 0.3446  | 0.3611  | 0.3537  | 0.3348  |
| nati                |                 | Prof./Adv.       | -    | 1.3089  | 1.3315  | 1.3437  | 1.3204  | 1.3175  | 1.3544  | 1.3427  | 1.3609  | 1.3197  |
| hen                 |                 | Bel. Basic       | -    | 12.6    | 12.7    | 12.3    | 9.4     | 7.0     | 7.1     | 8.7     | 13.4    | 14.9    |
| <b>Vlat</b>         | %               | Basic            | -    | 10.1    | 9.3     | 8.2     | 8.8     | 8.1     | 7.6     | 8.6     | 9.1     | 8.8     |
| F                   | Impact          | Proficient       | -    | 33.7    | 31.1    | 29.6    | 30.6    | 30.9    | 31.0    | 29.2    | 27.6    | 27.0    |
|                     | [m]             | Advanced         | -    | 43.5    | 46.9    | 50.0    | 51.2    | 54.0    | 54.2    | 53.4    | 49.9    | 49.2    |
|                     | -               | Prof. + Adv.     | -    | 77.3    | 78.0    | 79.5    | 81.8    | 84.8    | 85.2    | 82.7    | 77.5    | 76.3    |
|                     | S               | N Count          | -    | 127959  | 126154  | 126414  | 127601  | 126333  | 125604  | 122526  | 126550  | 126911  |
|                     | tphi            | % City           | -    | 11.6    | 11.3    | 11.0    | 10.9    | 10.6    | 10.2    | 10.2    | 10.0    | 9.6     |
|                     | Demographics    | % White          | -    | 74.5    | 73.6    | 73.0    | 72.5    | 72.2    | 71.5    | 70.6    | 69.8    | 68.8    |
|                     | эша             | % Black          | -    | 15.4    | 15.7    | 15.7    | 15.6    | 15.3    | 15.1    | 15.0    | 14.8    | 14.5    |
|                     | Ď               | % Hispanic       | -    | 6.4     | 6.9     | 7.5     | 7.6     | 7.7     | 8.3     | 8.7     | 9.0     | 9.7     |

|                     |                     |                  | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   |
|---------------------|---------------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                     | , a                 | Mean             | 47.21  | 44.71  | 43.81  | 43.39  | 46.20  | 48.59  | 47.54  | 47.28  | 46.32  | 46.39  |
|                     | Raw<br>Score        | SD               | 12.31  | 12.99  | 12.45  | 14.08  | 14.57  | 13.60  | 13.17  | 13.52  | 13.82  | 15.55  |
|                     |                     | Max              | 66     | 66     | 66     | 66     | 72     | 72     | 72     | 72     | 72     | 72     |
|                     |                     | Mean             | 1419.3 | 1424.0 | 1427.6 | 1453.1 | 1451.9 | 1477.1 | 1474.1 | 1462.5 | 1428.2 | 1447.8 |
|                     | <b>Scaled</b> Score | SD               | 223.8  | 238.1  | 226.7  | 234.2  | 226.2  | 236.3  | 222.2  | 235.2  | 227.3  | 263.0  |
|                     |                     | Max              | 2272   | 2292   | 2476   | 2329   | 2409   | 2432   | 2470   | 2455   | 2430   | 2460   |
|                     | > v                 | Bel. Basic/Basic | 31     | 29     | 28     | 23     | 25     | 28     | 27     | 28     | 29     | 28     |
| w                   | Raw<br>Cuts         | Basic/Prof.      | 43     | 40     | 38     | 35     | 37     | 40     | 38     | 39     | 40     | 40     |
| Mathematics Grade ! |                     | Prof./Adv.       | 54     | 51     | 49     | 48     | 51     | 52     | 51     | 51     | 52     | 52     |
|                     | e s                 | Bel. Basic/Basic | -      | 0.1924 | 0.1886 | 0.1398 | 0.1286 | 0.1494 | 0.1911 | 0.1526 | 0.1796 | 0.1816 |
| છ                   | Theta<br>Cuts       | Basic/Prof.      | -      | 0.9868 | 0.9326 | 0.9407 | 0.9367 | 0.9992 | 0.9477 | 0.9473 | 0.9442 | 0.9856 |
| natics              |                     | Prof./Adv.       | -      | 1.8626 | 1.8384 | 1.8360 | 1.8797 | 1.9071 | 1.9015 | 1.8719 | 1.8610 | 1.8764 |
| hen                 |                     | Bel. Basic       | 11.9   | 13.4   | 12.1   | 10.4   | 9.6    | 8.8    | 7.7    | 9.5    | 12.7   | 15.4   |
| <b>Mat</b>          | %                   | Basic            | 19.1   | 19.8   | 17.0   | 16.4   | 16.9   | 16.8   | 16.0   | 17.3   | 18.0   | 17.4   |
| F                   | Impact              | Proficient       | 30.9   | 28.0   | 29.5   | 27.5   | 29.2   | 26.8   | 30.1   | 27.5   | 27.9   | 22.8   |
|                     | [m]                 | Advanced         | 38.1   | 38.9   | 41.5   | 45.7   | 44.3   | 47.6   | 46.2   | 45.8   | 41.4   | 44.4   |
|                     | -                   | Prof. + Adv.     | 69.0   | 66.9   | 71.0   | 73.2   | 73.5   | 74.4   | 76.3   | 73.2   | 69.2   | 67.2   |
|                     | S                   | N Count          | 134322 | 131702 | 129781 | 127324 | 127544 | 126419 | 126578 | 124973 | 125790 | 126693 |
|                     | ıphi                | % City           | 12.3   | 11.6   | 11.0   | 10.8   | 10.6   | 10.6   | 9.7    | 9.5    | 9.3    | 8.9    |
|                     | Demographics        | % White          | 74.4   | 74.7   | 74.2   | 73.4   | 72.9   | 72.3   | 72.2   | 71.3   | 70.2   | 69.5   |
|                     | oma                 | % Black          | 16.3   | 15.6   | 15.4   | 15.6   | 15.5   | 15.5   | 15.0   | 14.8   | 15.0   | 14.6   |
|                     | De                  | % Hispanic       | 6.0    | 6.3    | 6.7    | 7.2    | 7.5    | 7.8    | 7.9    | 8.6    | 8.9    | 9.3    |

|                     |                     |                  | 2005 | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|---------------------|---------------------|------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                     | . e                 | Mean             | -    | 42.44   | 44.66   | 42.96   | 47.90   | 49.42   | 49.33   | 48.65   | 48.55   | 48.00   |
|                     | Raw<br>Score        | SD               | -    | 13.07   | 11.81   | 13.85   | 14.36   | 13.68   | 13.92   | 13.11   | 14.35   | 14.27   |
|                     |                     | Max              | -    | 66      | 66      | 66      | 72      | 72      | 72      | 72      | 72      | 72      |
|                     | e g                 | Mean             | -    | 1400.2  | 1421.1  | 1457.4  | 1469.9  | 1493.4  | 1499.2  | 1485.9  | 1467.2  | 1479.4  |
|                     | <b>Scaled</b> Score | SD               | -    | 227.7   | 233.6   | 253.5   | 240.2   | 245.0   | 248.0   | 240.2   | 259.9   | 279.8   |
|                     | <u> </u>            | Max              | -    | 2345    | 2369    | 2453    | 2415    | 2447    | 2476    | 2580    | 2595    | 2649    |
|                     | > x                 | Bel. Basic/Basic | -    | 28      | 31      | 26      | 28      | 29      | 29      | 29      | 31      | 31      |
| 9                   | Ra w<br>Cuts        | Basic/Prof.      | -    | 37      | 39      | 35      | 38      | 39      | 38      | 39      | 40      | 40      |
| Mathematics Grade 6 |                     | Prof./Adv.       | -    | 49      | 50      | 47      | 51      | 51      | 51      | 51      | 53      | 51      |
| <b>E</b>            | s s                 | Bel. Basic/Basic | -    | -0.1366 | -0.1292 | -0.0912 | -0.1288 | -0.1237 | -0.0971 | -0.1424 | -0.0804 | -0.0940 |
| S                   | Theta<br>Cuts       | Basic/Prof.      | -    | 0.4823  | 0.5116  | 0.5200  | 0.5206  | 0.5324  | 0.4855  | 0.5263  | 0.5027  | 0.5415  |
| nati                |                     | Prof./Adv.       | -    | 1.3721  | 1.4429  | 1.4008  | 1.4040  | 1.3791  | 1.4047  | 1.4132  | 1.4465  | 1.4054  |
| hen                 |                     | Bel. Basic       | -    | 15.8    | 14.4    | 14.1    | 11.1    | 9.4     | 10.1    | 9.0     | 13.8    | 14.1    |
| Mat                 | <b>t</b> %          | Basic            | -    | 16.2    | 15.9    | 13.6    | 13.2    | 12.6    | 11.0    | 13.8    | 12.6    | 13.9    |
| F                   | Impact              | Proficient       | -    | 30.2    | 30.0    | 25.5    | 26.2    | 24.7    | 25.0    | 26.7    | 27.1    | 23.2    |
|                     | Im                  | Advanced         | -    | 37.8    | 39.6    | 46.8    | 49.5    | 53.3    | 53.8    | 50.5    | 46.5    | 48.7    |
|                     |                     | Prof. + Adv.     | -    | 68.0    | 69.6    | 72.3    | 75.7    | 78.0    | 78.9    | 77.2    | 73.6    | 71.9    |
|                     | ics                 | N Count          | -    | 136186  | 133610  | 130851  | 128421  | 126288  | 126630  | 126661  | 129366  | 126128  |
|                     | Demographics        | % City           | -    | 11.4    | 10.8    | 10.3    | 10.2    | 10.2    | 9.7     | 9.0     | 8.6     | 8.2     |
|                     | gra                 | % White          | -    | 74.5    | 74.5    | 74.2    | 73.3    | 72.8    | 72.2    | 72.1    | 70.9    | 69.9    |
|                     | оша                 | % Black          | -    | 16.1    | 15.6    | 15.3    | 15.4    | 15.2    | 15.2    | 14.7    | 14.8    | 14.8    |
|                     | Ď                   | % Hispanic       | -    | 6.2     | 6.5     | 6.9     | 7.3     | 7.6     | 8.0     | 8.1     | 8.9     | 9.3     |

|                     |                     |                  | 2005 | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|---------------------|---------------------|------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                     | . e                 | Mean             | -    | 39.77   | 40.54   | 41.58   | 45.62   | 47.88   | 47.81   | 48.19   | 47.20   | 44.95   |
|                     | Raw<br>Score        | SD               | -    | 13.38   | 13.23   | 13.41   | 14.57   | 14.61   | 14.13   | 13.84   | 14.64   | 15.41   |
|                     | <b>–</b> $\infty$   | Max              | -    | 66      | 66      | 66      | 72      | 72      | 72      | 72      | 72      | 72      |
|                     | e g                 | Mean             | -    | 1393.3  | 1419.2  | 1442.7  | 1464.2  | 1500.0  | 1503.8  | 1499.9  | 1497.1  | 1494.4  |
|                     | <b>Scaled</b> Score | SD               | -    | 221.7   | 248.5   | 236.7   | 233.4   | 254.7   | 249.7   | 239.8   | 267.3   | 264.6   |
|                     |                     | Max              | -    | 2343    | 2487    | 2407    | 2450    | 2475    | 2545    | 2548    | 2566    | 2561    |
|                     | > x                 | Bel. Basic/Basic | -    | 26      | 27      | 26      | 26      | 28      | 28      | 27      | 28      | 25      |
| _                   | Ra w<br>Cuts        | Basic/Prof.      | =    | 34      | 35      | 34      | 35      | 36      | 36      | 36      | 36      | 33      |
| de                  |                     | Prof./Adv.       | -    | 46      | 46      | 46      | 49      | 49      | 49      | 49      | 49      | 46      |
| Grac                | es s                | Bel. Basic/Basic | =    | -0.2123 | -0.2114 | -0.1486 | -0.2145 | -0.1565 | -0.1500 | -0.2106 | -0.1715 | -0.1761 |
| ) જી                | Theta<br>Cuts       | Basic/Prof.      | =    | 0.3636  | 0.4076  | 0.4271  | 0.3755  | 0.3673  | 0.3885  | 0.3655  | 0.3661  | 0.3625  |
| Mathematics Grade 7 |                     | Prof./Adv.       | -    | 1.2351  | 1.3170  | 1.2916  | 1.2920  | 1.2552  | 1.2924  | 1.2310  | 1.2871  | 1.2478  |
| hen                 |                     | Bel. Basic       | -    | 17.3    | 17.8    | 14.9    | 11.6    | 11.7    | 10.8    | 9.2     | 12.3    | 12.6    |
| <b>Mat</b>          | % 1                 | Basic            | -    | 16.3    | 15.0    | 14.5    | 13.1    | 10.3    | 10.6    | 10.8    | 10.9    | 11.7    |
| A                   | Impact              | Proficient       | -    | 29.3    | 26.2    | 26.8    | 27.8    | 23.6    | 24.9    | 24.7    | 24.9    | 23.6    |
|                     | Im                  | Advanced         | -    | 37.2    | 41.0    | 43.8    | 47.5    | 54.3    | 53.7    | 55.4    | 51.9    | 52.1    |
|                     |                     | Prof. + Adv.     | -    | 66.4    | 67.2    | 70.6    | 75.3    | 78.0    | 78.6    | 80.0    | 76.8    | 75.7    |
|                     | s                   | N Count          | -    | 141300  | 138838  | 135807  | 132803  | 127685  | 126993  | 127152  | 131842  | 130189  |
|                     | qdı                 | % City           | -    | 10.9    | 10.7    | 10.0    | 9.7     | 9.6     | 9.2     | 8.6     | 8.0     | 7.6     |
|                     | Demographics        | % White          | -    | 75.1    | 74.3    | 74.4    | 74.1    | 73.3    | 72.7    | 72.1    | 71.5    | 70.7    |
|                     | ешс                 | % Black          | -    | 15.8    | 15.9    | 15.4    | 15.1    | 15.1    | 14.8    | 14.9    | 14.8    | 14.5    |
|                     | Ď                   | % Hispanic       | -    | 6.0     | 6.4     | 6.7     | 7.0     | 7.4     | 7.9     | 8.2     | 8.4     | 9.1     |

|                     |                   |                  | 2005   | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|---------------------|-------------------|------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                     | , o               | Mean             | 43.97  | 42.33   | 42.62   | 44.17   | 47.17   | 49.33   | 49.21   | 49.32   | 48.35   | 48.32   |
|                     | Raw<br>Score      | SD               | 13.69  | 13.71   | 13.70   | 13.54   | 14.84   | 14.53   | 14.17   | 13.99   | 14.40   | 15.62   |
|                     | <b>–</b> $\infty$ | Max              | 66     | 66      | 66      | 66      | 72      | 72      | 72      | 72      | 72      | 72      |
|                     | e g               | Mean             | 1369.2 | 1368.7  | 1393.5  | 1406.3  | 1419.8  | 1450.7  | 1448.7  | 1446.1  | 1425.8  | 1456.1  |
|                     | Scaled<br>Score   | SD               | 222.2  | 222.5   | 222.3   | 221.0   | 220.3   | 236.9   | 225.4   | 223.0   | 221.7   | 260.9   |
|                     |                   | Max              | 2240   | 2225    | 2259    | 2270    | 2286    | 2314    | 2310    | 2301    | 2288    | 2337    |
|                     | > v               | Bel. Basic/Basic | 31     | 29      | 28      | 29      | 28      | 30      | 30      | 30      | 30      | 30      |
| ~                   | Raw<br>Cuts       | Basic/Prof.      | 41     | 39      | 37      | 38      | 39      | 40      | 39      | 40      | 40      | 39      |
| de 8                |                   | Prof./Adv.       | 52     | 50      | 49      | 50      | 52      | 52      | 52      | 52      | 53      | 51      |
| Mathematics Grade 8 | et s              | Bel. Basic/Basic | =      | -0.0514 | -0.0174 | -0.0046 | -0.0649 | -0.0609 | -0.0168 | -0.0559 | -0.0349 | -0.0221 |
| 8                   | Theta<br>Cuts     | Basic/Prof.      | -      | 0.6355  | 0.6341  | 0.6221  | 0.6285  | 0.6122  | 0.5777  | 0.6189  | 0.6203  | 0.6128  |
| nati                |                   | Prof./Adv.       | -      | 1.4907  | 1.5493  | 1.5535  | 1.4991  | 1.5042  | 1.5154  | 1.5031  | 1.5409  | 1.5295  |
| hen                 |                   | Bel. Basic       | 19.3   | 18.9    | 16.9    | 16.0    | 12.8    | 12.0    | 11.4    | 11.4    | 12.9    | 15.6    |
| /Jat                | Impact %          | Basic            | 17.8   | 18.9    | 15.2    | 13.7    | 16.0    | 12.8    | 11.7    | 12.2    | 13.1    | 10.8    |
| A                   | paci              | Proficient       | 26.5   | 26.1    | 27.6    | 27.7    | 26.6    | 24.1    | 26.7    | 25.0    | 28.4    | 21.6    |
|                     | [m]               | Advanced         | 36.4   | 36.1    | 40.3    | 42.6    | 44.7    | 51.1    | 50.2    | 51.4    | 45.7    | 52.0    |
|                     |                   | Prof. + Adv.     | 62.9   | 62.2    | 67.9    | 70.3    | 71.2    | 75.1    | 76.9    | 76.5    | 74.0    | 73.6    |
|                     | S                 | N Count          | 145999 | 143749  | 141451  | 138582  | 135909  | 129983  | 126786  | 126204  | 131143  | 131363  |
|                     | ıphi              | % City           | 11.1   | 11.0    | 10.6    | 10.3    | 9.8     | 9.5     | 9.1     | 8.7     | 8.0     | 7.5     |
|                     | Demographics      | % White          | 76.8   | 75.9    | 75.0    | 74.5    | 74.4    | 74.1    | 73.3    | 72.6    | 71.8    | 71.3    |
|                     | oma               | % Black          | 15.0   | 15.4    | 15.7    | 15.6    | 15.0    | 14.7    | 14.8    | 14.5    | 14.7    | 14.6    |
|                     | Ď                 | % Hispanic       | 5.3    | 5.6     | 6.2     | 6.5     | 6.9     | 7.0     | 7.6     | 8.1     | 8.4     | 8.6     |

|                      |                 |                  | 2005   | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013 | 2014 |
|----------------------|-----------------|------------------|--------|---------|---------|---------|---------|---------|---------|---------|------|------|
|                      | , a             | Mean             | 39.89  | 43.39   | 40.95   | 42.00   | 45.97   | 47.62   | 47.99   | 45.57   | -    | -    |
|                      | Raw<br>Score    | SD               | 15.17  | 14.24   | 14.25   | 14.33   | 15.50   | 15.23   | 14.56   | 14.73   | -    | -    |
|                      |                 | Max              | 66     | 66      | 66      | 66      | 72      | 72      | 72      | 72      | -    | -    |
|                      |                 | Mean             | 1338.1 | 1342.5  | 1332.8  | 1343.8  | 1345.4  | 1372.2  | 1379.0  | 1375.8  | -    | -    |
|                      | Scaled<br>Score | SD               | 288.3  | 292.5   | 253.3   | 267.3   | 259.9   | 276.0   | 264.0   | 267.0   | -    | -    |
|                      | <u>~~~~~</u>    | Max              | 2440   | 2398    | 2349    | 2342    | 2347    | 2377    | 2425    | 2587    | -    | -    |
|                      | > v2            | Bel. Basic/Basic | 31     | 36      | 31      | 33      | 35      | 37      | 36      | 34      | -    | -    |
| Τ.                   | Raw<br>Cuts     | Basic/Prof.      | 41     | 45      | 41      | 42      | 46      | 46      | 46      | 43      | -    | -    |
| de 1                 |                 | Prof./Adv.       | 53     | 55      | 54      | 54      | 59      | 58      | 59      | 56      | -    |      |
| Mathematics Grade 11 | z s             | Bel. Basic/Basic | -      | -0.1182 | -0.1546 | -0.1113 | -0.1731 | -0.1149 | -0.1601 | -0.1157 | -    | -    |
|                      | Theta<br>Cuts   | Basic/Prof.      | -      | 0.5620  | 0.5150  | 0.5254  | 0.5272  | 0.4987  | 0.4983  | 0.4933  | -    | -    |
| ıati                 |                 | Prof./Adv.       | -      | 1.5382  | 1.5344  | 1.5474  | 1.5417  | 1.4788  | 1.5722  | 1.4957  | -    |      |
| hem                  |                 | Bel. Basic       | 30.5   | 30.4    | 26.6    | 26.6    | 24.9    | 24.8    | 21.6    | 23.2    | -    | -    |
| [at]                 | <b>t</b> %      | Basic            | 18.7   | 17.7    | 19.8    | 17.6    | 19.5    | 15.6    | 18.0    | 16.8    | -    | -    |
| 4                    | Impact          | Proficient       | 24.6   | 23.9    | 29.5    | 30.0    | 29.9    | 27.6    | 31.5    | 29.6    | -    | -    |
|                      | Im              | Advanced         | 26.3   | 28.1    | 24.2    | 25.9    | 25.7    | 32.0    | 28.8    | 30.4    | -    | -    |
|                      |                 | Prof. + Adv.     | 50.8   | 51.9    | 53.7    | 55.9    | 55.7    | 59.6    | 60.4    | 60.0    | -    | -    |
|                      | S               | N Count          | 129962 | 132666  | 135632  | 135137  | 133952  | 129910  | 127797  | 125113  | -    | -    |
|                      | ıph             | % City           | 9.3    | 8.5     | 8.2     | 7.8     | 8.4     | 8.2     | 8.2     | 7.5     | -    | -    |
|                      | Demographics    | % White          | 80.5   | 80.5    | 79.5    | 79.1    | 77.8    | 76.6    | 75.9    | 75.5    | -    | -    |
|                      | оша             | % Black          | 12.1   | 12.2    | 12.6    | 12.7    | 13.5    | 13.7    | 13.9    | 13.4    | -    | -    |
|                      | Ď               | % Hispanic       | 3.8    | 4.0     | 4.5     | 5.0     | 5.3     | 5.8     | 6.2     | 6.6     | -    | -    |

|                 |                     |                  | 2005 | 2006 | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|-----------------|---------------------|------------------|------|------|---------|---------|---------|---------|---------|---------|---------|---------|
|                 | , a                 | Mean             | -    | -    | 30.18   | 30.64   | 30.82   | 30.64   | 31.11   | 30.81   | 30.91   | 30.55   |
|                 | Raw<br>Score        | SD               | -    | -    | 9.43    | 8.87    | 8.80    | 9.09    | 8.87    | 8.98    | 9.34    | 9.73    |
|                 |                     | Max              | -    | -    | 46      | 46      | 46      | 46      | 46      | 46      | 46      | 46      |
|                 | g e                 | Mean             | -    | -    | 1330.8  | 1334.8  | 1342.1  | 1350.2  | 1346.5  | 1332.8  | 1335.8  | 1332.5  |
|                 | <b>Scaled</b> Score | SD               | -    | -    | 149.7   | 139.4   | 145.8   | 158.6   | 155.9   | 150.7   | 157.7   | 164.8   |
|                 |                     | Max              | -    | -    | 1891    | 1896    | 1928    | 1966    | 1942    | 1929    | 1907    | 1932    |
|                 | > x                 | Bel. Basic/Basic | =    | -    | 19      | 19      | 20      | 19      | 20      | 21      | 21      | 21      |
|                 | Ra w<br>Cuts        | Basic/Prof.      | -    | -    | 25      | 25      | 25      | 25      | 25      | 26      | 26      | 26      |
| Reading Grade 3 |                     | Prof./Adv.       | -    | -    | 39      | 39      | 38      | 38      | 38      | 38      | 39      | 39      |
|                 | es s                | Bel. Basic/Basic | -    | -    | -0.3137 | -0.3235 | -0.2423 | -0.3251 | -0.3173 | -0.2522 | -0.2423 | -0.2289 |
| Ë               | Theta<br>Cuts       | Basic/Prof.      | -    | -    | 0.2857  | 0.2836  | 0.2779  | 0.3125  | 0.2220  | 0.2858  | 0.2838  | 0.2828  |
| ing             |                     | Prof./Adv.       | -    | -    | 2.0417  | 2.0544  | 1.9360  | 2.0230  | 1.9466  | 1.8854  | 2.0420  | 2.0269  |
| ead             |                     | Bel. Basic       | -    | -    | 14.8    | 12.4    | 13.5    | 12.9    | 13.1    | 15.9    | 16.6    | 19.3    |
| ×               | % 1                 | Basic            | -    | -    | 12.4    | 10.7    | 9.5     | 11.9    | 9.6     | 10.0    | 10.0    | 10.4    |
|                 | Impact              | Proficient       | -    | -    | 50.8    | 57.1    | 50.8    | 47.9    | 48.9    | 46.9    | 49.1    | 44.5    |
|                 | [m]                 | Advanced         | -    | -    | 22.0    | 19.7    | 26.2    | 27.3    | 28.3    | 27.2    | 24.3    | 25.8    |
|                 |                     | Prof. + Adv.     | -    | -    | 72.8    | 76.9    | 77.0    | 75.2    | 77.2    | 74.1    | 73.4    | 70.3    |
|                 | s                   | N Count          | -    | -    | 125344  | 126395  | 127154  | 126588  | 124678  | 126062  | 126685  | 124659  |
|                 | ıphi                | % City           | -    | -    | 11.4    | 11.2    | 10.9    | 10.8    | 10.6    | 10.5    | 10.2    | 9.9     |
|                 | Demographics        | % White          | -    | -    | 73.2    | 72.8    | 72.5    | 71.6    | 70.8    | 70.0    | 69.1    | 67.9    |
|                 | эша                 | % Black          | -    | -    | 15.8    | 15.8    | 15.5    | 15.5    | 15.4    | 15.1    | 14.7    | 14.7    |
|                 | Ď                   | % Hispanic       | -    | -    | 7.2     | 7.5     | 7.6     | 8.1     | 8.5     | 8.8     | 9.4     | 10.0    |

|                 |                     |                  | 2005 | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|-----------------|---------------------|------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                 | . e                 | Mean             | -    | 33.10   | 31.74   | 33.93   | 34.07   | 34.97   | 35.41   | 35.30   | 34.70   | 35.07   |
|                 | Raw<br>Score        | SD               | -    | 9.92    | 9.63    | 9.82    | 10.15   | 9.98    | 9.26    | 9.59    | 10.19   | 10.23   |
|                 |                     | Max              | -    | 52      | 52      | 52      | 52      | 52      | 52      | 52      | 52      | 52      |
|                 | e g                 | Mean             | -    | 1339.3  | 1349.2  | 1366.6  | 1375.5  | 1379.6  | 1379.5  | 1367.6  | 1355.8  | 1350.4  |
|                 | <b>Scaled</b> Score | SD               | -    | 217.9   | 218.7   | 225.1   | 223.0   | 222.9   | 205.8   | 221.4   | 232.2   | 232.8   |
|                 | <u> </u>            | Max              | -    | 2303    | 2411    | 2318    | 2299    | 2294    | 2286    | 2249    | 2244    | 2255    |
|                 | > x                 | Bel. Basic/Basic | -    | 22      | 21      | 22      | 21      | 22      | 23      | 24      | 23      | 24      |
|                 | Ra w<br>Cuts        | Basic/Prof.      | -    | 30      | 28      | 30      | 29      | 30      | 31      | 31      | 32      | 32      |
| 4               |                     | Prof./Adv.       | -    | 40      | 38      | 40      | 40      | 41      | 41      | 42      | 42      | 42      |
| Reading Grade 4 | es s                | Bel. Basic/Basic | -    | -0.2218 | -0.1667 | -0.2014 | -0.2069 | -0.2073 | -0.1389 | -0.1402 | -0.2253 | -0.2057 |
| Ğ               | Theta<br>Cuts       | Basic/Prof.      | -    | 0.4935  | 0.5021  | 0.5469  | 0.5023  | 0.5057  | 0.5607  | 0.4941  | 0.5805  | 0.5086  |
| ing             |                     | Prof./Adv.       | -    | 1.5629  | 1.5675  | 1.6028  | 1.5925  | 1.6441  | 1.6033  | 1.6862  | 1.6694  | 1.6085  |
| ead             |                     | Bel. Basic       | -    | 15.3    | 14.9    | 13.6    | 12.8    | 12.8    | 11.3    | 13.5    | 14.8    | 15.7    |
| ×               | Impact %            | Basic            | -    | 16.6    | 15.0    | 16.3    | 14.6    | 14.3    | 15.3    | 14.4    | 18.6    | 15.6    |
|                 | pac                 | Proficient       | -    | 37.1    | 38.1    | 35.8    | 36.2    | 36.3    | 37.9    | 41.3    | 36.2    | 36.2    |
|                 | Im                  | Advanced         | -    | 31.0    | 32.0    | 34.3    | 36.4    | 36.6    | 35.4    | 30.8    | 30.4    | 32.4    |
|                 |                     | Prof. + Adv.     | -    | 68.1    | 70.1    | 70.1    | 72.6    | 72.9    | 73.4    | 72.0    | 66.6    | 68.6    |
|                 | <u>s</u>            | N Count          | -    | 127680  | 125981  | 126280  | 127519  | 128452  | 124535  | 121479  | 126491  | 126887  |
|                 | ıphi                | % City           | -    | 11.5    | 11.3    | 11.0    | 10.9    | 10.5    | 10.2    | 10.2    | 9.9     | 9.6     |
|                 | emographics         | % White          | -    | 74.5    | 73.7    | 73.0    | 72.5    | 72.2    | 71.4    | 70.6    | 69.9    | 68.8    |
|                 | эша                 | % Black          | -    | 15.4    | 15.7    | 15.7    | 15.6    | 15.3    | 15.2    | 15.0    | 14.8    | 14.5    |
|                 | Ď                   | % Hispanic       | -    | 6.4     | 6.9     | 7.4     | 7.6     | 7.7     | 8.4     | 8.7     | 9.0     | 9.7     |

|                 |                 |                  | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   |
|-----------------|-----------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                 | , a             | Mean             | 35.87  | 35.13  | 33.83  | 34.57  | 35.11  | 35.65  | 35.72  | 36.29  | 34.39  | 34.96  |
|                 | Raw<br>Score    | SD               | 9.52   | 9.81   | 9.68   | 9.80   | 9.19   | 8.79   | 8.53   | 9.07   | 10.00  | 9.59   |
|                 |                 | Max              | 52     | 52     | 52     | 52     | 52     | 52     | 52     | 52     | 52     | 52     |
|                 | e g             | Mean             | 1334.8 | 1311.5 | 1318.0 | 1329.7 | 1332.1 | 1328.9 | 1354.3 | 1353.5 | 1331.7 | 1321.9 |
|                 | Scaled<br>Score | SD               | 235.1  | 232.9  | 221.9  | 222.0  | 219.8  | 217.6  | 214.5  | 226.4  | 238.7  | 227.8  |
|                 |                 | Max              | 2300   | 2234   | 2261   | 2262   | 2322   | 2357   | 2344   | 2293   | 2314   | 2312   |
|                 | > v             | Bel. Basic/Basic | 28     | 28     | 26     | 26     | 27     | 28     | 27     | 28     | 27     | 28     |
|                 | Raw<br>Cuts     | Basic/Prof.      | 35     | 35     | 33     | 34     | 34     | 35     | 34     | 35     | 34     | 35     |
| w               |                 | Prof./Adv.       | 44     | 44     | 43     | 43     | 43     | 43     | 43     | 43     | 43     | 43     |
| Reading Grade 5 | et s            | Bel. Basic/Basic | -      | 0.2263 | 0.2564 | 0.2378 | 0.2289 | 0.2219 | 0.2425 | 0.2815 | 0.2948 | 0.2788 |
| Ë               | Theta<br>Cuts   | Basic/Prof.      | -      | 0.9268 | 0.9094 | 0.9934 | 0.9321 | 0.9505 | 0.9668 | 0.9794 | 0.9868 | 0.9757 |
| ing             |                 | Prof./Adv.       | -      | 2.0985 | 2.0854 | 2.0706 | 2.1020 | 2.0584 | 2.1815 | 2.0234 | 2.1469 | 2.0449 |
| ead             |                 | Bel. Basic       | 19.1   | 21.1   | 20.4   | 18.9   | 17.9   | 17.2   | 14.6   | 17.0   | 21.7   | 21.4   |
| ×               | Impact %        | Basic            | 16.7   | 18.3   | 19.7   | 19.6   | 17.5   | 18.7   | 18.2   | 18.0   | 17.3   | 18.0   |
|                 | pac             | Proficient       | 41.3   | 39.8   | 39.2   | 38.1   | 41.8   | 41.2   | 44.9   | 36.7   | 37.3   | 36.3   |
|                 | [m]             | Advanced         | 22.9   | 20.8   | 20.8   | 23.5   | 22.7   | 22.9   | 22.4   | 28.3   | 23.7   | 24.2   |
|                 |                 | Prof. + Adv.     | 64.2   | 60.6   | 59.9   | 61.5   | 64.5   | 64.1   | 67.2   | 65.0   | 61.0   | 60.5   |
|                 | S               | N Count          | 134142 | 131488 | 129593 | 127211 | 127430 | 128933 | 125963 | 124007 | 125727 | 126639 |
|                 | ıphi            | % City           | 12.2   | 11.6   | 11.0   | 10.8   | 10.6   | 10.5   | 9.7    | 9.5    | 9.3    | 8.9    |
|                 | gra             | % White          | 74.4   | 74.7   | 74.3   | 73.5   | 72.9   | 72.2   | 72.2   | 71.3   | 70.2   | 69.6   |
|                 | emographics     | % Black          | 16.3   | 15.6   | 15.5   | 15.6   | 15.5   | 15.6   | 15.0   | 14.8   | 15.0   | 14.6   |
|                 | De              | % Hispanic       | 5.9    | 6.3    | 6.7    | 7.2    | 7.5    | 7.8    | 7.9    | 8.6    | 8.9    | 9.3    |

|                 |                                       |                  | 2005 | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|-----------------|---------------------------------------|------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                 | , a                                   | Mean             | -    | 32.96   | 33.11   | 34.54   | 35.44   | 35.71   | 36.22   | 35.79   | 34.66   | 34.07   |
|                 | Raw<br>Score                          | SD               | -    | 9.26    | 9.87    | 9.60    | 9.67    | 9.72    | 9.27    | 9.47    | 9.39    | 10.15   |
|                 |                                       | Max              | -    | 52      | 52      | 52      | 52      | 52      | 52      | 52      | 52      | 52      |
|                 | e g                                   | Mean             | -    | 1335.6  | 1342.7  | 1357.6  | 1373.1  | 1378.4  | 1396.4  | 1377.0  | 1358.9  | 1365.9  |
|                 | Scaled<br>Score                       | SD               | -    | 210.4   | 223.9   | 221.5   | 222.4   | 233.7   | 234.0   | 238.4   | 222.5   | 246.0   |
|                 | ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | Max              | -    | 2339    | 2306    | 2290    | 2285    | 2293    | 2332    | 2319    | 2350    | 2391    |
|                 | > v3                                  | Bel. Basic/Basic | -    | 23      | 23      | 24      | 24      | 25      | 25      | 25      | 24      | 24      |
|                 | Raw<br>Cuts                           | Basic/Prof.      | -    | 31      | 31      | 32      | 33      | 33      | 33      | 33      | 33      | 32      |
| 9               |                                       | Prof./Adv.       | -    | 39      | 40      | 41      | 41      | 41      | 41      | 41      | 40      | 40      |
| Reading Grade 6 | s s                                   | Bel. Basic/Basic | -    | -0.2409 | -0.1960 | -0.1898 | -0.1980 | -0.1583 | -0.1615 | -0.2155 | -0.2323 | -0.1657 |
| Ę               | Theta<br>Cuts                         | Basic/Prof.      | -    | 0.5452  | 0.5488  | 0.5587  | 0.6215  | 0.5928  | 0.6003  | 0.5576  | 0.6276  | 0.5995  |
| ing             |                                       | Prof./Adv.       | -    | 1.4345  | 1.5094  | 1.5553  | 1.5044  | 1.5051  | 1.5402  | 1.5031  | 1.4366  | 1.5169  |
| ead             |                                       | Bel. Basic       | -    | 15.6    | 17.0    | 15.3    | 14.0    | 14.8    | 13.1    | 14.2    | 14.4    | 18.0    |
| ×               | Impact %                              | Basic            | -    | 18.5    | 19.6    | 17.7    | 18.4    | 16.4    | 17.0    | 17.3    | 20.5    | 17.5    |
|                 | pac                                   | Proficient       | -    | 33.5    | 32.7    | 34.9    | 30.5    | 30.7    | 30.5    | 31.1    | 28.3    | 27.1    |
|                 | [m]                                   | Advanced         | -    | 32.4    | 30.8    | 32.0    | 37.1    | 38.1    | 39.4    | 37.4    | 36.9    | 37.4    |
|                 |                                       | Prof. + Adv.     | -    | 65.9    | 63.5    | 66.9    | 67.6    | 68.7    | 69.9    | 68.5    | 65.2    | 64.6    |
|                 | S                                     | N Count          | -    | 135914  | 133399  | 130706  | 128284  | 128921  | 126170  | 126146  | 129305  | 126044  |
|                 | tphi                                  | % City           | -    | 11.4    | 10.8    | 10.3    | 10.2    | 10.1    | 9.7     | 9.0     | 8.6     | 8.2     |
|                 | Demographics                          | % White          | -    | 74.5    | 74.6    | 74.3    | 73.3    | 72.7    | 72.2    | 72.0    | 70.9    | 69.9    |
|                 | эша                                   | % Black          | -    | 16.0    | 15.6    | 15.3    | 15.4    | 15.3    | 15.2    | 14.7    | 14.8    | 14.8    |
|                 | Ď                                     | % Hispanic       | -    | 6.2     | 6.5     | 6.9     | 7.3     | 7.6     | 8.0     | 8.2     | 8.9     | 9.3     |

|                 |                                       |                  | 2005 | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|-----------------|---------------------------------------|------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                 | _ e _                                 | Mean             | -    | 33.13   | 33.19   | 34.12   | 34.52   | 34.83   | 34.42   | 35.06   | 33.96   | 34.68   |
|                 | Raw<br>Score                          | SD               | -    | 9.75    | 10.18   | 10.05   | 9.91    | 9.48    | 9.02    | 8.96    | 10.06   | 9.83    |
|                 |                                       | Max              | -    | 52      | 52      | 52      | 52      | 52      | 52      | 52      | 52      | 52      |
|                 | e g                                   | Mean             | -    | 1363.5  | 1372.4  | 1394.2  | 1413.1  | 1413.9  | 1418.3  | 1412.8  | 1397.5  | 1409.0  |
|                 | Scaled<br>Score                       | SD               | -    | 220.1   | 229.7   | 234.8   | 231.0   | 219.2   | 210.7   | 221.2   | 228.1   | 231.0   |
|                 | ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | Max              | -    | 2351    | 2361    | 2366    | 2388    | 2373    | 2387    | 2394    | 2338    | 2319    |
|                 | > v                                   | Bel. Basic/Basic | -    | 22      | 22      | 22      | 21      | 22      | 21      | 23      | 21      | 22      |
|                 | Raw<br>Cuts                           | Basic/Prof.      | -    | 30      | 30      | 30      | 30      | 30      | 29      | 30      | 30      | 30      |
| <b>F</b>        |                                       | Prof./Adv.       | -    | 39      | 39      | 40      | 39      | 39      | 38      | 39      | 39      | 39      |
| Reading Grade 7 | s s                                   | Bel. Basic/Basic | -    | -0.3167 | -0.2713 | -0.2808 | -0.3012 | -0.2353 | -0.2950 | -0.2634 | -0.3202 | -0.2756 |
| Ğ               | Theta<br>Cuts                         | Basic/Prof.      | -    | 0.4230  | 0.4511  | 0.4361  | 0.4955  | 0.4820  | 0.4572  | 0.4224  | 0.5051  | 0.4776  |
| ing             |                                       | Prof./Adv.       | -    | 1.3773  | 1.3771  | 1.4939  | 1.4066  | 1.4015  | 1.3935  | 1.4251  | 1.4282  | 1.4063  |
| ead             |                                       | Bel. Basic       | -    | 14.6    | 16.0    | 13.8    | 11.2    | 11.2    | 9.2     | 10.7    | 12.8    | 12.2    |
| ×               | % <b>1</b>                            | Basic            | -    | 17.3    | 17.3    | 16.2    | 17.4    | 15.3    | 14.8    | 13.2    | 16.9    | 15.7    |
|                 | Impact                                | Proficient       | -    | 33.2    | 30.3    | 34.0    | 30.0    | 31.6    | 32.7    | 34.7    | 30.7    | 30.3    |
|                 | Im                                    | Advanced         | -    | 34.9    | 36.5    | 36.0    | 41.4    | 41.9    | 43.3    | 41.3    | 39.7    | 41.7    |
|                 |                                       | Prof. + Adv.     | -    | 68.0    | 66.8    | 70.0    | 71.4    | 73.5    | 76.0    | 76.1    | 70.4    | 72.1    |
|                 | S                                     | N Count          | -    | 141012  | 138610  | 135669  | 132641  | 130376  | 126902  | 126765  | 131767  | 130053  |
|                 | ıph                                   | % City           | -    | 10.9    | 10.6    | 10.0    | 9.7     | 9.6     | 9.2     | 8.6     | 8.0     | 7.6     |
|                 | Demographics                          | % White          | -    | 75.2    | 74.4    | 74.5    | 74.2    | 73.3    | 72.7    | 72.1    | 71.5    | 70.7    |
|                 | оша                                   | % Black          | -    | 15.7    | 15.9    | 15.4    | 15.1    | 15.2    | 14.9    | 14.9    | 14.7    | 14.5    |
|                 | Ď                                     | % Hispanic       | -    | 6.0     | 6.4     | 6.7     | 7.0     | 7.4     | 7.9     | 8.2     | 8.4     | 9.1     |

|                 |                 |                  | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   |
|-----------------|-----------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                 | _ e ₄           | Mean             | 39.12  | 34.98  | 33.08  | 33.57  | 34.77  | 34.61  | 35.60  | 35.18  | 33.28  | 34.59  |
|                 | Raw<br>Score    | SD               | 9.07   | 9.78   | 8.98   | 10.13  | 9.55   | 8.89   | 8.93   | 9.30   | 9.90   | 9.65   |
|                 |                 | Max              | 52     | 52     | 52     | 52     | 52     | 52     | 52     | 52     | 52     | 52     |
|                 | e g             | Mean             | 1359.5 | 1424.8 | 1441.3 | 1479.9 | 1499.5 | 1491.3 | 1513.0 | 1505.5 | 1483.1 | 1494.4 |
|                 | Scaled<br>Score | SD               | 274.3  | 284.7  | 249.2  | 272.8  | 263.7  | 245.3  | 260.4  | 265.7  | 263.4  | 263.0  |
|                 |                 | Max              | 2349   | 2559   | 2646   | 2628   | 2621   | 2635   | 2639   | 2626   | 2616   | 2610   |
|                 | > v             | Bel. Basic/Basic | 33     | 25     | 22     | 20     | 21     | 21     | 22     | 21     | 20     | 21     |
|                 | Raw<br>Cuts     | Basic/Prof.      | 39     | 31     | 28     | 26     | 27     | 27     | 28     | 28     | 26     | 27     |
| <b>∞</b>        |                 | Prof./Adv.       | 45     | 39     | 36     | 35     | 36     | 36     | 36     | 36     | 34     | 36     |
| Reading Grade 8 | es s            | Bel. Basic/Basic | -      | 0.1584 | 0.1727 | 0.1507 | 0.1775 | 0.1659 | 0.1977 | 0.1407 | 0.1997 | 0.1860 |
| Ğ               | Theta<br>Cuts   | Basic/Prof.      | -      | 0.7466 | 0.7668 | 0.7042 | 0.7360 | 0.7294 | 0.7688 | 0.7964 | 0.7631 | 0.7419 |
| ing             |                 | Prof./Adv.       | -      | 1.6424 | 1.6248 | 1.5700 | 1.6317 | 1.6340 | 1.5882 | 1.6002 | 1.5315 | 1.6310 |
| ead             |                 | Bel. Basic       | 19.7   | 16.2   | 12.3   | 12.1   | 10.6   | 8.7    | 8.9    | 9.0    | 11.7   | 11.0   |
| ×               | %               | Basic            | 16.3   | 13.2   | 12.7   | 9.6    | 8.9    | 9.4    | 9.3    | 11.3   | 10.8   | 9.4    |
|                 | Impact %        | Proficient       | 30.6   | 27.1   | 29.3   | 24.2   | 25.2   | 28.6   | 24.1   | 24.1   | 21.9   | 24.9   |
|                 | [m]             | Advanced         | 33.5   | 43.5   | 45.7   | 54.1   | 55.3   | 53.3   | 57.7   | 55.7   | 55.6   | 54.7   |
|                 | -               | Prof. + Adv.     | 64.0   | 70.6   | 75.0   | 78.2   | 80.5   | 81.9   | 81.7   | 79.8   | 77.5   | 79.6   |
|                 | <u>s</u>        | N Count          | 145752 | 143401 | 141193 | 138377 | 135739 | 132906 | 127125 | 126250 | 131006 | 131218 |
|                 | ıphi            | % City           | 11.1   | 11.0   | 10.6   | 10.2   | 9.8    | 9.4    | 9.0    | 8.6    | 7.9    | 7.5    |
|                 | gra             | % White          | 76.8   | 76.0   | 75.0   | 74.5   | 74.5   | 74.1   | 73.3   | 72.6   | 71.9   | 71.3   |
|                 | Demographics    | % Black          | 15.0   | 15.4   | 15.7   | 15.6   | 15.0   | 14.8   | 14.8   | 14.5   | 14.7   | 14.6   |
|                 | Ď               | % Hispanic       | 5.3    | 5.6    | 6.2    | 6.5    | 6.9    | 7.1    | 7.6    | 8.1    | 8.4    | 8.6    |

|                  |                 |                  | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013 | 2014 |
|------------------|-----------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|
|                  | _ o             | Mean             | 38.75  | 34.76  | 34.02  | 34.81  | 35.04  | 35.25  | 35.88  | 35.99  | -    | -    |
|                  | Raw<br>Score    | SD               | 9.51   | 9.13   | 9.55   | 9.28   | 9.39   | 9.38   | 9.10   | 8.49   | -    | -    |
|                  |                 | Max              | 52     | 52     | 52     | 52     | 52     | 52     | 52     | 52     | -    | -    |
|                  |                 | Mean             | 1362.9 | 1366.4 | 1346.2 | 1360.2 | 1368.5 | 1363.2 | 1381.6 | 1370.0 | -    | -    |
|                  | Scaled<br>Score | SD               | 316.5  | 278.5  | 266.9  | 276.2  | 280.8  | 280.4  | 273.4  | 258.6  | -    | -    |
|                  | <u>~~~~~</u>    | Max              | 2446   | 2631   | 2529   | 2546   | 2524   | 2520   | 2511   | 2520   | -    | -    |
|                  | > v             | Bel. Basic/Basic | 33     | 27     | 26     | 27     | 27     | 27     | 27     | 28     | -    | -    |
|                  | Raw<br>Cuts     | Basic/Prof.      | 38     | 33     | 32     | 33     | 33     | 33     | 33     | 34     | -    | -    |
| 11               |                 | Prof./Adv.       | 45     | 41     | 41     | 41     | 41     | 41     | 41     | 41     | -    | -    |
| Reading Grade 11 | z s             | Bel. Basic/Basic | -      | 0.0646 | 0.0416 | 0.0582 | 0.0675 | 0.0156 | 0.0437 | 0.0633 | -    | -    |
|                  | Theta<br>Cuts   | Basic/Prof.      | -      | 0.6639 | 0.6034 | 0.6497 | 0.6540 | 0.6097 | 0.6194 | 0.6795 | -    | -    |
| in g             |                 | Prof./Adv.       | -      | 1.6804 | 1.6229 | 1.6056 | 1.5958 | 1.5606 | 1.5392 | 1.5355 | -    | -    |
| gadi             |                 | Bel. Basic       | 22.0   | 18.5   | 19.3   | 19.0   | 18.8   | 18.0   | 15.9   | 15.7   | -    | -    |
| Ä                | <b>,</b> %      | Basic            | 12.9   | 16.3   | 15.3   | 16.2   | 15.9   | 14.8   | 14.9   | 16.5   | -    | -    |
|                  | Impact          | Proficient       | 31.4   | 33.9   | 36.5   | 32.9   | 32.1   | 33.2   | 33.0   | 33.6   | -    | -    |
|                  | Im              | Advanced         | 33.6   | 31.2   | 28.9   | 31.8   | 33.1   | 34.0   | 36.1   | 34.2   | -    | -    |
|                  |                 | Prof. + Adv.     | 65.0   | 65.2   | 65.4   | 64.7   | 65.3   | 67.2   | 69.2   | 67.8   | -    | -    |
|                  | S               | N Count          | 129693 | 132434 | 135364 | 135015 | 133753 | 133291 | 127997 | 125380 | -    | -    |
|                  | ıph             | % City           | 9.3    | 8.5    | 8.2    | 7.8    | 8.4    | 8.2    | 8.2    | 7.4    | -    | -    |
|                  | gra             | % White          | 80.6   | 80.5   | 79.6   | 79.2   | 77.8   | 76.4   | 75.9   | 75.5   | -    | -    |
|                  | Demographics    | % Black          | 12.1   | 12.2   | 12.5   | 12.7   | 13.4   | 13.9   | 13.9   | 13.3   | -    | -    |
|                  | Ď               | % Hispanic       | 3.8    | 4.0    | 4.5    | 4.9    | 5.2    | 5.9    | 6.2    | 6.6    | -    | -    |

|                 |                     |                  | 2005 | 2006 | 2007 | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|-----------------|---------------------|------------------|------|------|------|---------|---------|---------|---------|---------|---------|---------|
|                 | e                   | Mean             | -    | -    | -    | 45.80   | 47.25   | 48.64   | 48.47   | 45.73   | 45.47   | 47.41   |
|                 | Raw<br>Score        | SD               | -    | -    | -    | 11.04   | 11.53   | 12.22   | 11.88   | 12.28   | 13.20   | 13.01   |
|                 |                     | Max              | -    | -    | -    | 66      | 66      | 68      | 68      | 68      | 68      | 68      |
|                 | e gd                | Mean             | -    | -    | -    | 1429.4  | 1449.2  | 1456.8  | 1452.4  | 1447.8  | 1435.5  | 1447.8  |
|                 | <b>Scaled</b> Score | SD               | -    | -    | -    | 174.1   | 176.0   | 200.4   | 181.9   | 183.8   | 196.0   | 206.9   |
|                 | <u> </u>            | Max              | -    | -    | -    | 2256    | 2271    | 2254    | 2234    | 2285    | 2269    | 2259    |
|                 | > v                 | Bel. Basic/Basic | -    | -    | -    | 26      | 25      | 28      | 26      | 24      | 25      | 27      |
|                 | Raw<br>Cuts         | Basic/Prof.      | -    | -    | -    | 36      | 36      | 38      | 37      | 34      | 35      | 37      |
| 4               |                     | Prof./Adv.       | -    | -    | -    | 51      | 52      | 53      | 53      | 50      | 51      | 53      |
| Science Grade 4 | e s                 | Bel. Basic/Basic | -    | -    | -    | -0.4243 | -0.4261 | -0.3909 | -0.3994 | -0.3851 | -0.3750 | -0.3956 |
| Grä             | Theta<br>Cuts       | Basic/Prof.      | -    | -    | -    | 0.2798  | 0.3223  | 0.3093  | 0.3180  | 0.3065  | 0.3115  | 0.2983  |
| ıce             |                     | Prof./Adv.       | -    | -    | -    | 1.4659  | 1.5133  | 1.4914  | 1.4788  | 1.4523  | 1.4658  | 1.5376  |
| cie             |                     | Bel. Basic       | -    | -    | -    | 5.9     | 4.9     | 7.7     | 5.6     | 6.1     | 9.2     | 9.4     |
| S               | Impact %            | Basic            | -    | -    | -    | 12.7    | 11.7    | 10.8    | 11.5    | 11.6    | 12.2    | 11.4    |
|                 | pac                 | Proficient       | -    | -    | -    | 41.2    | 41.0    | 35.5    | 38.0    | 37.8    | 36.0    | 36.0    |
|                 | Im                  | Advanced         | -    | -    | -    | 40.3    | 42.4    | 45.9    | 44.9    | 44.5    | 42.5    | 43.2    |
|                 |                     | Prof. + Adv.     | -    | -    | -    | 81.5    | 83.4    | 81.5    | 83.0    | 82.3    | 78.6    | 79.2    |
|                 | s                   | N Count          | -    | -    | -    | 126426  | 127537  | 128565  | 128103  | 125170  | 126729  | 127105  |
|                 | ıphi                | % City           | -    | -    | -    | 10.9    | 10.7    | 10.5    | 10.2    | 10.3    | 10.0    | 9.6     |
|                 | emographics         | % White          | -    | -    | -    | 72.9    | 72.5    | 72.0    | 71.2    | 70.4    | 69.6    | 68.7    |
|                 | оша                 | % Black          | -    | -    | -    | 15.5    | 15.5    | 15.3    | 15.2    | 15.1    | 14.8    | 14.4    |
|                 | Ď                   | % Hispanic       | -    | -    | =    | 7.6     | 7.7     | 7.9     | 8.5     | 8.9     | 9.2     | 9.8     |

|                   |                     |                  | 2005 | 2006 | 2007 | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|-------------------|---------------------|------------------|------|------|------|---------|---------|---------|---------|---------|---------|---------|
|                   | , a                 | Mean             | -    | -    | -    | 38.25   | 41.00   | 42.61   | 42.10   | 43.09   | 44.04   | 45.48   |
|                   | Raw<br>Score        | SD               | -    | -    | -    | 11.71   | 13.02   | 13.74   | 13.62   | 12.75   | 13.52   | 13.81   |
|                   |                     | Max              | -    | -    | -    | 66      | 66      | 68      | 68      | 68      | 68      | 68      |
|                   | e g                 | Mean             | -    | -    | -    | 1284.4  | 1302.9  | 1309.0  | 1312.5  | 1319.6  | 1323.2  | 1324.1  |
|                   | <b>Scaled</b> Score | SD               | -    | -    | -    | 174.1   | 197.6   | 210.1   | 203.2   | 191.9   | 209.9   | 209.3   |
|                   |                     | Max              | -    | -    | -    | 2297    | 2303    | 2258    | 2283    | 2276    | 2268    | 2213    |
|                   | > v                 | Bel. Basic/Basic | -    | -    | -    | 29      | 31      | 33      | 31      | 32      | 33      | 35      |
|                   | Raw<br>Cuts         | Basic/Prof.      | -    | -    | -    | 39      | 41      | 42      | 41      | 42      | 43      | 45      |
| <b>∞</b>          |                     | Prof./Adv.       | -    | -    | -    | 51      | 53      | 55      | 54      | 54      | 55      | 57      |
| Science Grade 8   | Theta Cuts          | Bel. Basic/Basic | -    | -    | -    | -0.2333 | -0.2118 | -0.1829 | -0.2267 | -0.2018 | -0.2263 | -0.1862 |
| Gr                |                     | Basic/Prof.      | -    | -    | -    | 0.4587  | 0.4620  | 0.4202  | 0.4102  | 0.4526  | 0.4352  | 0.4695  |
| ıce               |                     | Prof./Adv.       | -    | -    | =    | 1.4173  | 1.4098  | 1.4771  | 1.4148  | 1.4096  | 1.4295  | 1.4916  |
| cie               |                     | Bel. Basic       | -    | -    | =    | 23.1    | 24.0    | 25.5    | 22.9    | 20.9    | 22.3    | 22.9    |
| $\mathbf{\alpha}$ | Impact %            | Basic            | -    | -    | -    | 24.3    | 21.1    | 17.3    | 18.9    | 19.5    | 17.7    | 16.6    |
|                   | pac                 | Proficient       | -    | -    | -    | 36.4    | 32.5    | 33.7    | 34.0    | 35.4    | 33.4    | 34.9    |
|                   | Im.                 | Advanced         | -    | -    | -    | 16.3    | 22.3    | 23.5    | 24.3    | 24.3    | 26.7    | 25.6    |
|                   |                     | Prof. + Adv.     | -    | -    | -    | 52.7    | 54.8    | 57.2    | 58.3    | 59.6    | 60.1    | 60.5    |
|                   | s                   | N Count          | -    | -    | -    | 137790  | 134969  | 132452  | 127075  | 126112  | 130637  | 130918  |
|                   | ıphi                | % City           | -    | -    | -    | 10.1    | 9.7     | 9.3     | 9.0     | 8.6     | 7.9     | 7.4     |
|                   | emographics         | % White          | -    | -    | -    | 74.6    | 74.5    | 74.1    | 73.2    | 72.6    | 71.7    | 71.3    |
|                   | ome                 | % Black          | -    | -    | -    | 15.3    | 14.9    | 14.6    | 14.7    | 14.4    | 14.7    | 14.5    |
|                   | Ď                   | % Hispanic       | -    | -    | -    | 6.6     | 7.0     | 7.1     | 7.6     | 8.1     | 8.5     | 8.6     |

|                  |                     |                  | 2005 | 2006 | 2007 | 2008    | 2009    | 2010    | 2011    | 2012    | 2013 | 2014 |
|------------------|---------------------|------------------|------|------|------|---------|---------|---------|---------|---------|------|------|
|                  | , a                 | Mean             | -    | -    | -    | 36.11   | 39.02   | 39.48   | 39.72   | 39.47   | -    | -    |
|                  | Raw<br>Score        | SD               | -    | -    | -    | 12.46   | 13.16   | 13.02   | 13.94   | 13.38   | -    | -    |
|                  |                     | Max              | -    | -    | -    | 72      | 72      | 74      | 74      | 74      | -    | -    |
|                  | e g                 | Mean             | -    | -    | -    | 1236.3  | 1244.0  | 1242.6  | 1244.8  | 1245.9  | -    | -    |
|                  | <b>Scaled Score</b> | SD               | -    | -    | -    | 89.0    | 101.5   | 96.7    | 96.5    | 93.5    | -    | -    |
|                  | <u> </u>            | Max              | -    | -    | -    | 1825    | 1859    | 1862    | 1822    | 1814    | -    | -    |
|                  | > v                 | Bel. Basic/Basic | -    | -    | -    | 24      | 27      | 27      | 26      | 25      | -    | -    |
|                  | Ra w<br>Cuts        | Basic/Prof.      | -    | -    | -    | 42      | 44      | 45      | 45      | 44      | -    | -    |
| 7                |                     | Prof./Adv.       | -    | -    | -    | 53      | 53      | 54      | 56      | 55      | -    | -    |
| Science Grade 11 | e s                 | Bel. Basic/Basic | -    | -    | -    | -0.3955 | -0.3898 | -0.4062 | -0.3853 | -0.4439 | -    | -    |
| Gra              | Theta<br>Cuts       | Basic/Prof.      | -    | -    | -    | 0.7921  | 0.8144  | 0.8288  | 0.7891  | 0.7792  | -    | -    |
| 9                |                     | Prof./Adv.       | -    | -    | -    | 1.5577  | 1.4967  | 1.5053  | 1.5633  | 1.5334  | -    | -    |
| zien             |                     | Bel. Basic       | -    | -    | -    | 18.1    | 19.8    | 19.0    | 18.8    | 16.3    | -    | -    |
| Š                | Impact %            | Basic            | -    | -    | -    | 46.2    | 40.5    | 41.2    | 40.4    | 41.8    | -    | -    |
|                  | pac                 | Proficient       | -    | -    | -    | 25.2    | 22.5    | 25.0    | 26.7    | 27.6    | -    | -    |
|                  | Im                  | Advanced         | -    | -    | -    | 10.5    | 17.2    | 14.8    | 14.1    | 14.2    | -    | -    |
|                  |                     | Prof. + Adv.     | -    | -    | -    | 35.6    | 39.7    | 39.8    | 40.8    | 41.9    | -    | -    |
|                  | S                   | N Count          | -    | -    | -    | 131157  | 130262  | 129926  | 125307  | 121693  | -    | -    |
|                  | hdt                 | % City           | -    | -    | -    | 6.8     | 7.3     | 7.0     | 7.4     | 6.4     | -    | -    |
|                  | Demographics        | % White          | -    | -    | -    | 80.2    | 78.8    | 77.5    | 76.8    | 76.7    | -    | -    |
|                  | ешс                 | % Black          | -    | -    | -    | 11.6    | 12.4    | 13.0    | 13.1    | 12.4    | -    | -    |
|                  | Ď                   | % Hispanic       | -    | -    | -    | 4.8     | 5.1     | 5.7     | 6.0     | 6.2     | -    |      |

|      |                                 |                  | 2005 | 2006   | 2007   | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|------|---------------------------------|------------------|------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
|      | . e                             | Mean             | -    | 68.63  | 65.07  | 66.56   | 66.03   | 65.44   | 65.83   | 64.82   | 65.63   | 63.10   |
|      | Raw<br>Score                    | SD               | -    | 12.97  | 13.03  | 13.93   | 14.35   | 14.55   | 14.57   | 14.91   | 13.93   | 14.89   |
|      |                                 | Max              | -    | 100    | 100    | 100     | 100     | 100     | 100     | 100     | 100     | 100     |
|      | e g                             | Mean             | -    | 1300.2 | 1274.5 | 1319.6  | 1303.2  | 1322.1  | 1351.3  | 1331.0  | 1315.6  | 1330.6  |
|      | <b>Scaled</b> Score             | SD               | -    | 248.9  | 215.4  | 304.4   | 246.0   | 265.5   | 277.7   | 275.7   | 262.6   | 282.0   |
|      | <u> </u>                        | Max              | -    | 2188   | 2145   | 2615    | 2162    | 2249    | 2294    | 2314    | 2274    | 2354    |
|      | > x                             | Bel. Basic/Basic | -    | 35     | 35     | 34      | 31      | 30      | 31      | 28      | 33      | 29      |
|      | Raw<br>Cuts                     | Basic/Prof.      | -    | 68     | 64     | 65      | 64      | 63      | 61      | 62      | 63      | 59      |
| w    |                                 | Prof./Adv.       | -    | 96     | 98     | 89      | 97      | 94      | 92      | 91      | 93      | 88      |
| ade  | s s                             | Bel. Basic/Basic |      |        |        | -3.2096 | -3.2167 | -3.2280 | -3.1071 | -3.1662 | -3.1257 | -3.0765 |
| Ë    | Writing Grade 5    Theta   Cuts | Basic/Prof.      |      |        |        | 1.6555  | 1.7538  | 1.7554  | 1.7133  | 1.7283  | 1.6573  | 1.6398  |
| ing  |                                 | Prof./Adv.       |      |        |        | 8.6187  | 8.4299  | 8.4710  | 8.4777  | 8.3972  | 8.4274  | 8.3673  |
| Vrit |                                 | Bel. Basic       | -    | 0.8    | 1.1    | 1.2     | 1.0     | 1.8     | 1.9     | 1.8     | 1.4     | 2.3     |
| >    | %<br><b>1</b>                   | Basic            | -    | 45.0   | 41.6   | 41.6    | 40.9    | 36.5    | 31.0    | 34.0    | 35.3    | 36.5    |
|      | Impact %                        | Proficient       | -    | 52.0   | 56.0   | 52.7    | 55.5    | 59.8    | 64.9    | 62.5    | 61.7    | 56.2    |
|      | Im                              | Advanced         | -    | 2.1    | 1.3    | 4.6     | 2.6     | 2.0     | 2.2     | 1.7     | 1.7     | 5.1     |
|      |                                 | Prof. + Adv.     | -    | 54.1   | 57.3   | 57.3    | 58.1    | 61.7    | 67.1    | 64.2    | 63.3    | 61.2    |
|      | ics —                           | N Count          | -    | 129802 | 128637 | 125547  | 126625  | 128201  | 128833  | 127549  | 124041  | 124666  |
|      | qdı                             | % City           | -    | 11.2   | 10.7   | 10.5    | 10.4    | 10.4    | 9.6     | 9.5     | 9.2     | 8.7     |
|      | gra                             | % White          | -    | 75.2   | 74.6   | 73.9    | 73.1    | 72.4    | 72.2    | 71.3    | 70.5    | 70.0    |
|      | Demographics                    | % Black          | -    | 15.2   | 15.2   | 15.5    | 15.3    | 15.4    | 15.1    | 14.9    | 14.9    | 14.3    |
|      | Ď                               | % Hispanic       | -    | 6.2    | 6.6    | 7.0     | 7.5     | 7.7     | 7.9     | 8.6     | 8.9     | 9.2     |

|      |  |                  | 2005 | 2006   | 2007   | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    |
|------|--|------------------|------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
|      | . e  | Mean             | -    | 71.71  | 67.24  | 68.05   | 67.82   | 68.36   | 67.11   | 67.06   | 66.63   | 67.23   |
|      | Writing Grade 8  Writing Grade 8  Cuts Raw Scaled Raw Cuts Score Score | SD               | -    | 14.09  | 13.91  | 13.32   | 13.83   | 14.90   | 14.22   | 14.41   | 14.49   | 13.89   |
|      |  | Max              | -    | 100    | 100    | 100     | 100     | 100     | 100     | 100     | 100     | 100     |
|      | e g  | Mean             | -    | 1340.5 | 1375.1 | 1322.5  | 1363.1  | 1400.9  | 1415.5  | 1406.6  | 1402.9  | 1391.4  |
|      | cale   | SD               | -    | 266.0  | 258.4  | 210.5   | 265.5   | 271.9   | 272.1   | 276.8   | 268.4   | 264.8   |
|      | <u> </u>   | Max              | -    | 2119   | 2265   | 2098    | 2288    | 2245    | 2329    | 2341    | 2306    | 2321    |
|      | > x  | Bel. Basic/Basic | -    | 45     | 40     | 43      | 43      | 38      | 38      | 38      | 38      | 40      |
|      | <b>Ray</b><br>Cut  | Basic/Prof.      | -    | 69     | 60     | 63      | 62      | 60      | 58      | 59      | 58      | 60      |
| ∞    |  | Prof./Adv.       | -    | 92     | 85     | 94      | 85      | 86      | 82      | 82      | 83      | 82      |
| ade  | s s  | Bel. Basic/Basic |      |        |        | -1.9218 | -2.0619 | -2.0663 | -2.0134 | -1.9652 | -1.9614 | -1.9605 |
| Ë    | ng Grade   | Basic/Prof.      |      |        |        | 1.1614  | 1.1847  | 1.1789  | 1.2283  | 1.2174  | 1.2152  | 1.2286  |
| ing  |  | Prof./Adv.       |      |        |        | 6.4254  | 6.3760  | 6.4115  | 6.3574  | 6.4652  | 6.3932  | 6.2487  |
| Vrit |  | Bel. Basic       | -    | 3.4    | 2.8    | 2.9     | 4.2     | 3.2     | 2.8     | 3.2     | 3.3     | 3.8     |
| >    | %<br><b>1</b>  | Basic            | -    | 30.6   | 25.5   | 28.0    | 24.6    | 21.6    | 24.1    | 24.1    | 24.1    | 22.6    |
|      | Impact %   | Proficient       | -    | 60.5   | 60.9   | 66.8    | 60.7    | 61.7    | 62.1    | 62.2    | 61.5    | 63.7    |
|      | Im   | Advanced         | -    | 5.6    | 10.9   | 2.3     | 10.5    | 13.5    | 11.0    | 10.5    | 11.1    | 9.8     |
|      |  | Prof. + Adv.     | -    | 66.0   | 71.7   | 69.1    | 71.2    | 75.1    | 73.1    | 72.7    | 72.6    | 73.6    |
|      | s  | N Count          | -    | 141365 | 139263 | 136417  | 134976  | 131780  | 129619  | 129035  | 129823  | 130302  |
|      | qdı  | % City           | -    | 10.4   | 10.1   | 9.8     | 9.6     | 9.3     | 8.9     | 8.5     | 7.8     | 7.4     |
|      | gra  | % White          | -    | 76.7   | 75.6   | 75.0    | 74.7    | 74.3    | 73.4    | 72.7    | 72.0    | 71.5    |
|      | Demographics   | % Black          | -    | 14.9   | 15.3   | 15.2    | 14.9    | 14.6    | 14.8    | 14.5    | 14.7    | 14.5    |
|      | Ď  | % Hispanic       | -    | 5.5    | 6.0    | 6.4     | 6.8     | 7.0     | 7.5     | 8.0     | 8.3     | 8.5     |

|                  |                 |                  | 2005 | 2006   | 2007   | 2008    | 2009    | 2010    | 2011    | 2012    | 2013 | 2014 |
|------------------|-----------------|------------------|------|--------|--------|---------|---------|---------|---------|---------|------|------|
|                  | e ~             | Mean             | -    | 71.90  | 70.23  | 69.71   | 72.30   | 69.60   | 71.44   | 68.63   | -    | -    |
|                  | Raw<br>Score    | SD               | -    | 13.22  | 11.48  | 13.27   | 14.48   | 14.35   | 14.76   | 15.27   | -    | -    |
|                  |                 | Max              | -    | 100    | 100    | 100     | 100     | 100     | 100     | 100     | -    | -    |
|                  | g e             | Mean             | -    | 1515.7 | 1442.9 | 1470.6  | 1480.4  | 1483.7  | 1536.8  | 1523.3  | -    | -    |
|                  | Scaled<br>Score | SD               | -    | 274.8  | 216.7  | 262.8   | 283.7   | 282.3   | 298.6   | 293.9   | -    | -    |
|                  | <u> </u>        | Max              | -    | 2356   | 2283   | 2377    | 2257    | 2382    | 2364    | 2418    | -    | -    |
|                  | > x             | Bel. Basic/Basic | -    | 36     | 38     | 36      | 39      | 35      | 34      | 31      | -    | -    |
|                  | Ra w<br>Cuts    | Basic/Prof.      | -    | 57     | 59     | 56      | 60      | 57      | 55      | 53      | -    | -    |
| 11               |                 | Prof./Adv.       | -    | 83     | 87     | 84      | 88      | 82      | 83      | 81      | -    | -    |
| Writing Grade 11 | s s             | Bel. Basic/Basic |      |        |        | -2.8217 | -2.8091 | -2.7956 | -2.7861 | -2.9190 | -    | -    |
| Gra              | Theta<br>Cuts   | Basic/Prof.      |      |        |        | -0.0891 | -0.0515 | -0.0159 | -0.0562 | 0.0251  | -    | -    |
| ng (             |                 | Prof./Adv.       |      |        |        | 5.6192  | 5.6480  | 5.6311  | 5.7382  | 5.7556  | -    | -    |
| riti             |                 | Bel. Basic       | -    | 1.2    | 0.8    | 1.2     | 2.3     | 2.2     | 1.7     | 2.5     | -    | -    |
| <b>&gt;</b>      | Impact %        | Basic            | -    | 13.1   | 11.3   | 13.0    | 14.9    | 17.1    | 13.6    | 14.6    | -    | -    |
|                  | pac             | Proficient       | -    | 69.8   | 80.2   | 72.2    | 67.9    | 67.7    | 66.0    | 69.3    | -    | -    |
|                  | [m]             | Advanced         | -    | 15.8   | 7.7    | 13.6    | 14.8    | 13.0    | 18.7    | 13.6    | -    | -    |
|                  |                 | Prof. + Adv.     | -    | 85.7   | 87.8   | 85.8    | 82.8    | 80.7    | 84.7    | 82.9    | -    | -    |
|                  | s               | N Count          | -    | 130572 | 133368 | 132349  | 132866  | 130352  | 128775  | 125095  | -    | -    |
|                  | ıphi            | % City           | -    | 7.9    | 7.4    | 7.0     | 7.9     | 7.3     | 7.5     | 6.7     | -    | -    |
|                  | emographics     | % White          | -    | 81.4   | 80.3   | 80.1    | 78.2    | 77.3    | 76.5    | 76.5    | -    | -    |
|                  | <b>om</b> a     | % Black          | -    | 11.6   | 12.0   | 11.9    | 13.1    | 13.2    | 13.4    | 12.8    | -    | -    |
|                  | Ď               | % Hispanic       | -    | 3.8    | 4.3    | 4.8     | 5.1     | 5.7     | 6.1     | 6.2     | -    | -    |

Appendix R:

ELA: Writing Field Test Report

#### INTRODUCTION

The ELA: Writing Field Tests for grades 3–8 are designed to yield a sufficient number of a) standalone language/convention MC items and b) narrative, informative, and persuasive writing prompts to cover six administrations. The size of these tests are expected to mirror the operational writing portion of the ELA test (Section 4) and include unique field-test MC items, linking MC items (identical MC items appearing in the same position on all standalone field-test forms), and unique writing prompts representing one of three modes (narrative, informative, or persuasive). The testing window was spring 2013 for grades 3, 4, and 5, and spring 2014 for grades 6, 7, and 8. The participation was voluntary.

The main purpose of this appendix is to document the psychometric analyses conducted on the writing field tests administered in spring 2013 and 2014. The psychometric analyses included are:

- key verification analysis of multiple-choice (MC) items,
- item analysis based on classical test theory,
- differential item functioning (DIF) analysis, and
- item calibration based on the Rasch model.

This report also includes the following results:

- Data review meeting results
- Inter-Rater Agreement

The technical information provided in this report is intended for users who are interested in learning how the field tests were analyzed and how the results were interpreted and used for subsequent educational decisions. It is assumed that the reader has technical knowledge of test construction and measurement procedures, as stated in the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 1999).

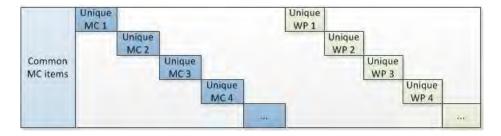
#### **TEST DESIGN**

To calibrate all the field-test items within one content area on the same scale, the common item non-equivalent groups design was employed. In other words, multiple forms were field tested to different groups of students and these forms shared common or linking items that were administered to all students. Figures 1 and 2 illustrate the test design for the 2013 and 2014 ELA: Writing Field Tests for grade 3, and grades 4 through 8, respectively. With all grades, a common set of multiple-choice (MC) items were given to all students. With grade 3, there were also common open-ended (OE) items. A subset of the student sample took the unique MC and writing prompt (WP) items that varied across forms in all grades. Grade 3 also had unique OE items.

Unique Unique Unique MC1 WP1 OE 1 Unique Unique Unique WP 2 OE 2 MC 2 Unique Unique Unique Common Common MC items OE items WP3 MC 3 OE 3 Unique Unique Unique WP4 MC4 OE 4

Figure 1. Test Design for the 2013 and 2014 ELA: Writing Field Tests for Grade 3.

Figure R. Test Design for the 2013 and 2014 ELA: Writing Field Tests for Grades 4–8.



The number of common, unique, and total MC, WP, and OE items per form are shown in Table 1. It also provides the number of forms and total number of items. The WP items were scored on a 1 to 4 point scale for all grades, and the OE items were scored on a 0 to 2 point scale.

No. of Common No. of Unique Items Total No. of Items No. of Total No. of Items per Form per Form Forms Grade Items per Form MC WP WP MC WP MC OE **OE** MC **OE** OE 3 10 2 8 2 18 4 20 170 20 42 4 14 0 10 1 0 24 1 0 20 214 20 0 5 14 0 10 1 0 24 1 0 20 214 20 0 6 13 0 11 0 24 0 20 233 20 0 1 1 7 24 0 20 233 20 13 0 11 1 0 1 0 8 13 0 11 0 24 20 233 20 0 1 1

Table 1. Test Design

#### SAMPLING

Participation in the field test was voluntary. To increase the likelihood of equivalent groups taking each of the 20 forms, the forms were administered in a spiral fashion.

#### **Summary of demographic characteristics (MC and WP items separately)**

Frequency data for each demographic category is presented in Tables 2 through 14. Percentages were based on students with a valid score. Table 2 presents the overall demographic information for the students who took the field tests for each grade. The gender distribution of the sample was balanced, as one would expect. For the ethnicity demographic, approximately 67.8% to 71.1% of students reported as White. The next largest ethnicity group was Black/African American, ranging from 13.6% to 15.2%. The proportion of Hispanic ranged from 9.1% to 10.2%. The economically disadvantaged students' percentage varied from 43.7% to 45.3%.

Table 2. Demographic Characteristics of the Overall Sample by Grade

|              | Grade            |        | 3    |             | 4       |       | 5    |       | 6    |       | 7    |       | 8    |
|--------------|------------------|--------|------|-------------|---------|-------|------|-------|------|-------|------|-------|------|
|              | =                | N      | %    | N           | %       | N     | %    | N     | %    | N     | %    | N     | %    |
|              | Total            | 102193 |      | 100887      |         | 99336 |      | 80846 |      | 78481 |      | 74573 |      |
| Gender       | Male             | 51966  | 50.9 | 51145       | 50.7    | 50719 | 51.1 | 40806 | 50.5 | 39488 | 50.3 | 37530 | 50.3 |
|              | Female           | 49820  | 48.8 | 49535       | 49.1    | 48313 | 48.6 | 39024 | 48.3 | 37969 | 48.4 | 35882 | 48.1 |
| Ethnicity    | White            | 71195  | 69.7 | 71128       | 70.5    | 70619 | 71.1 | 54852 | 67.8 | 53600 | 68.3 | 50827 | 68.2 |
|              | Af. Ameri.       | 13928  | 13.6 | 13978       | 13.9    | 13838 | 13.9 | 12010 | 14.9 | 11653 | 14.8 | 11329 | 15.2 |
|              | Hispanic         | 9867   | 9.7  | 9352        | 9.3     | 9035  | 9.1  | 8364  | 10.3 | 8029  | 10.2 | 7391  | 9.9  |
|              | Asian            | 3573   | 3.5  | 3473        | 3.4     | 3285  | 3.3  | 2452  | 3.0  | 2291  | 2.9  | 2060  | 2.8  |
|              | Am. Indian       | 152    | 0.1  | 153         | 0.2     | 156   | 0.2  | 122   | 0.2  | 112   | 0.1  | 101   | 0.1  |
|              | Pacific Islander |        |      | Included in | ı Asian |       |      | 55    | 0.1  | 65    | 0.1  | 66    | 0.1  |
|              | Multi            | 3003   | 2.9  | 2466        | 2.4     | 1973  | 2.0  | 1879  | 2.3  | 1608  | 2.0  | 1505  | 2.0  |
| Eco.<br>Dis. | Yes              | 45880  | 44.9 | 44666       | 44.3    | 43429 | 43.7 | 36618 | 45.3 | 35167 | 44.8 | 32898 | 44.1 |
|              | No               | 56313  | 55.1 | 56221       | 55.7    | 55907 | 56.3 | 44228 | 54.7 | 43314 | 55.2 | 41675 | 55.9 |

Tables 3 through 14 provide gender, ethnicity (White, Black, and Hispanic) and economically disadvantaged information by form for MC and WP items. All students' responses were scored for MC items, but only subsets of students were scored for the WP items and OE items for grade 3, with approximate sample size of 1500. The percentage of students in each demographic characteristic appears to be comparable across most of the forms.

Table 3. Demographic Characteristics for Grade 3 MC Sample by Form

|      |      | Ge   | nder |      |      |      | Et    | hnicity |      |       | Eco. | Dis. |
|------|------|------|------|------|------|------|-------|---------|------|-------|------|------|
| Form | Ma   | ıle  | Fem  | ale  | Wh   | ite  | Af. A | meri.   | Hisp | panic | Y    | es   |
|      | N    | %    | N    | %    | N    | %    | N     | %       | N    | %     | N    | %    |
| 1    | 2580 | 50.2 | 2534 | 49.3 | 3583 | 69.7 | 691   | 13.4    | 494  | 9.6   | 2298 | 44.7 |
| 2    | 2606 | 50.7 | 2521 | 49.0 | 3558 | 69.2 | 685   | 13.3    | 508  | 9.9   | 2333 | 45.3 |
| 3    | 2669 | 52.1 | 2432 | 47.5 | 3588 | 70.1 | 644   | 12.6    | 503  | 9.8   | 2284 | 44.6 |
| 4    | 2692 | 52.4 | 2427 | 47.2 | 3602 | 70.1 | 681   | 13.2    | 494  | 9.6   | 2305 | 44.8 |
| 5    | 2615 | 51.0 | 2496 | 48.6 | 3571 | 69.6 | 735   | 14.3    | 471  | 9.2   | 2261 | 44.1 |
| 6    | 2548 | 49.7 | 2564 | 50.0 | 3545 | 69.1 | 710   | 13.8    | 531  | 10.4  | 2313 | 45.1 |
| 7    | 2599 | 50.9 | 2489 | 48.7 | 3568 | 69.9 | 702   | 13.7    | 492  | 9.6   | 2327 | 45.6 |
| 8    | 2608 | 51.1 | 2479 | 48.6 | 3525 | 69.0 | 708   | 13.9    | 490  | 9.6   | 2290 | 44.9 |
| 9    | 2635 | 51.4 | 2476 | 48.3 | 3574 | 69.7 | 686   | 13.4    | 500  | 9.7   | 2342 | 45.6 |
| 10   | 2602 | 50.7 | 2511 | 48.9 | 3609 | 70.3 | 690   | 13.4    | 480  | 9.4   | 2307 | 45.0 |
| 11   | 2579 | 50.6 | 2496 | 49.0 | 3561 | 69.8 | 695   | 13.6    | 483  | 9.5   | 2285 | 44.8 |
| 12   | 2646 | 52.1 | 2418 | 47.6 | 3507 | 69.0 | 706   | 13.9    | 511  | 10.1  | 2291 | 45.1 |
| 13   | 2566 | 50.3 | 2509 | 49.2 | 3563 | 69.9 | 702   | 13.8    | 490  | 9.6   | 2301 | 45.1 |
| 14   | 2583 | 50.7 | 2483 | 48.8 | 3570 | 70.1 | 700   | 13.8    | 472  | 9.3   | 2260 | 44.4 |
| 15   | 2516 | 49.8 | 2520 | 49.9 | 3553 | 70.3 | 711   | 14.1    | 475  | 9.4   | 2275 | 45.0 |
| 16   | 2594 | 51.0 | 2471 | 48.6 | 3545 | 69.7 | 685   | 13.5    | 500  | 9.8   | 2290 | 45.1 |
| 17   | 2613 | 50.9 | 2503 | 48.8 | 3544 | 69.0 | 727   | 14.2    | 499  | 9.7   | 2328 | 45.3 |
| 18   | 2613 | 51.1 | 2481 | 48.5 | 3565 | 69.7 | 696   | 13.6    | 510  | 10.0  | 2290 | 44.8 |
| 19   | 2546 | 50.0 | 2519 | 49.5 | 3530 | 69.4 | 667   | 13.1    | 513  | 10.1  | 2244 | 44.1 |
| 20   | 2556 | 50.5 | 2491 | 49.2 | 3534 | 69.8 | 707   | 14.0    | 451  | 8.9   | 2256 | 44.5 |

Table 4. Demographic Characteristics for Grade 3 WP Sample by Form

|      |       |     | Ge   | nder |      |      |      | Et    | hnicity |      |       | Eco | Dis. |
|------|-------|-----|------|------|------|------|------|-------|---------|------|-------|-----|------|
| Form | Total | M   | ale  | Fen  | nale | Wh   | ite  | Af. A | meri.   | Hisp | panic | Y   | es   |
|      |       | N   | %    | N    | %    | N    | %    | N     | %       | N    | %     | N   | %    |
| 1    | 1499  | 748 | 49.9 | 744  | 49.6 | 1069 | 71.3 | 210   | 14.0    | 122  | 8.1   | 643 | 42.9 |
| 2    | 1499  | 768 | 51.2 | 728  | 48.6 | 1013 | 67.6 | 218   | 14.5    | 133  | 8.9   | 684 | 45.6 |
| 3    | 1500  | 822 | 54.8 | 668  | 44.5 | 1047 | 69.8 | 180   | 12.0    | 147  | 9.8   | 645 | 43.0 |
| 4    | 1499  | 808 | 53.9 | 685  | 45.7 | 1033 | 68.9 | 200   | 13.3    | 157  | 10.5  | 661 | 44.1 |
| 5    | 1498  | 770 | 51.4 | 723  | 48.3 | 1030 | 68.8 | 215   | 14.4    | 150  | 10.0  | 660 | 44.1 |
| 6    | 1500  | 771 | 51.4 | 728  | 48.5 | 1042 | 69.5 | 197   | 13.1    | 169  | 11.3  | 677 | 45.1 |
| 7    | 1499  | 749 | 50.0 | 745  | 49.7 | 1047 | 69.8 | 186   | 12.4    | 169  | 11.3  | 715 | 47.7 |
| 8    | 1500  | 777 | 51.8 | 718  | 47.9 | 1046 | 69.7 | 199   | 13.3    | 131  | 8.7   | 678 | 45.2 |
| 9    | 1500  | 763 | 50.9 | 727  | 48.5 | 1042 | 69.5 | 210   | 14.0    | 134  | 8.9   | 681 | 45.4 |
| 10   | 1500  | 768 | 51.2 | 727  | 48.5 | 1064 | 70.9 | 199   | 13.3    | 124  | 8.3   | 667 | 44.5 |
| 11   | 1500  | 770 | 51.3 | 722  | 48.1 | 1058 | 70.5 | 198   | 13.2    | 144  | 9.6   | 646 | 43.1 |
| 12   | 1500  | 762 | 50.8 | 735  | 49.0 | 1047 | 69.8 | 195   | 13.0    | 157  | 10.5  | 687 | 45.8 |
| 13   | 1500  | 779 | 51.9 | 713  | 47.5 | 1057 | 70.5 | 206   | 13.7    | 130  | 8.7   | 700 | 46.7 |
| 14   | 1500  | 763 | 50.9 | 729  | 48.6 | 1074 | 71.6 | 196   | 13.1    | 133  | 8.9   | 651 | 43.4 |
| 15   | 1500  | 747 | 49.8 | 746  | 49.7 | 1032 | 68.8 | 214   | 14.3    | 147  | 9.8   | 683 | 45.5 |
| 16   | 1500  | 776 | 51.7 | 719  | 47.9 | 1021 | 68.1 | 209   | 13.9    | 174  | 11.6  | 687 | 45.8 |
| 17   | 1499  | 768 | 51.2 | 725  | 48.4 | 1027 | 68.5 | 213   | 14.2    | 153  | 10.2  | 691 | 46.1 |
| 18   | 1500  | 738 | 49.2 | 755  | 50.3 | 1035 | 69.0 | 203   | 13.5    | 153  | 10.2  | 690 | 46.0 |
| 19   | 1500  | 744 | 49.6 | 751  | 50.1 | 1053 | 70.2 | 188   | 12.5    | 155  | 10.3  | 666 | 44.4 |
| 20   | 1499  | 763 | 50.9 | 734  | 49.0 | 1044 | 69.6 | 206   | 13.7    | 128  | 8.5   | 670 | 44.7 |

**Table 5. Demographic Characteristics for Grade 4 MC Sample by Form** 

|      |      | Ger  | nder |      |      |      | E     | hnicity |     |       | Eco. | Dis. |
|------|------|------|------|------|------|------|-------|---------|-----|-------|------|------|
| Form | M    | ale  | Fem  | ale  | Wh   | ite  | Af. A | meri.   | His | panic | Y    | es   |
|      | N    | %    | N    | %    | N    | %    | N     | %       | N   | %     | N    | %    |
| 1    | 2646 | 51.6 | 2462 | 48.0 | 3595 | 70.2 | 714   | 13.9    | 476 | 9.3   | 2267 | 44.2 |
| 2    | 2584 | 51.0 | 2473 | 48.8 | 3563 | 70.3 | 689   | 13.6    | 489 | 9.6   | 2224 | 43.9 |
| 3    | 2564 | 50.6 | 2490 | 49.2 | 3578 | 70.7 | 691   | 13.6    | 483 | 9.5   | 2200 | 43.5 |
| 4    | 2606 | 51.6 | 2433 | 48.2 | 3521 | 69.8 | 704   | 13.9    | 502 | 9.9   | 2265 | 44.9 |
| 5    | 2518 | 50.3 | 2484 | 49.6 | 3543 | 70.7 | 688   | 13.7    | 464 | 9.3   | 2151 | 42.9 |
| 6    | 2519 | 50.0 | 2507 | 49.8 | 3545 | 70.4 | 697   | 13.8    | 460 | 9.1   | 2204 | 43.7 |
| 7    | 2593 | 51.3 | 2455 | 48.5 | 3578 | 70.7 | 677   | 13.4    | 475 | 9.4   | 2286 | 45.2 |
| 8    | 2530 | 50.3 | 2489 | 49.5 | 3543 | 70.5 | 687   | 13.7    | 451 | 9.0   | 2228 | 44.3 |
| 9    | 2528 | 50.1 | 2510 | 49.8 | 3614 | 71.6 | 690   | 13.7    | 434 | 8.6   | 2220 | 44.0 |
| 10   | 2589 | 51.5 | 2430 | 48.3 | 3550 | 70.6 | 697   | 13.9    | 454 | 9.0   | 2213 | 44.0 |
| 11   | 2538 | 50.5 | 2479 | 49.3 | 3488 | 69.4 | 707   | 14.1    | 474 | 9.4   | 2205 | 43.8 |
| 12   | 2564 | 50.8 | 2473 | 49.0 | 3558 | 70.5 | 714   | 14.1    | 446 | 8.8   | 2317 | 45.9 |
| 13   | 2509 | 50.0 | 2496 | 49.7 | 3556 | 70.8 | 727   | 14.5    | 432 | 8.6   | 2268 | 45.2 |
| 14   | 2580 | 51.2 | 2445 | 48.6 | 3542 | 70.3 | 682   | 13.5    | 506 | 10.0  | 2207 | 43.8 |
| 15   | 2535 | 50.2 | 2501 | 49.6 | 3560 | 70.5 | 712   | 14.1    | 479 | 9.5   | 2235 | 44.3 |
| 16   | 2547 | 50.5 | 2490 | 49.4 | 3576 | 70.9 | 676   | 13.4    | 467 | 9.3   | 2236 | 44.3 |
| 17   | 2445 | 48.8 | 2557 | 51.0 | 3543 | 70.7 | 715   | 14.3    | 454 | 9.1   | 2254 | 45.0 |
| 18   | 2586 | 51.4 | 2435 | 48.4 | 3527 | 70.1 | 706   | 14.0    | 470 | 9.3   | 2252 | 44.8 |
| 19   | 2540 | 50.3 | 2501 | 49.5 | 3579 | 70.9 | 694   | 13.7    | 480 | 9.5   | 2190 | 43.4 |
| 20   | 2624 | 51.9 | 2425 | 48.0 | 3569 | 70.6 | 711   | 14.1    | 456 | 9.0   | 2244 | 44.4 |

Table 6. Demographic Characteristics for Grade 4 WP Sample by Form

|      |       |     | Gen  | der |      |      |      | Et    | hnicity |     |       | Eco | . Dis. |
|------|-------|-----|------|-----|------|------|------|-------|---------|-----|-------|-----|--------|
| Form | total | M   | ale  | Fen | nale | Wh   | ite  | Af. A | meri.   | His | panic | Y   | es     |
|      |       | N   | %    | N   | %    | N    | %    | N     | %       | N   | %     | N   | %      |
| 1    | 1500  | 784 | 52.3 | 708 | 47.2 | 1037 | 69.1 | 209   | 13.9    | 146 | 9.7   | 671 | 44.7   |
| 2    | 1500  | 742 | 49.5 | 753 | 50.2 | 1069 | 71.3 | 196   | 13.1    | 144 | 9.6   | 649 | 43.3   |
| 3    | 1499  | 750 | 50.0 | 748 | 49.9 | 1079 | 72.0 | 204   | 13.6    | 134 | 8.9   | 662 | 44.2   |
| 4    | 1500  | 766 | 51.1 | 732 | 48.8 | 1037 | 69.1 | 197   | 13.1    | 171 | 11.4  | 661 | 44.1   |
| 5    | 1500  | 763 | 50.9 | 733 | 48.9 | 1049 | 69.9 | 212   | 14.1    | 152 | 10.1  | 652 | 43.5   |
| 6    | 1500  | 700 | 46.7 | 796 | 53.1 | 1053 | 70.2 | 201   | 13.4    | 154 | 10.3  | 674 | 44.9   |
| 7    | 1499  | 771 | 51.4 | 727 | 48.5 | 1052 | 70.2 | 197   | 13.1    | 147 | 9.8   | 696 | 46.4   |
| 8    | 1500  | 739 | 49.3 | 760 | 50.7 | 1050 | 70.0 | 201   | 13.4    | 142 | 9.5   | 670 | 44.7   |
| 9    | 1500  | 743 | 49.5 | 754 | 50.3 | 1098 | 73.2 | 191   | 12.7    | 123 | 8.2   | 655 | 43.7   |
| 10   | 1500  | 791 | 52.7 | 705 | 47.0 | 1046 | 69.7 | 192   | 12.8    | 157 | 10.5  | 655 | 43.7   |
| 11   | 1500  | 756 | 50.4 | 737 | 49.1 | 1048 | 69.9 | 206   | 13.7    | 139 | 9.3   | 664 | 44.3   |
| 12   | 1500  | 768 | 51.2 | 728 | 48.5 | 1074 | 71.6 | 195   | 13.0    | 139 | 9.3   | 692 | 46.1   |
| 13   | 1500  | 754 | 50.3 | 741 | 49.4 | 1055 | 70.3 | 225   | 15.0    | 121 | 8.1   | 656 | 43.7   |
| 14   | 1499  | 767 | 51.2 | 728 | 48.6 | 1057 | 70.5 | 203   | 13.5    | 145 | 9.7   | 659 | 44.0   |
| 15   | 1500  | 770 | 51.3 | 725 | 48.3 | 1048 | 69.9 | 225   | 15.0    | 135 | 9.0   | 695 | 46.3   |
| 16   | 1500  | 761 | 50.7 | 738 | 49.2 | 1069 | 71.3 | 198   | 13.2    | 132 | 8.8   | 649 | 43.3   |
| 17   | 1500  | 719 | 47.9 | 778 | 51.9 | 1081 | 72.1 | 218   | 14.5    | 120 | 8.0   | 652 | 43.5   |
| 18   | 1500  | 763 | 50.9 | 735 | 49.0 | 1069 | 71.3 | 211   | 14.1    | 140 | 9.3   | 666 | 44.4   |
| 19   | 1500  | 757 | 50.5 | 738 | 49.2 | 1082 | 72.1 | 188   | 12.5    | 130 | 8.7   | 632 | 42.1   |
| 20   | 1499  | 782 | 52.2 | 714 | 47.6 | 1027 | 68.5 | 218   | 14.5    | 159 | 10.6  | 668 | 44.6   |

Table 7. Demographic Characteristics for Grade 5 MC Sample by Form

|      |      | Ge   | nder |      |      |      | Et    | hnicity |      |      | Eco. | Dis. |
|------|------|------|------|------|------|------|-------|---------|------|------|------|------|
| Form | Ma   | ale  | Fem  | ale  | Wh   | ite  | Af. A | meri.   | Hisp | anic | Y    | es   |
|      | N    | %    | N    | %    | N    | %    | N     | %       | N    | %    | N    | %    |
| 1    | 2577 | 51.6 | 2404 | 48.2 | 3499 | 70.1 | 706   | 14.1    | 476  | 9.5  | 2212 | 44.3 |
| 2    | 2561 | 51.4 | 2407 | 48.3 | 3531 | 70.8 | 670   | 13.4    | 472  | 9.5  | 2166 | 43.5 |
| 3    | 2543 | 50.8 | 2450 | 48.9 | 3582 | 71.5 | 717   | 14.3    | 407  | 8.1  | 2184 | 43.6 |
| 4    | 2507 | 50.4 | 2452 | 49.3 | 3489 | 70.2 | 730   | 14.7    | 465  | 9.4  | 2197 | 44.2 |
| 5    | 2561 | 51.3 | 2421 | 48.4 | 3559 | 71.2 | 685   | 13.7    | 466  | 9.3  | 2246 | 44.9 |
| 6    | 2578 | 51.4 | 2422 | 48.3 | 3512 | 70.0 | 736   | 14.7    | 458  | 9.1  | 2194 | 43.7 |
| 7    | 2585 | 51.8 | 2390 | 47.9 | 3526 | 70.7 | 708   | 14.2    | 463  | 9.3  | 2213 | 44.3 |
| 8    | 2524 | 50.8 | 2422 | 48.8 | 3562 | 71.8 | 645   | 13.0    | 468  | 9.4  | 2153 | 43.4 |
| 9    | 2572 | 51.6 | 2399 | 48.1 | 3550 | 71.2 | 702   | 14.1    | 447  | 9.0  | 2146 | 43.1 |
| 10   | 2500 | 50.2 | 2465 | 49.5 | 3547 | 71.2 | 686   | 13.8    | 426  | 8.6  | 2149 | 43.1 |
| 11   | 2547 | 51.7 | 2358 | 47.9 | 3529 | 71.7 | 655   | 13.3    | 434  | 8.8  | 2165 | 44.0 |
| 12   | 2522 | 50.9 | 2409 | 48.7 | 3539 | 71.5 | 715   | 14.4    | 435  | 8.8  | 2144 | 43.3 |
| 13   | 2525 | 51.7 | 2346 | 48.0 | 3502 | 71.7 | 687   | 14.1    | 410  | 8.4  | 2117 | 43.3 |
| 14   | 2487 | 50.5 | 2427 | 49.3 | 3521 | 71.5 | 714   | 14.5    | 425  | 8.6  | 2132 | 43.3 |
| 15   | 2438 | 49.7 | 2452 | 50.0 | 3494 | 71.3 | 682   | 13.9    | 469  | 9.6  | 2191 | 44.7 |
| 16   | 2552 | 51.5 | 2384 | 48.1 | 3579 | 72.2 | 643   | 13.0    | 443  | 8.9  | 2146 | 43.3 |
| 17   | 2561 | 51.2 | 2431 | 48.6 | 3578 | 71.5 | 681   | 13.6    | 455  | 9.1  | 2186 | 43.7 |
| 18   | 2551 | 51.3 | 2408 | 48.4 | 3552 | 71.4 | 660   | 13.3    | 474  | 9.5  | 2169 | 43.6 |
| 19   | 2557 | 51.6 | 2381 | 48.1 | 3472 | 70.1 | 714   | 14.4    | 458  | 9.2  | 2141 | 43.2 |
| 20   | 2471 | 49.7 | 2485 | 50.0 | 3496 | 70.3 | 702   | 14.1    | 484  | 9.7  | 2178 | 43.8 |

Table 8. Demographic Characteristics for Grade 5 WP Sample by Form

| •    |       |     | Ger  | nder |      | •    | •    | Et    | hnicity | •   |       | Eco | . Dis. |
|------|-------|-----|------|------|------|------|------|-------|---------|-----|-------|-----|--------|
| Form | Total | Ma  | ale  | Fen  | nale | Wh   | ite  | Af. A | meri.   | His | panic | Y   | es     |
|      |       | N   | %    | N    | %    | N    | %    | N     | %       | N   | %     | N   | %      |
| 1    | 1500  | 782 | 52.1 | 714  | 47.6 | 1056 | 70.4 | 210   | 14.0    | 133 | 8.9   | 648 | 43.2   |
| 2    | 1499  | 767 | 51.2 | 724  | 48.3 | 1050 | 70.0 | 213   | 14.2    | 148 | 9.9   | 623 | 41.6   |
| 3    | 1499  | 769 | 51.3 | 726  | 48.4 | 1072 | 71.5 | 209   | 13.9    | 135 | 9.0   | 684 | 45.6   |
| 4    | 1500  | 768 | 51.2 | 728  | 48.5 | 1057 | 70.5 | 227   | 15.1    | 129 | 8.6   | 635 | 42.3   |
| 5    | 1500  | 764 | 50.9 | 732  | 48.8 | 1074 | 71.6 | 199   | 13.3    | 149 | 9.9   | 681 | 45.4   |
| 6    | 1500  | 737 | 49.1 | 759  | 50.6 | 1052 | 70.1 | 202   | 13.5    | 153 | 10.2  | 653 | 43.5   |
| 7    | 1500  | 771 | 51.4 | 725  | 48.3 | 1042 | 69.5 | 213   | 14.2    | 146 | 9.7   | 660 | 44.0   |
| 8    | 1500  | 788 | 52.5 | 710  | 47.3 | 1076 | 71.7 | 187   | 12.5    | 150 | 10.0  | 654 | 43.6   |
| 9    | 1500  | 782 | 52.1 | 714  | 47.6 | 1068 | 71.2 | 213   | 14.2    | 141 | 9.4   | 647 | 43.1   |
| 10   | 1500  | 742 | 49.5 | 752  | 50.1 | 1057 | 70.5 | 208   | 13.9    | 132 | 8.8   | 662 | 44.1   |
| 11   | 1500  | 767 | 51.1 | 728  | 48.5 | 1085 | 72.3 | 193   | 12.9    | 133 | 8.9   | 665 | 44.3   |
| 12   | 1500  | 791 | 52.7 | 704  | 46.9 | 1096 | 73.1 | 201   | 13.4    | 123 | 8.2   | 646 | 43.1   |
| 13   | 1500  | 793 | 52.9 | 704  | 46.9 | 1070 | 71.3 | 212   | 14.1    | 136 | 9.1   | 666 | 44.4   |
| 14   | 1500  | 749 | 49.9 | 749  | 49.9 | 1083 | 72.2 | 209   | 13.9    | 127 | 8.5   | 648 | 43.2   |
| 15   | 1500  | 760 | 50.7 | 737  | 49.1 | 1037 | 69.1 | 208   | 13.9    | 162 | 10.8  | 686 | 45.7   |
| 16   | 1500  | 775 | 51.7 | 721  | 48.1 | 1072 | 71.5 | 209   | 13.9    | 125 | 8.3   | 677 | 45.1   |
| 17   | 1500  | 764 | 50.9 | 731  | 48.7 | 1052 | 70.1 | 204   | 13.6    | 160 | 10.7  | 668 | 44.5   |
| 18   | 1500  | 759 | 50.6 | 738  | 49.2 | 1066 | 71.1 | 196   | 13.1    | 153 | 10.2  | 665 | 44.3   |
| 19   | 1499  | 787 | 52.5 | 706  | 47.1 | 1065 | 71.0 | 211   | 14.1    | 136 | 9.1   | 598 | 39.9   |
| 20   | 1499  | 742 | 49.5 | 753  | 50.2 | 1050 | 70.0 | 229   | 15.3    | 137 | 9.1   | 661 | 44.1   |

Table 9. Demographic Characteristics for Grade 6 MC Sample by Form

|      |      | Gei  | nder |      |      |      | Εt    | hnicity |      |       | Eco. | Dis. |
|------|------|------|------|------|------|------|-------|---------|------|-------|------|------|
| Form | Ma   | ıle  | Fem  | ale  | Wh   | ite  | Af. A | meri.   | Hisp | oanic | Y    | es   |
|      | N    | %    | N    | %    | N    | %    | N     | %       | N    | %     | N    | %    |
| 1    | 2317 | 51.4 | 2136 | 47.4 | 3029 | 67.2 | 669   | 14.9    | 502  | 11.1  | 2099 | 46.6 |
| 2    | 2282 | 50.6 | 2173 | 48.2 | 2997 | 66.5 | 743   | 16.5    | 472  | 10.5  | 2054 | 45.6 |
| 3    | 2264 | 50.5 | 2157 | 48.1 | 2981 | 66.5 | 693   | 15.5    | 458  | 10.2  | 2030 | 45.3 |
| 4    | 2319 | 51.6 | 2117 | 47.1 | 3053 | 68.0 | 697   | 15.5    | 459  | 10.2  | 2076 | 46.2 |
| 5    | 2294 | 51.2 | 2136 | 47.7 | 3023 | 67.5 | 708   | 15.8    | 442  | 9.9   | 2050 | 45.8 |
| 6    | 2200 | 49.1 | 2228 | 49.7 | 3041 | 67.9 | 656   | 14.6    | 483  | 10.8  | 2061 | 46.0 |
| 7    | 2215 | 49.5 | 2206 | 49.3 | 3032 | 67.8 | 684   | 15.3    | 465  | 10.4  | 2047 | 45.8 |
| 8    | 2247 | 50.4 | 2160 | 48.5 | 3057 | 68.6 | 661   | 14.8    | 442  | 9.9   | 2077 | 46.6 |
| 9    | 2267 | 50.9 | 2137 | 48.0 | 3016 | ٦ 7. | 680   | 15.3    | 439  | 9.9   | 2004 | 45.0 |
| 10   | 2197 | 49.4 | 2206 | 49.6 | 3000 | 67.4 | 682   | 15.3    | 457  | 10.3  | 2066 | 46.4 |
| 11   | 1775 | 49.4 | 1776 | 49.4 | 2439 | 67.9 | 513   | 14.3    | 380  | 10.6  | 1608 | 44.8 |
| 12   | 1892 | 52.5 | 1660 | 46.1 | 2495 | 69.3 | 506   | 14.0    | 370  | 10.3  | 1652 | 45.9 |
| 13   | 1848 | 51.3 | 1706 | 47.3 | 2477 | 68.7 | 512   | 14.2    | 365  | 10.1  | 1615 | 44.8 |
| 14   | 1791 | 49.5 | 1778 | 49.1 | 2512 | 69.4 | 492   | 13.6    | 376  | 10.4  | 1619 | 44.7 |
| 15   | 1865 | 51.8 | 1673 | 46.5 | 2434 | 67.6 | 514   | 14.3    | 374  | 10.4  | 1562 | 43.4 |
| 16   | 1818 | 50.5 | 1731 | 48.1 | 2479 | 68.8 | 510   | 14.2    | 360  | 10.0  | 1583 | 43.9 |
| 17   | 1835 | 50.7 | 1731 | 47.8 | 2481 | 68.6 | 485   | 13.4    | 399  | 11.0  | 1587 | 43.9 |
| 18   | 1817 | 50.7 | 1716 | 47.9 | 2423 | 67.6 | 529   | 14.8    | 369  | 10.3  | 1599 | 44.6 |
| 19   | 1781 | 49.2 | 1797 | 49.7 | 2442 | 67.5 | 529   | 14.6    | 375  | 10.4  | 1629 | 45.0 |
| 20   | 1782 | 49.1 | 1800 | 49.6 | 2441 | 67.3 | 547   | 15.1    | 377  | 10.4  | 1600 | 44.1 |

Table 10. Demographic Characteristics for Grade 6 WP Sample by Form

|      |       |     | Ger  | nder |      | •    |      | Et    | thnicity |     |       | Eco | . Dis. |
|------|-------|-----|------|------|------|------|------|-------|----------|-----|-------|-----|--------|
| Form | Total | M   | ale  | Fen  | nale | Wh   | ite  | Af. A | Ameri.   | His | panic | Y   | es     |
|      |       | N   | %    | N    | %    | N    | %    | N     | %        | N   | %     | N   | %      |
| 1    | 1499  | 771 | 51.4 | 728  | 48.6 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 727 | 48.5   |
| 2    | 1499  | 772 | 51.5 | 727  | 48.5 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 657 | 43.8   |
| 3    | 1498  | 773 | 51.6 | 725  | 48.4 | 1027 | 68.6 | 228   | 15.2     | 157 | 10.5  | 704 | 47.0   |
| 4    | 1500  | 767 | 51.1 | 732  | 48.8 | 1028 | 68.5 | 228   | 15.2     | 157 | 10.5  | 679 | 45.3   |
| 5    | 1499  | 769 | 51.3 | 730  | 48.7 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 688 | 45.9   |
| 6    | 1500  | 756 | 50.4 | 744  | 49.6 | 1028 | 68.5 | 228   | 15.2     | 157 | 10.5  | 697 | 46.5   |
| 7    | 1500  | 774 | 51.6 | 726  | 48.4 | 1028 | 68.5 | 228   | 15.2     | 157 | 10.5  | 698 | 46.5   |
| 8    | 1499  | 757 | 50.5 | 741  | 49.4 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 715 | 47.7   |
| 9    | 1500  | 785 | 52.3 | 715  | 47.7 | 1028 | 68.5 | 228   | 15.2     | 157 | 10.5  | 710 | 47.3   |
| 10   | 1499  | 750 | 50.0 | 749  | 50.0 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 695 | 46.4   |
| 11   | 1500  | 740 | 49.3 | 760  | 50.7 | 1028 | 68.5 | 228   | 15.2     | 157 | 10.5  | 694 | 46.3   |
| 12   | 1499  | 813 | 54.2 | 686  | 45.8 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 697 | 46.5   |
| 13   | 1500  | 777 | 51.8 | 723  | 48.2 | 1028 | 68.5 | 228   | 15.2     | 157 | 10.5  | 654 | 43.6   |
| 14   | 1499  | 749 | 50.0 | 750  | 50.0 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 698 | 46.6   |
| 15   | 1499  | 771 | 51.4 | 728  | 48.6 | 1028 | 68.6 | 227   | 15.1     | 157 | 10.5  | 662 | 44.2   |
| 16   | 1499  | 772 | 51.5 | 727  | 48.5 | 1028 | 68.6 | 228   | 15.2     | 157 | 10.5  | 676 | 45.1   |
| 17   | 1499  | 768 | 51.2 | 731  | 48.8 | 1027 | 68.5 | 228   | 15.2     | 157 | 10.5  | 679 | 45.3   |
| 18   | 1499  | 771 | 51.4 | 727  | 48.5 | 1028 | 68.6 | 228   | 15.2     | 156 | 10.4  | 631 | 42.1   |
| 19   | 1496  | 727 | 48.6 | 769  | 51.4 | 1025 | 68.5 | 228   | 15.2     | 156 | 10.4  | 657 | 43.9   |
| 20   | 1500  | 739 | 49.3 | 761  | 50.7 | 1028 | 68.5 | 228   | 15.2     | 157 | 10.5  | 668 | 44.5   |

Table 11. Demographic Characteristics for Grade 7 MC Sample by Form

|      |      | Ger  | nder |      |      |      | Et    | hnicity |     |       | Eco. | Dis. |
|------|------|------|------|------|------|------|-------|---------|-----|-------|------|------|
| Form | M    | ale  | Fem  | ale  | Wh   | ite  | Af. A | meri.   | His | panic | Y    | es   |
|      | N    | %    | N    | %    | N    | %    | N     | %       | N   | %     | N    | %    |
| 1    | 2187 | 50.0 | 2131 | 48.8 | 2964 | 67.8 | 672   | 15.4    | 447 | 10.2  | 1981 | 45.3 |
| 2    | 2192 | 50.3 | 2116 | 48.6 | 2952 | 67.7 | 705   | 16.2    | 423 | 9.7   | 1948 | 44.7 |
| 3    | 2177 | 50.1 | 2111 | 48.6 | 2970 | 68.4 | 634   | 14.6    | 440 | 10.1  | 1956 | 45.0 |
| 4    | 2138 | 49.2 | 2146 | 49.4 | 3001 | 69.1 | 648   | 14.9    | 428 | 9.9   | 1955 | 45.0 |
| 5    | 2237 | 51.7 | 2034 | 47.0 | 2908 | 67.2 | 661   | 15.3    | 486 | 11.2  | 1963 | 45.4 |
| 6    | 2160 | 49.9 | 2110 | 48.7 | 2937 | 67.8 | 655   | 15.1    | 469 | 10.8  | 1983 | 45.8 |
| 7    | 2198 | 51.0 | 2059 | 47.8 | 2950 | 68.4 | 659   | 15.3    | 435 | 10.1  | 1957 | 45.4 |
| 8    | 2229 | 51.3 | 2055 | 47.3 | 2943 | 67.8 | 656   | 15.1    | 448 | 10.3  | 1982 | 45.7 |
| 9    | 2209 | 50.3 | 2117 | 48.2 | 2960 | 67.4 | 676   | 15.4    | 456 | 10.4  | 2036 | 46.4 |
| 10   | 2194 | 50.0 | 2130 | 48.6 | 2953 | 67.3 | 656   | 15.0    | 457 | 10.4  | 2002 | 45.7 |
| 11   | 1794 | 51.6 | 1635 | 47.1 | 2393 | 68.9 | 505   | 14.5    | 347 | 10.0  | 1503 | 43.3 |
| 12   | 1731 | 49.4 | 1730 | 49.4 | 2424 | 69.2 | 480   | 13.7    | 357 | 10.2  | 1550 | 44.3 |
| 13   | 1729 | 49.6 | 1711 | 49.1 | 2385 | 68.5 | 502   | 14.4    | 360 | 10.3  | 1550 | 44.5 |
| 14   | 1740 | 49.4 | 1742 | 49.4 | 2393 | 67.9 | 515   | 14.6    | 359 | 10.2  | 1556 | 44.2 |
| 15   | 1748 | 49.9 | 1717 | 49.0 | 2409 | 68.7 | 493   | 14.1    | 354 | 10.1  | 1551 | 44.2 |
| 16   | 1769 | 50.7 | 1678 | 48.1 | 2407 | 69.0 | 516   | 14.8    | 340 | 9.8   | 1551 | 44.5 |
| 17   | 1780 | 50.7 | 1684 | 47.9 | 2435 | 69.3 | 518   | 14.7    | 337 | 9.6   | 1507 | 42.9 |
| 18   | 1790 | 51.2 | 1654 | 47.3 | 2386 | 68.3 | 515   | 14.7    | 367 | 10.5  | 1569 | 44.9 |
| 19   | 1741 | 49.6 | 1715 | 48.9 | 2419 | 68.9 | 499   | 14.2    | 358 | 10.2  | 1544 | 44.0 |
| 20   | 1745 | 50.0 | 1694 | 48.6 | 2411 | 69.1 | 488   | 14.0    | 361 | 10.4  | 1523 | 43.7 |

 Table 12. Demographic Characteristics for Grade 7 WP Sample by Form

|      |       |     | Gen  | der |      |      |      | Et    | thnicity |     |       | Eco | . Dis. |
|------|-------|-----|------|-----|------|------|------|-------|----------|-----|-------|-----|--------|
| Form | Total | M   | ale  | Fen | nale | Wh   | ite  | Af. A | meri.    | His | panic | Y   | es     |
|      |       | N   | %    | N   | %    | N    | %    | N     | %        | N   | %     | N   | %      |
| 1    | 1500  | 766 | 51.1 | 734 | 48.9 | 1031 | 68.7 | 228   | 15.2     | 157 | 10.5  | 664 | 44.3   |
| 2    | 1498  | 754 | 50.3 | 744 | 49.7 | 1030 | 68.8 | 228   | 15.2     | 156 | 10.4  | 666 | 44.5   |
| 3    | 1498  | 785 | 52.4 | 713 | 47.6 | 1030 | 68.8 | 227   | 15.2     | 157 | 10.5  | 688 | 45.9   |
| 4    | 1499  | 728 | 48.6 | 771 | 51.4 | 1031 | 68.8 | 228   | 15.2     | 156 | 10.4  | 699 | 46.6   |
| 5    | 1497  | 780 | 52.1 | 717 | 47.9 | 1030 | 68.8 | 227   | 15.2     | 157 | 10.5  | 689 | 46.0   |
| 6    | 1497  | 792 | 52.9 | 705 | 47.1 | 1028 | 68.7 | 228   | 15.2     | 157 | 10.5  | 721 | 48.2   |
| 7    | 1499  | 763 | 50.9 | 736 | 49.1 | 1030 | 68.7 | 228   | 15.2     | 157 | 10.5  | 682 | 45.5   |
| 8    | 1497  | 759 | 50.7 | 738 | 49.3 | 1031 | 68.9 | 226   | 15.1     | 156 | 10.4  | 666 | 44.5   |
| 9    | 1500  | 797 | 53.1 | 703 | 46.9 | 1031 | 68.7 | 228   | 15.2     | 157 | 10.5  | 680 | 45.3   |
| 10   | 1499  | 726 | 48.4 | 773 | 51.6 | 1030 | 68.7 | 228   | 15.2     | 157 | 10.5  | 694 | 46.3   |
| 11   | 1499  | 785 | 52.4 | 714 | 47.6 | 1031 | 68.8 | 227   | 15.1     | 157 | 10.5  | 672 | 44.8   |
| 12   | 1497  | 762 | 50.9 | 735 | 49.1 | 1030 | 68.8 | 227   | 15.2     | 156 | 10.4  | 684 | 45.7   |
| 13   | 1497  | 740 | 49.4 | 757 | 50.6 | 1030 | 68.8 | 228   | 15.2     | 155 | 10.4  | 667 | 44.6   |
| 14   | 1500  | 753 | 50.2 | 747 | 49.8 | 1031 | 68.7 | 228   | 15.2     | 157 | 10.5  | 658 | 43.9   |
| 15   | 1498  | 762 | 50.9 | 736 | 49.1 | 1031 | 68.8 | 227   | 15.2     | 156 | 10.4  | 664 | 44.3   |
| 16   | 1498  | 765 | 51.1 | 733 | 48.9 | 1030 | 68.8 | 227   | 15.2     | 157 | 10.5  | 683 | 45.6   |
| 17   | 1498  | 754 | 50.3 | 744 | 49.7 | 1030 | 68.8 | 227   | 15.2     | 157 | 10.5  | 654 | 43.7   |
| 18   | 1500  | 778 | 51.9 | 721 | 48.1 | 1031 | 68.7 | 228   | 15.2     | 157 | 10.5  | 713 | 47.5   |
| 19   | 1498  | 741 | 49.5 | 757 | 50.5 | 1030 | 68.8 | 227   | 15.2     | 157 | 10.5  | 673 | 44.9   |
| 20   | 1499  | 727 | 48.5 | 772 | 51.5 | 1030 | 68.7 | 228   | 15.2     | 157 | 10.5  | 673 | 44.9   |

Table 13. Demographic Characteristics for Grade 8 MC Sample by Form

|      |      | Gei  | nder |      |      |      | Et    | hnicity |     |       | Eco. | Dis. |
|------|------|------|------|------|------|------|-------|---------|-----|-------|------|------|
| Form | Ma   | ale  | Fem  | ale  | Wh   | ite  | Af. A | meri.   | His | panic | Y    | es   |
|      | N    | %    | N    | %    | N    | %    | N     | %       | N   | %     | N    | %    |
| 1    | 2084 | 50.6 | 1980 | 48.1 | 2777 | 67.4 | 651   | 15.8    | 409 | 9.9   | 1877 | 45.6 |
| 2    | 2087 | 50.1 | 2015 | 48.4 | 2803 | 67.3 | 683   | 16.4    | 401 | 9.6   | 1915 | 46.0 |
| 3    | 2058 | 50.0 | 2002 | 48.6 | 2755 | 66.9 | 668   | 16.2    | 411 | 10.0  | 1851 | 44.9 |
| 4    | 2054 | 49.5 | 2031 | 49.0 | 2812 | 67.8 | 646   | 15.6    | 420 | 10.1  | 1823 | 44.0 |
| 5    | 2061 | 49.5 | 2045 | 49.1 | 2844 | 68.3 | 650   | 15.6    | 397 | 9.5   | 1839 | 44.1 |
| 6    | 2041 | 49.0 | 2064 | 49.5 | 2836 | 68.0 | 623   | 14.9    | 431 | 10.3  | 1839 | 44.1 |
| 7    | 2094 | 49.8 | 2047 | 48.6 | 2857 | 67.9 | 668   | 15.9    | 398 | 9.5   | 1861 | 44.2 |
| 8    | 2081 | 50.4 | 1988 | 48.1 | 2777 | 67.2 | 649   | 15.7    | 425 | 10.3  | 1835 | 44.4 |
| 9    | 2112 | 51.2 | 1960 | 47.5 | 2823 | 68.4 | 645   | 15.6    | 379 | 9.2   | 1832 | 44.4 |
| 10   | 2069 | 50.1 | 2000 | 48.4 | 2785 | 67.4 | 647   | 15.7    | 426 | 10.3  | 1837 | 44.5 |
| 11   | 1639 | 49.1 | 1636 | 49.0 | 2324 | 69.6 | 469   | 14.1    | 324 | 9.7   | 1473 | 44.1 |
| 12   | 1690 | 51.0 | 1566 | 47.3 | 2273 | 68.6 | 490   | 14.8    | 321 | 9.7   | 1454 | 43.9 |
| 13   | 1666 | 50.3 | 1593 | 48.1 | 2298 | 69.4 | 474   | 14.3    | 329 | 9.9   | 1449 | 43.8 |
| 14   | 1661 | 50.6 | 1568 | 47.8 | 2248 | 68.5 | 477   | 14.5    | 347 | 10.6  | 1376 | 41.9 |
| 15   | 1709 | 51.7 | 1536 | 46.5 | 2242 | 67.9 | 507   | 15.3    | 314 | 9.5   | 1476 | 44.7 |
| 16   | 1664 | 50.5 | 1570 | 47.7 | 2254 | 68.4 | 476   | 14.5    | 323 | 9.8   | 1453 | 44.1 |
| 17   | 1676 | 50.8 | 1566 | 47.5 | 2278 | 69.1 | 472   | 14.3    | 313 | 9.5   | 1405 | 42.6 |
| 18   | 1721 | 52.0 | 1538 | 46.4 | 2267 | 68.4 | 483   | 14.6    | 344 | 10.4  | 1397 | 42.2 |
| 19   | 1670 | 50.4 | 1594 | 48.1 | 2276 | 68.7 | 460   | 13.9    | 363 | 11.0  | 1430 | 43.2 |
| 20   | 1693 | 50.8 | 1583 | 47.5 | 2298 | 69.0 | 491   | 14.7    | 316 | 9.5   | 1476 | 44.3 |

Table 14. Demographic Characteristics for Grade 8 WP Sample by Form

|      |       |     | Ger  | nder |      |      |      | Ethi  | nicity |      |      | Eco | Dis. |
|------|-------|-----|------|------|------|------|------|-------|--------|------|------|-----|------|
| Form | Total | Ma  | ale  | Fen  | nale | Wh   | ite  | Af. A | meri.  | Hisp | anic | Y   | es   |
|      |       | N   | %    | N    | %    | N    | %    | N     | %      | N    | %    | N   | %    |
| 1    | 1500  | 763 | 50.9 | 737  | 49.1 | 1027 | 68.5 | 232   | 15.5   | 156  | 10.4 | 695 | 46.3 |
| 2    | 1499  | 744 | 49.6 | 755  | 50.4 | 1026 | 68.4 | 232   | 15.5   | 156  | 10.4 | 691 | 46.1 |
| 3    | 1500  | 742 | 49.5 | 758  | 50.5 | 1027 | 68.5 | 232   | 15.5   | 156  | 10.4 | 678 | 45.2 |
| 4    | 1499  | 729 | 48.6 | 770  | 51.4 | 1026 | 68.4 | 232   | 15.5   | 156  | 10.4 | 653 | 43.6 |
| 5    | 1499  | 731 | 48.8 | 768  | 51.2 | 1026 | 68.4 | 232   | 15.5   | 156  | 10.4 | 679 | 45.3 |
| 6    | 1500  | 731 | 48.7 | 769  | 51.3 | 1027 | 68.5 | 232   | 15.5   | 156  | 10.4 | 652 | 43.5 |
| 7    | 1500  | 750 | 50.0 | 749  | 49.9 | 1027 | 68.5 | 232   | 15.5   | 156  | 10.4 | 652 | 43.5 |
| 8    | 1496  | 780 | 52.1 | 716  | 47.9 | 1023 | 68.4 | 232   | 15.5   | 156  | 10.4 | 663 | 44.3 |
| 9    | 1499  | 750 | 50.0 | 749  | 50.0 | 1027 | 68.5 | 231   | 15.4   | 156  | 10.4 | 700 | 46.7 |
| 10   | 1499  | 755 | 50.4 | 744  | 49.6 | 1027 | 68.5 | 232   | 15.5   | 155  | 10.3 | 675 | 45.0 |
| 11   | 1499  | 761 | 50.8 | 738  | 49.2 | 1027 | 68.5 | 232   | 15.5   | 156  | 10.4 | 693 | 46.2 |
| 12   | 1499  | 760 | 50.7 | 739  | 49.3 | 1027 | 68.5 | 231   | 15.4   | 156  | 10.4 | 678 | 45.2 |
| 13   | 1500  | 766 | 51.1 | 734  | 48.9 | 1027 | 68.5 | 232   | 15.5   | 156  | 10.4 | 696 | 46.4 |
| 14   | 1498  | 779 | 52.0 | 719  | 48.0 | 1026 | 68.5 | 232   | 15.5   | 155  | 10.3 | 641 | 42.8 |
| 15   | 1499  | 804 | 53.6 | 694  | 46.3 | 1027 | 68.5 | 232   | 15.5   | 155  | 10.3 | 694 | 46.3 |
| 16   | 1498  | 793 | 52.9 | 705  | 47.1 | 1025 | 68.4 | 232   | 15.5   | 156  | 10.4 | 679 | 45.3 |
| 17   | 1498  | 793 | 52.9 | 705  | 47.1 | 1026 | 68.5 | 231   | 15.4   | 156  | 10.4 | 665 | 44.4 |
| 18   | 1499  | 800 | 53.4 | 699  | 46.6 | 1026 | 68.4 | 232   | 15.5   | 156  | 10.4 | 649 | 43.3 |
| 19   | 1500  | 801 | 53.4 | 699  | 46.6 | 1027 | 68.5 | 232   | 15.5   | 156  | 10.4 | 712 | 47.5 |
| 20   | 1498  | 783 | 52.3 | 715  | 47.7 | 1026 | 68.5 | 231   | 15.4   | 156  | 10.4 | 701 | 46.8 |

#### **KEY VERIFICATION**

A key verification is conducted early in the scoring process to ensure that the keys for the multiple-choice items are applied correctly and to identify administration irregularities before any official scoring/reporting/item banking occurs. The data files used for the key verification analysis are usually based on the student data from early-return schools. Sample representativeness is not required for this internal quality check. Available student data typically suffices as long as there is reasonable variability in the total test scores of students.

For the ELA: Writing Field Tests, key verification files were used to conduct preliminary analyses to verify the accuracy of the scoring keys and to obtain an early indication of how items were functioning. Content specialists examined all flagged items and didn't find any miskeyed items. The statistics estimated are described in Chapter Eleven of this 2014 PSSA Technical Report.

An MC item is flagged if it meets one or more of the following criteria:

- p-values < 0.30
- distractor proportion > 0.3
- omit proportion > 0.05
- multiple response proportion > 0.05
- item-total correlation < 0.25
- distractor-total correlation > 0
- distractor proportion > key proportion
- and/or distractor-total correlation > item-total correlation

#### CLASSICAL ITEM ANALYSIS

The final data files were used to conduct item analysis, calibration, and to prepare the report analyses. The final data contained all students' responses to the MC and a subset of students' responses to the WP/OE items. The final sample sizes (or *n*-counts) can be found in the Item Statistics section at the end of this appendix. The characteristics of the samples are summarized in Table 2.

All field-test items were analyzed statistically following conventional item analysis methods. Indices known as traditional or classical item statistics included the *p*-value, item-total correlation, and the distractor distribution. The final item analysis results can be found in the Item Statistics section at the end of this appendix. The statistics estimated are described in Chapter Eleven of this 2014 PSSA Technical Report. Please note that the term item discrimination and item-total correlation are used interchangeably in this report.

#### Item P-value and Item Discrimination

Table 15 summarizes *p*-value information across the forms for each grade broken down by item type. Information in the table includes the total counts of items, mean, median, standard deviation, minimum, and maximum. The mean *p*-values for the MC items ranged from approximately 0.47 to 0.57, while the mean proportion-correct values for the WP items ranged from approximately 0.43 to 0.56. A wide range of item difficulties appeared on each grade's exam, which was one test development goal.

Summary item-total correlation information across subjects is shown in Table 16. Information in the table includes the total count of items, mean, median, standard deviation, minimum, and maximum. The mean item-test correlations ranged from roughly 0.21 to 0.26 and 0.42 to 0.49 for the MC and WP items, respectively.

Grade N Mean Median SD Min Max 0.19  $0.92^{-}$ MC 3 170 0.20 0.51 0.48 4 214 0.57 0.56 0.20 0.16 0.94 5 214 0.53 0.50 0.21 0.15 0.95 6 233 0.54 0.55 0.20 0.05 0.95 7 0.50 233 0.51 0.20 0.06 0.90 8 233 0.47 0.44 0.22 0.06 0.96 WP 3 20 0.43 0.41 0.05 0.36 0.52 4 20 0.48 0.46 0.06 0.40 0.61 5 20 0.52 0.51 0.03 0.48 0.60 6 20 0.54 0.54 0.04 0.47 0.62 7 0.51 20 0.55 0.54 0.03 0.60 8 20 0.56 0.56 0.02 0.52 0.60 OE 3 42 0.45 0.39 0.22 0.12 0.90

Table 15. Summary of Item P-value

**Table 16. Summary of Item-Total Correlation** 

|    | Grade | N |     | Mean | Median | SD |      | Min   | Max  |
|----|-------|---|-----|------|--------|----|------|-------|------|
| MC | 3     |   | 170 | 0.23 | 0.24   |    | 0.10 | 0.00  | 0.42 |
|    | 4     |   | 214 | 0.26 | 0.28   |    | 0.11 | -0.08 | 0.44 |
|    | 5     |   | 214 | 0.26 | 0.29   |    | 0.13 | -0.09 | 0.48 |
|    | 6     |   | 233 | 0.25 | 0.28   |    | 0.12 | -0.11 | 0.46 |
|    | 7     |   | 233 | 0.25 | 0.28   |    | 0.13 | -0.08 | 0.45 |
|    | 8     |   | 233 | 0.21 | 0.23   |    | 0.12 | -0.15 | 0.43 |
| WP | 3     |   | 20  | 0.42 | 0.41   |    | 0.03 | 0.36  | 0.49 |
|    | 4     |   | 20  | 0.43 | 0.43   |    | 0.04 | 0.34  | 0.52 |
|    | 5     |   | 20  | 0.46 | 0.47   |    | 0.04 | 0.38  | 0.52 |
|    | 6     |   | 20  | 0.47 | 0.48   |    | 0.04 | 0.39  | 0.53 |
|    | 7     |   | 20  | 0.49 | 0.50   |    | 0.04 | 0.42  | 0.56 |
|    | 8     |   | 20  | 0.45 | 0.46   |    | 0.04 | 0.37  | 0.54 |
| OE | 3     |   | 42  | 0.33 | 0.32   |    | 0.06 | 0.21  | 0.54 |

Figure 3 contains a series of scatterplots showing item discrimination values (y-axis) on the item difficulty (x-axis) for each grade. Note that pseudo *p*-values (described above) are used for WP/OE items in these plots. These plots provide maximum information about item discrimination and difficulty in a single visual image. This is because the x- and y-axes also show histogram with following descriptive statistics:

- Minimum and maximum values
- Mean scores
- Median scores
- First and third quartile (Q1 and Q3)

The bivariate relationship between item discrimination (item-test correlations) and difficulty (item *p*-value) is also presented through scatterplots in these figures. One does not usually expect any type of trend here. However, it is often the case that items with extreme difficulties can have lower discrimination values, as this can be revealed in such plots.

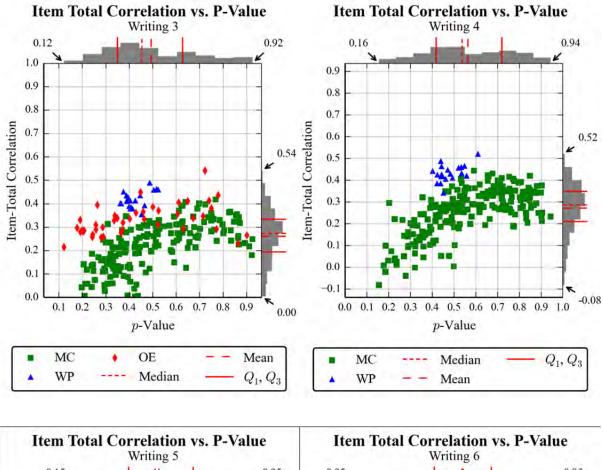
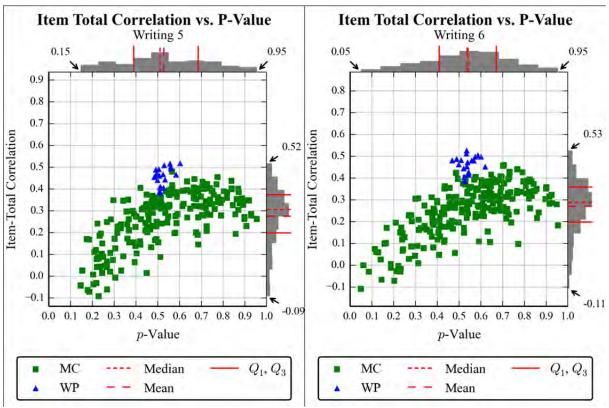
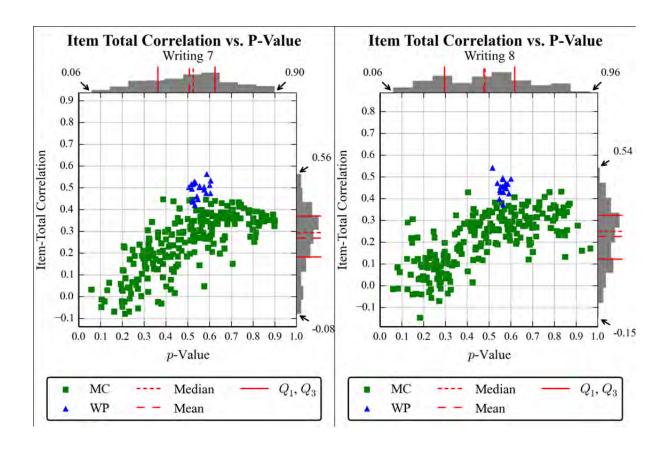


Figure 3. Discrimination on Difficulty Scatterplots





#### DIFFERENTIAL ITEM FUNCTIONING (DIF) ANALYSIS

One of the goals of test development is to develop items that provide an estimate of a student's ability that is as fair and accurate as possible regardless of the student's gender, ethnicity, or test administration mode. Differential item functioning is present when examinees of equal ability do not have the same probability of passing the item. For the purpose of the ELA: Writing Field Tests, if this inequity is associated with gender or ethnicity, the item could be described as potentially biased.

DIF statistics are often used to identify items that groups of students with the same underlying level of ability have different probabilities of answering correctly. For this analysis, groups were spread across four ability categories. If the item is differentially more difficult for an identifiable subgroup when conditioned on ability, the item may be measuring something different from the intended construct. However, it is important to recognize that DIF-flagged items might be related to actual differences in relevant knowledge or skills (item impact) or a statistical Type I error (i.e., false positive). As a result, DIF statistics are used to identify potential sources of item bias. No statistical procedure should be used as a substitute for rigorous, hands-on reviews by content and bias specialists; therefore, subsequent review by content experts and bias/sensitivity committees is required to determine the source and meaning of performance differences. The items with C DIF were reviewed by a group of Pennsylvania teachers in the data review meeting. The details of the data review meeting can be found in Chapter Five of this 2014 PSSA Technical Report and the results of the data review meeting for the ELA: Writing Field Tests can be found in the next section. For more discussion about DIF, readers can refer to Chapter Five of this 2014 PSSA Technical Report.

Counts of the number of items from each grade that were assigned to each severity code are shown below in Table 17. Overall, relatively few MC items had B or C DIF for the Male/Female or White/Black reference and focal groups. With MC items, there were more items showing White/Black DIF than Male/Female DIF. With WP items, there were more items showing Male/Female DIF than White/Black DIF.

**Table 17. DIF Summary—MC Items** 

|    |           |            |           | Male       | /Fema | ale        |    |     |            |           | Whi        | te/Bla | ck         |    |     |
|----|-----------|------------|-----------|------------|-------|------------|----|-----|------------|-----------|------------|--------|------------|----|-----|
|    | Grad<br>e | <b>A</b> + | <b>A-</b> | <b>B</b> + | В-    | <b>C</b> + | C- | Tot | <b>A</b> + | <b>A-</b> | <b>B</b> + | В-     | <b>C</b> + | C- | Tot |
| MC | 3         | 74         | 91        | 3          | 2     | 0          | 0  | 170 | 55         | 91        | 4          | 12     | 0          | 8  | 170 |
|    | 4         | 111        | 101       | 0          | 2     | 0          | 0  | 214 | 71         | 105       | 6          | 29     | 0          | 3  | 214 |
|    | 5         | 104        | 104       | 3          | 3     | 0          | 0  | 214 | 84         | 107       | 10         | 11     | 0          | 2  | 214 |
|    | 6         | 121        | 103       | 4          | 3     | 0          | 2  | 233 | 105        | 101       | 4          | 20     | 1          | 2  | 233 |
|    | 7         | 109        | 120       | 2          | 1     | 0          | 1  | 233 | 96         | 123       | 2          | 12     | 0          | 0  | 233 |
|    | 8         | 121        | 104       | 6          | 1     | 0          | 1  | 233 | 87         | 115       | 5          | 22     | 0          | 4  | 233 |
| WP | 3         | 5          | 0         | 12         | 0     | 3          | 0  | 20  | 0          | 8         | 0          | 10     | 0          | 2  | 20  |
|    | 4         | 2          | 0         | 7          | 0     | 11         | 0  | 20  | 1          | 14        | 0          | 4      | 0          | 1  | 20  |
|    | 5         | 2          | 0         | 11         | 0     | 7          | 0  | 20  | 0          | 13        | 0          | 7      | 0          | 0  | 20  |
|    | 6         | 0          | 0         | 3          | 0     | 17         | 0  | 20  | 2          | 15        | 0          | 2      | 0          | 1  | 20  |
|    | 7         | 1          | 0         | 7          | 0     | 12         | 0  | 20  | 0          | 10        | 0          | 7      | 0          | 3  | 20  |
|    | 8         | 1          | 0         | 10         | 0     | 9          | 0  | 20  | 0          | 4         | 0          | 10     | 0          | 6  | 20  |
| OE | 3         | 29         | 13        | 0          | 0     | 0          | 0  | 42  | 3          | 20        | 0          | 17     | 0          | 2  | 42  |

#### ITEM REVIEW RESULTS

Item review was conducted during the PSSA item review meeting. The detail of the item review meeting can be found in Chapter Five of this 2014 PSSA Technical Report. The results of item review are shown in Table 18.

Flagged Items in **Items Field Test** Classified as Flagged Items in Field Test Examined by "Rejected" Rejected by Data No. of **Data Review Committees Review** from Items Field Test\*\* Committee Assessment Grade in **Field Items Total** No. % of **Test** MC CR flagged for **Total** (% of % of FT No. of of FT **DIF** only FT) 232 3 1.2 45\* 19.3\* 3 78 8 19 86 37.0 4 234 80 20 10 4.2 11 91 38.8 10 4.2 5 234 80 7 9 87 37.7 5.1 13 16 6.8 **ELA** 6 253 84 20 23 104 45.0 5 2.0 9 3.5 7 253 88 20 15 108 46.6 10 4.0 12 4.7 8 253 123 20 25 143 7 2.7 10 56.5 4.0 533 619 42.4% 48 3.3% 102 **Totals** 1,459 86 111 7.0%

**Table 18. Item Review Results** 

#### CALIBRATION BASED ON RASCH MODEL

This section focuses on the item analysis in the framework of modern item response theory (IRT). The IRT model used for the ELA: Writing Field Tests is based on the work of Georg Rasch. Rasch models have had a long-standing presence in applied testing programs given their advantages over classical test theory. This section reports the analysis results. Readers can refer to Chapter 12 of this 2014 PSSA Technical Report for more explanation on Rasch item calibration and item fit.

Please note that with the standalone writing field test, the WP items were scored with 1-4 point scale, but valid non-score responses (blank, non-scoreable, and off topic) received 0 score for the item in the item calibration. The MC, WP, and OE items were calibrated together in one calibration.

#### **Model Data Fit**

The fit statistics for each item can be found in the Item Statistics section at the end of this appendix. Table 19 presents the summary statistics of infit and outfit for the ELA: Writing Field Tests, including the mean, standard deviation (SD), minimum, and maximum values. The numbers of items within the acceptable range MSQ fit [0.7, 1.3] are also reported in Table 19. As one can see from the table, the mean values for both fit statistics were close to 1.00 for all tests. Most items had infit values falling

<sup>\*</sup>Includes grade 3 2-point open-ended items accepted at data review; PDE later decided not to include this item type on the operational test design.

<sup>\*\*</sup>all sources: Data Review Committee, PDE, and DRC

within the desired range of [0.7, 1.3]. More outfit values fell outside this range than infit values. Overall, these results indicate that the Rasch model fits the data well for most of the items.

Table 19. Summary of Infit and Outfit Mean Square Statistics MC only

|    |   |      | Infi | t Mean S | quare |           |      | Outfi | t Mean | Square | )         |
|----|---|------|------|----------|-------|-----------|------|-------|--------|--------|-----------|
|    |   | Mean | SD   | Min      | Max   | [0.7,1.3] | Mean | SD    | Min    | Max    | [0.7,1.3] |
| MC | 3 | 0.99 | 0.08 | 0.85     | 1.19  | 170       | 0.99 | 0.15  | 0.65   | 1.36   | 162       |
|    | 4 | 0.98 | 0.08 | 0.84     | 1.22  | 214       | 0.98 | 0.17  | 0.60   | 1.83   | 198       |
|    | 5 | 1.00 | 0.10 | 0.83     | 1.25  | 214       | 1.04 | 0.25  | 0.58   | 1.97   | 174       |
|    | 6 | 0.99 | 0.08 | 0.84     | 1.22  | 233       | 1.02 | 0.25  | 0.55   | 2.72   | 206       |
|    | 7 | 1.01 | 0.10 | 0.85     | 1.30  | 233       | 1.05 | 0.24  | 0.59   | 2.20   | 200       |
|    | 8 | 0.99 | 0.08 | 0.83     | 1.25  | 233       | 1.03 | 0.20  | 0.65   | 2.12   | 218       |
| WP | 3 | 0.88 | 0.03 | 0.83     | 0.93  | 20        | 0.88 | 0.03  | 0.83   | 0.94   | 20        |
|    | 4 | 0.91 | 0.04 | 0.82     | 0.97  | 20        | 0.91 | 0.04  | 0.82   | 0.97   | 20        |
|    | 5 | 0.91 | 0.04 | 0.85     | 1.01  | 20        | 0.91 | 0.04  | 0.85   | 1.02   | 20        |
|    | 6 | 0.89 | 0.04 | 0.83     | 0.95  | 20        | 0.89 | 0.04  | 0.83   | 0.95   | 20        |
|    | 7 | 0.88 | 0.04 | 0.82     | 0.94  | 20        | 0.88 | 0.04  | 0.82   | 0.94   | 20        |
|    | 8 | 0.86 | 0.03 | 0.79     | 0.93  | 20        | 0.86 | 0.03  | 0.79   | 0.93   | 20        |
| OE | 3 | 0.94 | 0.06 | 0.78     | 1.05  | 42        | 0.91 | 0.09  | 0.64   | 1.08   | 40        |

#### **Rasch Item Difficulties**

The item difficulties for each item can be found in the column labeled "Rasch" in the Item Statistics section at the end of this appendix. Table 20 summarizes the Rasch logit difficulties of MC, WP, and OE items. The minimum and maximum values and standard deviations suggest that the ELA: Writing Field Test items covered a relatively wide range of difficulties. It is important to note that the logit difficulty values presented have not been linked to a common scale of measurement across grades. Therefore, the relative magnitude of the statistics across content areas and grades cannot be compared.

Table 20. Summary of Item Difficulty

|    | Grade | N   | SD   | Min   | Mean  | Median | Max   |
|----|-------|-----|------|-------|-------|--------|-------|
|    | 3     | 170 | 1.02 | -2.85 | -0.13 | 0.06   | 1.60  |
|    | 4     | 214 | 1.06 | -2.74 | -0.06 | 0.07   | 2.28  |
| MC | 5     | 214 | 1.16 | -3.28 | -0.02 | 0.18   | 2.19  |
| MC | 6     | 233 | 1.13 | -3.18 | 0.00  | -0.04  | 3.55  |
|    | 7     | 233 | 1.06 | -2.49 | 0.01  | -0.03  | 3.14  |
|    | 8     | 233 | 1.16 | -3.70 | 0.04  | 0.14   | 3.00  |
|    | 3     | 20  | 0.38 | -0.12 | 0.62  | 0.74   | 1.12  |
|    | 4     | 20  | 0.38 | -0.18 | 0.60  | 0.74   | 1.16  |
| WP | 5     | 20  | 0.30 | -0.42 | 0.16  | 0.24   | 0.52  |
| WP | 6     | 20  | 0.24 | -0.37 | 0.04  | 0.02   | 0.43  |
|    | 7     | 20  | 0.24 | -0.63 | -0.17 | -0.10  | 0.11  |
|    | 8     | 20  | 0.09 | -0.61 | -0.48 | -0.50  | -0.28 |
| OE | 3     | 42  | 1.02 | -2.53 | 0.25  | 0.50   | 2.26  |

## RATER AGREEMENT

A source of random error with reliability is related to the scorers of WP items. The data most easily obtainable that captures this information comes from the "10 percent read behinds" collected during the scoring process. See Chapter Eight of 2014 PSSA Technical Report for a description of "10 percent read behinds" and Chapter Eighteen for more discussion on reliability and rater agreement.

The rater agreement information for WP items is provided in Tables 21 through 26. In addition, the percentages awarded to each score point are also presented in these tables. As seen from these tables, the inter-rater agreement percentages were above 80 percent with most WP items.

Table 21. Inter-Rater Agreement and Percentage Awarded for Each Score Point for WP Items Grade 3

|      |       | r-Rater<br>ement % | Percen | tage Aw | arded | for E | ach Sco | ore Poi | nt % |
|------|-------|--------------------|--------|---------|-------|-------|---------|---------|------|
| Item | Exact | Adjacent           | 1      | 2       | 3     | 4     | В       | N       | T    |
| 1    | 93    | 7                  | 44     | 36      | 7     | 0     | 4       | 2       | 6    |
| 2    | 95    | 5                  | 37     | 43      | 8     | 0     | 3       | 2       | 6    |
| 3    | 96    | 4                  | 33     | 50      | 7     | 0     | 2       | 3       | 4    |
| 4    | 91    | 9                  | 15     | 44      | 24    | 6     | 3       | 3       | 5    |
| 5    | 88    | 12                 | 16     | 48      | 26    | 5     | 2       | 2       | 2    |
| 6    | 87    | 13                 | 18     | 46      | 23    | 4     | 2       | 1       | 5    |
| 7    | 94    | 6                  | 16     | 43      | 24    | 3     | 3       | 2       | 9    |
| 8    | 85    | 15                 | 38     | 38      | 11    | 1     | 3       | 3       | 7    |
| 9    | 89    | 11                 | 31     | 45      | 12    | 1     | 3       | 2       | 6    |
| 10   | 91    | 9                  | 28     | 45      | 13    | 2     | 3       | 3       | 6    |
| 11   | 90    | 10                 | 25     | 44      | 18    | 1     | 3       | 4       | 6    |
| 12   | 88    | 12                 | 41     | 38      | 11    | 1     | 2       | 2       | 4    |
| 13   | 95    | 5                  | 37     | 44      | 9     | 1     | 3       | 1       | 6    |
| 14   | 91    | 9                  | 21     | 50      | 16    | 2     | 3       | 3       | 6    |
| 15   | 88    | 13                 | 34     | 46      | 10    | 1     | 3       | 2       | 5    |
| 16   | 96    | 4                  | 37     | 47      | 6     | 0     | 2       | 1       | 6    |
| 17   | 83    | 17                 | 25     | 42      | 19    | 3     | 2       | 2       | 6    |
| 18   | 94    | 6                  | 46     | 31      | 10    | 0     | 3       | 2       | 8    |
| 19   | 96    | 4                  | 41     | 43      | 6     | 0     | 3       | 3       | 5    |
| 20   | 95    | 5                  | 35     | 49      | 8     | 0     | 2       | 1       | 5    |

Table 22. Inter-Rater Agreement and Percentage Awarded for Each Score Point for WP Items Grade 4

|      |       | r-Rater<br>ement % | Perce | ntage Av | varded | for E | Each Sc | ore Po | int % |
|------|-------|--------------------|-------|----------|--------|-------|---------|--------|-------|
| Item | Exact | Adjacent           | 1     | 2        | 3      | 4     | В       | N      | T     |
| 1    | 94    | 6                  | 33    | 51       | 9      | 1     | 1       | 2      | 3     |
| 2    | 81    | 19                 | 36    | 46       | 12     | 1     | 2       | 1      | 4     |
| 3    | 87    | 13                 | 22    | 55       | 17     | 2     | 1       | 1      | 3     |
| 4    | 84    | 16                 | 34    | 43       | 17     | 1     | 1       | 1      | 3     |
| 5    | 92    | 8                  | 42    | 42       | 10     | 0     | 1       | 1      | 4     |
| 6    | 89    | 11                 | 16    | 51       | 23     | 6     | 1       | 2      | 2     |
| 7    | 89    | 11                 | 12    | 52       | 25     | 4     | 1       | 1      | 4     |
| 8    | 92    | 8                  | 13    | 46       | 29     | 6     | 1       | 1      | 4     |
| 9    | 94    | 6                  | 30    | 54       | 11     | 1     | 1       | 1      | 3     |
| 10   | 93    | 7                  | 25    | 57       | 10     | 1     | 1       | 2      | 5     |
| 11   | 83    | 17                 | 24    | 44       | 20     | 5     | 1       | 1      | 5     |
| 12   | 88    | 12                 | 10    | 37       | 35     | 12    | 1       | 0      | 4     |
| 13   | 94    | 6                  | 30    | 53       | 11     | 1     | 1       | 0      | 3     |
| 14   | 90    | 10                 | 13    | 42       | 30     | 7     | 1       | 1      | 5     |
| 15   | 84    | 16                 | 27    | 48       | 17     | 1     | 1       | 2      | 4     |
| 16   | 86    | 14                 | 25    | 52       | 18     | 1     | 1       | 0      | 3     |
| 17   | 94    | 6                  | 32    | 51       | 12     | 1     | 1       | 0      | 4     |
| 18   | 98    | 2                  | 29    | 53       | 13     | 0     | 1       | 0      | 3     |
| 19   | 92    | 8                  | 28    | 58       | 11     | 0     | 1       | 1      | 2     |
| 20   | 87    | 13                 | 16    | 46       | 26     | 4     | 1       | 1      | 6     |

Table 23. Inter-Rater Agreement and Percentage Awarded for Each Score Point for WP Items Grade 5

|      |       | r-Rater<br>ement % | Percen | tage Aw | arded | for Ea | ach Sco | ore Poi | nt % |
|------|-------|--------------------|--------|---------|-------|--------|---------|---------|------|
| Item | Exact | Adjacent           | 1      | 2       | 3     | 4      | В       | N       | T    |
| 1    | 89    | 11                 | 15     | 55      | 22    | 3      | 1       | 0       | 4    |
| 2    | 88    | 12                 | 11     | 38      | 36    | 11     | 1       | 1       | 4    |
| 3    | 84    | 16                 | 15     | 52      | 26    | 3      | 1       | 0       | 2    |
| 4    | 89    | 11                 | 20     | 37      | 28    | 10     | 1       | 0       | 3    |
| 5    | 88    | 13                 | 16     | 53      | 22    | 1      | 1       | 1       | 6    |
| 6    | 85    | 15                 | 14     | 57      | 22    | 1      | 1       | 0       | 4    |
| 7    | 86    | 14                 | 12     | 43      | 35    | 7      | 1       | 0       | 3    |
| 8    | 89    | 11                 | 14     | 51      | 29    | 1      | 1       | 0       | 3    |
| 9    | 87    | 13                 | 17     | 61      | 15    | 1      | 1       | 1       | 4    |
| 10   | 90    | 10                 | 18     | 57      | 20    | 2      | 0       | 1       | 2    |
| 11   | 95    | 5                  | 16     | 51      | 27    | 3      | 0       | 1       | 3    |
| 12   | 91    | 9                  | 18     | 60      | 18    | 1      | 1       | 1       | 2    |
| 13   | 89    | 11                 | 17     | 58      | 18    | 1      | 1       | 1       | 4    |
| 14   | 90    | 10                 | 13     | 64      | 17    | 1      | 1       | 1       | 3    |
| 15   | 88    | 13                 | 14     | 43      | 33    | 6      | 1       | 1       | 2    |
| 16   | 91    | 9                  | 14     | 60      | 22    | 1      | 0       | 1       | 3    |
| 17   | 92    | 8                  | 13     | 44      | 32    | 6      | 1       | 1       | 4    |
| 18   | 94    | 6                  | 14     | 61      | 20    | 1      | 1       | 0       | 2    |
| 19   | 92    | 8                  | 17     | 56      | 22    | 1      | 1       | 0       | 3    |
| 20   | 90    | 10                 | 13     | 61      | 23    | 2      | 1       | 0       | 1    |

Table 24. Inter-Rater Agreement and Percentage Awarded for Each Score Point for WP Items Grade 6

|      |       | r-Rater<br>ement % | Percen | tage Aw | arded | for E | ach Sco | ore Poi | nt % |
|------|-------|--------------------|--------|---------|-------|-------|---------|---------|------|
| Item | Exact | Adjacent           | 1      | 2       | 3     | 4     | В       | N       | T    |
| 1    | 91    | 9                  | 14     | 55      | 25    | 2     | 1       | 0       | 3    |
| 2    | 88    | 12                 | 13     | 57      | 24    | 2     | 1       | 0       | 2    |
| 3    | 86    | 14                 | 12     | 55      | 28    | 3     | 1       | 0       | 1    |
| 4    | 90    | 10                 | 14     | 50      | 29    | 4     | 1       | 1       | 2    |
| 5    | 86    | 14                 | 13     | 52      | 30    | 2     | 1       | 0       | 2    |
| 6    | 89    | 11                 | 13     | 56      | 25    | 2     | 1       | 0       | 3    |
| 7    | 88    | 12                 | 13     | 54      | 26    | 3     | 1       | 0       | 2    |
| 8    | 90    | 10                 | 23     | 48      | 21    | 2     | 1       | 1       | 3    |
| 9    | 83    | 17                 | 20     | 48      | 26    | 2     | 1       | 1       | 2    |
| 10   | 86    | 14                 | 16     | 49      | 28    | 4     | 1       | 0       | 1    |
| 11   | 85    | 15                 | 20     | 54      | 21    | 2     | 1       | 0       | 2    |
| 12   | 90    | 10                 | 15     | 47      | 30    | 3     | 1       | 1       | 3    |
| 13   | 86    | 14                 | 28     | 50      | 17    | 2     | 1       | 1       | 2    |
| 14   | 83    | 17                 | 17     | 46      | 31    | 3     | 2       | 0       | 2    |
| 15   | 90    | 10                 | 15     | 41      | 33    | 7     | 2       | 0       | 2    |
| 16   | 87    | 12                 | 12     | 37      | 41    | 8     | 1       | 0       | 1    |
| 17   | 83    | 17                 | 13     | 41      | 37    | 7     | 1       | 0       | 1    |
| 18   | 83    | 16                 | 16     | 44      | 30    | 7     | 1       | 0       | 1    |
| 19   | 90    | 10                 | 8      | 36      | 43    | 9     | 1       | 0       | 3    |
| 20   | 87    | 13                 | 12     | 40      | 35    | 7     | 1       | 1       | 4    |

Table 25. Inter-Rater Agreement and Percentage Awarded for Each Score Point for WP Items Grade 7

|      |       | r-Rater<br>ement % | Percen | tage Aw | arded | for E | ach Sco | ore Poi | nt % |
|------|-------|--------------------|--------|---------|-------|-------|---------|---------|------|
| Item | Exact | Adjacent           | 1      | 2       | 3     | 4     | В       | N       | T    |
| 1    | 87    | 13                 | 87     | 13      | 87    | 13    | 87      | 13      | 87   |
| 2    | 83    | 17                 | 83     | 17      | 83    | 17    | 83      | 17      | 83   |
| 3    | 86    | 14                 | 86     | 14      | 86    | 14    | 86      | 14      | 86   |
| 4    | 88    | 12                 | 88     | 12      | 88    | 12    | 88      | 12      | 88   |
| 5    | 86    | 14                 | 86     | 14      | 86    | 14    | 86      | 14      | 86   |
| 6    | 86    | 14                 | 86     | 14      | 86    | 14    | 86      | 14      | 86   |
| 7    | 86    | 14                 | 86     | 14      | 86    | 14    | 86      | 14      | 86   |
| 8    | 88    | 12                 | 88     | 12      | 88    | 12    | 88      | 12      | 88   |
| 9    | 82    | 18                 | 82     | 18      | 82    | 18    | 82      | 18      | 82   |
| 10   | 85    | 14                 | 85     | 14      | 85    | 14    | 85      | 14      | 85   |
| 11   | 84    | 16                 | 84     | 16      | 84    | 16    | 84      | 16      | 84   |
| 12   | 85    | 15                 | 85     | 15      | 85    | 15    | 85      | 15      | 85   |
| 13   | 86    | 14                 | 86     | 14      | 86    | 14    | 86      | 14      | 86   |
| 14   | 83    | 17                 | 83     | 17      | 83    | 17    | 83      | 17      | 83   |
| 15   | 82    | 17                 | 82     | 17      | 82    | 17    | 82      | 17      | 82   |
| 16   | 87    | 13                 | 87     | 13      | 87    | 13    | 87      | 13      | 87   |
| 17   | 90    | 10                 | 90     | 10      | 90    | 10    | 90      | 10      | 90   |
| 18   | 84    | 16                 | 84     | 16      | 84    | 16    | 84      | 16      | 84   |
| 19   | 87    | 13                 | 87     | 13      | 87    | 13    | 87      | 13      | 87   |
| 20   | 89    | 11                 | 89     | 11      | 89    | 11    | 89      | 11      | 89   |

Table 26. Inter-Rater Agreement and Percentage Awarded for Each Score Point for WP Items Grade 8

|      |       | r-Rater<br>ement % | Percen | tage Aw | arded | for E | ach Sco | ore Poi | nt % |
|------|-------|--------------------|--------|---------|-------|-------|---------|---------|------|
| Item | Exact | Adjacent           | 1      | 2       | 3     | 4     | В       | N       | T    |
| 1    | 90    | 10                 | 14     | 41      | 35    | 7     | 1       | 1       | 1    |
| 2    | 80    | 20                 | 18     | 47      | 27    | 7     | 1       | 0       | 0    |
| 3    | 80    | 20                 | 9      | 47      | 38    | 3     | 1       | 0       | 1    |
| 4    | 90    | 10                 | 12     | 48      | 33    | 5     | 1       | 1       | 1    |
| 5    | 82    | 18                 | 17     | 41      | 32    | 7     | 2       | 0       | 1    |
| 6    | 76    | 24                 | 9      | 44      | 40    | 4     | 1       | 0       | 1    |
| 7    | 88    | 12                 | 13     | 43      | 35    | 6     | 2       | 0       | 1    |
| 8    | 85    | 15                 | 14     | 46      | 30    | 7     | 2       | 0       | 1    |
| 9    | 87    | 13                 | 16     | 43      | 34    | 5     | 2       | 0       | 0    |
| 10   | 84    | 16                 | 12     | 43      | 36    | 7     | 1       | 0       | 1    |
| 11   | 82    | 18                 | 20     | 45      | 29    | 4     | 1       | 0       | 1    |
| 12   | 88    | 12                 | 11     | 42      | 38    | 4     | 2       | 1       | 2    |
| 13   | 85    | 15                 | 9      | 40      | 41    | 7     | 2       | 0       | 2    |
| 14   | 86    | 14                 | 14     | 49      | 31    | 3     | 1       | 0       | 1    |
| 15   | 87    | 13                 | 12     | 46      | 33    | 5     | 1       | 1       | 1    |
| 16   | 86    | 14                 | 19     | 43      | 30    | 5     | 1       | 1       | 1    |
| 17   | 78    | 22                 | 16     | 45      | 34    | 3     | 2       | 0       | 1    |
| 18   | 85    | 15                 | 15     | 45      | 33    | 4     | 1       | 0       | 1    |
| 19   | 83    | 17                 | 15     | 46      | 33    | 3     | 1       | 1       | 0    |
| 20   | 84    | 16                 | 22     | 45      | 27    | 3     | 1       | 0       | 2    |

## **ITEM STATISTICS**

This section provides item statistics for each item. Valid non-score responses (blank, non-scoreable, and off-topic) for WP items were treated as 0 point.

**Table 27. MC Item Statistics** 

|    | It     | em Inforn | nation  |         |        |             |      |      |      | Clas | sical |       |       |       |       |       | Ras   | sch             | Iı    | nfit | Οι    | tfit |        | DIF    |        |
|----|--------|-----------|---------|---------|--------|-------------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-----------------|-------|------|-------|------|--------|--------|--------|
| Gr | PubID  | Form      | Std     | DO<br>K | N      | P.Valu<br>e | P(A) | P(B) | P(C) | P(D) | P(-)  | PtBis | PT(A  | PT(B  | PT(C) | PT(D  | В     | Final.B.<br>Err | t     | MS   | t     | MS   | M<br>W | B<br>W | W<br>H |
| 3  | 102153 | 0         | D.1.2.5 | 1       | 102193 | 0.51        | 0.25 | 0.12 | 0.12 | 0.51 | 0.01  | 0.22  | -0.07 | -0.12 | -0.11 | 0.22  | -0.07 | 0.01            | -9.90 | 0.97 | -9.90 | 0.97 | A+     | B+     | A+     |
| 3  | 871828 | 0         | D.1.1.4 | 2       | 102193 | 0.75        | 0.07 | 0.11 | 0.06 | 0.75 | 0.01  | 0.28  | -0.17 | -0.15 | -0.13 | 0.28  | -1.29 | 0.01            | -9.90 | 0.86 | -9.90 | 0.76 | A+     | C-     | C-     |
| 3  | 758781 | 0         | D.1.2.1 | 2       | 102193 | 0.38        | 0.18 | 0.15 | 0.29 | 0.38 | 0.01  | 0.09  | -0.12 | -0.08 | 0.07  | 0.09  | 0.56  | 0.01            | 9.90  | 1.09 | 9.90  | 1.15 | A-     | A-     | A+     |
| 3  | 198916 | 0         | D.1.1.6 | 3       | 102193 | 0.48        | 0.10 | 0.13 | 0.48 | 0.12 | 0.00  | 0.07  | -0.12 | -0.16 | 0.27  | -0.10 | 0.07  | 0.01            | -9.90 | 0.92 | -9.90 | 0.90 | A-     | A-     | A-     |
| 3  | 697452 | 0         | D.1.2.4 | 2       | 102193 | 0.27        | 0.25 | 0.27 | 0.35 | 0.12 | 0.01  | 0.17  | -0.16 | 0.17  | 0.06  | -0.10 | 1.12  | 0.01            | -2.63 | 0.99 | 9.90  | 1.08 | A-     | A-     | A+     |
| 3  | 314142 | 0         | D.1.1.9 | 2       | 102193 | 0.42        | 0.18 | 0.13 | 0.42 | 0.12 | 0.00  | 0.00  | -0.16 | -0.04 | 0.00  | 0.07  | 0.32  | 0.01            | 9.90  | 1.19 | 9.90  | 1.26 | A+     | A+     | A+     |
| 3  | 785433 | 0         | D.1.2.3 | 2       | 102193 | 0.42        | 0.13 | 0.13 | 0.42 | 0.42 | 0.00  | 0.19  | -0.04 | -0.04 | -0.06 | 0.19  | 0.32  | 0.01            | 1.55  | 1.00 | 5.17  | 1.02 | A+     | A-     | A-     |
| 3  | 671622 | 0         | D.1.1.1 | 2       | 102193 | 0.42        | 0.49 | 0.14 | 0.23 | 0.42 | 0.00  | 0.20  | 0.20  | -0.12 | -0.04 | -0.10 | 0.00  | 0.01            | -3.52 | 0.99 | -2.89 | 0.99 | A-     | A-     | A-     |
| 3  | 727044 | 0         | D.2.1.1 | 3       | 102193 | 0.49        | 0.49 | 0.14 | 0.30 | 0.30 | 0.00  | 0.20  | -0.06 | 0.04  | 0.01  | 0.01  | 1.30  | 0.01            | 9.90  | 1.12 | 9.90  | 1.27 | A-     | A+     | A+     |
| 3  | 946046 | 0         | D.1.1.8 | 2       | 102193 | 0.58        | 0.05 | 0.58 | 0.29 | 0.09 | 0.00  | 0.20  | -0.13 | 0.20  | -0.06 | -0.15 | -0.39 | 0.01            | -5.25 | 0.99 | -4.92 | 0.98 | A-     | A-     | A+     |
| 3  | 185483 | 1         | D.1.2.5 | 1       | 5140   | 0.38        | 0.05 | 0.38 | 0.29 | 0.09 | 0.00  | 0.20  | -0.13 | 0.20  | -0.19 | -0.15 | -2.17 | 0.01            | -5.34 | 0.85 | -8.58 | 0.65 |        | A-     | A-     |
| 3  | 561859 | 1         |         | 2       | 5140   | 0.87        | 0.03 | 0.05 | 0.04 | 0.04 | 0.01  | 0.34  |       |       |       | -0.10 | -2.17 | 0.04            | -1.57 | 0.83 | -2.36 | 0.86 | A+     |        |        |
|    |        | 1         | D.1.1.3 |         |        | 0.52        |      |      |      | 0.02 |       |       | 0.22  | -0.16 | -0.11 | 0.27  |       |                 |       |      |       | 0.80 | A+     | Α-     | Α-     |
| 3  | 602433 |           | D.1.1.7 | 3       | 5140   |             | 0.10 | 0.20 | 0.17 |      | 0.01  | 0.27  | -0.16 | -0.09 | -0.12 |       | -0.11 | 0.03            | -2.83 | 0.97 | -2.20 |      | A+     | A-     | A-     |
| 3  | 358789 | 1         | D.1.2.4 | 2       | 5140   | 0.55        | 0.10 | 0.14 | 0.20 | 0.55 | 0.00  | 0.30  | -0.18 | -0.18 | -0.08 | 0.30  | -0.25 | 0.03            | -5.56 | 0.94 | -5.01 | 0.93 | A-     | A+     | A-     |
| 3  | 632234 | 1         | D.1.1.1 | 2       | 5140   | 0.63        | 0.16 | 0.63 | 0.13 | 0.08 | 0.01  | 0.29  | -0.15 | 0.29  | -0.13 | -0.15 | -0.64 | 0.03            | -4.17 | 0.95 | -4.58 | 0.92 | A-     | A-     | A+     |
| 3  | 599927 | 1         | D.1.1.8 | 2       | 5140   | 0.30        | 0.21 | 0.22 | 0.30 | 0.26 | 0.01  | 0.11  | -0.03 | -0.04 | 0.11  | -0.03 | 0.97  | 0.03            | 5.87  | 1.09 | 8.03  | 1.20 | A-     | A+     | A+     |
| 3  | 138651 | 1         | D.1.2.3 | 2       | 5140   | 0.43        | 0.16 | 0.43 | 0.16 | 0.24 | 0.01  | 0.25  | -0.13 | 0.25  | -0.12 | -0.06 | 0.31  | 0.03            | -0.91 | 0.99 | -1.01 | 0.98 | A-     | A+     | A+     |
| 3  | 428637 | 1         | D.2.1.1 | 3       | 5140   | 0.33        | 0.33 | 0.12 | 0.15 | 0.39 | 0.00  | 0.21  | 0.21  | -0.10 | -0.08 | -0.07 | 0.80  | 0.03            | 0.72  | 1.01 | 3.96  | 1.09 | A-     | A-     | A-     |
| 3  | 803630 | 2         | D.1.2.5 | 2       | 5145   | 0.72        | 0.72 | 0.06 | 0.11 | 0.10 | 0.01  | 0.32  | 0.32  | -0.16 | -0.18 | -0.16 | -1.06 | 0.03            | -6.39 | 0.90 | -6.77 | 0.85 | A+     | A+     | A-     |
| 3  | 460975 | 2         | D.1.1.3 | 2       | 5145   | 0.86        | 0.08 | 0.03 | 0.86 | 0.02 | 0.00  | 0.26  | -0.16 | -0.14 | 0.26  | -0.14 | -2.09 | 0.04            | -3.10 | 0.91 | -5.29 | 0.78 | A+     | Α-     | A-     |
| 3  | 925375 | 2         | D.1.1.4 | 2       | 5145   | 0.80        | 0.08 | 0.80 | 0.06 | 0.05 | 0.00  | 0.29  | -0.17 | 0.29  | -0.18 | -0.11 | -1.61 | 0.04            | -4.06 | 0.91 | -5.33 | 0.83 | A-     | A-     | A+     |
| 3  | 462917 | 2         | D.1.1.6 | 2       | 5145   | 0.40        | 0.40 | 0.12 | 0.26 | 0.21 | 0.00  | 0.13  | 0.13  | -0.07 | -0.03 | -0.06 | 0.46  | 0.03            | 7.13  | 1.08 | 6.27  | 1.10 | A-     | A-     | A-     |
| 3  | 829152 | 2         | D.1.2.2 | 2       | 5145   | 0.22        | 0.40 | 0.22 | 0.16 | 0.21 | 0.01  | 0.06  | 0.08  | 0.06  | -0.11 | -0.05 | 1.45  | 0.04            | 4.69  | 1.09 | 9.16  | 1.31 | A-     | A+     | A-     |
| 3  | 870268 | 2         | D.1.1.7 | 3       | 5145   | 0.29        | 0.24 | 0.16 | 0.29 | 0.29 | 0.01  | 0.25  | -0.11 | -0.10 | 0.25  | -0.05 | 1.05  | 0.03            | -2.78 | 0.96 | -0.23 | 0.99 | A-     | A-     | A-     |
| 3  | 398241 | 2         | D.1.2.4 | 3       | 5145   | 0.39        | 0.36 | 0.39 | 0.11 | 0.13 | 0.01  | 0.23  | -0.04 | 0.23  | -0.14 | -0.13 | 0.54  | 0.03            | -1.30 | 0.99 | -0.65 | 0.99 | A-     | A+     | A-     |
| 3  | 942146 | 2         | D.2.1.1 | 3       | 5145   | 0.31        | 0.33 | 0.24 | 0.11 | 0.31 | 0.00  | 0.14  | -0.10 | 0.03  | -0.09 | 0.14  | 0.91  | 0.03            | 3.92  | 1.05 | 4.08  | 1.09 | A+     | A-     | B-     |

| 3       690404       3       D.1.2.5       2       5121       0.75       0.13       0.75       0.06       0.05       0.01       0.33       -0.17       -0.18       -1.35       0.03       -6.09       0.90       -5.79       0.85         3       225188       3       D.1.1.3       2       5121       0.49       0.49       0.12       0.12       0.26       0.01       0.12       -0.10       -0.08       0.00       -0.02       0.03       9.90       1.11       9.59       1.14         3       822586       3       D.1.1.4       2       5121       0.46       0.18       0.17       0.46       0.19       0.00       0.31       -0.09       -0.16       0.31       -0.14       0.10       0.03       -5.58       0.94       -4.71       0.93         3       156566       3       D.1.1.6       3       5121       0.62       0.62       0.12       0.15       0.09       0.01       0.32       0.32       -0.14       -0.15       -0.68       0.03       -5.90       0.93       -6.09       0.90         3       17318       3       D.1.1.7       3       5121       0.64       0.15       0.08       0. | A+ A+ A- A+ A- A- A- A- A- A- A- A- A+ A- A+ A- A+ A- | + A+<br>+ A-<br>- B-<br>- C-<br>- A+ |
|--|---|--------------------------------------|
| 3       822586       3       D.1.1.4       2       5121       0.46       0.18       0.17       0.46       0.19       0.00       0.31       -0.16       0.31       -0.14       0.10       0.03       -5.58       0.94       -4.71       0.93         3       156566       3       D.1.1.6       3       5121       0.62       0.62       0.12       0.15       0.09       0.01       0.32       -0.14       -0.15       -0.18       -0.68       0.03       -5.90       0.93       -6.09       0.90         3       417318       3       D.1.1.7       3       5121       0.64       0.15       0.08       0.64       0.13       0.00       0.30       -0.21       -0.11       0.30       -0.11       -0.75       0.03       -4.45       0.95       -4.95       0.91         3       998027       3       D.1.2.4       2       5121       0.25       0.46       0.25       0.20       0.08       0.01       0.14       0.08       0.14       -0.17       -0.12       1.22       0.03       2.85       1.05       6.82       1.20         3       209349       3       D.1.2.3       2       5121       0.30       0 | A+ A+ A-          | + A-<br>- B-<br>- C-<br>- A+         |
| 3       156566       3       D.1.1.6       3       5121       0.62       0.62       0.12       0.15       0.09       0.01       0.32       -0.14       -0.15       -0.18       -0.68       0.03       -5.90       0.93       -6.09       0.90         3       417318       3       D.1.1.7       3       5121       0.64       0.15       0.08       0.64       0.13       0.00       0.30       -0.21       -0.11       0.30       -0.11       -0.75       0.03       -4.45       0.95       -4.95       0.91         3       998027       3       D.1.2.4       2       5121       0.25       0.46       0.25       0.20       0.08       0.01       0.14       -0.08       0.14       -0.17       -0.12       1.22       0.03       2.85       1.05       6.82       1.20         3       209349       3       D.1.2.3       2       5121       0.30       0.17       0.28       0.25       0.30       0.01       0.14       -0.09       -0.08       0.02       0.14       0.88       0.03       4.65       1.07       6.55       1.15         3       876223       3       D.1.1.8       2       5121       0. | A- A- A- A- A- A- A- A- A-                            | - B-<br>- C-<br>- A+                 |
| 3       417318       3       D.1.1.7       3       5121       0.64       0.15       0.08       0.64       0.13       0.00       0.30       -0.21       -0.11       0.30       -0.11       -0.75       0.03       -4.45       0.95       -4.95       0.91         3       998027       3       D.1.2.4       2       5121       0.25       0.46       0.25       0.20       0.08       0.01       0.14       -0.08       0.14       -0.17       -0.12       1.22       0.03       2.85       1.05       6.82       1.20         3       209349       3       D.1.2.3       2       5121       0.30       0.17       0.28       0.25       0.30       0.01       0.14       -0.09       -0.08       0.02       0.14       0.88       0.03       4.65       1.07       6.55       1.15         3       876223       3       D.1.1.8       2       5121       0.76       0.76       0.11       0.06       0.07       0.00       0.33       0.33       -0.24       -0.17       -0.12       -1.41       0.03       -6.24       0.89       -7.21       0.81         3       690732       4       D.1.2.6       1       51 | A- A-<br>A- A-<br>A+ A-<br>A+ A-                      | - C-<br>- A+                         |
| 3     998027     3     D.1.2.4     2     5121     0.25     0.46     0.25     0.20     0.08     0.01     0.14     0.08     0.14     -0.17     -0.12     1.22     0.03     2.85     1.05     6.82     1.20       3     209349     3     D.1.2.3     2     5121     0.30     0.17     0.28     0.25     0.30     0.01     0.14     -0.09     -0.08     0.02     0.14     0.88     0.03     4.65     1.07     6.55     1.15       3     876223     3     D.1.1.8     2     5121     0.76     0.76     0.11     0.06     0.07     0.00     0.33     0.33     -0.24     -0.17     -0.12     -1.41     0.03     -6.24     0.89     -7.21     0.81       3     690732     4     D.1.2.6     1     5140     0.83     0.12     0.02     0.83     0.02     0.01     0.29     -0.20     -0.11     0.29     -0.15     -1.86     0.04     -3.62     0.92     -5.12     0.81  | A- A-<br>A+ A-<br>A+ A-                               | - A+<br>- A-                         |
| 3     209349     3     D.1.2.3     2     5121     0.30     0.17     0.28     0.25     0.30     0.01     0.14     -0.09     -0.08     0.02     0.14     0.88     0.03     4.65     1.07     6.55     1.15       3     876223     3     D.1.1.8     2     5121     0.76     0.76     0.11     0.06     0.07     0.00     0.33     0.33     -0.24     -0.17     -0.12     -1.41     0.03     -6.24     0.89     -7.21     0.81       3     690732     4     D.1.2.6     1     5140     0.83     0.12     0.02     0.83     0.02     0.01     0.29     -0.20     -0.11     0.29     -0.15     -1.86     0.04     -3.62     0.92     -5.12     0.81   | A+ A-<br>A+ A-  | - A-                                 |
| 3     876223     3     D.1.1.8     2     5121     0.76     0.76     0.11     0.06     0.07     0.00     0.33     0.33     -0.24     -0.17     -0.12     -1.41     0.03     -6.24     0.89     -7.21     0.81       3     690732     4     D.1.2.6     1     5140     0.83     0.12     0.02     0.83     0.02     0.01     0.29     -0.20     -0.11     0.29     -0.15     -1.86     0.04     -3.62     0.92     -5.12     0.81  | A+ A-   |                                      |
| 3 690732 4 D.1.2.6 1 5140 0.83 0.12 0.02 0.83 0.02 0.01 0.29 -0.20 -0.11 0.29 -0.15 -1.86 0.04 -3.62 0.92 -5.12 0.81   |   | . В-                                 |
|  | A+ B+   |                                      |
|  |   | + B+                                 |
| 3 331149 4 D.1.1.2 2 5140 0.79 0.07 0.05 0.09 0.79 0.01 0.33 -0.17 -0.18 0.33 -1.52 0.04 -5.39 0.90 -7.13 0.79   | A+ B-   | - C-                                 |
| 3 386027 4 D.1.1.5 2 5140 0.61 0.08 0.14 0.16 0.61 0.01 0.37 -0.25 -0.16 -0.14 0.37 -0.55 0.03 -9.90 0.89 -9.34 0.85   | A- A-   | - A-                                 |
| 3 937839 4 D.1.2.1 2 5140 0.49 0.11 0.49 0.19 0.21 0.00 0.33 -0.26 0.33 -0.11 -0.09 0.05 0.03 -7.25 0.93 -6.38 0.91  | A+ A-   | - A-                                 |
| 3 432960 4 D.1.1.9 2 5140 0.33 0.13 0.33 0.07 0.47 0.00 0.12 -0.14 0.12 -0.11 0.04 0.80 0.03 7.42 1.10 7.98 1.17   | A- A-   | - A+                                 |
| 3 714480 4 D.1.2.3 2 5140 0.36 0.15 0.25 0.23 0.36 0.01 0.24 -0.17 -0.04 -0.09 0.24 0.63 0.03 -0.56 0.99 2.01 1.04   | A+ A-   | - A-                                 |
| 3 561365 4 D.2.1.1 3 5140 0.34 0.21 0.34 0.23 0.21 0.00 0.12 0.04 0.12 -0.13 -0.04 0.75 0.03 7.29 1.10 8.87 1.19   | A- A+   | + A+                                 |
| 3 754308 4 D.1.1.1 2 5140 0.63 0.63 0.11 0.13 0.13 0.01 0.28 0.28 -0.13 -0.13 -0.14 -0.63 0.03 -2.43 0.97 -3.58 0.94   | A- A-   | - A-                                 |
| 3 513345 5 D.1.1.9 2 5131 0.61 0.21 0.12 0.61 0.06 0.00 0.27 -0.16 -0.10 0.27 -0.14 -0.56 0.03 -2.11 0.98 -1.79 0.97   | A+ A-   | - B+                                 |
| 3 982177 5 D.1.2.6 2 5131 0.53 0.53 0.16 0.09 0.21 0.01 0.29 0.29 -0.12 -0.13 -0.14 -0.19 0.03 -3.17 0.97 -3.08 0.95   | A+ A+   | + A+                                 |
| 3 621596 5 D.1.1.2 2 5131 0.72 0.12 0.72 0.06 0.09 0.00 0.40 -0.23 0.40 -0.20 -0.19 -1.18 0.03 -9.57 0.86 -9.90 0.76   | A- C-   | - C-                                 |
| 3 212169 5 D.1.1.3 2 5131 0.70 0.17 0.08 0.05 0.70 0.01 0.40 -0.24 -0.21 -0.16 0.40 -1.03 0.03 -9.90 0.86 -9.90 0.77   | B- A-   | - A-                                 |
| 3 525894 5 D.1.1.5 2 5131 0.61 0.61 0.10 0.13 0.14 0.01 0.31 0.31 -0.12 -0.16 -0.16 -0.59 0.03 -4.65 0.95 -5.23 0.91   | A+ A-   | - B-                                 |
| 3 450780 5 D.1.2.1 2 5131 0.31 0.31 0.18 0.31 0.20 0.00 0.31 -0.10 -0.09 0.31 -0.16 0.89 0.03 -4.62 0.93 -1.82 0.96  | A+ A-   | - A+                                 |
| 3 400590 5 D.1.2.3 2 5131 0.52 0.13 0.16 0.52 0.19 0.00 0.22 -0.12 -0.07 0.22 -0.12 -0.17 0.03 3.05 1.03 1.82 1.03   | A- A-   | - A-                                 |
| 3 199310 5 D.1.1.5 2 5131 0.33 0.21 0.22 0.33 0.23 0.01 0.15 -0.12 -0.01 0.15 -0.04 0.79 0.03 5.49 1.08 6.81 1.15  | A- A+   | + A+                                 |
| 3 529004 6 D.1.1.3 2 5130 0.60 0.23 0.05 0.12 0.60 0.00 0.31 -0.15 -0.16 -0.16 0.31 -0.50 0.03 -6.59 0.93 -6.67 0.90   | A- A-   | - A-                                 |
| 3 713266 6 D.1.2.6 2 5130 0.31 0.13 0.21 0.35 0.31 0.00 0.06 -0.14 -0.05 0.09 0.06 0.90 0.03 8.01 1.12 9.11 1.21   | A+ A+   | + A+                                 |
| 3 338053 6 D.1.1.4 2 5130 0.69 0.11 0.69 0.15 0.05 0.01 0.38 -0.21 0.38 -0.21 -0.17 -0.96 0.03 -9.90 0.87 -9.90 0.79   | A+ C-   | - B-                                 |
| 3 142385 6 D.1.1.6 3 5130 0.36 0.24 0.18 0.36 0.21 0.01 0.11 0.01 -0.11 0.11 -0.02 0.63 0.03 6.83 1.08 7.06 1.13   | A- A+   | + A-                                 |
| 3 262941 6 D.1.1.7 2 5130 0.68 0.68 0.17 0.09 0.06 0.01 0.26 0.26 -0.05 -0.21 -0.19 -0.92 0.03 -3.02 0.96 -2.70 0.95   | A- A-   |                                      |
| 3 921894 6 D.1.2.4 2 5130 0.48 0.24 0.14 0.14 0.48 0.00 0.31 -0.12 -0.13 -0.16 0.31 0.07 0.03 -6.91 0.93 -5.85 0.92  | A- A-   |                                      |
| 3 766527 6 D.1.2.3 2 5130 0.29 0.29 0.26 0.22 0.21 0.11 0.12 0.12 -0.06 -0.01 -0.05 0.97 0.03 4.07 1.06 6.84 1.16  | A- A+   |                                      |
| 3 598945 6 D.1.1.8 3 5130 0.47 0.13 0.15 0.47 0.25 0.00 0.22 -0.13 -0.05 0.22 -0.11 0.09 0.03 -0.27 1.00 -0.36 0.99  | A+ A+   |                                      |

| 3 | 664716 | 7  | D.1.2.5 | 1 | 5108 | 0.80 | 0.09 | 0.80 | 0.06 | 0.05 | 0.00 | 0.27 | -0.15 | 0.27  | -0.11 | -0.17 | -1.68 | 0.04 | -1.62 | 0.97 | -1.51 |      | A+         | A- | A- |
|---|--------|----|---------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|------------|----|----|
| 3 | 129094 | 7  | D.1.1.4 | 2 | 5108 | 0.77 | 0.09 | 0.08 | 0.05 | 0.77 | 0.01 | 0.42 | -0.23 | -0.20 | -0.23 | 0.42  | -1.45 | 0.04 | -8.54 | 0.85 | -9.12 | 0.73 | A-         | A- | A- |
| 3 | 192165 | 7  | D.1.1.6 | 2 | 5108 | 0.62 | 0.11 | 0.13 | 0.62 | 0.12 | 0.02 | 0.39 | -0.23 | -0.20 | 0.39  | -0.14 | -0.62 | 0.03 | -8.25 | 0.90 | -7.99 | 0.85 | A+         | A- | A- |
| 3 | 226521 | 7  | D.1.2.3 | 2 | 5108 | 0.37 | 0.23 | 0.25 | 0.37 | 0.14 | 0.01 | 0.29 | -0.19 | -0.03 | 0.29  | -0.13 | 0.63  | 0.03 | -1.44 | 0.98 | 0.08  | 1.00 | A+         | A+ | A- |
| 3 | 675457 | 7  | D.2.1.1 | 3 | 5108 | 0.45 | 0.45 | 0.12 | 0.17 | 0.26 | 0.01 | 0.30 | 0.30  | -0.14 | -0.13 | -0.11 | 0.24  | 0.03 | -1.38 | 0.98 | 1.06  | 1.02 | A+         | A- | A+ |
| 3 | 163810 | 7  | D.1.1.8 | 2 | 5108 | 0.64 | 0.17 | 0.09 | 0.09 | 0.64 | 0.01 | 0.41 | -0.22 | -0.16 | -0.22 | 0.41  | -0.71 | 0.03 | -9.14 | 0.89 | -8.48 | 0.83 | A-         | B- | A- |
| 3 | 116151 | 7  | D.1.1.7 | 2 | 5108 | 0.82 | 0.82 | 0.04 | 0.10 | 0.03 | 0.00 | 0.36 | 0.36  | -0.21 | -0.20 | -0.21 | -1.85 | 0.04 | -5.34 | 0.88 | -6.69 | 0.74 | A-         | A- | A- |
| 3 | 808966 | 7  | D.1.1.3 | 2 | 5108 | 0.80 | 0.80 | 0.06 | 0.08 | 0.06 | 0.01 | 0.31 | 0.31  | -0.20 | -0.10 | -0.21 | -1.64 | 0.04 | -2.97 | 0.94 | -4.12 | 0.85 | A-         | A+ | A+ |
| 3 | 229406 | 8  | D.1.2.5 | 1 | 5105 | 0.86 | 0.05 | 0.04 | 0.04 | 0.86 | 0.01 | 0.36 | -0.22 | -0.20 | -0.17 | 0.36  | -2.11 | 0.04 | -5.36 | 0.86 | -8.41 | 0.66 | A+         | C- | B- |
| 3 | 634592 | 8  | D.1.2.5 | 2 | 5105 | 0.61 | 0.17 | 0.12 | 0.10 | 0.61 | 0.00 | 0.25 | -0.11 | -0.14 | -0.12 | 0.25  | -0.55 | 0.03 | -0.40 | 1.00 | -0.82 | 0.99 | A+         | A+ | A- |
| 3 | 939559 | 8  | D.1.1.2 | 2 | 5105 | 0.32 | 0.23 | 0.15 | 0.29 | 0.32 | 0.01 | 0.19 | -0.15 | -0.02 | -0.03 | 0.19  | 0.86  | 0.03 | 2.21  | 1.03 | 4.80  | 1.11 | A-         | B- | A- |
| 3 | 721637 | 8  | D.1.1.5 | 2 | 5105 | 0.74 | 0.07 | 0.16 | 0.02 | 0.74 | 0.01 | 0.34 | -0.20 | -0.20 | -0.16 | 0.34  | -1.22 | 0.03 | -6.50 | 0.89 | -6.79 | 0.83 | A+         | В- | A- |
| 3 | 533404 | 8  | D.1.2.1 | 2 | 5105 | 0.52 | 0.18 | 0.52 | 0.16 | 0.14 | 0.00 | 0.28 | -0.11 | 0.28  | -0.14 | -0.12 | -0.10 | 0.03 | -2.81 | 0.97 | -2.02 | 0.97 | A-         | A+ | A+ |
| 3 | 835898 | 8  | D.1.2.3 | 2 | 5105 | 0.37 | 0.26 | 0.37 | 0.20 | 0.16 | 0.01 | 0.21 | -0.03 | 0.21  | -0.09 | -0.13 | 0.58  | 0.03 | 0.90  | 1.01 | 2.50  | 1.05 | A-         | A- | A- |
| 3 | 114204 | 8  | D.2.1.1 | 3 | 5105 | 0.25 | 0.18 | 0.25 | 0.48 | 0.09 | 0.00 | 0.11 | -0.07 | 0.11  | 0.01  | -0.08 | 1.27  | 0.03 | 3.73  | 1.07 | 9.62  | 1.30 | A+         | B- | A+ |
| 3 | 909378 | 8  | D.1.1.8 | 2 | 5105 | 0.85 | 0.10 | 0.03 | 0.85 | 0.01 | 0.01 | 0.35 | -0.27 | -0.18 | 0.35  | -0.09 | -2.06 | 0.04 | -5.41 | 0.86 | -8.24 | 0.67 | B+         | A- | A- |
| 3 | 482170 | 9  | D.1.1.2 | 2 | 5131 | 0.64 | 0.64 | 0.07 | 0.07 | 0.21 | 0.01 | 0.13 | 0.13  | -0.16 | -0.11 | 0.02  | -0.71 | 0.03 | 3.64  | 1.04 | 2.81  | 1.05 | <b>A</b> + | A+ | A+ |
| 3 | 995474 | 9  | D.1.1.5 | 2 | 5131 | 0.51 | 0.14 | 0.16 | 0.17 | 0.51 | 0.01 | 0.28 | -0.20 | -0.05 | -0.12 | 0.28  | -0.12 | 0.03 | -7.11 | 0.94 | -6.90 | 0.92 | A-         | A- | A- |
| 3 | 928897 | 9  | D.1.2.1 | 2 | 5131 | 0.39 | 0.34 | 0.11 | 0.39 | 0.16 | 0.00 | 0.13 | -0.01 | -0.08 | 0.13  | -0.09 | 0.44  | 0.03 | 4.82  | 1.05 | 5.00  | 1.08 | A-         | A+ | A+ |
| 3 | 796540 | 9  | D.1.2.2 | 2 | 5131 | 0.33 | 0.34 | 0.33 | 0.15 | 0.17 | 0.01 | 0.06 | 0.05  | 0.06  | -0.04 | -0.09 | 0.75  | 0.03 | 7.00  | 1.09 | 7.49  | 1.15 | A-         | A- | A- |
| 3 | 554507 | 9  | D.1.1.9 | 2 | 5131 | 0.40 | 0.40 | 0.30 | 0.13 | 0.16 | 0.00 | 0.07 | 0.07  | 0.01  | -0.04 | -0.07 | 0.39  | 0.03 | 8.98  | 1.10 | 8.86  | 1.13 | A+         | A+ | A+ |
| 3 | 746870 | 9  | D.2.1.1 | 3 | 5131 | 0.59 | 0.59 | 0.07 | 0.23 | 0.10 | 0.01 | 0.23 | 0.23  | -0.17 | -0.07 | -0.12 | -0.46 | 0.03 | -3.38 | 0.97 | -2.98 | 0.96 | A-         | A+ | A+ |
| 3 | 985603 | 9  | D.1.1.8 | 2 | 5131 | 0.52 | 0.23 | 0.52 | 0.19 | 0.05 | 0.00 | 0.27 | -0.23 | 0.27  | -0.02 | -0.14 | -0.15 | 0.03 | -6.50 | 0.94 | -5.49 | 0.93 | A+         | A- | B- |
| 3 | 396974 | 9  | D.1.2.6 | 1 | 5131 | 0.65 | 0.14 | 0.65 | 0.12 | 0.08 | 0.01 | 0.21 | -0.14 | 0.21  | -0.06 | -0.10 | -0.75 | 0.03 | -1.73 | 0.98 | -1.70 | 0.97 | A-         | A- | A+ |
| 3 | 712140 | 10 | D.1.2.5 | 1 | 5132 | 0.68 | 0.12 | 0.68 | 0.04 | 0.15 | 0.01 | 0.30 | -0.14 | 0.30  | -0.13 | -0.19 | -0.90 | 0.03 | -6.32 | 0.92 | -6.81 | 0.87 | A-         | A+ | A+ |
| 3 | 646980 | 10 | D.1.1.2 | 2 | 5132 | 0.30 | 0.14 | 0.30 | 0.36 | 0.19 | 0.01 | 0.16 | -0.13 | 0.16  | 0.00  | -0.07 | 0.93  | 0.03 | 1.82  | 1.03 | 4.34  | 1.10 | A-         | A+ | A- |
| 3 | 817549 | 10 | D.1.1.5 | 2 | 5132 | 0.86 | 0.86 | 0.05 | 0.03 | 0.05 | 0.01 | 0.26 | 0.26  | -0.15 | -0.12 | -0.14 | -2.14 | 0.04 | -2.86 | 0.92 | -5.71 | 0.77 | A-         | C- | C- |
| 3 | 395898 | 10 | D.1.2.1 | 2 | 5132 | 0.44 | 0.29 | 0.06 | 0.44 | 0.21 | 0.00 | 0.30 | -0.18 | -0.12 | 0.30  | -0.09 | 0.21  | 0.03 | -7.11 | 0.93 | -6.45 | 0.91 | A+         | A- | A- |
| 3 | 261288 | 10 | D.1.1.7 | 3 | 5132 | 0.35 | 0.27 | 0.19 | 0.35 | 0.18 | 0.01 | 0.21 | -0.04 | -0.13 | 0.21  | -0.08 | 0.64  | 0.03 | -0.68 | 0.99 | 0.18  | 1.00 | A+         | A+ | A+ |
| 3 | 627612 | 10 | D.1.1.9 | 2 | 5132 | 0.32 | 0.32 | 0.24 | 0.20 | 0.24 | 0.00 | 0.09 | 0.09  | -0.02 | -0.01 | -0.06 | 0.81  | 0.03 | 6.33  | 1.09 | 8.28  | 1.18 | A-         | A- | A- |
| 3 | 441072 | 10 | D.1.2.3 | 2 | 5132 | 0.32 | 0.14 | 0.22 | 0.32 | 0.32 | 0.01 | 0.17 | -0.21 | -0.13 | 0.11  | 0.17  | 0.82  | 0.03 | 2.43  | 1.03 | 2.98  |      | A-         | A+ | A- |
| 3 | 889515 | 10 | D.2.1.1 | 3 | 5132 | 0.42 | 0.15 | 0.22 | 0.42 | 0.21 | 0.00 | 0.22 | -0.15 | -0.03 | 0.22  | -0.10 | 0.30  | 0.03 | -0.21 | 1.00 | 0.31  |      | A+         | A+ | A- |

|   |        |    |         |   |      |      |      |      |      |      |      |      |       |       |       |       |       |      |       |      |       |      |    |    | Τ. |
|---|--------|----|---------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 3 | 963175 | 11 | D.1.2.6 | 2 | 5099 | 0.67 | 0.09 | 0.07 | 0.16 | 0.67 | 0.00 | 0.35 | -0.18 | -0.15 | -0.20 | 0.35  | -0.83 | 0.03 | -7.66 | 0.90 | -7.55 | 0.85 | A+ | B+ | A+ |
| 3 | 443216 | 11 | D.1.1.2 | 2 | 5099 | 0.75 | 0.10 | 0.05 | 0.75 | 0.08 | 0.01 | 0.36 | -0.19 | -0.18 | 0.36  | -0.20 | -1.25 | 0.03 | -7.38 | 0.88 | -8.89 | 0.78 | A+ | C- | C- |
| 3 | 535370 | 11 | D.1.1.5 | 2 | 5099 | 0.77 | 0.08 | 0.03 | 0.77 | 0.11 | 0.01 | 0.24 | -0.26 | -0.14 | 0.24  | -0.01 | -1.39 | 0.04 | -2.46 | 0.95 | -0.19 | 0.99 | A- | В- | B- |
| 3 | 721949 | 11 | D.1.2.1 | 2 | 5099 | 0.45 | 0.17 | 0.45 | 0.14 | 0.24 | 0.00 | 0.22 | -0.09 | 0.22  | -0.12 | -0.07 | 0.26  | 0.03 | 0.85  | 1.01 | 1.35  | 1.02 | A- | A- | A- |
| 3 | 915419 | 11 | D.1.1.9 | 2 | 5099 | 0.43 | 0.43 | 0.37 | 0.09 | 0.10 | 0.01 | 0.05 | 0.05  | 0.08  | -0.10 | -0.12 | 0.33  | 0.03 | 9.90  | 1.15 | 9.90  | 1.20 | A- | A+ | A+ |
| 3 | 744898 | 11 | D.1.2.3 | 2 | 5099 | 0.49 | 0.49 | 0.09 | 0.30 | 0.10 | 0.01 | 0.20 | 0.20  | -0.11 | -0.04 | -0.15 | 0.04  | 0.03 | 2.88  | 1.03 | 2.60  | 1.04 | A- | A- | A- |
| 3 | 911788 | 11 | D.2.1.1 | 3 | 5099 | 0.38 | 0.21 | 0.18 | 0.22 | 0.38 | 0.01 | 0.19 | -0.15 | -0.02 | -0.05 | 0.19  | 0.57  | 0.03 | 1.90  | 1.02 | 2.41  | 1.04 | A- | A- | A+ |
| 3 | 865369 | 11 | D.1.1.8 | 2 | 5099 | 0.69 | 0.69 | 0.08 | 0.07 | 0.15 | 0.00 | 0.25 | 0.25  | -0.18 | -0.13 | -0.09 | -0.93 | 0.03 | -1.91 | 0.97 | -2.64 | 0.94 | A+ | A- | A- |
| 3 | 651512 | 12 | D.1.1.9 | 2 | 5083 | 0.30 | 0.31 | 0.30 | 0.30 | 0.08 | 0.01 | 0.03 | -0.02 | 0.03  | 0.09  | -0.16 | 0.87  | 0.03 | 7.13  | 1.11 | 8.19  | 1.18 | A+ | A+ | A+ |
| 3 | 441036 | 12 | D.1.2.5 | 1 | 5083 | 0.68 | 0.68 | 0.08 | 0.09 | 0.15 | 0.00 | 0.21 | 0.21  | -0.17 | -0.11 | -0.06 | -0.97 | 0.03 | -2.15 | 0.97 | -2.25 | 0.96 | A+ | A+ | A+ |
| 3 | 231601 | 12 | D.1.1.2 | 2 | 5083 | 0.44 | 0.44 | 0.11 | 0.27 | 0.17 | 0.01 | 0.01 | 0.01  | -0.04 | 0.07  | -0.06 | 0.18  | 0.03 | 9.90  | 1.14 | 9.90  | 1.17 | A- | A+ | A+ |
| 3 | 493145 | 12 | D.1.1.5 | 2 | 5083 | 0.66 | 0.19 | 0.08 | 0.66 | 0.06 | 0.01 | 0.27 | -0.17 | -0.07 | 0.27  | -0.16 | -0.85 | 0.03 | -6.56 | 0.92 | -6.94 | 0.88 | A+ | A- | B- |
| 3 | 646595 | 12 | D.1.2.1 | 2 | 5083 | 0.36 | 0.21 | 0.30 | 0.36 | 0.13 | 0.01 | 0.19 | -0.09 | -0.06 | 0.19  | -0.06 | 0.56  | 0.03 | -1.34 | 0.98 | 0.33  | 1.01 | A- | A- | A- |
| 3 | 442929 | 12 | D.1.2.2 | 2 | 5083 | 0.29 | 0.07 | 0.35 | 0.29 | 0.28 | 0.01 | 0.05 | -0.03 | -0.06 | 0.05  | 0.04  | 0.88  | 0.03 | 5.88  | 1.09 | 6.44  | 1.14 | A+ | A+ | A+ |
| 3 | 861638 | 12 | D.1.2.3 | 2 | 5083 | 0.40 | 0.40 | 0.22 | 0.20 | 0.17 | 0.00 | 0.14 | 0.14  | -0.02 | -0.09 | -0.06 | 0.35  | 0.03 | 3.01  | 1.03 | 3.12  | 1.05 | A- | A+ | B+ |
| 3 | 272468 | 12 | D.2.1.1 | 3 | 5083 | 0.60 | 0.60 | 0.11 | 0.16 | 0.12 | 0.01 | 0.24 | 0.24  | -0.14 | -0.09 | -0.13 | -0.58 | 0.03 | -5.43 | 0.94 | -5.30 | 0.93 | A+ | Α- | B- |
| 3 | 344249 | 13 | D.1.2.5 | 1 | 5098 | 0.43 | 0.29 | 0.43 | 0.16 | 0.12 | 0.01 | 0.23 | -0.19 | 0.23  | -0.03 | -0.03 | 0.36  | 0.03 | -0.44 | 1.00 | 0.06  | 1.00 | A+ | A+ | A+ |
| 3 | 955997 | 13 | D.1.1.4 | 2 | 5098 | 0.75 | 0.06 | 0.12 | 0.75 | 0.05 | 0.01 | 0.34 | -0.21 | -0.20 | 0.34  | -0.12 | -1.27 | 0.03 | -7.40 | 0.88 | -8.63 | 0.78 | A- | C- | C- |
| 3 | 839236 | 13 | D.1.1.6 | 3 | 5098 | 0.50 | 0.50 | 0.12 | 0.08 | 0.30 | 0.00 | 0.32 | 0.32  | -0.09 | -0.11 | -0.21 | -0.01 | 0.03 | -8.22 | 0.92 | -7.42 | 0.90 | A- | C- | A- |
| 3 | 898142 | 13 | D.1.2.2 | 2 | 5098 | 0.34 | 0.26 | 0.20 | 0.19 | 0.34 | 0.01 | 0.10 | 0.00  | -0.01 | -0.10 | 0.10  | 0.76  | 0.03 | 7.87  | 1.10 | 8.34  | 1.17 | A- | A- | A- |
| 3 | 824353 | 13 | D.1.2.3 | 2 | 5098 | 0.21 | 0.36 | 0.26 | 0.17 | 0.21 | 0.01 | 0.14 | 0.04  | -0.14 | -0.04 | 0.14  | 1.56  | 0.04 | 1.55  | 1.03 | 5.34  | 1.19 | A- | A- | A+ |
| 3 | 108301 | 13 | D.1.1.1 | 2 | 5098 | 0.30 | 0.16 | 0.30 | 0.33 | 0.19 | 0.01 | 0.23 | -0.05 | 0.23  | -0.09 | -0.11 | 0.99  | 0.03 | -1.42 | 0.98 | -0.10 | 1.00 | A- | A+ | A+ |
| 3 | 912129 | 13 | D.2.1.1 | 3 | 5098 | 0.22 | 0.26 | 0.22 | 0.13 | 0.38 | 0.01 | 0.12 | -0.09 | 0.12  | -0.11 | 0.06  | 1.46  | 0.04 | 2.73  | 1.05 | 7.14  | 1.24 | A- | A- | A- |
| 3 | 847434 | 13 | D.1.1.8 | 2 | 5098 | 0.92 | 0.02 | 0.02 | 0.04 | 0.92 | 0.00 | 0.18 | -0.13 | -0.10 | -0.08 | 0.18  | -2.78 | 0.05 | -0.77 | 0.97 | -2.64 | 0.83 | B+ | A- | A+ |
| 3 | 686990 | 14 | D.1.2.2 | 2 | 5090 | 0.39 | 0.39 | 0.12 | 0.19 | 0.29 | 0.01 | 0.01 | 0.01  | -0.06 | -0.03 | 0.07  | 0.45  | 0.03 | 9.90  | 1.16 | 9.90  | 1.21 | A- | A- | A- |
| 3 | 206275 | 14 | D.1.1.2 | 3 | 5090 | 0.52 | 0.11 | 0.52 | 0.22 | 0.13 | 0.01 | 0.30 | -0.15 | 0.30  | -0.15 | -0.11 | -0.16 | 0.03 | -7.90 | 0.93 | -7.11 | 0.91 | A- | B- | A- |
| 3 | 498994 | 14 | D.1.2.1 | 2 | 5090 | 0.48 | 0.31 | 0.12 | 0.48 | 0.09 | 0.00 | 0.26 | -0.14 | -0.07 | 0.26  | -0.13 | 0.06  | 0.03 | -4.32 | 0.96 | -3.33 | 0.96 | A+ | B- | A- |
| 3 | 294361 | 14 | D.1.1.7 | 2 | 5090 | 0.76 | 0.12 | 0.76 | 0.04 | 0.07 | 0.01 | 0.29 | -0.19 | 0.29  | -0.16 | -0.11 | -1.37 | 0.03 | -4.96 | 0.91 | -6.12 | 0.84 | A+ | B- | B- |
| 3 | 418891 | 14 | D.1.1.9 | 2 | 5090 | 0.45 | 0.45 | 0.07 | 0.04 | 0.42 | 0.01 | 0.14 | 0.14  | -0.16 | -0.14 | 0.01  | 0.16  | 0.03 | 4.73  | 1.05 | 4.13  | 1.06 | A- | A- | A+ |
| 3 | 163018 | 14 | D.1.2.3 | 2 | 5090 | 0.21 | 0.37 | 0.23 | 0.18 | 0.21 | 0.01 | 0.01 | 0.03  | 0.04  | -0.08 | 0.01  | 1.45  | 0.04 | 5.59  | 1.12 | 9.24  | 1.31 | A+ | A+ | B+ |
| 3 | 732695 | 14 | D.1.1.1 | 2 | 5090 | 0.57 | 0.57 | 0.16 | 0.17 | 0.08 | 0.01 | 0.31 | 0.31  | -0.20 | -0.13 | -0.09 | -0.38 | 0.03 | -8.01 | 0.92 | -7.88 | 0.89 | A- | A- | A+ |
| 3 | 851754 | 14 | D.1.2.4 | 2 | 5090 | 0.37 | 0.37 | 0.17 | 0.21 | 0.24 | 0.00 | 0.23 | 0.23  | -0.08 | -0.10 | -0.08 | 0.55  | 0.03 | -1.66 | 0.98 | -1.12 | 0.98 | A+ | A- | A- |

| 3   473798   15   D.1.2.5   1   5054   0.87   0.87   0.03   0.03   0.07   0.01   0.32   0.32   0.19   0.16   0.18   0.21   0.016   0.18   0.21   0.21   0.21   0.21   0.21   0.21   0.22   0.23   0.22   0.22   0.23   0.22   0.22   0.23   0.22   0.22   0.23   0.23   0.22   0.23   0.23   0.22   0.23   0.23   0.22   0.23   0. |    |
|--|----|
| 3 262747 15 D.1.1.4 2 5054 0.50 0.18 0.50 0.13 0.17 0.02 0.26 -0.06 0.26 -0.10 -0.17 0.00 0.03 -1.46 0.99 -2.11 0.97 A- A A I 3 176494 15 D.1.2.1 2 5054 0.58 0.13 0.58 0.16 0.13 0.00 0.20 -0.08 0.20 -0.11 -0.09 -0.37 0.03 3.30 1.04 2.08 1.03 A- A I 3 779130 15 D.1.1.6 3 5054 0.53 0.11 0.19 0.53 0.16 0.01 0.33 -0.17 -0.17 0.33 -0.12 -0.11 0.03 -6.99 0.93 -6.53 0.91 A- A I 3 428492 15 D.1.2.4 2 5054 0.33 0.29 0.21 0.17 0.33 0.01 0.13 -0.07 -0.03 -0.04 0.13 0.84 0.03 6.11 1.09 6.45 1.14 A- A I 3 408866 15 D.1.2.3 2 5054 0.36 0.22 0.22 0.36 0.20 0.01 0.25 -0.12 -0.12 -0.13 0.25 -0.04 0.70 0.03 -1.29 0.98 0.82 1.02 A+ A I 3 494405 16 D.1.2.6 2 5083 0.89 0.04 0.89 0.04 0.89 0.04 0.03 0.00 0.23 -0.13 0.32 -0.20 -0.13 0.58 0.67 0.03 -8.77 0.90 -9.04 0.86 A- A I 3 595717 16 D.1.2.2 2 5083 0.39 0.39 0.39 0.39 0.22 0.21 0.17 0.01 0.09 0.09 0.00 0.31 -0.16 0.31 -0.15 -0.13 0.03 -8.55 0.92 -7.49 0.90 A- A I 3 595717 16 D.1.2.2 2 5083 0.28 0.30 0.15 0.26 0.28 0.01 0.16 0.13 0.00 0.00 0.11 0.11 0.01 0.07 0.03 1.15 0.03 4.69 1.08 7.44 1.20 A- A I 3 164537 16 D.1.2.4 2 5083 0.25 0.25 0.25 0.29 0.10 0.01 0.01 0.01 0.00 0.01 1.15 0.03 0.03 0.37.8 1.06 6.37 1.15 A+ B I 51657 16 D.1.1.1 2 5083 0.25 0.25 0.25 0.29 0.10 0.01 0.01 0.01 0.07 0.07 0.96 0.03 3.78 1.06 6.37 1.15 A+ B I 51657 16 D.1.1.1 2 5083 0.25 0.25 0.25 0.29 0.10 0.01 0.01 0.01 0.07 0.07 0.96 0.03 3.78 1.06 6.37 1.15 A+ B I 51657 16 D.1.1.1 2 5083 0.25 0.25 0.25 0.29 0.10 0.01 0.01 0.01 0.07 0.07 0.96 0.03 3.78 1.06 6.37 1.15 A+ B I 51657 16 D.1.1.2 1 5134 0.58 0.08 0.08 0.08 0.58 0.25 0.00 0.27 0.01 0.01 0.07 0.07 0.09 0.03 0.35 0.00 0.35 0.00 0.35 0.00 0.35 0.00 0.37 0.00 0.35 0.00 0.35 0.00 0.37 0.37   | A- |
| 3 176494 15 D.1.2.1 2 5054 0.58 0.13 0.58 0.16 0.13 0.00 0.20 -0.08 0.20 -0.11 -0.09 -0.37 0.03 3.30 1.04 2.08 1.03 A-   | B- |
| 3 779130 15 D.1.16 3 5054 0.53 0.11 0.19 0.53 0.16 0.01 0.33 -0.17 -0.17 0.33 -0.12 -0.11 0.03 -6.99 0.93 -6.53 0.91 A. A. A. 3 428492 15 D.1.2.4 2 5054 0.33 0.29 0.21 0.17 0.33 0.01 0.13 -0.07 -0.03 -0.04 0.13 0.84 0.03 6.11 1.09 6.45 1.14 A. A. A. A. 3 408866 15 D.1.2.3 2 5054 0.36 0.22 0.22 0.36 0.20 0.01 0.25 -0.12 -0.13 0.25 -0.04 0.70 0.03 -1.29 0.98 0.82 1.02 A+ A. 3 933850 15 D.1.18 3 5054 0.34 0.18 0.31 0.16 0.34 0.01 0.18 -0.08 -0.02 -0.11 0.18 0.78 0.03 3.32 1.04 5.70 1.12 A+ A. A. 3 140210 16 D.1.2.6 2 5083 0.89 0.04 0.89 0.04 0.03 0.00 0.23 -0.12 0.23 -0.13 -0.13 -2.45 0.05 -2.47 0.92 -5.06 0.76 A+ A. 3 494405 16 D.1.1.2 2 5083 0.63 0.09 0.63 0.19 0.09 0.00 0.32 -0.13 0.32 -0.13 -0.13 -0.67 0.03 -8.77 0.90 -9.04 0.86 A- A. 3 545319 16 D.1.1.4 2 5083 0.39 0.39 0.32 0.51 0.07 0.09 0.00 0.31 -0.16 0.31 -0.15 -0.13 -0.13 0.03 -8.55 0.92 -7.49 0.90 A- A. 3 595717 16 D.1.2.2 2 5083 0.39 0.39 0.39 0.22 0.21 0.17 0.01 0.09 0.09 -0.01 0.04 -0.14 0.42 0.03 7.86 1.09 7.41 1.12 A+ A. A. 3 746552 16 D.1.2.2 2 5083 0.28 0.30 0.15 0.26 0.28 0.01 0.16 -0.13 0.00 -0.03 0.16 1.00 0.03 1.39 1.02 2.64 1.06 A- A. 3 512011 16 D.1.2.4 2 5083 0.25 0.25 0.47 0.15 0.12 0.01 0.07 0.07 0.05 -0.06 -0.10 1.15 0.03 4.69 1.08 7.44 1.20 A- A. 3 985018 16 D.1.1.1 2 5083 0.47 0.47 0.30 0.13 0.10 0.00 0.11 0.11 0.11 0.01 -0.07 0.96 0.03 3.78 1.06 6.37 1.15 A+ B. 3 164537 16 D.2.1.1 3 5083 0.29 0.35 0.25 0.29 0.10 0.01 0.01 0.01 0.01 0.07 0.07 0.05 0.08 0.03 0.3 0.03 -3.57 0.96 -3.33 0.95 A+ A.  | B- |
| 3 428492 15 D.1.2.4 2 5054 0.33 0.29 0.21 0.17 0.33 0.01 0.13 -0.07 -0.03 -0.04 0.13 0.84 0.03 6.11 1.09 6.45 1.14 A- A 4 408866 15 D.1.2.3 2 5054 0.36 0.22 0.22 0.36 0.20 0.01 0.25 -0.12 -0.13 0.25 -0.04 0.70 0.03 -1.29 0.98 0.82 1.02 A+ A 5 3 93850 15 D.1.1.8 3 5054 0.34 0.18 0.31 0.16 0.34 0.01 0.18 -0.08 -0.02 -0.11 0.18 0.78 0.03 3.32 1.04 5.70 1.12 A+ A 5 140210 16 D.1.2.6 2 5083 0.89 0.04 0.89 0.04 0.03 0.00 0.23 -0.12 0.23 -0.13 -0.13 -0.13 -0.45 0.05 -2.47 0.92 -5.06 0.76 A+ A 5 140210 16 D.1.1.1 2 5083 0.51 0.32 0.51 0.07 0.09 0.00 0.31 -0.16 0.31 -0.15 -0.13 -0.13 0.03 -8.55 0.92 -7.49 0.90 A- A 5 150211 16 D.1.2.2 2 5083 0.39 0.39 0.22 0.21 0.17 0.01 0.09 0.09 0.09 -0.01 0.04 -0.14 0.42 0.03 7.86 1.09 7.41 1.12 A+ A 5 150211 16 D.1.2.4 2 5083 0.28 0.30 0.15 0.26 0.28 0.01 0.16 -0.13 0.00 -0.03 0.16 1.00 0.03 1.70 1.08 6.62 1.09 A+ A 5 164537 16 D.1.1.1 2 5083 0.29 0.35 0.25 0.25 0.47 0.15 0.12 0.01 0.00 0.11 0.01 0.00 -0.03 0.11 0.00 0.03 3.78 1.06 6.37 1.15 A+ B 5 175129 17 D.1.2.6 1 5134 0.58 0.08 0.08 0.08 0.58 0.25 0.00 0.27 -0.19 -0.17 0.27 -0.08 -0.39 0.03 -3.57 0.96 -3.33 0.95 A+ A 5 1000 0.00 0.00 0.00 0.00 0.00 0.00 0.  | A- |
| 3 408866 15 D.1.2.3 2 5054 0.36 0.22 0.22 0.36 0.20 0.01 0.25 -0.12 -0.13 0.25 -0.04 0.70 0.03 -1.29 0.98 0.82 1.02 A+ A 3 933850 15 D.1.1.8 3 5054 0.34 0.18 0.31 0.16 0.34 0.01 0.18 -0.08 -0.02 -0.11 0.18 0.78 0.03 3.32 1.04 5.70 1.12 A+ A 3 140210 16 D.1.2.6 2 5083 0.89 0.04 0.89 0.04 0.03 0.00 0.23 -0.12 0.23 -0.13 -0.13 -2.45 0.05 -2.47 0.92 -5.06 0.76 A+ A 3 494405 16 D.1.1.2 2 5083 0.63 0.09 0.63 0.19 0.09 0.00 0.32 -0.13 0.32 -0.20 -0.13 -0.67 0.03 -8.77 0.90 -9.04 0.86 A- A 3 545319 16 D.1.1.4 2 5083 0.51 0.32 0.51 0.07 0.09 0.00 0.31 -0.16 0.31 -0.15 -0.13 -0.13 0.03 -8.55 0.92 -7.49 0.90 A- A 3 595717 16 D.1.2.2 2 5083 0.39 0.39 0.22 0.21 0.17 0.01 0.09 0.09 0.09 -0.01 0.04 -0.14 0.42 0.03 7.86 1.09 7.41 1.12 A+ A 3 746552 16 D.1.2.2 2 5083 0.28 0.30 0.15 0.26 0.28 0.01 0.16 -0.13 0.00 -0.03 0.16 1.00 0.03 1.39 1.02 2.64 1.06 A- A 3 512011 16 D.1.2.4 2 5083 0.25 0.25 0.47 0.15 0.12 0.01 0.07 0.07 0.05 -0.06 -0.10 1.15 0.03 4.69 1.08 7.44 1.20 A- A 3 985018 16 D.1.1.1 2 5083 0.29 0.35 0.25 0.25 0.47 0.15 0.12 0.01 0.01 0.01 0.07 0.07 0.05 -0.06 -0.10 1.15 0.03 4.69 1.08 7.44 1.20 A- A 3 164537 16 D.1.1.1 2 5083 0.29 0.35 0.25 0.25 0.49 0.10 0.01 0.01 0.01 0.07 0.07 0.05 -0.06 -0.10 1.15 0.03 3.78 1.06 6.37 1.15 A+ B 3 775129 17 D.1.2.6 1 5134 0.58 0.08 0.08 0.08 0.58 0.25 0.00 0.27 0.01 0.07 0.07 0.07 0.08 -0.39 0.03 3.75 0.96 -3.33 0.95 A+ A 5 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0.  | A+ |
| 3 933850 15 D.1.1.8 3 5054 0.34 0.18 0.31 0.16 0.34 0.01 0.18 -0.08 -0.02 -0.11 0.18 0.78 0.03 3.32 1.04 5.70 1.12 A+ A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-   | A+ |
| 3 140210 16 D.1.2.6 2 5083 0.89 0.04 0.89 0.04 0.89 0.04 0.03 0.00 0.23 -0.12 0.23 -0.13 -0.13 -2.45 0.05 -2.47 0.92 -5.06 0.76 A+ A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-  | A- |
| 3 494405 16 D.1.1.2 2 5083 0.63 0.09 0.63 0.19 0.09 0.00 0.32 -0.13 0.32 -0.20 -0.13 -0.67 0.03 -8.77 0.90 -9.04 0.86 A-   | A- |
| 3 545319 16 D.1.1.4 2 5083 0.51 0.32 0.51 0.07 0.09 0.00 0.31 -0.16 0.31 -0.15 -0.13 -0.13 0.03 -8.55 0.92 -7.49 0.90 A-   | A- |
| 3 595717 16 D.1.2.2 2 5083 0.39 0.39 0.22 0.21 0.17 0.01 0.09 0.09 -0.01 0.04 -0.14 0.42 0.03 7.86 1.09 7.41 1.12 A+ A.  | A- |
| 3 746552 16 D.1.2.2 2 5083 0.28 0.30 0.15 0.26 0.28 0.01 0.16 -0.13 0.00 -0.03 0.16 1.00 0.03 1.39 1.02 2.64 1.06 A-   | A- |
| 3 512011 16 D.1.2.4 2 5083 0.25 0.25 0.47 0.15 0.12 0.01 0.07 0.07 0.05 -0.06 -0.10 1.15 0.03 4.69 1.08 7.44 1.20 A-   | A- |
| 3 985018 16 D.1.1.1 2 5083 0.47 0.47 0.30 0.13 0.10 0.00 0.11 0.11 0.01 -0.07 -0.11 0.06 0.03 7.70 1.08 6.62 1.09 A+ A- 3 164537 16 D.2.1.1 3 5083 0.29 0.35 0.25 0.29 0.10 0.01 0.11 -0.03 -0.03 0.11 -0.07 0.96 0.03 3.78 1.06 6.37 1.15 A+ B- 3 775129 17 D.1.2.6 1 5134 0.58 0.08 0.08 0.08 0.58 0.25 0.00 0.27 -0.19 -0.17 0.27 -0.08 -0.39 0.03 -3.57 0.96 -3.33 0.95 A+ A- 3 164537 16 D.2.1.1 3 5083 0.29 0.35 0.25 0.29 0.10 0.01 0.11 -0.03 -0.03 0.11 -0.07 0.96 0.03 3.78 1.06 6.37 1.15 A+ B- 3 775129 17 D.1.2.6 1 5134 0.58 0.08 0.08 0.08 0.58 0.25 0.00 0.27 -0.19 -0.17 0.27 -0.08 -0.39 0.03 -3.57 0.96 -3.33 0.95 A+ A- 3 164537 0.96 0.96 0.97 0.96 0.97 0.96 0.97 0.96 0.97 0.96 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97   | A- |
| 3 164537 16 D.2.1.1 3 5083 0.29 0.35 0.25 0.29 0.10 0.01 0.11 -0.03 -0.03 0.11 -0.07 0.96 0.03 3.78 1.06 6.37 1.15 A+ B- 3 775129 17 D.1.2.6 1 5134 0.58 0.08 0.08 0.58 0.25 0.00 0.27 -0.19 -0.17 0.27 -0.08 -0.39 0.03 -3.57 0.96 -3.33 0.95 A+ A-   | A+ |
| 3 775129 17 D.1.2.6 1 5134 0.58 0.08 0.08 0.58 0.25 0.00 0.27 -0.19 -0.17 0.27 -0.08 -0.39 0.03 -3.57 0.96 -3.33 0.95 A+ A-  | A- |
|  | A+ |
| 3 200540 17 D.1.1.5 2 5134 0.59 0.12 0.59 0.12 0.15 0.01 0.35 -0.15 0.35 -0.17 -0.17 -0.45 0.03 -9.35 0.90 -8.75 0.87 A+ A-  | A+ |
|  | A- |
| 3 202465 17 D.1.2.4 2 5134 0.41 0.17 0.23 0.41 0.19 0.01 0.29 -0.23 -0.04 0.29 -0.09 0.41 0.03 -4.21 0.95 -3.15 0.95 A- A-   | A- |
| 3 482665 17 D.1.1.9 2 5134 0.42 0.42 0.22 0.19 0.15 0.01 0.04 0.04 -0.05 0.11 -0.10 0.34 0.03 9.90 1.16 9.90 1.21 A- A-  | A+ |
| 3 984159 17 D.1.2.3 2 5134 0.35 0.35 0.26 0.13 0.25 0.01 0.13 0.13 -0.07 -0.12 0.03 0.69 0.03 5.48 1.07 6.43 1.12 A+ A-  | A- |
| 3 209410 17 D.1.1.1 2 5134 0.39 0.35 0.19 0.06 0.39 0.01 0.35 -0.16 -0.18 -0.07 0.35 0.51 0.03 -8.36 0.91 -5.65 0.91 A- A-   | A+ |
| 3 916836 17 D.2.1.1 3 5134 0.87 0.05 0.05 0.03 0.87 0.00 0.23 -0.16 -0.11 -0.11 0.23 -2.15 0.04 -1.92 0.95 -3.33 0.85 A+ A-  | A+ |
| 3 338503 17 D.1.2.1 2 5134 0.44 0.13 0.44 0.32 0.10 0.00 0.26 -0.11 0.26 -0.13 -0.09 0.24 0.03 -2.14 0.98 -1.61 0.98 A+ A-   | A- |
| 3 208620 18 D.1.1.5 2 5117 0.44 0.44 0.41 0.07 0.06 0.01 0.19 0.19 -0.05 -0.15 -0.12 0.22 0.03 2.68 1.03 2.40 1.03 A- A-   | A+ |
| 3 875070 18 D.1.2.1 2 5117 0.39 0.39 0.19 0.10 0.31 0.00 0.28 0.28 -0.16 -0.16 -0.05 0.48 0.03 -3.90 0.96 -3.46 0.95 B+ A-   | C- |
| 3 132011 18 D.1.2.5 2 5117 0.46 0.28 0.13 0.11 0.46 0.01 0.26 -0.13 -0.08 -0.13 0.26 0.12 0.03 -2.99 0.97 -2.41 0.97 A+ A-   | A- |
| 3 249350 18 D.1.1.2 2 5117 0.51 0.33 0.08 0.51 0.06 0.01 0.24 -0.13 -0.12 0.24 -0.10 -0.11 0.03 -1.16 0.99 -0.90 0.99 A- A-  | A- |
| 3 398343 18 D.1.2.2 2 5117 0.32 0.23 0.32 0.24 0.20 0.01 0.23 -0.05 0.23 -0.07 -0.13 0.81 0.03 -0.99 0.99 0.02 1.00 A- A-  | A+ |
| 3 228778 18 D.1.1.7 3 5117 0.24 0.28 0.24 0.16 0.30 0.01 0.19 -0.03 0.19 -0.14 -0.02 1.26 0.03 0.45 1.01 3.35 1.09 A- A-   | A- |
| 3 925250 18 D.1.2.3 2 5117 0.38 0.38 0.27 0.14 0.20 0.01 0.20 0.20 0.02 -0.18 -0.11 0.49 0.03 1.29 1.01 3.16 1.05 A- A-  | A+ |
| 3 836300 18 D.2.1.1 3 5117 0.33 0.42 0.09 0.15 0.33 0.00 0.16 -0.04 -0.12 -0.05 0.16 0.75 0.03 3.68 1.05 2.76 1.05 A+ A-   | A+ |

| 3 389910 19 D1.25 1 5087 0.70 0.23 0.05 0.70 0.02 0.00 0.00 0.27 0.22 0.013 0.29 0.07 1.02 0.03 0.482 0.93 4.66 0.90 A- A- A- A- 3 29279 19 D1.1.1 2 5087 0.69 0.04 0.12 0.14 0.69 0.00 0.27 0.27 0.12 0.15 0.05 0.00 0.3 0.31 0.00 0.25 0.19 0.14 0.15 0.16 0.13 0.27 0.12 0.15 0.07 0.02 0.80 0.03 0.31 0.00 0.25 0.10 0.13 0.13 0.10 0.25 0.10 0.16 0.03 0.00 0.03 0.33 0.00 0.00 0.03 0.03 0.03 0.00 0.0 | 1  |    |    |      |       |      |       |      |       |       |       |       |       |       |      |      |      |      |      |      |        |   |         |    |        |   |
|--|----|----|----|------|-------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|--------|---|---------|----|--------|---|
| 3         48/1653         19         D.1.1.4         2         5/87         0.33         0.33         0.23         0.15         0.28         0.01         0.21         0.21         0.01         0.02         0.08         0.03         0.33         1.00         2.25         1.05         Ar         Ar           3         612615         19         D.1.1.6         2         5/87         0.37         0.12         0.22         0.37         0.29         0.00         0.23         -0.11         -0.07         0.23         -0.10         0.61         0.03         0.20         1.00         1.33         1.02         Ar         Ar           3         768330         19         D.1.2.4         2         5/87         0.56         0.15         0.01         0.33         0.20         0.07         -0.78         0.03         0.99         -0.75         0.09         A.         Ar         3         978475         19         D.1.1.1         2         5/87         0.56         0.15         0.08         0.02         0.03         6.82         1.09         8.58         1.16         Ar         Ar         A         3         676565         19         D.1.1.1         2         5/87  | A- | A- | A+ |      |       |      |       |      |       |       |       |       |       |       |      |      |      |      |      |      |        |   |         | -  |        |   |
| 3   612615   19   D.1.1.6   2   5087   0.37   0.12   0.22   0.37   0.29   0.00   0.23   0.11   0.07   0.23   0.10   0.61   0.03   0.20   1.00   1.33   1.02   A.   | A+ | A- | A+ | 0.93 | -3.19 | 0.95 | -3.41 | 0.03 | -0.98 | 0.27  | -0.13 | -0.16 | -0.12 | 0.27  | 0.00 | 0.69 | 0.14 | 0.12 | 0.04 | 0.69 | 5087   | 2 | D.1.1.3 | 19 | 239279 | 3 |
| 3   768330   19   D.1.1.7   2   5087   0.66   0.07   0.66   0.04   0.23   0.00   0.24   -0.20   0.24   -0.18   -0.07   -0.78   0.03   -0.89   0.99   -0.75   0.99   A.   | A- | A+ | A+ | 1.05 | 2.25  | 1.00 | 0.33  | 0.03 | 0.80  | -0.02 | -0.07 | -0.15 | 0.21  | 0.21  | 0.01 | 0.28 | 0.15 | 0.23 | 0.33 | 0.33 | 5087   | 2 | D.1.1.4 | 19 | 481653 | 3 |
| 3 978475 19 D.1.24 2 5087 0.52 0.15 0.18 0.52 0.14 0.01 0.33 0-20 0.07 0.33 0.19 0.14 0.03 0.7.56 0.93 0.51 0.91 A. B. 3 664095 19 D.1.23 2 5087 0.36 0.36 0.12 0.27 0.24 0.00 0.13 0.13 0.11 0.02 0.08 0.62 0.03 6.82 1.09 8.58 1.16 A+   | A- | A- | A- | 1.02 | 1.33  | 1.00 | 0.20  | 0.03 | 0.61  | -0.10 | 0.23  | -0.07 | -0.11 | 0.23  | 0.00 | 0.29 | 0.37 | 0.22 | 0.12 | 0.37 | 5087   | 2 | D.1.1.6 | 19 | 612615 | 3 |
| 3 664095 19 D.1.23 2 5087 0.36 0.36 0.12 0.27 0.24 0.00 0.13 0.13 0.11 0.02 0.08 0.62 0.03 6.82 1.09 8.58 1.16 A+  | B- | A- | A- | 0.99 | -0.75 | 0.99 | -0.89 | 0.03 | -0.78 | -0.07 | -0.18 | 0.24  | -0.20 | 0.24  | 0.00 | 0.23 | 0.04 | 0.66 | 0.07 | 0.66 | 5087   | 2 | D.1.1.7 | 19 | 768330 | 3 |
| 3 657665 19 D.1.1.1 2 5087 0.61 0.61 0.07 0.25 0.06 0.00 0.27 0.27 0.15 0.14 0.11 0.057 0.03 0.281 0.97 0.303 0.95 A.  | A+ | B- | A- | 0.91 | -6.51 | 0.93 | -7.56 | 0.03 | -0.14 | -0.19 | 0.33  | -0.07 | -0.20 | 0.33  | 0.01 | 0.14 | 0.52 | 0.18 | 0.15 | 0.52 | 5087   | 2 | D.1.2.4 | 19 | 978475 | 3 |
| 3         761372         20         D.1.2.5         1         5065         0.83         0.09         0.83         0.04         0.04         0.00         0.37         -0.24         0.37         -0.15         -0.20         -1.82         0.04         -6.05         0.86         -8.80         0.70         A+         B-           3         930910         20         D.1.1.3         2         5065         0.83         0.04         0.07         0.05         0.83         0.01         0.24         -0.15         -0.06         -0.20         0.24         -1.86         0.04         -2.19         0.95         2.43         0.91         A-           3         926959         20         D.1.1.4         2         5065         0.59         0.04         0.05         0.01         0.32         -0.19         -0.15         -0.20         -0.43         0.03         4.76         1.05         5.89         1.10         A-           3         142352         20         D.1.1.6         2         5065         0.85         0.04         0.05         0.01         0.32         -0.19         -0.12         -0.11         -2.85         0.06         -1.81         0.92         -4.31         0.73 <td>B+</td> <td>A+</td> <td>A+</td> <td>1.16</td> <td>8.58</td> <td>1.09</td> <td>6.82</td> <td>0.03</td> <td>0.62</td> <td>-0.08</td> <td>0.02</td> <td>-0.11</td> <td>0.13</td> <td>0.13</td> <td>0.00</td> <td>0.24</td> <td>0.27</td> <td>0.12</td> <td>0.36</td> <td>0.36</td> <td>5087</td> <td>2</td> <td>D.1.2.3</td> <td>19</td> <td>664095</td> <td>3</td>  | B+ | A+ | A+ | 1.16 | 8.58  | 1.09 | 6.82  | 0.03 | 0.62  | -0.08 | 0.02  | -0.11 | 0.13  | 0.13  | 0.00 | 0.24 | 0.27 | 0.12 | 0.36 | 0.36 | 5087   | 2 | D.1.2.3 | 19 | 664095 | 3 |
| 3 930910 20 D.1.1.3 2 5065 0.83 0.04 0.07 0.05 0.83 0.01 0.24 -0.15 -0.06 -0.20 0.24 -1.86 0.04 -2.19 0.95 -2.43 0.91 A- A- A- 3 926959 20 D.1.1.4 2 5065 0.59 0.04 0.32 0.59 0.04 0.01 0.15 -0.23 0.03 0.15 -0.20 -0.43 0.03 4.76 1.05 5.89 1.10 A- A- 3 142352 20 D.1.1.6 2 5065 0.85 0.06 0.85 0.04 0.05 0.01 0.32 -0.19 0.32 -0.19 -0.15 -1.96 0.04 4.63 0.88 -6.83 0.74 A- B- 3 530665 20 D.1.1.7 2 5065 0.92 0.92 0.93 0.03 0.01 0.00 0.25 0.25 -0.19 -0.12 -0.11 -2.85 0.06 -1.81 0.92 4.31 0.73 A+ A- 3 728676 20 D.1.2.4 2 5065 0.24 0.24 0.24 0.20 0.35 0.20 0.00 0.13 0.13 -0.15 0.01 0.00 1.33 0.03 1.83 1.03 5.76 1.18 A- A+ 3 567647 20 D.1.2.3 2 5065 0.21 0.36 0.18 0.23 0.21 0.01 0.06 0.01 -0.10 0.03 0.06 1.51 0.04 3.74 1.08 9.48 1.35 A+ A- 3 980209 20 D.2.1.1 3 5065 0.20 0.27 0.28 0.25 0.20 0.01 0.04 -0.08 0.06 -0.02 0.04 1.60 0.04 3.81 1.08 9.18 1.36 A+ A- 4 194818 0 D.1.2.4 2 100887 0.73 0.73 0.73 0.03 0.04 0.19 0.00 0.26 0.26 -0.16 -0.18 -0.14 -0.83 0.01 -9.90 0.96 -9.90 0.92 A+ A+ 4 983191 0 D.1.1.4 2 100887 0.64 0.64 0.05 0.10 0.21 0.00 0.25 0.25 0.04 0.35 -0.15 -0.14 -0.61 0.01 -9.90 0.95 -9.90 0.91 A- A- 4 469285 0 D.1.1.2 2 100887 0.69 0.18 0.69 0.05 0.08 0.00 0.35 -0.24 0.35 -0.15 -0.14 -0.61 0.01 -9.90 0.95 -9.90 0.91 A- A- 4 489972 0 D.1.1.8 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.03 0.00 0.25 0.18 0.11 0.25 0.18 0.11 0.05 0.10 0.99 0.99 0.99 0.99 0.90 0.90 A+ B- 4 48972 0 D.1.1.8 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.00 0.25 0.18 0.11 0.25 0.13 -0.14 0.17 0.06 0.01 -9.90 0.95 0.99 0.90 0.90 A+ B- 4 48972 0 D.1.1.8 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.00 0.25 0.18 0.11 0.25 0.13 -0.14 0.17 0.00 0.99 0.99 0.99 0.99 0.90 0.90 A+ A- 4 489972 0 D.1.1.8 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 0.18 0.11 0.25 0.13 -0.14 0.17 0.00 0.01 0.99 0.99 0.99 0.99 0.90 0.90  | A+ | A- | A- | 0.95 | -3.03 | 0.97 | -2.81 | 0.03 | -0.57 | -0.11 | -0.14 | -0.15 | 0.27  | 0.27  | 0.00 | 0.06 | 0.25 | 0.07 | 0.61 | 0.61 | 5087   | 2 | D.1.1.1 | 19 | 657665 | 3 |
| 3 926959 20 D.1.1.4 2 5065 0.59 0.04 0.32 0.59 0.04 0.01 0.15 -0.23 0.03 0.15 -0.20 -0.43 0.03 4.76 1.05 5.89 1.10 A- A- 3 142352 20 D.1.1.6 2 5065 0.85 0.06 0.85 0.04 0.05 0.01 0.32 -0.19 0.32 -0.19 -0.15 -1.96 0.04 4.63 0.88 -6.83 0.74 A- B- 3 530665 20 D.1.1.7 2 5065 0.92 0.92 0.03 0.03 0.01 0.00 0.25 0.25 -0.19 -0.12 -0.11 -2.85 0.06 -1.81 0.92 -4.31 0.73 A+ A- 3 728676 20 D.1.2.4 2 5065 0.24 0.24 0.20 0.35 0.20 0.00 0.13 0.13 -0.15 0.01 0.00 1.33 0.03 1.83 1.03 5.76 1.18 A- A+ 3 567647 20 D.1.2.3 2 5065 0.21 0.36 0.18 0.23 0.21 0.01 0.06 0.01 -0.10 0.03 0.06 1.51 0.04 3.74 1.08 9.48 1.35 A+ A+ 3 980209 20 D.2.1.1 3 5065 0.20 0.27 0.28 0.25 0.20 0.01 0.04 -0.08 0.06 -0.02 0.04 1.60 0.04 3.81 1.08 9.18 1.36 A+ A- 4 194818 0 D.1.2.4 2 100887 0.73 0.73 0.03 0.04 0.19 0.00 0.26 0.26 0.26 -0.16 -0.18 -0.14 -0.83 0.01 -9.90 0.96 -9.90 0.92 A+ A+ 4 983191 0 D.1.1.4 2 100887 0.64 0.64 0.05 0.10 0.21 0.00 0.28 0.28 0.28 -0.16 -0.13 -0.14 -0.31 0.01 -9.90 0.95 -9.90 0.91 A- A- 4 469285 0 D.1.1.2 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.31 -0.15 0.31 -0.14 -0.17 0.06 0.01 -9.90 0.92 -9.90 0.90 0.91 A- A- 4 489972 0 D.1.1.8 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.25 -0.18 -0.11 0.25 -0.13 -1.47 0.01 -9.90 0.95 -9.90 0.90 0.90 A+ B- 489972 0 D.1.1.8 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.25 -0.18 -0.11 0.25 -0.13 -1.47 0.01 -9.90 0.95 -9.90 0.96 A+ A+ 4 889972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 -0.11 0.25 -0.13 -1.47 0.01 -9.90 0.95 -9.90 0.96 A+ A+ A+ 489972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 -0.11 0.25 -0.15 -0.12 -0.21 0.01 -9.90 0.95 -9.90 0.86 A- A- 4 889972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 -0.11 0.25 -0.15 -0.12 -0.21 0.01 -9.90 0.95 -9.90 0.86 A- A- 4 889972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 -0.11 0.25 -0.15 -0.12 -0.21 0.01 -9.90 0.95 -9.90 0.95 -9.90 0.86 A- A- 4 889972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.10 0.25 -0.15 -0.15 -0.12 -0.21 0.01 -0.21 0.01 -9.90 0.95 -9.90 0.96 A+ A+        | A+ | B- | A+ | 0.70 | -8.80 | 0.86 | -6.05 | 0.04 | -1.82 | -0.20 | -0.15 | 0.37  | -0.24 | 0.37  | 0.00 | 0.04 | 0.04 | 0.83 | 0.09 | 0.83 | 5065   | 1 | D.1.2.5 | 20 | 761372 | 3 |
| 3 142352 20 D.1.1.6 2 5065 0.85 0.06 0.85 0.04 0.05 0.01 0.32 -0.19 0.32 -0.19 -0.15 -1.96 0.04 -4.63 0.88 -6.83 0.74 A- B- 3 530665 20 D.1.1.7 2 5065 0.92 0.92 0.03 0.03 0.01 0.00 0.25 0.25 -0.19 -0.12 -0.11 -2.85 0.06 -1.81 0.92 -4.31 0.73 A+ A- 3 728676 20 D.1.2.4 2 5065 0.24 0.24 0.20 0.35 0.20 0.00 0.13 0.13 0.13 -0.15 0.01 0.00 1.33 0.03 1.83 1.03 5.76 1.18 A- A+ 3 567647 20 D.1.2.3 2 5065 0.21 0.36 0.18 0.23 0.21 0.01 0.00 0.01 0.00 0.01 0.00 1.33 0.03 1.83 1.03 5.76 1.18 A- A+ 3 980209 20 D.2.1.1 3 5065 0.20 0.27 0.28 0.25 0.20 0.01 0.04 0.04 0.08 0.06 -0.02 0.04 1.60 0.04 3.81 1.08 9.18 1.36 A+ A- 4 194818 0 D.1.2.4 2 100887 0.73 0.73 0.03 0.04 0.19 0.00 0.26 0.26 0.16 -0.18 -0.14 -0.83 0.01 -9.90 0.96 -9.90 0.92 A+ A+ 4 4 983191 0 D.1.1.4 2 100887 0.64 0.64 0.05 0.10 0.21 0.00 0.28 0.28 0.28 0.16 -0.13 -0.14 -0.13 0.01 -9.90 0.95 -9.90 0.91 A- A- 4 4 469285 0 D.1.1.2 2 100887 0.69 0.18 0.69 0.05 0.08 0.00 0.35 -0.24 0.35 -0.15 -0.14 -0.61 0.01 -9.90 0.92 -9.90 0.90 0.91 A- A- 4 489972 0 D.1.1.8 2 100887 0.83 0.10 0.06 0.83 0.02 0.00 0.25 -0.18 0.11 0.25 -0.13 -1.47 0.01 -9.90 0.95 -9.90 0.96 A+ B- 4 89972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 0.11 0.25 -0.13 -1.47 0.01 -9.90 0.95 -9.90 0.86 A- A- 4 88972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 0.11 0.25 -0.13 -0.14 0.01 -9.90 0.95 -9.90 0.86 A- A- 4 88972 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 0.11 0.25 -0.15 -0.12 -0.21 0.01 -8.12 0.98 -9.55 0.96 A+ A+  | A- | A- | A- | 0.91 | -2.43 | 0.95 | -2.19 | 0.04 | -1.86 | 0.24  | -0.20 | -0.06 | -0.15 | 0.24  | 0.01 | 0.83 | 0.05 | 0.07 | 0.04 | 0.83 | 5065   | 2 | D.1.1.3 | 20 | 930910 | 3 |
| 3 530665 20 D.1.1.7 2 5065 0.92 0.92 0.03 0.03 0.01 0.00 0.25 0.25 -0.19 -0.12 -0.11 -2.85 0.06 -1.81 0.92 -4.31 0.73 A+ A-  3 728676 20 D.1.2.4 2 5065 0.24 0.24 0.20 0.35 0.20 0.00 0.13 0.13 -0.15 0.01 0.00 1.33 0.03 1.83 1.03 5.76 1.18 A- A+  3 567647 20 D.1.2.3 2 5065 0.21 0.36 0.18 0.23 0.21 0.01 0.06 0.01 -0.10 0.03 0.06 1.51 0.04 3.74 1.08 9.48 1.35 A+ A+  3 980209 20 D.2.1.1 3 5065 0.20 0.27 0.28 0.25 0.20 0.01 0.04 -0.08 0.06 -0.02 0.04 1.60 0.04 3.81 1.08 9.18 1.36 A+ A-  4 194818 0 D.1.2.4 2 100887 0.73 0.73 0.03 0.04 0.19 0.00 0.26 0.26 -0.16 -0.18 -0.14 -0.83 0.01 -9.90 0.96 -9.90 0.92 A+ A+  4 983191 0 D.1.1.4 2 100887 0.64 0.64 0.05 0.10 0.21 0.00 0.28 0.28 -0.16 -0.13 -0.14 -0.31 0.01 -9.90 0.95 -9.90 0.91 A- A-  4 469285 0 D.1.1.2 2 100887 0.69 0.18 0.69 0.05 0.08 0.00 0.35 -0.24 0.35 -0.15 -0.14 -0.61 0.01 -9.90 0.95 -9.90 0.81 A+ A-  4 751250 0 D.1.2.1 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.31 -0.15 0.31 -0.14 -0.17 0.06 0.01 -9.90 0.95 -9.90 0.90 A+ B-  4 489972 0 D.1.1.8 2 100887 0.63 0.10 0.06 0.83 0.02 0.00 0.25 -0.18 -0.11 0.25 -0.13 -1.47 0.01 -9.90 0.95 -9.90 0.86 A- A-  4 583676 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.18 -0.11 0.25 -0.15 -0.12 -0.21 0.01 -8.12 0.98 -9.55 0.96 A+ A+  | A- | A- | A- | 1.10 | 5.89  | 1.05 | 4.76  | 0.03 | -0.43 | -0.20 | 0.15  | 0.03  | -0.23 | 0.15  | 0.01 | 0.04 | 0.59 | 0.32 | 0.04 | 0.59 | 5065   | 2 | D.1.1.4 | 20 | 926959 | 3 |
| 3         728676         20         D.1.2.4         2         5065         0.24         0.24         0.20         0.35         0.20         0.00         0.13         0.13         -0.15         0.01         0.00         1.33         0.03         1.83         1.03         5.76         1.18         A-         A+           3         567647         20         D.1.2.3         2         5065         0.21         0.36         0.18         0.23         0.21         0.01         0.06         0.01         -0.10         0.03         0.06         1.51         0.04         3.74         1.08         9.48         1.35         A+         A+           3         980209         20         D.2.1.1         3         5065         0.20         0.27         0.28         0.25         0.20         0.01         0.04         -0.08         0.06         -0.02         0.04         1.60         0.04         3.81         1.08         9.18         1.36         A+         A-           4         194818         0         D.1.2.4         2         100887         0.73         0.73         0.03         0.04         0.19         0.00         0.26         0.26         -0.16         -0.1   | A- | В- | A- | 0.74 | -6.83 | 0.88 | -4.63 | 0.04 | -1.96 | -0.15 | -0.19 | 0.32  | -0.19 | 0.32  | 0.01 | 0.05 | 0.04 | 0.85 | 0.06 | 0.85 | 5065   | 2 | D.1.1.6 | 20 | 142352 | 3 |
| 3 567647 20 D.1.2.3 2 5065 0.21 0.36 0.18 0.23 0.21 0.01 0.06 0.01 -0.10 0.03 0.06 1.51 0.04 3.74 1.08 9.48 1.35 A+ A+ A+ 3 980209 20 D.2.1.1 3 5065 0.20 0.27 0.28 0.25 0.20 0.01 0.04 -0.08 0.06 -0.02 0.04 1.60 0.04 3.81 1.08 9.18 1.36 A+ A- 4 194818 0 D.1.2.4 2 100887 0.73 0.73 0.03 0.04 0.19 0.00 0.26 0.26 0.26 0.16 -0.18 -0.14 -0.83 0.01 -9.90 0.96 -9.90 0.92 A+ A+ 4 983191 0 D.1.1.4 2 100887 0.64 0.64 0.65 0.10 0.21 0.00 0.28 0.28 -0.16 -0.13 -0.14 -0.31 0.01 -9.90 0.95 -9.90 0.91 A- A- 4 469285 0 D.1.1.2 2 100887 0.69 0.18 0.69 0.05 0.08 0.00 0.35 -0.24 0.35 -0.15 -0.14 -0.61 0.01 -9.90 0.87 -9.90 0.81 A+ A- 4 751250 0 D.1.2.1 2 100887 0.56 0.18 0.56 0.21 0.05 0.00 0.31 -0.15 0.31 -0.14 -0.17 0.06 0.01 -9.90 0.92 -9.90 0.90 0.90 A+ B- 4 489972 0 D.1.1.8 2 100887 0.83 0.10 0.06 0.83 0.02 0.00 0.25 -0.18 -0.11 0.25 -0.13 -1.47 0.01 -9.90 0.95 -9.90 0.86 A- A- 4 583676 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.10 0.25 -0.15 -0.12 -0.21 0.01 -8.12 0.98 -9.55 0.96 A+ A+  | A- | A- | A+ | 0.73 | -4.31 | 0.92 | -1.81 | 0.06 | -2.85 | -0.11 | -0.12 | -0.19 | 0.25  | 0.25  | 0.00 | 0.01 | 0.03 | 0.03 | 0.92 | 0.92 | 5065   | 2 | D.1.1.7 | 20 | 530665 | 3 |
| 3       980209       20       D.2.1.1       3       5065       0.20       0.27       0.28       0.25       0.20       0.01       0.04       -0.08       0.06       -0.02       0.04       1.60       0.04       3.81       1.08       9.18       1.36       A+       A-         4       194818       0       D.1.2.4       2       100887       0.73       0.73       0.03       0.04       0.19       0.00       0.26       0.26       -0.16       -0.18       -0.14       -0.83       0.01       -9.90       0.96       -9.90       0.92       A+       A+         4       983191       0       D.1.1.4       2       100887       0.64       0.64       0.05       0.10       0.21       0.00       0.28       0.28       -0.16       -0.13       -0.14       -0.31       0.01       -9.90       0.95       -9.90       0.91       A-         4       469285       0       D.1.1.2       2       100887       0.69       0.18       0.69       0.08       0.00       0.35       -0.15       -0.14       -0.61       0.01       -9.90       0.87       -9.90       0.81       A+       A-         4       751250   | A- | A+ | A- | 1.18 | 5.76  | 1.03 | 1.83  | 0.03 | 1.33  | 0.00  | 0.01  | -0.15 | 0.13  | 0.13  | 0.00 | 0.20 | 0.35 | 0.20 | 0.24 | 0.24 | 5065   | 2 | D.1.2.4 | 20 | 728676 | 3 |
| 4       194818       0       D.1.2.4       2       100887       0.73       0.73       0.03       0.04       0.19       0.00       0.26       0.26       -0.16       -0.18       -0.14       -0.83       0.01       -9.90       0.96       -9.90       0.92       A+       A+         4       983191       0       D.1.1.4       2       100887       0.64       0.64       0.05       0.10       0.21       0.00       0.28       0.28       -0.16       -0.13       -0.14       -0.31       0.01       -9.90       0.95       -9.90       0.91       A-       A-         4       469285       0       D.1.1.2       2       100887       0.69       0.18       0.69       0.08       0.00       0.35       -0.24       0.35       -0.15       -0.14       -0.61       0.01       -9.90       0.87       -9.90       0.81       A+       A-         4       751250       0       D.1.2.1       2       100887       0.56       0.21       0.05       0.00       0.31       -0.15       0.31       -0.14       -0.17       0.06       0.01       -9.90       0.92       -9.90       0.90       A+       B-  | B+ | A+ | A+ | 1.35 | 9.48  | 1.08 | 3.74  | 0.04 | 1.51  | 0.06  | 0.03  | -0.10 | 0.01  | 0.06  | 0.01 | 0.21 | 0.23 | 0.18 | 0.36 | 0.21 | 5065   | 2 | D.1.2.3 | 20 | 567647 | 3 |
| 4       983191       0       D.1.1.4       2       100887       0.64       0.64       0.05       0.10       0.21       0.00       0.28       0.28       -0.16       -0.13       -0.14       -0.31       0.01       -9.90       0.95       -9.90       0.91       A-       A-         4       469285       0       D.1.1.2       2       100887       0.69       0.18       0.69       0.05       0.08       0.00       0.35       -0.15       -0.14       -0.61       0.01       -9.90       0.87       -9.90       0.81       A+       A-         4       751250       0       D.1.2.1       2       100887       0.56       0.18       0.56       0.21       0.05       0.00       0.31       -0.15       0.31       -0.14       -0.17       0.06       0.01       -9.90       0.92       -9.90       0.90       A+       B-         4       489972       0       D.1.1.8       2       100887       0.83       0.10       0.06       0.83       0.02       0.00       0.25       -0.18       -0.11       0.25       -0.13       -1.47       0.01       -9.90       0.95       -9.90       0.86       A- <td< td=""><td>A+</td><td>A-</td><td>A+</td><td>1.36</td><td>9.18</td><td>1.08</td><td>3.81</td><td>0.04</td><td>1.60</td><td>0.04</td><td>-0.02</td><td>0.06</td><td>-0.08</td><td>0.04</td><td>0.01</td><td>0.20</td><td>0.25</td><td>0.28</td><td>0.27</td><td>0.20</td><td>5065</td><td>3</td><td>D.2.1.1</td><td>20</td><td>980209</td><td>3</td></td<>  | A+ | A- | A+ | 1.36 | 9.18  | 1.08 | 3.81  | 0.04 | 1.60  | 0.04  | -0.02 | 0.06  | -0.08 | 0.04  | 0.01 | 0.20 | 0.25 | 0.28 | 0.27 | 0.20 | 5065   | 3 | D.2.1.1 | 20 | 980209 | 3 |
| 4       469285       0       D.1.1.2       2       100887       0.69       0.18       0.69       0.05       0.08       0.00       0.35       -0.24       0.35       -0.15       -0.14       -0.61       0.01       -9.90       0.87       -9.90       0.81       A+       A-         4       751250       0       D.1.2.1       2       100887       0.56       0.18       0.56       0.21       0.05       0.00       0.31       -0.15       0.31       -0.14       -0.17       0.06       0.01       -9.90       0.92       -9.90       0.90       A+       B-         4       489972       0       D.1.1.8       2       100887       0.83       0.10       0.06       0.83       0.02       0.00       0.25       -0.18       -0.11       0.25       -0.13       -1.47       0.01       -9.90       0.95       -9.90       0.86       A-         4       583676       0       D.1.1.6       2       100887       0.62       0.11       0.09       0.00       0.25       -0.15       -0.15       -0.21       0.01       -9.90       0.95       -9.90       0.86       A-         4       583676       0       D   | A+ | A+ | A+ | 0.92 | -9.90 | 0.96 | -9.90 | 0.01 | -0.83 | -0.14 | -0.18 | -0.16 | 0.26  | 0.26  | 0.00 | 0.19 | 0.04 | 0.03 | 0.73 | 0.73 | 100887 | 2 | D.1.2.4 | 0  | 194818 | 4 |
| 4       751250       0       D.1.2.1       2       100887       0.56       0.18       0.56       0.21       0.05       0.00       0.31       -0.15       0.31       -0.14       -0.17       0.06       0.01       -9.90       0.92       -9.90       0.90       A+       B-         4       489972       0       D.1.1.8       2       100887       0.83       0.10       0.06       0.83       0.02       0.00       0.25       -0.18       -0.11       0.25       -0.13       -1.47       0.01       -9.90       0.95       -9.90       0.86       A-       A-         4       583676       0       D.1.1.6       2       100887       0.62       0.11       0.09       0.00       0.25       -0.10       0.25       -0.15       -0.12       -0.21       0.01       -8.12       0.98       -9.55       0.96       A+       A+  | A- | A- | A- | 0.91 | -9.90 | 0.95 | -9.90 | 0.01 | -0.31 | -0.14 | -0.13 | -0.16 | 0.28  | 0.28  | 0.00 | 0.21 | 0.10 | 0.05 | 0.64 | 0.64 | 100887 | 2 | D.1.1.4 | 0  | 983191 | 4 |
| 4       489972       0       D.1.1.8       2       100887       0.83       0.10       0.06       0.83       0.02       0.00       0.25       -0.18       -0.11       0.25       -0.13       -1.47       0.01       -9.90       0.95       -9.90       0.86       A-       A-         4       583676       0       D.1.1.6       2       100887       0.62       0.11       0.09       0.00       0.25       -0.10       0.25       -0.15       -0.12       -0.21       0.01       -8.12       0.98       -9.55       0.96       A+       A+  | B- | A- | A+ | 0.81 | -9.90 | 0.87 | -9.90 | 0.01 | -0.61 | -0.14 | -0.15 | 0.35  | -0.24 | 0.35  | 0.00 | 0.08 | 0.05 | 0.69 | 0.18 | 0.69 | 100887 | 2 | D.1.1.2 | 0  | 469285 | 4 |
| 4 583676 0 D.1.1.6 2 100887 0.62 0.18 0.62 0.11 0.09 0.00 0.25 -0.10 0.25 -0.15 -0.12 -0.21 0.01 -8.12 0.98 -9.55 0.96 A+ A+   | B- | B- | A+ | 0.90 | -9.90 | 0.92 | -9.90 | 0.01 | 0.06  | -0.17 | -0.14 | 0.31  | -0.15 | 0.31  | 0.00 | 0.05 | 0.21 | 0.56 | 0.18 | 0.56 | 100887 | 2 | D.1.2.1 | 0  | 751250 | 4 |
|  | A- | A- | A- | 0.86 | -9.90 | 0.95 | -9.90 | 0.01 | -1.47 | -0.13 | 0.25  | -0.11 | -0.18 | 0.25  | 0.00 | 0.02 | 0.83 | 0.06 | 0.10 | 0.83 | 100887 | 2 | D.1.1.8 | 0  | 489972 | 4 |
| 4 914462 0 D.2.1.3 3 100887 0.16 0.15 0.16 0.15 0.16 0.54 0.00 -0.08 -0.10 -0.06 -0.08 0.18 2.28 0.01 9.90 1.20 9.90 1.83 A- A+  | A+ | A+ | A+ | 0.96 | -9.55 | 0.98 | -8.12 | 0.01 | -0.21 | -0.12 | -0.15 | 0.25  | -0.10 | 0.25  | 0.00 | 0.09 | 0.11 | 0.62 | 0.18 | 0.62 | 100887 | 2 | D.1.1.6 | 0  | 583676 | 4 |
|  | A+ | A+ | A- | 1.83 | 9.90  | 1.20 | 9.90  | 0.01 | 2.28  | 0.18  | -0.08 | -0.06 | -0.10 | -0.08 | 0.00 | 0.54 | 0.16 | 0.16 | 0.15 | 0.16 | 100887 | 3 | D.2.1.3 | 0  | 914462 | 4 |
| 4 263821 0 D.1.1.5 2 100887 0.48 0.17 0.48 0.11 0.24 0.00 0.05 0.00 0.05 -0.06 -0.02 0.45 0.01 9.90 1.17 9.90 1.23 A- A+   | A+ | A+ | A- | 1.23 | 9.90  | 1.17 | 9.90  | 0.01 | 0.45  | -0.02 | -0.06 | 0.05  | 0.00  | 0.05  | 0.00 | 0.24 | 0.11 | 0.48 | 0.17 | 0.48 | 100887 | 2 | D.1.1.5 | 0  | 263821 | 4 |
| 4 960315 0 D.1.1.1 2 100887 0.33 0.17 0.20 0.30 0.33 0.00 0.12 -0.10 -0.04 -0.01 0.12 1.18 0.01 9.90 1.08 9.90 1.16 A+ A+  | A+ | A+ | A+ | 1.16 | 9.90  | 1.08 | 9.90  | 0.01 | 1.18  | 0.12  | -0.01 | -0.04 | -0.10 | 0.12  | 0.00 | 0.33 | 0.30 | 0.20 | 0.17 | 0.33 | 100887 | 2 | D.1.1.1 | 0  | 960315 | 4 |
| 4 88988 0 D.2.1.1 3 100887 0.37 0.08 0.34 0.22 0.37 0.00 0.15 -0.12 -0.10 0.02 0.15 0.97 0.01 9.90 1.05 9.90 1.12 A- A+  | A+ | A+ | A- | 1.12 | 9.90  | 1.05 | 9.90  | 0.01 | 0.97  | 0.15  | 0.02  | -0.10 | -0.12 | 0.15  | 0.00 | 0.37 | 0.22 | 0.34 | 0.08 | 0.37 | 100887 | 3 | D.2.1.1 | 0  | 889988 | 4 |
| 4 845964 0 D.1.2.2 2 100887 0.59 0.14 0.15 0.59 0.12 0.00 0.29 -0.10 -0.16 0.29 -0.15 -0.07 0.01 -9.90 0.93 -9.90 0.91 A+ A-   | A- | A- | A+ | 0.91 | -9.90 | 0.93 | -9.90 | 0.01 | -0.07 | -0.15 | 0.29  | -0.16 | -0.10 | 0.29  | 0.00 | 0.12 | 0.59 | 0.15 | 0.14 | 0.59 | 100887 | 2 | D.1.2.2 | 0  | 845964 | 4 |
| 4 277467 0 D.1.2.3 2 100887 0.47 0.16 0.17 0.20 0.47 0.00 0.21 -0.09 -0.07 -0.11 0.21 0.50 0.01 5.47 1.01 6.77 1.02 A- A-  | A- | A- | A- | 1.02 | 6.77  | 1.01 | 5.47  | 0.01 | 0.50  | 0.21  | -0.11 | -0.07 | -0.09 | 0.21  | 0.00 | 0.47 | 0.20 | 0.17 | 0.16 | 0.47 | 100887 | 2 | D.1.2.3 | 0  | 277467 | 4 |
| 4 953280 0 D.2.1.2 3 100887 0.50 0.09 0.31 0.10 0.50 0.00 0.10 -0.13 0.02 -0.08 0.10 0.33 0.01 9.90 1.12 9.90 1.16 A+ A-   | A- | A- | A+ | 1.16 | 9.90  | 1.12 | 9.90  | 0.01 | 0.33  | 0.10  | -0.08 | 0.02  | -0.13 | 0.10  | 0.00 | 0.50 | 0.10 | 0.31 | 0.09 | 0.50 | 100887 | 3 | D.2.1.2 | 0  | 953280 | 4 |
| 4 912315 0 D.2.1.3 3 100887 0.90 0.90 0.05 0.03 0.02 0.00 0.25 0.25 -0.14 -0.14 -0.15 -2.18 0.01 -9.90 0.91 -9.90 0.79 A+ B-   | A- | B- | A+ | 0.79 | -9.90 | 0.91 | -9.90 | 0.01 | -2.18 | -0.15 | -0.14 | -0.14 | 0.25  | 0.25  | 0.00 | 0.02 | 0.03 | 0.05 | 0.90 | 0.90 | 100887 | 3 | D.2.1.3 | 0  | 912315 | 4 |
| 4 916691 1 D.1.2.4 2 5124 0.42 0.19 0.22 0.18 0.42 0.00 0.29 -0.10 -0.12 -0.14 0.29 0.69 0.03 -2.99 0.97 -1.43 0.98 A+ A+  | A- |    |    |      |       |      |       |      |       |       |       |       |       |       |      |      |      |      |      |      |        |   |         | 1  |        |   |
| 4 561508 1 D.1.1.7 2 5124 0.65 0.17 0.08 0.09 0.65 0.00 0.40 -0.19 -0.20 -0.20 0.40 -0.44 0.03 -9.36 0.89 -9.27 0.83 A+ A-   | A+ |    |    |      |       |      |       |      |       |       |       |       |       |       |      |      |      |      |      |      |        |   |         | 1  |        |   |

| 4     788054     1     D.1.2.1     2     5124     0.54     0.54       4     304973     1     D.1.1.4     2     5124     0.82     0.06       4     639305     1     D.1.1.3     2     5124     0.54     0.30 | 0.07 0.26<br>0.82 0.03 | 0.14 0.00 | 0.28 | 0.28  | -0.17 | -0.02 | -0.25 | 0.13 0   | 03 -1.9  | 0.98 | -1.97 | 0.97 A- | A- | A- |
|---|------------------------|-----------|------|-------|-------|-------|-------|----------|----------|------|-------|---------|----|----|
|   | 0.82 0.03              |           |      |       |       |       |       |          |          |      |       |         |    |    |
| 4 639305 1 D.1.1.3 2 5124 0.54 0.30   |                        | 0.10 0.00 | 0.28 | -0.18 | 0.28  | -0.11 | -0.16 | -1.40 0. | 04 -1.99 |      | -4.02 | 0.86 A- | A- | A- |
|   | 0.13 0.54              | 0.03 0.00 | 0.30 | -0.13 | -0.18 | 0.30  | -0.15 | 0.12 0   | 03 -3.10 | 0.97 | -3.37 | 0.95 A+ | A- | A+ |
| 4 668016 1 D.1.1.8 2 5124 0.33 0.33   | 0.15 0.27              | 0.24 0.00 | 0.19 | 0.19  | -0.10 | -0.08 | -0.03 | 1.11 0   | 03 2.13  | 1.03 | 5.77  | 1.12 A+ | A+ | A- |
| 4 922700 1 D.1.1.5 3 5124 0.32 0.41   | 0.14 0.13              | 0.32 0.00 | 0.00 | 0.21  | -0.12 | -0.18 | 0.00  | 1.17 0   | 9.9      | 1.22 | 9.90  | 1.32 A- | A- | A+ |
| 4 209672 1 D.2.1.3 3 5124 0.74 0.06   | 0.74 0.10              | 0.11 0.00 | 0.28 | -0.08 | 0.28  | -0.15 | -0.19 | -0.89 0  | 03 -2.5  | 0.96 | -1.06 | 0.97 A+ | A+ | A+ |
| 4 445564 1 D.2.1.1 3 5124 0.30 0.61   | 0.30 0.04              | 0.05 0.00 | 0.20 | -0.11 | 0.20  | -0.11 | -0.09 | 1.28 0   | 0.6      | 1.01 | 6.88  | 1.16 A- | A- | A+ |
| 4 159485 1 D.2.1.2 3 5124 0.51 0.12   | 0.20 0.51              | 0.17 0.00 | 0.27 | -0.18 | -0.12 | 0.27  | -0.07 | 0.25 0   | 03 -0.5  | 0.99 | -1.11 | 0.98 A+ | A+ | A+ |
| 4 463957 2 D.1.2.4 1 5070 0.81 0.05   | 0.06 0.81              | 0.08 0.00 | 0.39 | -0.21 | -0.20 | 0.39  | -0.21 | -1.29 0  | 04 -5.6  | 0.88 | -8.06 | 0.74 A+ | A+ | A- |
| 4 245419 2 D.1.1.3 2 5070 0.85 0.85   | 0.05 0.06              | 0.04 0.00 | 0.36 | 0.36  | -0.18 | -0.21 | -0.19 | -1.62 0  | 04 -4.0  | 0.90 | -6.08 | 0.76 A+ | A- | A- |
| 4 759670 2 D.1.2.1 2 5070 0.43 0.43   | 0.04 0.45              | 0.08 0.00 | 0.23 | 0.23  | -0.17 | -0.13 | -0.06 | 0.67 0   | 03 2.5   | 1.03 | 3.24  | 1.05 A+ | A+ | A+ |
| 4 667577 2 D.1.1.7 3 5070 0.71 0.08   | 0.10 0.10              | 0.71 0.00 | 0.39 | -0.20 | -0.21 | -0.18 | 0.39  | -0.69 0  | 03 -6.7  | 0.90 | -6.80 | 0.84 A- | A- | A- |
| 4 925783 2 D.1.1.2 2 5070 0.87 0.09   | 0.87 0.02              | 0.03 0.00 | 0.35 | -0.25 | 0.35  | -0.14 | -0.18 | -1.81 0  | )4 -3.4  | 0.90 | -6.26 | 0.73 A+ | C- | B- |
| 4 816982 2 D.1.1.4 2 5070 0.58 0.11   | 0.58 0.19              | 0.12 0.00 | 0.23 | -0.11 | 0.23  | -0.11 | -0.11 | -0.02 0. | 3.0      | 1.03 | 2.24  | 1.04 A+ | A- | A- |
| 4 627322 2 D.1.1.6 2 5070 0.47 0.17   | 0.19 0.47              | 0.17 0.00 | 0.21 | -0.05 | -0.08 | 0.21  | -0.12 | 0.52 0   | 03 4.8   | 1.05 | 4.64  | 1.07 A- | A- | A- |
| 4 484211 2 D.1.1.1 2 5070 0.36 0.51   | 0.06 0.07              | 0.36 0.00 | 0.32 | -0.15 | -0.19 | -0.13 | 0.32  | 1.06 0   | 03 -5.6  | 0.93 | -1.84 | 0.96 A- | A+ | A+ |
| 4 386818 2 D.1.2.3 2 5070 0.49 0.20   | 0.49 0.14              | 0.16 0.00 | 0.31 | -0.14 | 0.31  | -0.09 | -0.17 | 0.39 0   | 03 -3.8  | 0.96 | -3.20 | 0.95 A- | A+ | A- |
| 4 600469 2 D.2.1.2 3 5070 0.53 0.53   | 0.07 0.22              | 0.18 0.00 | 0.20 | 0.20  | -0.17 | -0.07 | -0.07 | 0.24 0   | 03 5.9   | 1.06 | 4.68  | 1.07 A- | A+ | A- |
| 4 602628 3 D.1.2.1 2 5063 0.39 0.39   | 0.12 0.41              | 0.08 0.00 | 0.19 | 0.19  | -0.20 | 0.06  | -0.22 | 0.83     | 3.5      | 1.04 | 3.60  | 1.06 A+ | A- | A- |
| 4 478034 3 D.1.1.3 2 5063 0.76 0.06   | 0.10 0.08              | 0.76 0.00 | 0.35 | -0.21 | -0.18 | -0.16 | 0.35  | -0.99 0  | 03 -5.3  | 0.91 | -6.06 | 0.84 A- | B- | B- |
| 4 624010 3 D.1.1.8 2 5063 0.20 0.20   | 0.34 0.22              | 0.25 0.00 | 0.03 | 0.03  | 0.05  | -0.09 | 0.01  | 1.91 0.  | 04 5.00  | 1.11 | 9.90  | 1.39 A+ | A- | A+ |
| 4 102018 3 D.2.1.3 3 5063 0.49 0.23   | 0.11 0.49              | 0.17 0.00 | 0.23 | -0.01 | -0.17 | 0.23  | -0.16 | 0.37 0   | 03 1.0-  | 1.01 | 1.65  | 1.02 A- | A+ | A+ |
| 4 559576 3 D.1.1.5 2 5063 0.88 0.88   | 0.05 0.04              | 0.03 0.00 | 0.29 | 0.29  | -0.18 | -0.14 | -0.17 | -1.91 0  | 04 -2.8  | 0.92 | -4.23 | 0.81 A+ | A- | A- |
| 4 338852 3 D.2.1.1 3 5063 0.57 0.23   | 0.57 0.12              | 0.07 0.00 | 0.20 | -0.16 | 0.20  | -0.12 | 0.03  | -0.03 0  | 03 3.6   | 1.04 | 3.37  | 1.05 A- | A+ | A- |
| 4 631439 3 D.1.2.2 2 5063 0.41 0.09   | 0.23 0.41              | 0.26 0.00 | 0.28 | -0.21 | -0.12 | 0.28  | -0.05 | 0.71 0   | 03 -3.6  | 0.96 | -1.66 | 0.97 A+ | A- | A- |
| 4 570278 3 D.1.2.3 2 5063 0.42 0.42   | 0.22 0.14              | 0.22 0.00 | 0.24 | 0.24  | -0.08 | -0.21 | -0.02 | 0.70 0   | 03 -0.1  | 1.00 | 1.70  | 1.03 A- | A+ | A- |
| 4 863266 3 D.2.1.2 3 5063 0.66 0.17   | 0.66 0.09              | 0.07 0.00 | 0.22 | -0.10 | 0.22  | -0.12 | -0.12 | -0.47 0  | 03 1.6   | 1.02 | 0.49  | 1.01 A+ | A+ | A+ |
| 4 321294 3 D.1.1.7 2 5063 0.77 0.77   | 0.05 0.08              | 0.09 0.00 | 0.41 | 0.41  | -0.22 | -0.22 | -0.20 |          | 04 -7.3  |      | -9.42 | 0.75 A- | A- | A- |
| 4 500324 4 D.1.2.4 2 5048 0.40 0.17   | 0.40 0.16              | 0.27 0.00 | 0.17 | -0.05 | 0.17  | -0.11 | -0.06 |          | 03 2.3   |      | 3.65  | 1.06 A- | A+ | A- |
| 4 647592 4 D.1.1.1 2 5048 0.77 0.77   | 0.11 0.07              | 0.05 0.00 | 0.19 | 0.19  | -0.09 | -0.05 |       |          | 04 1.02  |      | 0.98  | 1.03 A+ | A- | A+ |
| 4 337182 4 D.1.1.2 2 5048 0.67 0.67   | 0.17 0.07              | 0.08 0.00 | 0.29 | 0.29  | -0.06 | -0.22 | -0.20 |          | 03 -3.1  |      | -3.35 | 0.94 A- | В- | A- |
| 4 358687 4 D.1.1.7 2 5048 0.64 0.64   | 0.07 0.07              | 0.21 0.00 | 0.19 | 0.19  | -0.18 | -0.20 | 0.03  |          | 03 2.29  |      | 2.13  | 1.04 A- | A+ | A+ |

| 4         278733         4         D.1.1.4         2         5048         0.78         0.03         0.12         0.78         0.07         0.00         0.35         -0.21         -0.17         0.35         -0.22         -1.11         0.04         -5.22         0.90         -6.28         0.83           4         570988         4         D.1.1.3         2         5048         0.90         0.90         0.05         0.02         0.03         0.00         0.24         -0.19         -0.10         -0.09         -2.13         0.05         -1.21         0.96         -2.94         0.85           4         600664         4         D.1.1.8         2         5048         0.32         0.16         0.22         0.32         0.30         0.00         0.10         -0.04         0.10         0.02         1.18         0.03         5.98         1.08         7.51         1.16           4         349606         4         D.1.1.6         2         5048         0.86         0.05         0.03         0.00         0.35         -0.23         0.35         -0.16         -0.17         -1.76         0.04         -4.17         0.88         -6.64         0.74           4 | A- A | B-<br>B-<br>A-<br>C-<br>A+<br>A+ |
|--|--|----------------------------------|
| 4       600664       4       D.1.1.8       2       5048       0.32       0.16       0.22       0.32       0.30       0.00       0.10       -0.04       0.10       0.02       1.18       0.03       5.98       1.08       7.51       1.16         4       349606       4       D.1.1.6       2       5048       0.86       0.06       0.86       0.05       0.03       0.00       0.35       -0.16       -0.17       -1.76       0.04       -4.17       0.88       -6.64       0.74         4       417620       4       D.2.1.3       3       5048       0.24       0.21       0.24       0.34       0.21       0.00       0.03       -0.09       0.03       0.11       -0.06       1.66       0.03       5.76       1.11       9.90       1.35         4       522744       4       D.2.1.2       3       5048       0.40       0.03       0.15       0.41       0.40       0.00       0.01       -0.18       0.11       0.11       0.07       0.03       7.91       1.09       7.86       1.13         4       311937       5       D.1.2.4       2       5010       0.65       0.28       0.65       0.04   | A- A+ A- A+ A+ A- A+ A+ A+ A+            | A-<br>C-<br>A+                   |
| 4       349606       4       D.1.1.6       2       5048       0.86       0.06       0.86       0.05       0.03       0.00       0.35       -0.23       0.35       -0.16       -0.17       -1.76       0.04       -4.17       0.88       -6.64       0.74         4       417620       4       D.2.1.3       3       5048       0.24       0.21       0.24       0.34       0.21       0.00       0.03       -0.09       0.03       0.11       -0.06       1.66       0.03       5.76       1.11       9.90       1.35         4       522744       4       D.2.1.2       3       5048       0.40       0.03       0.15       0.41       0.40       0.00       0.11       -0.21       -0.18       0.11       0.11       0.77       0.03       7.91       1.09       7.86       1.13         4       311937       5       D.1.2.4       2       5010       0.65       0.28       0.65       0.04       0.02       0.00       0.34       -0.20       -0.20       -0.39       0.03       -5.81       0.93       -5.45       0.90         4       585125       5       D.1.1.2       2       5010       0.44       0.04   | A+ A- A+ A+ A- A+ A+ A+                  | C-<br>A+                         |
| 4       417620       4       D.2.1.3       3       5048       0.24       0.21       0.24       0.34       0.21       0.00       0.03       -0.09       0.03       0.11       -0.06       1.66       0.03       5.76       1.11       9.90       1.35         4       522744       4       D.2.1.2       3       5048       0.40       0.03       0.11       -0.01       0.11       0.11       0.77       0.03       7.91       1.09       7.86       1.13         4       311937       5       D.1.2.4       2       5010       0.65       0.28       0.65       0.04       0.02       0.00       0.34       -0.20       -0.20       -0.39       0.03       -5.81       0.93       -5.45       0.90         4       585125       5       D.1.1.2       2       5010       0.44       0.04       0.04       0.00       0.05       -0.21       0.10       0.05       -0.17       0.62       0.03       9.90       1.18       9.90       1.23         4       538749       5       D.1.1.7       2       5010       0.88       0.88       0.03       0.06       0.00       0.34       -0.16       -0.18       -0.21 </td <td>A+ A+ A+ A- A+ A- A+</td> <td>A+</td>                                      | A+ A+ A+ A- A+ A- A+                     | A+                               |
| 4       522744       4       D.2.1.2       3       5048       0.40       0.03       0.15       0.41       0.40       0.00       0.11       -0.21       -0.18       0.11       0.11       0.77       0.03       7.91       1.09       7.86       1.13         4       311937       5       D.1.2.4       2       5010       0.65       0.28       0.65       0.04       0.02       0.00       0.34       -0.20       -0.20       -0.39       0.03       -5.81       0.93       -5.45       0.90         4       585125       5       D.1.1.2       2       5010       0.44       0.04       0.04       0.00       0.05       -0.21       0.10       0.05       -0.17       0.62       0.03       9.90       1.18       9.90       1.23         4       538749       5       D.1.1.7       2       5010       0.88       0.88       0.03       0.06       0.00       0.34       -0.16       -0.18       -0.21       -1.87       0.04       -4.07       0.88       -6.80       0.70         4       386329       5       D.1.2.1       2       5010       0.62       0.62       0.23       0.07       0.00       0.29   | A+ A+ A+ A- A+ A- A+                     | A+                               |
| 4       311937       5       D.1.2.4       2       5010       0.65       0.28       0.65       0.04       0.02       0.00       0.34       -0.20       -0.20       -0.39       0.03       -5.81       0.93       -5.45       0.90         4       585125       5       D.1.1.2       2       5010       0.44       0.04       0.04       0.00       0.05       -0.21       0.10       0.05       -0.17       0.62       0.03       9.90       1.18       9.90       1.23         4       538749       5       D.1.1.7       2       5010       0.88       0.88       0.03       0.06       0.00       0.34       -0.16       -0.18       -0.21       -1.87       0.04       -4.07       0.88       -6.80       0.70         4       386329       5       D.1.2.1       2       5010       0.62       0.62       0.23       0.07       0.00       0.29       0.29       -0.10       -0.18       -0.18       -0.24       0.03       -2.56       0.97       -3.17       0.94  | A- A+ A-                                 |                                  |
| 4       585125       5       D.1.1.2       2       5010       0.44       0.04       0.48       0.44       0.04       0.00       0.05       -0.21       0.10       0.05       -0.17       0.62       0.03       9.90       1.18       9.90       1.23         4       538749       5       D.1.1.7       2       5010       0.88       0.88       0.03       0.06       0.00       0.34       0.34       -0.16       -0.18       -0.21       -1.87       0.04       -4.07       0.88       -6.80       0.70         4       386329       5       D.1.2.1       2       5010       0.62       0.62       0.23       0.07       0.00       0.29       0.29       -0.10       -0.18       -0.18       -0.24       0.03       -2.56       0.97       -3.17       0.94   | A- A+                                    | A-                               |
| 4       538749       5       D.1.1.7       2       5010       0.88       0.88       0.03       0.06       0.00       0.34       0.34       -0.16       -0.18       -0.21       -1.87       0.04       -4.07       0.88       -6.80       0.70         4       386329       5       D.1.2.1       2       5010       0.62       0.62       0.23       0.07       0.00       0.29       0.29       -0.10       -0.18       -0.24       0.03       -2.56       0.97       -3.17       0.94  |  |                                  |
| 4 386329 5 D.1.2.1 2 5010 0.62 0.62 0.23 0.07 0.07 0.00 0.29 0.29 -0.10 -0.18 -0.18 -0.24 0.03 -2.56 0.97 -3.17 0.94   | A+ C-                                    | A-                               |
|  |  | B-                               |
| 4 66461 5 D114 2 5010 0.85 0.85 0.05 0.07 0.03 0.00 0.27 0.27 -0.18 -0.15 -0.12 -1.66 0.04 -2.51 0.93 -2.88 0.88   | A- A-                                    | A-                               |
| . 65.151 5 2.111. 2 555 5.05 5.05 5.05 5.05 5.05 5.05 5.   | A+ A-                                    | A-                               |
| 4 521514 5 D.1.1.3 2 5010 0.20 0.43 0.20 0.11 0.26 0.00 0.30 -0.20 0.30 0.08 -0.10 1.91 0.04 -3.74 0.92 -1.41 0.95   | A+ A-                                    | A-                               |
| 4 595808 5 D.2.1.1 3 5010 0.23 0.25 0.23 0.35 0.17 0.00 0.04 -0.10 0.04 0.05 0.01 1.73 0.04 6.53 1.13 9.90 1.45  | A- A+                                    | A+                               |
| 4 666667 5 D.1.2.2 2 5010 0.67 0.09 0.18 0.07 0.67 0.00 0.33 -0.20 -0.15 -0.17 0.33 -0.46 0.03 -5.04 0.93 -5.96 0.88   | A+ A+                                    | A+                               |
| 4 578551 5 D.1.2.3 2 5010 0.38 0.15 0.28 0.38 0.19 0.00 0.22 -0.16 -0.03 0.22 -0.09 0.91 0.03 1.75 1.02 3.25 1.06  | A+ A-                                    | A-                               |
| 4 152028 5 D.1.2.3 2 5010 0.46 0.46 0.22 0.13 0.18 0.00 0.35 0.35 -0.12 -0.18 -0.14 0.53 0.03 -8.41 0.92 -5.53 0.92  | A+ A-                                    | A-                               |
| 4 984548 6 D.1.2.1 2 5039 0.51 0.09 0.24 0.51 0.15 0.00 0.36 -0.25 -0.18 0.36 -0.07 0.29 0.03 -6.76 0.93 -5.70 0.92  | A+ B-                                    | B-                               |
| 4 985579 6 D.1.1.8 3 5039 0.39 0.28 0.13 0.19 0.39 0.00 0.16 0.01 -0.09 -0.12 0.16 0.90 0.03 7.31 1.09 9.38 1.17   | A+ A+                                    | A+                               |
| 4 925821 6 D.2.1.3 3 5039 0.49 0.07 0.49 0.09 0.36 0.00 0.29 -0.22 0.29 -0.18 -0.08 0.41 0.03 -1.15 0.99 -0.31 1.00  | A- A-                                    | B-                               |
| 4 633166 6 D.1.1.5 3 5039 0.81 0.07 0.03 0.09 0.81 0.00 0.31 -0.26 -0.18 -0.08 0.31 -1.29 0.04 -3.18 0.93 -2.40 0.92   | A- A-                                    | C-                               |
| 4 343659 6 D.2.1.3 3 5039 0.80 0.80 0.16 0.03 0.01 0.00 0.32 0.32 -0.25 -0.16 -0.12 -1.28 0.04 -3.11 0.93 -4.08 0.86   | A- B-                                    | B-                               |
| 4 273762 6 D.2.1.1 3 5039 0.49 0.41 0.03 0.07 0.49 0.00 0.37 -0.28 -0.14 -0.09 0.37 0.41 0.03 -8.58 0.91 -7.00 0.90  | A- A-                                    | A+                               |
| 4 304880 6 D.1.2.3 2 5039 0.64 0.07 0.16 0.64 0.13 0.00 0.33 -0.21 -0.16 0.33 -0.13 -0.33 0.03 -3.68 0.95 -3.48 0.94   | A+ A+                                    | A-                               |
| 4 831793 6 D.1.1.3 2 5039 0.67 0.21 0.06 0.06 0.67 0.00 0.35 -0.19 -0.22 -0.17 0.35 -0.48 0.03 -5.22 0.93 -5.26 0.89   | A+ A-                                    | A+                               |
| 4 497129 6 D.1.1.4 2 5039 0.89 0.05 0.89 0.02 0.04 0.00 0.25 -0.16 0.25 -0.13 -0.12 -2.00 0.05 -1.22 0.96 -2.07 0.89   | A+ B-                                    | A-                               |
| 4 650967 6 D.1.1.1 2 5039 0.63 0.09 0.13 0.15 0.63 0.00 0.34 -0.10 -0.17 -0.22 0.34 -0.27 0.03 -4.21 0.95 -4.57 0.92   | A+ A-                                    | A+                               |
| 4 879490 7 D.1.2.2 2 5058 0.49 0.15 0.49 0.08 0.27 0.00 0.20 -0.20 0.20 -0.20 0.06 0.36 0.03 1.40 1.01 2.28 1.03   | A+ A+                                    | A+                               |
| 4 148455 7 D.1.1.7 3 5058 0.56 0.16 0.11 0.17 0.56 0.00 0.27 -0.15 -0.08 0.27 0.06 0.03 -3.13 0.97 -3.02 0.96  | A- A+                                    | A-                               |
| 4 185884 7 D.1.1.2 2 5058 0.62 0.09 0.17 0.62 0.11 0.00 0.33 -0.17 -0.14 0.33 -0.17 -0.23 0.03 -6.80 0.92 -7.16 0.89   | A- A-                                    | A-                               |
| 4 109898 7 D.1.1.8 3 5058 0.28 0.28 0.32 0.16 0.24 0.00 -0.04 -0.04 0.07 -0.03 -0.01 1.41 0.03 9.90 1.17 9.90 1.32   | A- A+                                    | A+                               |
| 4 293237 7 D.1.1.6 2 5058 0.86 0.86 0.05 0.04 0.05 0.00 0.35 0.35 -0.18 -0.16 -0.21 -1.67 0.04 -4.50 0.88 -7.66 0.72   | A- B-                                    | B-                               |
| 4 796510 7 D.1.1.5 2 5058 0.39 0.14 0.16 0.30 0.39 0.00 0.10 -0.05 -0.08 -0.01 0.10 0.84 0.03 7.30 1.08 7.76 1.12  | 2  | A-                               |

|   |        | _  |         |   |      |      |      | 0.00 | 0.00 | 0.44 |      | 0.45 |       | 0.44  | 0.04  | 0.01  |       |      | • 10  | 4.00 |       | 1.00 |    |    | Τ. |
|---|--------|----|---------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 4 | 376099 | 7  | D.1.1.1 | 2 | 5058 | 0.31 | 0.31 | 0.38 | 0.20 | 0.11 | 0.00 | 0.15 | 0.15  | -0.11 | 0.01  | -0.06 | 1.23  | 0.03 | 2.18  | 1.03 | 4.04  | 1.08 | Α- | B+ | A- |
| 4 | 579515 | 7  | D.1.2.2 | 2 | 5058 | 0.44 | 0.32 | 0.10 | 0.14 | 0.44 | 0.00 | 0.27 | -0.13 | -0.17 | -0.07 | 0.27  | 0.62  | 0.03 | -4.55 | 0.96 | -3.32 | 0.96 | A+ | A- | A- |
| 4 | 576900 | 7  | D.2.1.2 | 3 | 5058 | 0.29 | 0.17 | 0.38 | 0.16 | 0.29 | 0.00 | 0.16 | -0.16 | 0.05  | -0.10 | 0.16  | 1.34  | 0.03 | 1.29  | 1.02 | 3.58  | 1.08 | A- | A+ | A+ |
| 4 | 800328 | 7  | D.2.1.3 | 3 | 5058 | 0.34 | 0.34 | 0.12 | 0.26 | 0.28 | 0.00 | 0.12 | 0.12  | -0.12 | -0.01 | -0.04 | 1.07  | 0.03 | 4.31  | 1.05 | 5.51  | 1.10 | Α- | A- | A+ |
| 4 | 358701 | 8  | D.1.2.4 | 1 | 5028 | 0.82 | 0.82 | 0.04 | 0.04 | 0.10 | 0.00 | 0.32 | 0.32  | -0.21 | -0.16 | -0.17 | -1.33 | 0.04 | -2.82 | 0.94 | -2.73 | 0.90 | A+ | A- | A+ |
| 4 | 168426 | 8  | D.1.1.2 | 2 | 5028 | 0.83 | 0.09 | 0.83 | 0.04 | 0.03 | 0.00 | 0.35 | -0.24 | 0.35  | -0.14 | -0.19 | -1.46 | 0.04 | -3.57 | 0.91 | -5.25 | 0.79 | A+ | A- | B- |
| 4 | 448230 | 8  | D.1.1.2 | 2 | 5028 | 0.57 | 0.13 | 0.05 | 0.57 | 0.25 | 0.00 | 0.36 | -0.25 | -0.23 | 0.36  | -0.10 | 0.11  | 0.03 | -5.06 | 0.94 | -5.29 | 0.91 | A+ | A+ | A+ |
| 4 | 734881 | 8  | D.1.1.4 | 2 | 5028 | 0.72 | 0.17 | 0.05 | 0.06 | 0.72 | 0.00 | 0.32 | -0.13 | -0.19 | -0.22 | 0.32  | -0.68 | 0.03 | -2.25 | 0.96 | -2.48 | 0.94 | A+ | A- | B- |
| 4 | 796931 | 8  | D.1.1.6 | 2 | 5028 | 0.68 | 0.20 | 0.06 | 0.06 | 0.68 | 0.00 | 0.43 | -0.28 | -0.22 | -0.15 | 0.43  | -0.44 | 0.03 | -9.01 | 0.88 | -8.52 | 0.82 | A- | A- | A- |
| 4 | 810706 | 8  | D.2.1.3 | 3 | 5028 | 0.78 | 0.78 | 0.18 | 0.02 | 0.03 | 0.00 | 0.24 | 0.24  | -0.17 | -0.17 | -0.10 | -1.06 | 0.04 | 1.32  | 1.03 | -0.23 | 0.99 | A+ | A- | A- |
| 4 | 818620 | 8  | D.1.1.7 | 2 | 5028 | 0.50 | 0.14 | 0.50 | 0.12 | 0.25 | 0.00 | 0.25 | -0.16 | 0.25  | -0.12 | -0.07 | 0.45  | 0.03 | 3.72  | 1.04 | 3.34  | 1.05 | Α- | A+ | A+ |
| 4 | 887573 | 8  | D.2.1.2 | 3 | 5028 | 0.62 | 0.21 | 0.06 | 0.62 | 0.11 | 0.00 | 0.38 | -0.20 | -0.24 | 0.38  | -0.15 | -0.14 | 0.03 | -6.16 | 0.93 | -5.91 | 0.89 | A- | A- | A- |
| 4 | 913054 | 8  | D.2.1.1 | 3 | 5028 | 0.39 | 0.44 | 0.07 | 0.39 | 0.10 | 0.00 | 0.31 | -0.15 | -0.10 | 0.31  | -0.17 | 0.95  | 0.03 | -3.63 | 0.96 | 1.15  | 1.02 | A+ | A- | A- |
| 4 | 286494 | 8  | D.1.1.5 | 2 | 5028 | 0.80 | 0.05 | 0.80 | 0.10 | 0.05 | 0.00 | 0.27 | -0.18 | 0.27  | -0.11 | -0.17 | -1.23 | 0.04 | -0.72 | 0.98 | -0.86 | 0.97 | A- | A- | A- |
| 4 | 124492 | 9  | D.1.2.1 | 2 | 5045 | 0.66 | 0.66 | 0.07 | 0.20 | 0.08 | 0.00 | 0.42 | 0.42  | -0.20 | -0.23 | -0.21 | -0.42 | 0.03 | -8.85 | 0.89 | -9.07 | 0.82 | A- | B- | B- |
| 4 | 185185 | 9  | D.1.1.8 | 2 | 5045 | 0.72 | 0.07 | 0.72 | 0.04 | 0.16 | 0.00 | 0.32 | -0.24 | 0.32  | -0.19 | -0.12 | -0.74 | 0.03 | -2.76 | 0.96 | -2.68 | 0.93 | A+ | A- | B- |
| 4 | 686514 | 9  | D.1.1.6 | 2 | 5045 | 0.72 | 0.09 | 0.14 | 0.72 | 0.06 | 0.00 | 0.41 | -0.27 | -0.24 | 0.41  | -0.11 | -0.75 | 0.03 | -7.90 | 0.88 | -7.42 | 0.82 | A+ | B- | A- |
| 4 | 620669 | 9  | D.1.1.5 | 2 | 5045 | 0.38 | 0.38 | 0.24 | 0.19 | 0.19 | 0.00 | 0.16 | 0.16  | -0.03 | -0.08 | -0.09 | 0.94  | 0.03 | 8.11  | 1.10 | 9.10  | 1.18 | A+ | A+ | A- |
| 4 | 336901 | 9  | D.2.1.3 | 3 | 5045 | 0.72 | 0.11 | 0.04 | 0.13 | 0.72 | 0.00 | 0.30 | -0.23 | -0.14 | -0.10 | 0.30  | -0.78 | 0.03 | -1.53 | 0.98 | -1.36 | 0.96 | A- | A- | B- |
| 4 | 748926 | 9  | D.1.1.1 | 2 | 5045 | 0.36 | 0.20 | 0.36 | 0.24 | 0.20 | 0.00 | 0.14 | -0.08 | 0.14  | 0.02  | -0.10 | 1.04  | 0.03 | 9.25  | 1.12 | 9.90  | 1.24 | A- | A+ | A+ |
| 4 | 684355 | 9  | D.2.1.1 | 3 | 5045 | 0.43 | 0.43 | 0.07 | 0.34 | 0.15 | 0.00 | 0.24 | 0.24  | -0.12 | -0.11 | -0.10 | 0.67  | 0.03 | 2.52  | 1.03 | 4.36  | 1.07 | A- | A- | A- |
| 4 | 292455 | 9  | D.1.2.2 | 3 | 5045 | 0.53 | 0.53 | 0.17 | 0.18 | 0.12 | 0.00 | 0.41 | 0.41  | -0.08 | -0.27 | -0.21 | 0.21  | 0.03 | -9.59 | 0.90 | -8.34 | 0.87 | A+ | A- | A- |
| 4 | 657822 | 9  | D.1.2.3 | 2 | 5045 | 0.68 | 0.04 | 0.16 | 0.68 | 0.11 | 0.00 | 0.37 | -0.21 | -0.17 | 0.37  | -0.20 | -0.54 | 0.03 | -5.55 | 0.92 | -5.70 | 0.88 | A+ | A+ | A+ |
| 4 | 516983 | 9  | D.1.1.3 | 2 | 5045 | 0.78 | 0.10 | 0.04 | 0.78 | 0.08 | 0.00 | 0.40 | -0.24 | -0.17 | 0.40  | -0.21 | -1.09 | 0.04 | -6.35 | 0.88 | -6.97 | 0.79 | A+ | B- | C- |
| 4 | 264026 | 10 | D.1.2.4 | 1 | 5027 | 0.47 | 0.40 | 0.47 | 0.08 | 0.04 | 0.00 | 0.35 | -0.18 | 0.35  | -0.21 | -0.15 | 0.46  | 0.03 | -4.87 | 0.95 | -2.98 | 0.95 | A+ | B- | A- |
| 4 | 539164 | 10 | D.1.1.3 | 2 | 5027 | 0.90 | 0.06 | 0.02 | 0.02 | 0.90 | 0.00 | 0.34 | -0.24 | -0.13 | -0.18 | 0.34  | -2.17 | 0.05 | -3.60 | 0.88 | -5.99 | 0.68 | A+ | В- | B- |
| 4 | 798037 | 10 | D.1.1.4 | 2 | 5027 | 0.70 | 0.70 | 0.04 | 0.05 | 0.21 | 0.00 | 0.38 | 0.38  | -0.19 | -0.20 | -0.23 | -0.68 | 0.03 | -5.70 | 0.92 | -5.79 | 0.86 | A- | A- | A- |
| 4 | 347656 | 10 | D.1.1.2 | 2 | 5027 | 0.76 | 0.09 | 0.06 | 0.76 | 0.08 | 0.00 | 0.27 | -0.11 | -0.17 | 0.27  | -0.13 | -1.00 | 0.04 | -0.33 | 0.99 | 0.56  | 1.02 | A+ | A- | A- |
| 4 | 841767 | 10 | D.1.1.6 | 2 | 5027 | 0.55 | 0.32 | 0.06 | 0.55 | 0.06 | 0.00 | 0.37 | -0.22 | -0.17 | 0.37  | -0.15 | 0.07  | 0.03 | -6.14 | 0.93 | -5.89 | 0.91 | A- | A- | A- |
| 4 | 222943 | 10 | D.1.1.5 | 2 | 5027 | 0.62 | 0.15 | 0.10 | 0.12 | 0.62 | 0.00 | 0.29 | -0.15 | -0.16 | -0.11 | 0.29  | -0.27 | 0.03 | 0.24  | 1.00 | 0.23  | 1.00 | A- | A- | A+ |
| 4 | 947639 | 10 | D.1.1.1 | 2 | 5027 | 0.68 | 0.08 | 0.15 | 0.68 | 0.09 | 0.00 | 0.37 | -0.19 | -0.20 | 0.37  | -0.18 | -0.57 | 0.03 | -5.50 | 0.92 | -6.10 | 0.87 | A- | B- | A- |
| 4 | 320428 | 10 | D.2.1.1 | 3 | 5027 | 0.55 | 0.07 | 0.55 | 0.08 | 0.30 | 0.00 | 0.35 | -0.22 | 0.35  | -0.17 | -0.15 | 0.11  | 0.03 | -4.70 | 0.95 | -4.42 | 0.93 | A- | В- | A- |

| 4 | 681820 | 10 | D.1.2.2 | 2 | 5027 | 0.65 | 0.07 | 0.65 | 0.11 | 0.17 | 0.00 | 0.42 | -0.22 | 0.42  | -0.17 | -0.25 | -0.43 | 0.03 | -9.16 | 0.88 | -9.20 |      | A+         | A- | A- |
|---|--------|----|---------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|------------|----|----|
| 4 | 492533 | 10 | D.2.1.2 | 3 | 5027 | 0.46 | 0.46 | 0.28 | 0.15 | 0.11 | 0.00 | 0.21 | 0.21  | -0.08 | -0.07 | -0.13 | 0.52  | 0.03 | 6.61  | 1.07 | 6.89  |      | A+         | A+ | B- |
| 4 | 639349 | 11 | D.1.2.4 | 1 | 5029 | 0.72 | 0.72 | 0.16 | 0.06 | 0.06 | 0.00 | 0.27 | 0.27  | -0.12 | -0.18 | -0.15 | -0.72 | 0.03 | -1.85 | 0.97 | -3.68 | 0.92 | A+         | A- | A- |
| 4 | 462070 | 11 | D.1.1.4 | 2 | 5029 | 0.67 | 0.08 | 0.18 | 0.67 | 0.07 | 0.00 | 0.33 | -0.19 | -0.11 | 0.33  | -0.23 | -0.45 | 0.03 | -5.88 | 0.92 | -5.34 | 0.90 | A-         | A- | B- |
| 4 | 606529 | 11 | D.1.1.7 | 2 | 5029 | 0.68 | 0.25 | 0.03 | 0.04 | 0.68 | 0.00 | 0.33 | -0.16 | -0.24 | -0.21 | 0.33  | -0.51 | 0.03 | -5.47 | 0.93 | -5.76 | 0.89 | A-         | A- | A- |
| 4 | 712797 | 11 | D.1.1.2 | 3 | 5029 | 0.90 | 0.03 | 0.02 | 0.04 | 0.90 | 0.00 | 0.21 | -0.15 | -0.11 | -0.09 | 0.21  | -2.16 | 0.05 | -0.81 | 0.97 | -1.96 | 0.89 | Α-         | A- | A+ |
| 4 | 646630 | 11 | D.1.1.8 | 2 | 5029 | 0.32 | 0.20 | 0.32 | 0.21 | 0.27 | 0.00 | 0.06 | -0.06 | 0.06  | -0.07 | 0.06  | 1.20  | 0.03 | 8.49  | 1.12 | 9.90  | 1.21 | <b>A</b> + | A+ | A+ |
| 4 | 316396 | 11 | D.1.2.1 | 2 | 5029 | 0.65 | 0.13 | 0.65 | 0.10 | 0.12 | 0.00 | 0.32 | -0.12 | 0.32  | -0.20 | -0.15 | -0.36 | 0.03 | -5.22 | 0.94 | -5.19 | 0.91 | A+         | A- | A- |
| 4 | 155553 | 11 | D.1.1.6 | 2 | 5029 | 0.85 | 0.05 | 0.05 | 0.05 | 0.85 | 0.00 | 0.29 | -0.16 | -0.16 | -0.15 | 0.29  | -1.65 | 0.04 | -2.88 | 0.92 | -3.66 | 0.86 | A-         | B- | A- |
| 4 | 491731 | 11 | D.1.1.5 | 2 | 5029 | 0.36 | 0.22 | 0.19 | 0.36 | 0.22 | 0.00 | 0.05 | 0.05  | -0.08 | 0.05  | -0.02 | 1.00  | 0.03 | 9.90  | 1.14 | 9.90  | 1.24 | A-         | A- | A- |
| 4 | 239494 | 11 | D.1.1.1 | 2 | 5029 | 0.44 | 0.07 | 0.43 | 0.44 | 0.06 | 0.00 | 0.19 | -0.20 | -0.05 | 0.19  | -0.07 | 0.63  | 0.03 | 3.48  | 1.04 | 3.37  | 1.05 | A-         | A+ | B+ |
| 4 | 796813 | 11 | D.1.2.2 | 3 | 5029 | 0.50 | 0.50 | 0.12 | 0.13 | 0.25 | 0.00 | 0.18 | 0.18  | -0.07 | -0.12 | -0.07 | 0.34  | 0.03 | 4.14  | 1.04 | 3.35  | 1.04 | A+         | A+ | A+ |
| 4 | 258368 | 12 | D.1.2.1 | 2 | 5048 | 0.66 | 0.16 | 0.66 | 0.06 | 0.12 | 0.00 | 0.35 | -0.25 | 0.35  | -0.12 | -0.13 | -0.42 | 0.03 | -5.91 | 0.93 | -6.46 | 0.88 | A+         | A- | A- |
| 4 | 435005 | 12 | D.1.1.8 | 3 | 5048 | 0.29 | 0.15 | 0.44 | 0.29 | 0.12 | 0.00 | 0.10 | -0.06 | 0.09  | 0.10  | -0.21 | 1.35  | 0.03 | 6.26  | 1.10 | 9.43  | 1.24 | A-         | A+ | A- |
| 4 | 257445 | 12 | D.1.1.6 | 2 | 5048 | 0.80 | 0.09 | 0.07 | 0.80 | 0.03 | 0.00 | 0.32 | -0.17 | -0.18 | 0.32  | -0.17 | -1.28 | 0.04 | -3.99 | 0.92 | -4.33 | 0.86 | A+         | A- | A+ |
| 4 | 581745 | 12 | D.1.1.5 | 2 | 5048 | 0.23 | 0.21 | 0.33 | 0.23 | 0.24 | 0.00 | 0.03 | -0.03 | 0.00  | 0.03  | -0.01 | 1.73  | 0.04 | 6.71  | 1.13 | 9.90  | 1.36 | A-         | A+ | A- |
| 4 | 689204 | 12 | D.2.1.3 | 3 | 5048 | 0.74 | 0.17 | 0.74 | 0.04 | 0.05 | 0.00 | 0.35 | -0.18 | 0.35  | -0.20 | -0.22 | -0.87 | 0.03 | -5.62 | 0.91 | -6.70 | 0.84 | A-         | A- | B- |
| 4 | 834431 | 12 | D.1.1.1 | 2 | 5048 | 0.77 | 0.77 | 0.09 | 0.10 | 0.04 | 0.00 | 0.19 | 0.19  | -0.14 | -0.07 | -0.10 | -1.07 | 0.04 | 1.28  | 1.02 | 2.84  | 1.09 | A-         | A- | A+ |
| 4 | 103071 | 12 | D.1.2.2 | 2 | 5048 | 0.46 | 0.20 | 0.20 | 0.46 | 0.14 | 0.00 | 0.26 | -0.13 | -0.08 | 0.26  | -0.11 | 0.52  | 0.03 | -0.68 | 0.99 | -0.30 | 1.00 | A+         | A- | A+ |
| 4 | 962001 | 12 | D.1.1.7 | 2 | 5048 | 0.42 | 0.25 | 0.42 | 0.18 | 0.15 | 0.00 | 0.22 | -0.09 | 0.22  | -0.07 | -0.11 | 0.72  | 0.03 | 1.69  | 1.02 | 4.06  | 1.06 | A+         | B+ | A- |
| 4 | 421467 | 12 | D.1.1.3 | 2 | 5048 | 0.52 | 0.15 | 0.20 | 0.13 | 0.52 | 0.00 | 0.29 | -0.22 | -0.09 | -0.09 | 0.29  | 0.24  | 0.03 | -3.37 | 0.97 | -3.60 | 0.95 | A-         | A+ | A+ |
| 4 | 861993 | 12 | D.2.1.1 | 3 | 5048 | 0.75 | 0.05 | 0.08 | 0.75 | 0.11 | 0.00 | 0.42 | -0.24 | -0.24 | 0.42  | -0.19 | -0.95 | 0.03 | -8.53 | 0.86 | -9.86 | 0.75 | A+         | B- | A- |
| 4 | 838756 | 13 | D.1.2.4 | 1 | 5021 | 0.76 | 0.76 | 0.18 | 0.03 | 0.03 | 0.00 | 0.25 | 0.25  | -0.12 | -0.17 | -0.19 | -1.00 | 0.04 | -0.44 | 0.99 | -0.07 | 1.00 | A+         | A+ | A+ |
| 4 | 477421 | 13 | D.1.1.3 | 2 | 5021 | 0.83 | 0.83 | 0.07 | 0.02 | 0.08 | 0.00 | 0.23 | 0.23  | -0.05 | -0.19 | -0.15 | -1.49 | 0.04 | -0.53 | 0.99 | 1.26  | 1.05 | A-         | A+ | A+ |
| 4 | 314262 | 13 | D.1.2.1 | 2 | 5021 | 0.60 | 0.18 | 0.08 | 0.60 | 0.15 | 0.00 | 0.36 | -0.14 | -0.19 | 0.36  | -0.20 | -0.11 | 0.03 | -7.30 | 0.92 | -6.05 | 0.90 | A-         | В- | B- |
| 4 | 223959 | 13 | D.1.1.4 | 2 | 5021 | 0.70 | 0.11 | 0.11 | 0.70 | 0.08 | 0.00 | 0.34 | -0.20 | -0.14 | 0.34  | -0.19 | -0.62 | 0.03 | -4.82 | 0.93 | -4.36 | 0.90 | B-         | C- | B- |
| 4 | 237406 | 13 | D.1.1.3 | 2 | 5021 | 0.87 | 0.09 | 0.87 | 0.03 | 0.01 | 0.00 | 0.29 | -0.19 | 0.29  | -0.15 | -0.15 | -1.78 | 0.04 | -2.25 | 0.94 | -3.03 | 0.86 | A-         | A- | A- |
| 4 | 672086 | 13 | D.1.1.6 | 2 | 5021 | 0.44 | 0.02 | 0.44 | 0.31 | 0.23 | 0.00 | 0.27 | -0.15 | 0.27  | -0.13 | -0.12 | 0.63  | 0.03 | -1.11 | 0.99 | 0.19  | 1.00 | A+         | A- | A+ |
| 4 | 949777 | 13 | D.2.1.3 | 3 | 5021 | 0.71 | 0.71 | 0.12 | 0.09 | 0.08 | 0.00 | 0.27 | 0.27  | -0.13 | -0.15 | -0.12 | -0.68 | 0.03 | -0.59 | 0.99 | -0.98 |      | A+         | В- | A- |
| 4 | 721502 | 13 | D.2.1.1 | 3 | 5021 | 0.52 | 0.16 | 0.07 | 0.25 | 0.52 | 0.00 | 0.26 | -0.12 | -0.16 | -0.09 | 0.26  | 0.26  | 0.03 | 0.94  | 1.01 | 0.00  |      | A-         | A+ | A+ |
| 4 | 887823 | 13 | D.1.1.7 | 2 | 5021 | 0.82 | 0.08 | 0.05 | 0.82 | 0.06 | 0.00 | 0.33 | -0.18 | -0.17 | 0.33  | -0.19 | -1.40 | 0.04 | -3.46 | 0.92 | -5.97 |      | A+         | A+ | A- |
| 4 | 695695 | 13 | D.1.2.3 | 2 | 5021 | 0.53 | 0.23 | 0.13 | 0.12 | 0.53 | 0.00 | 0.33 | -0.08 | -0.20 | -0.18 | 0.33  | 0.22  | 0.03 | -5.00 | 0.95 | -4.33 |      | A+         | A- | A- |

|   | 105000 |    | D 1 1 0 | 2 | 5025 | 0.40 | 0.15 | 0.10 | 0.40 | 0.10 | 0.00 | 0.05  | 0.11  | 0.12  | 0.25  | 0.12  | 0.42  | 0.02 | 2.21  | 0.00 | 0.54  | 0.00 |            |    |    |
|---|--------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|------------|----|----|
| 4 | 195890 | 14 | D.1.1.8 | 3 | 5036 | 0.48 | 0.15 | 0.18 | 0.48 | 0.19 | 0.00 | 0.27  | -0.11 | -0.12 | 0.27  | -0.13 | 0.43  | 0.03 | -2.31 | 0.98 | -0.54 |      | A+         | В- | A- |
| 4 | 141685 | 14 | D.1.2.4 | 1 | 5036 | 0.82 | 0.10 | 0.05 | 0.82 | 0.04 | 0.00 | 0.35  | -0.18 | -0.19 | 0.35  | -0.20 | -1.35 | 0.04 | -4.99 | 0.89 | -6.75 |      | A+         | A- | A- |
| 4 | 715857 | 14 | D.1.1.7 | 2 | 5036 | 0.81 | 0.07 | 0.81 | 0.06 | 0.05 | 0.00 | 0.33  | -0.16 | 0.33  | -0.19 | -0.18 | -1.34 | 0.04 | -4.34 | 0.91 | -5.82 |      | A+         | A- | A- |
| 4 | 497203 | 14 | D.1.1.4 | 2 | 5036 | 0.72 | 0.07 | 0.14 | 0.72 | 0.07 | 0.00 | 0.37  | -0.20 | -0.18 | 0.37  | -0.21 | -0.75 | 0.03 | -7.36 | 0.89 | -7.75 |      | A-         | B- | B- |
| 4 | 127172 | 14 | D.1.1.2 | 2 | 5036 | 0.69 | 0.69 | 0.14 | 0.10 | 0.08 | 0.00 | 0.28  | 0.28  | -0.10 | -0.17 | -0.15 | -0.54 | 0.03 | -1.81 | 0.97 | -2.61 |      | A+         | Α- | A- |
| 4 | 131125 | 14 | D.1.1.6 | 2 | 5036 | 0.32 | 0.32 | 0.17 | 0.13 | 0.39 | 0.00 | 0.22  | 0.22  | -0.07 | -0.15 | -0.04 | 1.24  | 0.03 | -0.10 | 1.00 | 1.94  |      | A-         | Α- | A+ |
| 4 | 790258 | 14 | D.1.1.5 | 2 | 5036 | 0.21 | 0.17 | 0.37 | 0.24 | 0.21 | 0.00 | 0.07  | -0.06 | -0.01 | 0.00  | 0.07  | 1.85  | 0.04 | 3.97  | 1.08 | 9.69  | 1.34 | A-         | A- | A+ |
| 4 | 399261 | 14 | D.1.1.1 | 3 | 5036 | 0.18 | 0.34 | 0.18 | 0.32 | 0.15 | 0.00 | -0.02 | 0.06  | -0.02 | 0.03  | -0.09 | 2.04  | 0.04 | 6.41  | 1.15 | 9.90  |      | A+         | B+ | A+ |
| 4 | 114318 | 14 | D.1.2.2 | 2 | 5036 | 0.40 | 0.19 | 0.12 | 0.29 | 0.40 | 0.00 | 0.29  | -0.12 | -0.14 | -0.10 | 0.29  | 0.84  | 0.03 | -3.95 | 0.96 | -1.78 | 0.97 | Α-         | B- | A- |
| 4 | 833509 | 14 | D.2.1.2 | 3 | 5036 | 0.27 | 0.44 | 0.17 | 0.27 | 0.12 | 0.00 | 0.15  | -0.04 | -0.06 | 0.15  | -0.06 | 1.49  | 0.03 | 2.60  | 1.04 | 6.86  | 1.18 | A+         | A+ | A+ |
| 4 | 719823 | 15 | D.1.1.4 | 2 | 5047 | 0.85 | 0.07 | 0.04 | 0.04 | 0.85 | 0.00 | 0.31  | -0.14 | -0.19 | -0.19 | 0.31  | -1.59 | 0.04 | -3.21 | 0.92 | -4.96 | 0.81 | A-         | A- | C- |
| 4 | 937191 | 15 | D.1.1.2 | 2 | 5047 | 0.47 | 0.17 | 0.11 | 0.24 | 0.47 | 0.00 | 0.29  | -0.16 | -0.15 | -0.06 | 0.29  | 0.48  | 0.03 | -4.30 | 0.96 | -3.27 | 0.96 | A-         | A- | A+ |
| 4 | 977524 | 15 | D.1.1.7 | 2 | 5047 | 0.44 | 0.20 | 0.22 | 0.44 | 0.14 | 0.00 | 0.19  | -0.08 | -0.03 | 0.19  | -0.13 | 0.63  | 0.03 | 3.54  | 1.04 | 3.72  | 1.05 | B-         | A+ | A+ |
| 4 | 259791 | 15 | D.1.1.5 | 2 | 5047 | 0.76 | 0.08 | 0.06 | 0.76 | 0.09 | 0.00 | 0.32  | -0.21 | -0.15 | 0.32  | -0.14 | -1.01 | 0.04 | -4.20 | 0.92 | -5.26 | 0.86 | A+         | A- | A- |
| 4 | 433997 | 15 | D.1.1.1 | 2 | 5047 | 0.90 | 0.90 | 0.04 | 0.03 | 0.02 | 0.00 | 0.38  | 0.38  | -0.25 | -0.20 | -0.14 | -2.15 | 0.05 | -4.42 | 0.85 | -8.35 | 0.60 | A+         | A- | B- |
| 4 | 622223 | 15 | D.2.1.1 | 3 | 5047 | 0.36 | 0.26 | 0.36 | 0.35 | 0.03 | 0.00 | 0.10  | -0.03 | 0.10  | 0.00  | -0.17 | 1.00  | 0.03 | 7.30  | 1.09 | 9.90  | 1.20 | A+         | B+ | B+ |
| 4 | 470785 | 15 | D.1.2.2 | 2 | 5047 | 0.27 | 0.35 | 0.17 | 0.21 | 0.27 | 0.00 | 0.05  | 0.13  | -0.11 | -0.09 | 0.05  | 1.47  | 0.03 | 6.91  | 1.11 | 9.90  | 1.27 | A+         | A+ | A- |
| 4 | 233658 | 15 | D.1.1.8 | 3 | 5047 | 0.41 | 0.22 | 0.22 | 0.15 | 0.41 | 0.00 | 0.12  | -0.10 | 0.01  | -0.07 | 0.12  | 0.78  | 0.03 | 7.47  | 1.08 | 8.61  | 1.14 | Α-         | A+ | A- |
| 4 | 960628 | 15 | D.2.1.3 | 3 | 5047 | 0.75 | 0.75 | 0.17 | 0.04 | 0.04 | 0.00 | 0.27  | 0.27  | -0.20 | -0.12 | -0.09 | -0.93 | 0.03 | -1.92 | 0.97 | -2.75 | 0.93 | A+         | A- | A- |
| 4 | 749919 | 15 | D.1.1.6 | 2 | 5047 | 0.55 | 0.33 | 0.04 | 0.55 | 0.07 | 0.00 | 0.35  | -0.21 | -0.15 | 0.35  | -0.16 | 0.11  | 0.03 | -8.99 | 0.91 | -8.26 | 0.89 | <b>A</b> + | A- | A- |
| 4 | 156129 | 16 | D.1.1.1 | 2 | 5043 | 0.39 | 0.39 | 0.08 | 0.09 | 0.44 | 0.00 | 0.27  | 0.27  | -0.12 | -0.10 | -0.15 | 0.88  | 0.03 | -1.43 | 0.98 | 2.89  | 1.05 | A-         | A+ | A- |
| 4 | 680136 | 16 | D.1.1.2 | 2 | 5043 | 0.75 | 0.75 | 0.10 | 0.06 | 0.08 | 0.00 | 0.36  | 0.36  | -0.12 | -0.22 | -0.23 | -0.96 | 0.04 | -4.96 | 0.91 | -5.00 | 0.86 | A+         | A- | A- |
| 4 | 713879 | 16 | D.1.1.8 | 2 | 5043 | 0.35 | 0.35 | 0.24 | 0.15 | 0.25 | 0.00 | 0.17  | 0.17  | -0.08 | -0.08 | -0.03 | 1.06  | 0.03 | 6.24  | 1.08 | 9.90  | 1.22 | A-         | A- | A+ |
| 4 | 491107 | 16 | D.1.1.5 | 2 | 5043 | 0.85 | 0.05 | 0.06 | 0.85 | 0.04 | 0.00 | 0.42  | -0.27 | -0.22 | 0.42  | -0.19 | -1.64 | 0.04 | -6.51 | 0.84 | -8.74 | 0.66 | Α-         | A- | C- |
| 4 | 423531 | 16 | D.2.1.3 | 3 | 5043 | 0.46 | 0.31 | 0.08 | 0.14 | 0.46 | 0.00 | 0.26  | -0.01 | -0.20 | -0.20 | 0.26  | 0.52  | 0.03 | 1.00  | 1.01 | 2.10  | 1.03 | A+         | A- | A- |
| 4 | 460458 | 16 | D.2.1.1 | 3 | 5043 | 0.80 | 0.13 | 0.03 | 0.80 | 0.03 | 0.00 | 0.39  | -0.27 | -0.22 | 0.39  | -0.13 | -1.24 | 0.04 | -6.05 | 0.88 | -6.99 | 0.77 | A+         | B- | A- |
| 4 | 811847 | 16 | D.1.2.2 | 2 | 5043 | 0.54 | 0.10 | 0.19 | 0.17 | 0.54 | 0.00 | 0.39  | -0.19 | -0.15 | -0.21 | 0.39  | 0.18  | 0.03 | -8.95 | 0.91 | -7.30 | 0.89 | A+         | A- | A+ |
| 4 | 917462 | 16 | D.1.2.3 | 2 | 5043 | 0.31 | 0.22 | 0.40 | 0.31 | 0.07 | 0.00 | 0.19  | -0.13 | 0.03  | 0.19  | -0.20 | 1.29  | 0.03 | 2.49  | 1.04 | 6.37  | 1.16 | A-         | A+ | A- |
| 4 | 998092 | 16 | D.1.1.3 | 2 | 5043 | 0.83 | 0.05 | 0.83 | 0.09 | 0.03 | 0.00 | 0.31  | -0.20 | 0.31  | -0.16 | -0.16 | -1.53 | 0.04 | -2.81 | 0.93 | -3.92 | 0.84 | A-         | A+ | A- |
| 4 | 337579 | 16 | D.1.2.1 | 2 | 5043 | 0.72 | 0.05 | 0.12 | 0.11 | 0.72 | 0.00 | 0.34  | -0.18 | -0.12 | -0.22 | 0.34  | -0.75 | 0.03 | -3.93 | 0.94 | -2.83 | 0.93 | A+         | A- | B- |
| 4 | 443286 | 17 | D.1.1.1 | 2 | 5012 | 0.52 | 0.52 | 0.08 | 0.29 | 0.10 | 0.00 | 0.18  | 0.18  | -0.14 | -0.05 | -0.09 | 0.26  | 0.03 | 6.09  | 1.06 | 5.18  |      | A-         | A- | A- |
| 4 | 853255 | 17 | D.1.1.3 | 2 | 5012 | 0.55 | 0.17 | 0.55 | 0.16 | 0.13 | 0.00 | 0.32  | -0.18 | 0.32  | -0.15 | -0.11 | 0.15  | 0.03 | -5.47 | 0.94 | -5.28 |      | A-         | B- | A- |

| 4       198286       17       D.1.1.8       3       5012       0.42       0.08       0.31       0.42       0.18       0.00       0.12       -0.10       -0.03       0.12       -0.03       0.75       0.03       9.59       1.11       8.40       1.14         4       413643       17       D.1.1.5       2       5012       0.94       0.03       0.01       0.94       0.02       0.00       0.23       -0.19       -0.09       0.23       -0.10       -2.74       0.06       -1.46       0.93       -4.28       0.70         4       500820       17       D.2.1.1       3       5012       0.35       0.17       0.11       0.35       0.36       0.00       0.24       -0.26       -0.14       0.24       0.06       1.06       0.03       -0.30       1.00       1.03       1.02         4       446126       17       D.1.2.2       2       5012       0.23       0.23       0.07       0.09       0.61       0.00       0.22       -0.23       -0.14       0.02       1.76       0.04       -0.83       0.98       1.92       1.06         4       167184       17       D.1.2.3       2       5012 <td< th=""><th>A- A- A- A-<br/>A- A- A-</th></td<> | A- A- A- A-<br>A- A- A- |
|---|-------------------------|
| 4       500820       17       D.2.1.1       3       5012       0.35       0.17       0.11       0.35       0.36       0.00       0.24       -0.26       -0.14       0.24       0.06       1.06       0.03       -0.30       1.00       1.03       1.02         4       446126       17       D.1.2.2       2       5012       0.23       0.23       0.07       0.09       0.61       0.00       0.22       -0.23       -0.14       0.02       1.76       0.04       -0.83       0.98       1.92       1.06         4       167184       17       D.1.2.3       2       5012       0.49       0.16       0.49       0.20       0.15       0.00       0.32       -0.12       0.32       -0.14       -0.15       0.39       0.03       -5.04       0.95       -4.63       0.94         4       368383       17       D.1.2.3       2       5012       0.69       0.18       0.06       0.69       0.06       0.00       0.36       -0.19       -0.17       0.36       -0.21       -0.58       0.03       -6.73       0.91       -7.62       0.84         4       941010       17       D.2.1.3       3       5012       <  |                         |
| 4       446126       17       D.1.2.2       2       5012       0.23       0.23       0.07       0.09       0.61       0.00       0.22       0.22       -0.23       -0.14       0.02       1.76       0.04       -0.83       0.98       1.92       1.06         4       167184       17       D.1.2.3       2       5012       0.49       0.16       0.49       0.20       0.15       0.00       0.32       -0.12       0.32       -0.14       -0.15       0.39       0.03       -5.04       0.95       -4.63       0.94         4       368383       17       D.1.2.3       2       5012       0.69       0.18       0.06       0.69       0.06       0.00       0.36       -0.19       -0.17       0.36       -0.21       -0.58       0.03       -6.73       0.91       -7.62       0.84         4       941010       17       D.2.1.2       3       5012       0.53       0.26       0.06       0.14       0.53       0.00       0.28       -0.10       -0.18       -0.14       0.28       0.23       0.03       -1.52       0.98       -1.40       0.98         4       979790       17       D.2.1.3       3  | A- A- A-                |
| 4       167184       17       D.1.2.3       2       5012       0.49       0.16       0.49       0.20       0.15       0.00       0.32       -0.14       -0.15       0.39       0.03       -5.04       0.95       -4.63       0.94         4       368383       17       D.1.2.3       2       5012       0.69       0.18       0.06       0.69       0.06       0.00       0.36       -0.19       -0.17       0.36       -0.21       -0.58       0.03       -6.73       0.91       -7.62       0.84         4       941010       17       D.2.1.2       3       5012       0.53       0.26       0.06       0.14       0.53       0.00       0.28       -0.10       -0.18       -0.14       0.28       0.23       0.03       -1.52       0.98       -1.40       0.98         4       979790       17       D.2.1.3       3       5012       0.18       0.10       0.59       0.18       0.00       0.01       -0.18       -0.16       0.23       0.01       2.11       0.04       5.50       1.13       9.90       1.48   |                         |
| 4       368383       17       D.1.2.3       2       5012       0.69       0.18       0.06       0.69       0.06       0.00       0.36       -0.19       -0.17       0.36       -0.21       -0.58       0.03       -6.73       0.91       -7.62       0.84         4       941010       17       D.2.1.2       3       5012       0.53       0.26       0.06       0.14       0.53       0.00       0.28       -0.10       -0.18       -0.14       0.28       0.23       0.03       -1.52       0.98       -1.40       0.98         4       979790       17       D.2.1.3       3       5012       0.18       0.13       0.10       0.59       0.18       0.00       0.01       -0.18       -0.16       0.23       0.01       2.11       0.04       5.50       1.13       9.90       1.48  | A- A+ A-                |
| 4     941010     17     D.2.1.2     3     5012     0.53     0.26     0.06     0.14     0.53     0.00     0.28     -0.10     -0.18     -0.14     0.28     0.23     0.03     -1.52     0.98     -1.40     0.98       4     979790     17     D.2.1.3     3     5012     0.18     0.10     0.59     0.18     0.00     0.01     -0.18     -0.16     0.23     0.01     2.11     0.04     5.50     1.13     9.90     1.48   | A+ A+ A+                |
| 4 979790 17 D.2.1.3 3 5012 0.18 0.13 0.10 0.59 0.18 0.00 0.01 -0.18 -0.16 0.23 0.01 2.11 0.04 5.50 1.13 9.90 1.48   | A+ A+ A+                |
|   | A+ A- A-                |
|   | A- A+ A+                |
| 4 761952 18 D.1.1.1 2 5032 0.74 0.18 0.03 0.74 0.04 0.00 0.35 -0.23 -0.21 0.35 -0.13 -0.86 0.03 -4.62 0.92 -5.35 0.86   | A+ A- A-                |
| 4 599821 18 D.1.1.3 2 5032 0.72 0.11 0.05 0.11 0.72 0.00 0.35 -0.20 -0.19 -0.15 0.35 -0.74 0.03 -4.47 0.93 -4.75 0.88   | A- A+ A-                |
| 4 872782 18 D.1.1.2 2 5032 0.58 0.58 0.09 0.09 0.24 0.00 0.29 0.29 -0.17 -0.14 -0.13 -0.02 0.03 -0.29 1.00 -1.23 0.98   | A- B+ A+                |
| 4 509938 18 D.1.1.4 2 5032 0.55 0.09 0.29 0.55 0.07 0.00 0.25 -0.18 -0.03 0.25 -0.24 0.16 0.03 2.38 1.03 2.12 1.03  | A- B- A-                |
| 4 557807 18 D.1.1.6 2 5032 0.35 0.35 0.17 0.36 0.12 0.00 0.24 0.24 -0.10 -0.08 -0.10 1.13 0.03 0.69 1.01 3.84 1.08  | A- A- A-                |
| 4 820777 18 D.2.1.3 3 5032 0.61 0.07 0.61 0.27 0.05 0.00 0.33 -0.05 0.33 -0.23 -0.20 -0.16 0.03 -3.65 0.96 -2.86 0.95   | A+ B- C-                |
| 4 697236 18 D.1.2.3 2 5032 0.59 0.15 0.11 0.14 0.59 0.00 0.44 -0.16 -0.27 -0.21 0.44 -0.06 0.03 -9.90 0.86 -9.90 0.81   | A- A- A+                |
| 4 352382 18 D.2.1.2 3 5032 0.19 0.47 0.19 0.20 0.14 0.00 0.10 -0.01 0.10 0.01 -0.11 2.09 0.04 3.18 1.07 9.90 1.44   | A- A- A+                |
| 4 109662 18 D.2.1.2 3 5032 0.70 0.10 0.07 0.70 0.13 0.00 0.40 -0.19 -0.20 0.40 -0.22 -0.62 0.03 -7.78 0.89 -7.12 0.84   | A+ B- A-                |
| 4 488323 18 D.1.2.2 2 5032 0.52 0.52 0.13 0.07 0.27 0.00 0.29 0.29 -0.20 -0.21 -0.06 0.26 0.03 -0.87 0.99 -0.82 0.99  | A+ A- A+                |
| 4 108297 19 D.1.1.7 3 5050 0.88 0.03 0.06 0.88 0.02 0.00 0.37 -0.20 -0.22 0.37 -0.19 -1.90 0.05 -4.53 0.86 -8.28 0.65   | A+ A- B-                |
| 4 424450 19 D.1.2.4 2 5050 0.49 0.23 0.16 0.11 0.49 0.00 0.22 -0.03 -0.10 -0.19 0.22 0.39 0.03 0.23 1.00 0.18 1.00  | A+ A+ A-                |
| 4 853185 19 D.1.1.1 2 5050 0.84 0.07 0.02 0.07 0.84 0.00 0.21 -0.18 -0.15 -0.02 0.21 -1.51 0.04 -0.88 0.98 1.08 1.04  | A+ A- A+                |
| 4 183889 19 D.1.2.1 2 5050 0.50 0.07 0.34 0.08 0.50 0.00 0.29 -0.22 -0.05 -0.24 0.29 0.32 0.03 -5.51 0.95 -4.55 0.94  | A- B- A-                |
| 4 825438 19 D.1.1.4 2 5050 0.76 0.15 0.02 0.07 0.76 0.00 0.30 -0.18 -0.12 -0.19 0.30 -0.98 0.03 -3.64 0.93 -4.28 0.89   | A+ B- A-                |
| 4 876738 19 D.1.1.6 2 5050 0.29 0.08 0.46 0.29 0.17 0.00 0.14 -0.13 0.02 0.14 -0.10 1.36 0.03 1.99 1.03 6.65 1.16   | A+ A+ A+                |
| 4 246512 19 D.1.1.5 2 5050 0.84 0.05 0.84 0.06 0.05 0.00 0.37 -0.20 0.37 -0.23 -0.17 -1.55 0.04 -5.20 0.87 -7.50 0.74   | A- A- A-                |
| 4 256103 19 D.2.1.1 3 5050 0.50 0.50 0.02 0.35 0.14 0.00 0.00 -0.16 0.03 0.02 0.34 0.03 9.90 1.18 9.90 1.25   | A+ B+ A-                |
| 4 161858 19 D.1.2.3 2 5050 0.31 0.31 0.14 0.23 0.31 0.00 0.11 0.11 -0.12 0.00 -0.01 1.25 0.03 4.85 1.07 7.63 1.17   | A- A+ A+                |
| 4 854657 19 D.1.1.8 2 5050 0.34 0.14 0.34 0.35 0.17 0.00 0.14 -0.08 0.14 -0.04 -0.04 1.09 0.03 3.48 1.04 6.31 1.13  | A+ A- A+                |
| 4 121611 20 D.1.2.4 1 5057 0.85 0.06 0.05 0.04 0.85 0.00 0.32 -0.22 -0.16 -0.14 0.32 -1.66 0.04 -3.83 0.90 -6.64 0.76   | A+ A+ A+                |
| 4 973986 20 D.1.2.1 2 5057 0.61 0.11 0.15 0.61 0.13 0.00 0.29 -0.13 -0.13 0.29 -0.15 -0.24 0.03 -3.38 0.96 -3.82 0.94   | A+ A- A-                |
| 4 638874 20 D.1.1.8 2 5057 0.24 0.24 0.20 0.25 0.31 0.00 0.01 -0.08 -0.07 0.13 1.62 0.03 8.13 1.15 9.90 1.31  | A- A+ A+                |
| 4 210690 20 D.1.1.6 2 5057 0.36 0.15 0.36 0.14 0.35 0.00 0.25 -0.14 0.25 -0.14 -0.04 0.94 0.03 -1.64 0.98 0.05 1.00   | A- A- A+                |

| 4 954803 20 D.2.1.3 3 5057 0.26 0.19 0.35 0.26 0.20 0.00 0.22 -0.20 0.00 0.22 -0.05 1.45 0.03 -0.51 0.99 1.65 1.04 A- A- A- A- Gr3498 20 D.1.1.5 3 5057 0.62 0.62 0.10 0.16 0.12 0.00 0.27 0.27 0.07 0.13 -0.18 -0.26 0.03 -2.21 0.97 -1.84 0.97 A- A- A- Gr3498 20 D.1.2.2 2 5057 0.45 0.45 0.15 0.13 0.27 0.00 0.29 0.29 0.20 -0.10 -0.14 0.13 0.50 0.03 -4.10 0.96 -3.38 0.95 A+ A- A- Gra498 20 D.1.2.3 2 5057 0.29 0.28 0.23 0.29 0.20 0.00 0.09 0.01 -0.02 0.09 -0.10 1.31 0.03 5.88 1.09 8.57 1.20 A- A- Gra498 20 D.1.2.3 3 5057 0.29 0.28 0.23 0.29 0.20 0.00 0.09 0.01 -0.02 0.09 -0.10 1.31 0.03 5.88 1.09 8.57 1.20 A- A- Gra498 20 D.1.1.3 3 5057 0.72 0.12 0.10 0.72 0.06 0.00 0.21 0.15 0.21 0.18 0.00 0.68 0.03 1.66 1.02 2.65 1.04 A- A- Gra498 20 D.1.1.1 3 5057 0.41 0.17 0.41 0.08 0.34 0.00 0.21 0.15 0.21 0.18 0.00 0.68 0.03 1.66 1.02 2.65 1.04 A- A- Gra498 20 D.1.1.2 2 99336 0.75 0.05 0.06 0.13 0.75 0.00 0.39 0.25 0.18 0.13 0.28 0.15 1.39 0.01 9.90 0.95 9.90 0.89 A+ A- S-  | A+<br>A-<br>A+ |
|---|----------------|
| 4 799954 20 D.1.2.2 2 5057 0.45 0.45 0.15 0.13 0.27 0.00 0.29 0.29 0.01 0.01 0.01 0.03 0.00 0.03 0.03 0.03  |                |
| 4 853379 20 D.1.23 2 5057 0.29 0.28 0.23 0.29 0.20 0.00 0.09 0.01 -0.02 0.09 -0.10 1.31 0.03 5.88 1.09 8.57 1.20 A.   | A+             |
| 4       381892       20       D.2.1.3       3       5057       0.72       0.12       0.10       0.72       0.06       0.00       0.32       -0.16       -0.17       0.32       -0.16       -0.79       0.03       -4.60       0.93       -5.52       0.88       A+       A+         4       517893       20       D.2.1.1       3       5057       0.41       0.17       0.41       0.08       0.34       0.00       0.21       -0.15       0.21       -0.18       0.00       0.68       0.03       1.66       1.02       2.65       1.04       A-       A-         5       188796       0       D.1.2.5       1       99336       0.79       0.08       0.10       0.79       0.03       0.00       0.28       -0.18       -0.13       0.28       -0.15       -1.39       0.01       -9.90       0.95       -9.90       0.89       A+       A-         5       844275       0       D.1.1.2       2       99336       0.75       0.05       0.06       0.13       0.75       0.00       0.39       -0.25       -0.17       -0.20       0.39       -1.13       0.01       -9.90       0.86       -9.90       0.77       A+  |                |
| 4         517893         20         D.2.1.1         3         5057         0.41         0.17         0.41         0.08         0.34         0.00         0.21         -0.15         0.21         -0.18         0.00         0.68         0.03         1.66         1.02         2.65         1.04         A-         A-           5         188796         0         D.1.2.5         1         99336         0.79         0.08         0.10         0.79         0.03         0.00         0.28         -0.18         -0.13         0.28         -0.15         -1.39         0.01         -9.90         0.95         -9.90         0.89         A+         A-           5         848275         0         D.1.1.2         2         99336         0.75         0.05         0.06         0.13         0.75         0.00         0.39         -0.25         -0.17         -0.20         0.39         -1.13         0.01         -9.90         0.86         -9.90         0.77         A+         A-           5         292687         0         D.1.1.5         2         99336         0.72         0.14         0.72         0.07         0.07         0.00         0.32         -0.12         -0.22   | A-             |
| 5         188796         0         D.1.2.5         1         99336         0.79         0.08         0.10         0.79         0.03         0.00         0.28         -0.18         -0.13         0.28         -0.15         -1.39         0.01         -9.90         0.95         -9.90         0.89         A+         A-           5         844275         0         D.1.1.2         2         99336         0.75         0.05         0.06         0.13         0.75         0.00         0.39         -0.25         -0.17         -0.20         0.39         -1.13         0.01         -9.90         0.86         -9.90         0.77         A+         A-           5         292687         0         D.1.1.5         2         99336         0.72         0.14         0.72         0.07         0.00         0.03         -0.22         -0.22         -0.93         0.01         -9.90         0.84         -9.90         0.73         A+         A-           5         171577         0         D.1.2.4         2         99336         0.22         0.22         0.18         0.14         0.46         0.05         0.03         -0.03         -0.03         -0.03         -0.13         1.66  | B-             |
| 5       844275       0       D.1.1.2       2       99336       0.75       0.05       0.06       0.13       0.75       0.00       0.39       -0.25       -0.17       -0.20       0.39       -1.13       0.01       -9.90       0.86       -9.90       0.77       A+       A-         5       292687       0       D.1.1.5       2       99336       0.72       0.14       0.72       0.07       0.07       0.00       0.42       -0.23       0.42       -0.22       -0.93       0.01       -9.90       0.84       -9.90       0.73       A+       A-         5       171577       0       D.1.2.4       2       99336       0.22       0.22       0.18       0.14       0.46       0.00       -0.03       -0.05       -0.09       0.13       1.66       0.01       9.90       1.23       9.90       1.62       A-         5       426823       0       D.1.2.3       2       99336       0.56       0.32       0.04       0.56       0.08       0.00       0.40       -0.30       -0.18       0.37       0.01       -9.90       0.86       -9.90       0.82       A+       A-         5       997075       0   | B-             |
| 5         292687         0         D.1.1.5         2         99336         0.72         0.14         0.72         0.07         0.00         0.42         -0.23         0.42         -0.22         -0.93         0.01         -9.90         0.84         -9.90         0.73         A+         A-           5         171577         0         D.1.2.4         2         99336         0.22         0.22         0.18         0.14         0.46         0.00         -0.03         -0.03         -0.05         -0.09         0.13         1.66         0.01         9.90         1.23         9.90         1.62         A-           5         426823         0         D.1.2.3         2         99336         0.46         0.05         0.34         0.46         0.15         0.00         0.30         -0.16         -0.10         0.30         -0.18         0.37         0.01         -9.90         0.95         -9.90         0.95         A+         A-           5         997075         0         D.1.1.6         2         99336         0.56         0.32         0.04         0.56         0.08         0.00         0.40         -0.13         0.40         -0.12         -0.12         0.01  | A-             |
| 5       171577       0       D.1.2.4       2       99336       0.22       0.22       0.18       0.14       0.46       0.00       -0.03       -0.05       -0.09       0.13       1.66       0.01       9.90       1.23       9.90       1.62       A-       A-         5       426823       0       D.1.2.3       2       99336       0.46       0.05       0.34       0.46       0.15       0.00       0.30       -0.16       -0.10       0.30       -0.18       0.37       0.01       -9.90       0.95       -9.90       0.95       A+       A-         5       997075       0       D.1.1.6       2       99336       0.56       0.32       0.04       0.56       0.08       0.00       0.40       -0.30       -0.13       0.40       -0.12       -0.12       0.01       -9.90       0.86       -9.90       0.82       A+       A-         5       956675       0       D.1.1.3       2       99336       0.93       0.03       0.03       0.01       0.00       0.28       -0.18       0.28       -0.16       -0.14       -2.75       0.01       -9.90       0.89       -9.90       0.66       A+       C- <t< td=""><td>B-</td></t<>  | B-             |
| 5       426823       0       D.1.2.3       2       99336       0.46       0.05       0.34       0.46       0.15       0.00       0.30       -0.16       -0.10       0.30       -0.18       0.37       0.01       -9.90       0.95       -9.90       0.95       A+       A-         5       997075       0       D.1.1.6       2       99336       0.56       0.32       0.04       0.56       0.08       0.00       0.40       -0.13       0.40       -0.12       -0.12       0.01       -9.90       0.86       -9.90       0.82       A+       A-         5       956675       0       D.1.1.3       2       99336       0.93       0.03       0.93       0.03       0.01       0.00       0.28       -0.18       0.28       -0.16       -0.14       -2.75       0.01       -9.90       0.89       -9.90       0.66       A+       C-         5       902065       0       D.2.1.2       3       99336       0.40       0.34       0.40       0.12       0.13       0.00       0.14       -0.04       0.14       -0.11       -0.04       0.66       0.01       9.90       1.09       9.90       1.18       A+       A- <td>A-</td>   | A-             |
| 5       997075       0       D.1.1.6       2       99336       0.56       0.32       0.04       0.56       0.08       0.00       0.40       -0.30       -0.13       0.40       -0.12       -0.12       0.01       -9.90       0.86       -9.90       0.82       A+       A-         5       956675       0       D.1.1.3       2       99336       0.93       0.03       0.93       0.03       0.01       0.00       0.28       -0.18       0.28       -0.16       -0.14       -2.75       0.01       -9.90       0.89       -9.90       0.66       A+       C-         5       902065       0       D.2.1.2       3       99336       0.40       0.34       0.40       0.12       0.13       0.00       0.14       -0.04       0.14       -0.11       -0.04       0.66       0.01       9.90       1.09       9.90       1.18       A+       A-         5       479824       0       D.1.2.1       2       99336       0.47       0.09       0.38       0.47       0.07       0.00       0.22       -0.19       0.00       0.22       -0.21       0.33       0.01       9.90       1.04       9.90       1.07       A- <td>A+</td>   | A+             |
| 5       956675       0       D.1.1.3       2       99336       0.93       0.03       0.93       0.03       0.01       0.00       0.28       -0.18       0.28       -0.16       -0.14       -2.75       0.01       -9.90       0.89       -9.90       0.66       A+       C-         5       902065       0       D.2.1.2       3       99336       0.40       0.34       0.40       0.12       0.13       0.00       0.14       -0.04       0.14       -0.11       -0.04       0.66       0.01       9.90       1.09       9.90       1.18       A+         5       479824       0       D.1.2.1       2       99336       0.47       0.09       0.38       0.47       0.07       0.00       0.22       -0.19       0.00       0.22       -0.21       0.33       0.01       9.90       1.04       9.90       1.07       A-         5       682991       0       D.1.2.2       2       99336       0.74       0.12       0.74       0.06       0.07       0.00       0.35       -0.23       0.35       -0.13       -0.18       -1.07       0.01       -9.90       0.89       -9.90       0.81       A+       A- <td>A-</td>  | A-             |
| 5       902065       0       D.2.1.2       3       99336       0.40       0.34       0.40       0.12       0.13       0.00       0.14       -0.04       0.14       -0.04       0.66       0.01       9.90       1.09       9.90       1.18       A+       A-         5       479824       0       D.1.2.1       2       99336       0.47       0.09       0.38       0.47       0.07       0.00       0.22       -0.19       0.00       0.22       -0.21       0.33       0.01       9.90       1.04       9.90       1.07       A-       A-         5       682991       0       D.1.2.2       2       99336       0.74       0.12       0.74       0.06       0.07       0.00       0.23       -0.13       -0.18       -1.07       0.01       -9.90       0.89       -9.90       0.81       A+       A-   | A-             |
| 5       479824       0       D.1.2.1       2       99336       0.47       0.09       0.38       0.47       0.07       0.00       0.22       -0.19       0.00       0.22       -0.21       0.33       0.01       9.90       1.04       9.90       1.07       A-       A-         5       682991       0       D.1.2.2       2       99336       0.74       0.12       0.74       0.06       0.07       0.00       0.35       -0.23       0.35       -0.13       -0.18       -1.07       0.01       -9.90       0.89       -9.90       0.81       A+       A-   | B-             |
| 5 682991 0 D.1.2.2 2 99336 0.74 0.12 0.74 0.06 0.07 0.00 0.35 -0.23 0.35 -0.13 -0.18 -1.07 0.01 -9.90 0.89 -9.90 0.81 A+ A-   | A-             |
|   | A+             |
| 5 74995 0 7444 0 9975 0 9 | A-             |
| 5 741896 0 D.1.1.1 2 99336 0.26 0.26 0.39 0.15 0.20 0.00 0.05 0.05 -0.01 -0.07 0.02 1.41 0.01 9.90 1.17 9.90 1.42 A- A-   | A+             |
| 5 901642 0 D.2.1.1 3 99336 0.88 0.02 0.06 0.05 0.88 0.00 0.33 -0.16 -0.22 -0.18 0.33 -2.09 0.01 -9.90 0.88 -9.90 0.67 A+ A-   | A-             |
| 5 435345 0 D.2.1.3 3 99336 0.27 0.27 0.40 0.17 0.16 0.00 0.05 0.05 0.04 0.03 -0.13 1.35 0.01 9.90 1.13 9.90 1.44 A- A-  | A+             |
| 5 207898 0 D.1.1.4 2 99336 0.49 0.16 0.18 0.16 0.49 0.00 0.25 -0.12 -0.10 -0.12 0.25 0.20 0.01 4.04 1.01 6.39 1.02 A- A-  | A+             |
| 5 728359 1 D.1.2.5 1 4992 0.72 0.72 0.02 0.05 0.21 0.00 0.23 0.23 -0.15 -0.21 -0.08 -0.98 0.03 3.19 1.05 1.87 1.05 A- B-  | A+             |
| 5 590408 1 D.1.1.7 3 4992 0.70 0.14 0.09 0.07 0.70 0.00 0.37 -0.19 -0.17 -0.21 0.37 -0.83 0.03 -4.64 0.93 -5.14 0.88 A+ A-  | A+             |
| 5 698412 1 D.1.1.7 2 4992 0.68 0.05 0.23 0.04 0.68 0.00 0.39 -0.22 -0.22 -0.22 0.39 -0.75 0.03 -6.57 0.91 -7.05 0.85 A- A-  | A+             |
| 5 623318 1 D.1.1.8 2 4992 0.75 0.75 0.14 0.05 0.06 0.00 0.33 0.33 -0.17 -0.20 -0.17 -1.13 0.04 -2.68 0.95 -3.65 0.90 A- A-  | C-             |
| 5 907344 1 D.1.2.4 2 4992 0.20 0.47 0.20 0.13 0.20 0.00 0.01 0.09 -0.03 -0.11 0.01 1.76 0.04 8.15 1.18 9.90 1.59 A- A-  | Α-             |
| 5 810639 1 D.1.1.3 2 4992 0.59 0.14 0.17 0.10 0.59 0.00 0.36 -0.16 -0.18 -0.18 0.36 -0.26 0.03 -5.17 0.94 -5.00 0.92 A+ A-  | Α-             |
| 5 434370 1 D.1.2.1 3 4992 0.72 0.11 0.72 0.09 0.08 0.00 0.34 -0.18 0.34 -0.18 -0.16 -0.95 0.03 -3.53 0.94 -3.92 0.90 A+ A-  | Α-             |
| 5 521781 1 D.1.1.1 2 4992 0.27 0.34 0.20 0.27 0.20 0.00 0.07 0.01 -0.03 0.07 -0.06 1.36 0.03 8.62 1.15 9.90 1.39 A+ A-  | A+             |
| 5 701928 1 D.2.1.3 3 4992 0.68 0.10 0.10 0.68 0.13 0.00 0.35 -0.22 -0.21 0.35 -0.10 -0.71 0.03 -3.86 0.95 -4.16 0.91 A- A-  | A-             |
| 5 451127 1 D.2.1.4 3 4992 0.42 0.15 0.24 0.42 0.19 0.00 0.26 -0.20 0.03 0.26 -0.18 0.54 0.03 1.50 1.02 4.50 1.08 A- A-  | Α-             |
| 5 147340 2 D.1.2.5 2 4985 0.59 0.10 0.59 0.16 0.15 0.00 0.28 -0.12 0.28 -0.17 -0.12 -0.31 0.03 1.47 1.02 -0.14 1.00 A+ B+   |                |
| 5 127510 2 D.1.2.5 2 4985 0.84 0.04 0.06 0.06 0.84 0.00 0.40 -0.22 -0.20 -0.23 0.40 -1.82 0.04 -6.17 0.85 -8.42 0.67 A+ A-  | A-             |

|   |        |   |         |   | 100= |      | 0.11 | 0.00 | 0.00 |      |      | 0.44  | 0.00  | 0.00  | 0.45  | 0.44  | 0.71  |      | 0.40  |      |       |      |    |    |    |
|---|--------|---|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 5 | 650299 | 2 | D.1.1.5 | 3 | 4985 | 0.42 | 0.11 | 0.39 | 0.08 | 0.42 | 0.00 | 0.41  | -0.20 | -0.20 | -0.15 | 0.41  | 0.51  | 0.03 | -9.48 | 0.89 | -6.65 | 0.89 | A+ | B+ | B+ |
| 5 | 708847 | 2 | D.1.2.4 | 2 | 4985 | 0.30 | 0.30 | 0.21 | 0.23 | 0.25 | 0.00 | 0.17  | 0.17  | -0.08 | -0.07 | -0.04 | 1.12  | 0.03 | 5.56  | 1.09 | 9.90  | 1.28 | A- | A- | B+ |
| 5 | 531843 | 2 | D.1.1.4 | 2 | 4985 | 0.69 | 0.10 | 0.11 | 0.11 | 0.69 | 0.00 | 0.27  | -0.11 | -0.12 | -0.18 | 0.27  | -0.81 | 0.03 | 1.43  | 1.02 | 1.23  | 1.03 | A+ | A+ | A- |
| 5 | 946810 | 2 | D.1.2.1 | 2 | 4985 | 0.52 | 0.12 | 0.14 | 0.52 | 0.22 | 0.00 | 0.33  | -0.17 | -0.10 | 0.33  | -0.18 | 0.04  | 0.03 | -2.34 | 0.97 | -2.64 | 0.96 | A- | A- | A- |
| 5 | 633432 | 2 | D.1.1.1 | 2 | 4985 | 0.15 | 0.28 | 0.27 | 0.31 | 0.15 | 0.00 | -0.04 | -0.05 | -0.02 | 0.11  | -0.04 | 2.19  | 0.04 | 7.27  | 1.21 | 9.90  | 1.95 | A+ | A+ | A- |
| 5 | 351565 | 2 | D.2.1.1 | 3 | 4985 | 0.89 | 0.07 | 0.02 | 0.02 | 0.89 | 0.00 | 0.36  | -0.25 | -0.16 | -0.19 | 0.36  | -2.30 | 0.05 | -4.30 | 0.87 | -6.81 | 0.66 | A+ | B- | A- |
| 5 | 931449 | 2 | D.2.1.3 | 3 | 4985 | 0.23 | 0.41 | 0.23 | 0.23 | 0.13 | 0.00 | 0.09  | 0.01  | 0.09  | 0.03  | -0.16 | 1.58  | 0.04 | 5.51  | 1.11 | 9.90  | 1.54 | A- | A+ | A+ |
| 5 | 499914 | 2 | D.2.1.4 | 3 | 4985 | 0.73 | 0.04 | 0.15 | 0.08 | 0.73 | 0.00 | 0.42  | -0.21 | -0.25 | -0.21 | 0.42  | -1.04 | 0.03 | -8.04 | 0.87 | -8.35 | 0.79 | A- | A- | A- |
| 5 | 795349 | 3 | D.1.1.2 | 2 | 5009 | 0.53 | 0.53 | 0.12 | 0.05 | 0.29 | 0.00 | 0.32  | 0.32  | -0.10 | -0.21 | -0.18 | 0.02  | 0.03 | -2.23 | 0.98 | -2.08 | 0.97 | A+ | A- | A- |
| 5 | 995557 | 3 | D.1.1.8 | 3 | 5009 | 0.23 | 0.43 | 0.12 | 0.21 | 0.23 | 0.00 | 0.04  | 0.01  | -0.03 | -0.03 | 0.04  | 1.57  | 0.04 | 8.62  | 1.17 | 9.90  | 1.47 | A- | A- | A+ |
| 5 | 671516 | 3 | D.1.1.5 | 2 | 5009 | 0.47 | 0.16 | 0.05 | 0.33 | 0.47 | 0.00 | 0.30  | -0.18 | -0.22 | -0.09 | 0.30  | 0.34  | 0.03 | -1.00 | 0.99 | -0.07 | 1.00 | A+ | A- | A+ |
| 5 | 312111 | 3 | D.1.2.3 | 3 | 5009 | 0.55 | 0.21 | 0.07 | 0.17 | 0.55 | 0.00 | 0.38  | -0.18 | -0.17 | -0.18 | 0.38  | -0.06 | 0.03 | -6.57 | 0.93 | -5.40 | 0.92 | A+ | A- | A- |
| 5 | 921926 | 3 | D.1.1.6 | 2 | 5009 | 0.84 | 0.84 | 0.03 | 0.07 | 0.07 | 0.00 | 0.40  | 0.40  | -0.21 | -0.23 | -0.22 | -1.76 | 0.04 | -5.29 | 0.87 | -8.74 | 0.67 | A- | C- | C- |
| 5 | 225840 | 3 | D.2.1.4 | 3 | 5009 | 0.50 | 0.20 | 0.14 | 0.15 | 0.50 | 0.00 | 0.33  | -0.19 | -0.19 | -0.07 | 0.33  | 0.18  | 0.03 | -3.26 | 0.96 | -3.17 | 0.95 | Α- | A- | A- |
| 5 | 610782 | 3 | D.2.1.2 | 3 | 5009 | 0.50 | 0.14 | 0.24 | 0.12 | 0.50 | 0.00 | 0.33  | -0.06 | -0.21 | -0.16 | 0.33  | 0.20  | 0.03 | -2.68 | 0.97 | -2.17 | 0.97 | A- | A+ | A+ |
| 5 | 637587 | 3 | D.2.1.1 | 3 | 5009 | 0.31 | 0.25 | 0.34 | 0.31 | 0.10 | 0.00 | 0.13  | -0.17 | 0.08  | 0.13  | -0.06 | 1.15  | 0.03 | 7.81  | 1.12 | 9.90  | 1.27 | A- | A+ | A+ |
| 5 | 838233 | 3 | D.1.2.2 | 2 | 5009 | 0.86 | 0.08 | 0.04 | 0.86 | 0.02 | 0.00 | 0.19  | -0.07 | -0.14 | 0.19  | -0.13 | -1.92 | 0.04 | 1.37  | 1.04 | 0.73  | 1.03 | A- | A+ | A+ |
| 5 | 247743 | 3 | D.1.1.3 | 2 | 5009 | 0.89 | 0.07 | 0.89 | 0.02 | 0.02 | 0.00 | 0.33  | -0.27 | 0.33  | -0.09 | -0.15 | -2.27 | 0.05 | -3.06 | 0.90 | -5.66 | 0.71 | A- | A- | A- |
| 5 | 301475 | 4 | D.1.2.5 | 2 | 4972 | 0.22 | 0.21 | 0.40 | 0.16 | 0.22 | 0.00 | 0.08  | -0.21 | 0.15  | -0.06 | 0.08  | 1.69  | 0.04 | 5.37  | 1.11 | 6.92  | 1.23 | A+ | B+ | A- |
| 5 | 426777 | 4 | D.1.1.8 | 2 | 4972 | 0.37 | 0.28 | 0.37 | 0.10 | 0.25 | 0.00 | 0.21  | -0.07 | 0.21  | -0.17 | -0.05 | 0.86  | 0.03 | 2.36  | 1.03 | 4.28  | 1.08 | A+ | A+ | B+ |
| 5 | 824323 | 4 | D.1.1.2 | 2 | 4972 | 0.50 | 0.50 | 0.15 | 0.33 | 0.01 | 0.00 | 0.33  | 0.33  | -0.16 | -0.19 | -0.15 | 0.23  | 0.03 | -6.17 | 0.94 | -4.99 | 0.93 | A- | A- | A- |
| 5 | 519312 | 4 | D.1.2.4 | 3 | 4972 | 0.27 | 0.40 | 0.27 | 0.18 | 0.15 | 0.00 | -0.06 | 0.08  | -0.06 | 0.03  | -0.07 | 1.40  | 0.03 | 9.90  | 1.23 | 9.90  | 1.49 | A+ | A+ | A+ |
| 5 | 287753 | 4 | D.2.1.4 | 3 | 4972 | 0.25 | 0.36 | 0.18 | 0.21 | 0.25 | 0.00 | 0.15  | 0.03  | -0.13 | -0.07 | 0.15  | 1.53  | 0.03 | 2.18  | 1.04 | 7.62  | 1.23 | A- | A- | A+ |
| 5 | 863421 | 4 | D.1.1.3 | 2 | 4972 | 0.40 | 0.40 | 0.14 | 0.17 | 0.28 | 0.00 | 0.23  | 0.23  | -0.10 | -0.09 | -0.09 | 0.72  | 0.03 | 1.57  | 1.02 | 2.49  | 1.04 | A- | A+ | A- |
| 5 | 722913 | 4 | D.1.1.1 | 2 | 4972 | 0.28 | 0.34 | 0.19 | 0.28 | 0.19 | 0.00 | 0.11  | 0.03  | 0.02  | 0.11  | -0.17 | 1.31  | 0.03 | 5.77  | 1.09 | 9.15  | 1.24 | A- | A+ | A+ |
| 5 | 199375 | 4 | D.2.1.3 | 3 | 4972 | 0.37 | 0.14 | 0.30 | 0.18 | 0.37 | 0.00 | 0.16  | -0.11 | -0.08 | 0.00  | 0.16  | 0.86  | 0.03 | 6.63  | 1.08 | 6.05  | 1.11 | A+ | A+ | B- |
| 5 | 370548 | 4 | D.1.2.3 | 2 | 4972 | 0.57 | 0.03 | 0.32 | 0.08 | 0.57 | 0.00 | 0.42  | -0.20 | -0.27 | -0.17 | 0.42  | -0.07 | 0.03 | -9.90 | 0.87 | -9.90 | 0.84 | A- | A- | A+ |
| 5 | 716467 | 4 | D.2.1.2 | 3 | 4972 | 0.63 | 0.16 | 0.07 | 0.63 | 0.14 | 0.00 | 0.40  | -0.32 | -0.18 | 0.40  | -0.08 | -0.40 | 0.03 | -9.82 | 0.88 | -9.09 | 0.85 | A+ | A- | A- |
| 5 | 147768 | 5 | D.1.1.2 | 2 | 4997 | 0.45 | 0.10 | 0.07 | 0.45 | 0.01 | 0.00 | 0.40  | -0.10 | -0.18 | 0.20  | -0.14 | 0.39  | 0.03 | 6.57  | 1.07 | 6.05  | 1.10 | A+ | A+ | A- |
| 5 |        | 5 |         |   | 4997 | 0.43 |      |      |      |      |      |       |       | -0.18 | -0.22 |       |       | 0.03 | 3.07  |      |       |      |    |    |    |
|   | 729983 |   | D.1.1.8 | 2 |      |      | 0.59 | 0.25 | 0.08 | 0.08 | 0.00 | 0.24  | 0.24  |       |       | -0.18 | -0.24 |      |       | 1.04 | 3.80  | 1.06 | Α- | Α- | A+ |
| 5 | 637707 | 5 | D.1.2.3 |   | 4997 | 0.74 | 0.03 | 0.74 | 0.07 | 0.16 | 0.00 | 0.28  | -0.16 | 0.28  | -0.19 | -0.13 | -1.06 | 0.03 | -0.60 | 0.99 | -2.49 | 0.93 | A- | A- | A+ |
| 5 | 912462 | 5 | D.1.1.6 | 2 | 4997 | 0.79 | 0.04 | 0.07 | 0.10 | 0.79 | 0.00 | 0.34  | -0.18 | -0.19 | -0.17 | 0.34  | -1.38 | 0.04 | -3.61 | 0.93 | -5.21 | 0.83 | A+ | A+ | A- |

|   |        |   |         | _ |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
|---|--------|---|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 5 | 210794 | 5 | D.2.1.4 | 3 | 4997 | 0.49 | 0.22 | 0.23 | 0.49 | 0.07 | 0.00 | 0.32  | -0.19 | -0.12 | 0.32  | -0.13 | 0.23  | 0.03 | -2.69 | 0.97 | -2.55 | 0.96 | A+ | A- | A+ |
| 5 | 274247 | 5 | D.1.1.4 | 2 | 4997 | 0.55 | 0.18 | 0.14 | 0.14 | 0.55 | 0.00 | 0.27  | -0.07 | -0.15 | -0.17 | 0.27  | -0.06 | 0.03 | 0.99  | 1.01 | 0.29  | 1.00 | Α- | A+ | A+ |
| 5 | 432420 | 5 | D.1.2.2 | 2 | 4997 | 0.43 | 0.20 | 0.43 | 0.24 | 0.14 | 0.00 | 0.31  | -0.06 | 0.31  | -0.20 | -0.12 | 0.51  | 0.03 | -2.58 | 0.97 | -0.82 | 0.99 | A+ | A+ | A+ |
| 5 | 286829 | 5 | D.2.1.1 | 3 | 4997 | 0.68 | 0.68 | 0.04 | 0.05 | 0.22 | 0.00 | 0.19  | 0.19  | -0.18 | -0.16 | -0.04 | -0.74 | 0.03 | 5.03  | 1.07 | 4.74  | 1.11 | A- | A- | A- |
| 5 | 884719 | 5 | D.2.1.2 | 3 | 4997 | 0.34 | 0.41 | 0.16 | 0.34 | 0.08 | 0.00 | 0.09  | 0.02  | 0.00  | 0.09  | -0.20 | 0.94  | 0.03 | 9.90  | 1.16 | 9.90  | 1.27 | A- | A+ | A- |
| 5 | 170199 | 5 | D.1.1.5 | 2 | 4997 | 0.54 | 0.20 | 0.54 | 0.23 | 0.04 | 0.00 | 0.39  | -0.12 | 0.39  | -0.24 | -0.23 | -0.01 | 0.03 | -8.45 | 0.91 | -7.39 | 0.89 | Α- | A+ | A- |
| 5 | 612204 | 6 | D.1.1.3 | 2 | 5015 | 0.95 | 0.02 | 0.95 | 0.01 | 0.02 | 0.00 | 0.26  | -0.16 | 0.26  | -0.10 | -0.18 | -3.28 | 0.07 | -1.76 | 0.90 | -3.82 | 0.67 | A+ | A- | A- |
| 5 | 659698 | 6 | D.1.2.5 | 2 | 5015 | 0.72 | 0.13 | 0.06 | 0.72 | 0.08 | 0.00 | 0.31  | -0.20 | -0.14 | 0.31  | -0.13 | -0.96 | 0.03 | -2.56 | 0.96 | -3.26 | 0.92 | A+ | A+ | A+ |
| 5 | 526203 | 6 | D.1.1.2 | 2 | 5015 | 0.67 | 0.11 | 0.11 | 0.12 | 0.67 | 0.00 | 0.36  | -0.20 | -0.14 | -0.19 | 0.36  | -0.65 | 0.03 | -5.71 | 0.92 | -5.36 | 0.89 | A+ | A- | A- |
| 5 | 801059 | 6 | D.1.1.8 | 3 | 5015 | 0.45 | 0.45 | 0.31 | 0.15 | 0.09 | 0.00 | 0.02  | 0.02  | 0.06  | -0.01 | -0.10 | 0.39  | 0.03 | 9.90  | 1.23 | 9.90  | 1.32 | A- | A+ | A+ |
| 5 | 395900 | 6 | D.1.2.3 | 3 | 5015 | 0.37 | 0.37 | 0.14 | 0.22 | 0.27 | 0.00 | 0.21  | 0.21  | -0.12 | -0.13 | -0.01 | 0.79  | 0.03 | 2.24  | 1.03 | 5.25  | 1.11 | A+ | A- | A+ |
| 5 | 147234 | 6 | D.1.1.6 | 2 | 5015 | 0.73 | 0.10 | 0.04 | 0.14 | 0.73 | 0.00 | 0.29  | -0.26 | -0.14 | -0.07 | 0.29  | -0.99 | 0.03 | -1.36 | 0.98 | -1.31 | 0.97 | A+ | A- | A+ |
| 5 | 439642 | 6 | D.2.1.4 | 3 | 5015 | 0.91 | 0.04 | 0.02 | 0.04 | 0.91 | 0.00 | 0.23  | -0.14 | -0.13 | -0.12 | 0.23  | -2.45 | 0.05 | -0.68 | 0.97 | -1.56 | 0.91 | A+ | A- | A+ |
| 5 | 253476 | 6 | D.1.1.1 | 2 | 5015 | 0.37 | 0.26 | 0.18 | 0.37 | 0.20 | 0.00 | 0.15  | -0.08 | -0.07 | 0.15  | -0.03 | 0.77  | 0.03 | 6.15  | 1.08 | 8.99  | 1.18 | A- | A+ | A+ |
| 5 | 867541 | 6 | D.1.2.2 | 3 | 5015 | 0.33 | 0.19 | 0.33 | 0.25 | 0.23 | 0.00 | 0.23  | -0.09 | 0.23  | -0.10 | -0.07 | 1.00  | 0.03 | 0.01  | 1.00 | 3.26  | 1.07 | A+ | A- | A+ |
| 5 | 391122 | 6 | D.2.1.1 | 3 | 5015 | 0.67 | 0.09 | 0.07 | 0.67 | 0.17 | 0.00 | 0.32  | -0.18 | -0.16 | 0.32  | -0.16 | -0.66 | 0.03 | -3.16 | 0.96 | -3.52 | 0.93 | A- | В- | B- |
| 5 | 773927 | 7 | D.2.1.3 | 3 | 4990 | 0.44 | 0.24 | 0.44 | 0.14 | 0.18 | 0.00 | 0.25  | -0.14 | 0.25  | -0.17 | -0.01 | 0.45  | 0.03 | 1.13  | 1.01 | 2.86  | 1.04 | A- | A+ | A+ |
| 5 | 204059 | 7 | D.1.2.5 | 1 | 4990 | 0.58 | 0.58 | 0.23 | 0.02 | 0.17 | 0.00 | 0.20  | 0.20  | -0.13 | -0.16 | -0.06 | -0.18 | 0.03 | 5.53  | 1.06 | 5.00  | 1.08 | A- | A+ | B+ |
| 5 | 632900 | 7 | D.1.1.7 | 2 | 4990 | 0.55 | 0.19 | 0.19 | 0.07 | 0.55 | 0.00 | 0.32  | -0.10 | -0.22 | -0.13 | 0.32  | -0.06 | 0.03 | -4.11 | 0.96 | -4.10 | 0.94 | A+ | A+ | A+ |
| 5 | 409145 | 7 | D.1.1.2 | 2 | 4990 | 0.37 | 0.13 | 0.37 | 0.18 | 0.31 | 0.00 | 0.26  | -0.16 | 0.26  | -0.05 | -0.11 | 0.82  | 0.03 | -1.41 | 0.98 | 2.18  | 1.04 | A- | A- | A- |
| 5 | 244200 | 7 | D.1.2.4 | 2 | 4990 | 0.48 | 0.48 | 0.19 | 0.19 | 0.14 | 0.00 | 0.23  | 0.23  | -0.06 | -0.08 | -0.17 | 0.30  | 0.03 | 2.85  | 1.03 | 1.99  | 1.03 | A+ | A+ | A+ |
| 5 | 174011 | 7 | D.1.1.8 | 2 | 4990 | 0.90 | 0.04 | 0.90 | 0.02 | 0.05 | 0.00 | 0.35  | -0.24 | 0.35  | -0.17 | -0.18 | -2.32 | 0.05 | -3.81 | 0.87 | -7.20 | 0.64 | A- | A- | B- |
| 5 | 836976 | 7 | D.2.1.4 | 3 | 4990 | 0.52 | 0.11 | 0.08 | 0.29 | 0.52 | 0.00 | 0.24  | -0.18 | -0.05 | -0.11 | 0.24  | 0.10  | 0.03 | 2.37  | 1.03 | 2.48  | 1.04 | A- | A+ | A- |
| 5 | 895587 | 7 | D.1.1.3 | 2 | 4990 | 0.50 | 0.08 | 0.26 | 0.50 | 0.15 | 0.00 | 0.16  | -0.11 | -0.01 | 0.16  | -0.11 | 0.18  | 0.03 | 9.25  | 1.10 | 8.41  | 1.13 | A+ | A+ | A- |
| 5 | 930034 | 7 | D.1.2.1 | 2 | 4990 | 0.75 | 0.09 | 0.07 | 0.75 | 0.09 | 0.00 | 0.39  | -0.25 | -0.22 | 0.39  | -0.15 | -1.07 | 0.03 | -7.10 | 0.88 | -7.43 | 0.81 | A+ | A+ | A+ |
| 5 | 617754 | 7 | D.1.1.1 | 2 | 4990 | 0.23 | 0.23 | 0.19 | 0.23 | 0.35 | 0.00 | -0.09 | -0.09 | 0.00  | 0.05  | 0.03  | 1.59  | 0.04 | 9.90  | 1.25 | 9.90  | 1.69 | A+ | A+ | A+ |
| 5 | 884493 | 8 | D.1.1.5 | 2 | 4964 | 0.34 | 0.09 | 0.35 | 0.34 | 0.22 | 0.00 | 0.35  | -0.25 | 0.05  | 0.35  | -0.28 | 0.91  | 0.03 | -6.40 | 0.92 | -5.15 | 0.90 | A- | A+ | A+ |
| 5 | 315562 | 8 | D.1.1.2 | 2 | 4964 | 0.69 | 0.02 | 0.28 | 0.69 | 0.02 | 0.00 | 0.15  | -0.14 | -0.07 | 0.15  | -0.15 | -0.77 | 0.03 | 6.55  | 1.10 | 6.73  | 1.16 | A- | A- | A+ |
| 5 | 694550 | 8 | D.1.1.8 | 2 | 4964 | 0.45 | 0.22 | 0.14 | 0.19 | 0.45 | 0.00 | 0.22  | -0.06 | -0.10 | -0.13 | 0.22  | 0.38  | 0.03 | 3.31  | 1.04 | 3.73  | 1.06 | A+ | A+ | A+ |
| 5 | 168172 | 8 | D.1.1.8 | 3 | 4964 | 0.47 | 0.19 | 0.47 | 0.24 | 0.10 | 0.00 | 0.13  | -0.09 | 0.13  | 0.04  | -0.14 | 0.29  | 0.03 | 9.90  | 1.12 | 9.90  | 1.17 | A- | A+ | A+ |
| 5 | 335826 | 8 | D.1.2.3 | 2 | 4964 | 0.72 | 0.72 | 0.05 | 0.19 | 0.03 | 0.00 | 0.40  | 0.40  | -0.16 | -0.29 | -0.18 | -0.97 | 0.03 | -7.83 | 0.88 | -8.51 | 0.80 | A+ | B- | A- |
| 5 | 672996 | 8 |         | 3 | 4964 | 0.71 | 0.71 | 0.05 | 0.21 | 0.04 | 0.00 | 0.32  | 0.32  | -0.20 | -0.16 | -0.20 | -0.88 | 0.03 | -3.40 | 0.95 | -2.87 | 0.93 | A- | A- | A+ |

| _ | 201.400 | 0  | D 1 1 2 | 2 | 40.64 | 0.60 | 0.06 | 0.60 | 0.07 | 0.20 | 0.00 | 0.20  | 0.21  | 0.20  | 0.16  | 0.02  | 0.71  | 0.02 | 2.46  | 1.05 | 4.50  | 1.10 |    |    |    |
|---|---------|----|---------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 5 | 391408  | 8  | D.1.1.3 | 2 | 4964  | 0.68 | 0.06 | 0.68 | 0.07 | 0.20 | 0.00 | 0.20  | -0.21 | 0.20  | -0.16 | -0.02 | -0.71 | 0.03 | 3.46  | 1.05 | 4.52  | 1.10 | A+ | A- | A+ |
| 5 | 381248  | 8  | D.2.1.2 | 3 | 4964  | 0.21 | 0.35 | 0.21 | 0.17 | 0.27 | 0.00 | 0.11  | -0.01 | 0.11  | -0.10 | -0.01 | 1.67  | 0.04 | 3.07  | 1.06 | 9.84  | 1.37 | A- | A+ | A+ |
| 5 | 445231  | 8  | D.1.2.2 | 3 | 4964  | 0.33 | 0.25 | 0.33 | 0.25 | 0.17 | 0.00 | 0.22  | -0.01 | 0.22  | -0.12 | -0.12 | 0.97  | 0.03 | 0.98  | 1.01 | 4.39  | 1.10 | A- | A- | A- |
| 5 | 743911  | 8  | D.2.1.1 | 3 | 4964  | 0.64 | 0.26 | 0.05 | 0.06 | 0.64 | 0.00 | 0.27  | -0.15 | -0.13 | -0.15 | 0.27  | -0.50 | 0.03 | -0.12 | 1.00 | 0.36  | 1.01 | A+ | A+ | A- |
| 5 | 587167  | 9  | D.1.2.5 | 1 | 4984  | 0.65 | 0.12 | 0.65 | 0.12 | 0.11 | 0.00 | 0.31  | -0.15 | 0.31  | -0.12 | -0.18 | -0.57 | 0.03 | -1.68 | 0.98 | -2.93 | 0.94 | A+ | A- | A+ |
| 5 | 301520  | 9  | D.1.1.2 | 2 | 4984  | 0.48 | 0.29 | 0.13 | 0.48 | 0.10 | 0.00 | 0.29  | -0.10 | -0.19 | 0.29  | -0.12 | 0.27  | 0.03 | -0.99 | 0.99 | 0.09  | 1.00 | A- | A- | A- |
| 5 | 422426  | 9  | D.1.1.8 | 3 | 4984  | 0.42 | 0.30 | 0.11 | 0.17 | 0.42 | 0.00 | 0.14  | 0.05  | -0.13 | -0.13 | 0.14  | 0.55  | 0.03 | 9.83  | 1.12 | 9.54  | 1.17 | A+ | A+ | A+ |
| 5 | 312162  | 9  | D.1.2.4 | 2 | 4984  | 0.27 | 0.38 | 0.17 | 0.18 | 0.27 | 0.00 | 0.04  | 0.06  | -0.02 | -0.10 | 0.04  | 1.35  | 0.03 | 9.79  | 1.17 | 9.90  | 1.39 | A+ | A+ | A+ |
| 5 | 933735  | 9  | D.1.2.3 | 2 | 4984  | 0.71 | 0.71 | 0.13 | 0.09 | 0.08 | 0.00 | 0.43  | 0.43  | -0.23 | -0.23 | -0.21 | -0.87 | 0.03 | -9.16 | 0.86 | -9.90 | 0.77 | A+ | A- | A- |
| 5 | 366553  | 9  | D.1.1.6 | 2 | 4984  | 0.36 | 0.41 | 0.16 | 0.08 | 0.36 | 0.00 | 0.30  | -0.13 | -0.10 | -0.16 | 0.30  | 0.86  | 0.03 | -3.42 | 0.96 | 0.48  | 1.01 | A- | A- | A- |
| 5 | 477365  | 9  | D.2.1.4 | 3 | 4984  | 0.61 | 0.11 | 0.09 | 0.61 | 0.19 | 0.00 | 0.32  | -0.27 | -0.19 | 0.32  | -0.05 | -0.39 | 0.03 | -2.56 | 0.97 | -3.20 | 0.94 | A+ | A- | A- |
| 5 | 997865  | 9  | D.1.1.3 | 2 | 4984  | 0.87 | 0.05 | 0.03 | 0.05 | 0.87 | 0.00 | 0.40  | -0.22 | -0.21 | -0.23 | 0.40  | -2.03 | 0.04 | -5.39 | 0.85 | -9.24 | 0.61 | A+ | A- | A- |
| 5 | 577305  | 9  | D.1.1.1 | 2 | 4984  | 0.19 | 0.33 | 0.22 | 0.19 | 0.26 | 0.00 | -0.07 | -0.04 | 0.09  | -0.07 | 0.01  | 1.88  | 0.04 | 9.38  | 1.22 | 9.90  | 1.83 | A- | A+ | A+ |
| 5 | 129629  | 9  | D.2.1.1 | 3 | 4984  | 0.80 | 0.04 | 0.80 | 0.10 | 0.05 | 0.00 | 0.39  | -0.16 | 0.39  | -0.25 | -0.20 | -1.48 | 0.04 | -5.78 | 0.88 | -7.63 | 0.75 | A+ | A- | A+ |
| 5 | 463300  | 10 | D.1.1.7 | 2 | 4981  | 0.79 | 0.03 | 0.79 | 0.15 | 0.02 | 0.00 | 0.35  | -0.20 | 0.35  | -0.24 | -0.15 | -1.40 | 0.04 | -4.18 | 0.91 | -5.19 | 0.82 | A+ | A+ | A- |
| 5 | 935716  | 10 | D.1.1.5 | 2 | 4981  | 0.93 | 0.93 | 0.01 | 0.04 | 0.02 | 0.00 | 0.29  | 0.29  | -0.10 | -0.22 | -0.14 | -2.74 | 0.06 | -2.05 | 0.91 | -4.55 | 0.69 | A+ | A+ | A- |
| 5 | 851502  | 10 | D.1.2.3 | 3 | 4981  | 0.49 | 0.34 | 0.49 | 0.08 | 0.09 | 0.00 | 0.23  | -0.06 | 0.23  | -0.16 | -0.14 | 0.23  | 0.03 | 5.14  | 1.06 | 5.28  | 1.09 | A+ | A- | A- |
| 5 | 148153  | 10 | D.1.1.6 | 2 | 4981  | 0.87 | 0.04 | 0.05 | 0.05 | 0.87 | 0.00 | 0.31  | -0.20 | -0.16 | -0.16 | 0.31  | -2.02 | 0.04 | -2.24 | 0.93 | -4.22 | 0.80 | A+ | B- | A- |
| 5 | 197497  | 10 | D.2.1.4 | 3 | 4981  | 0.51 | 0.51 | 0.27 | 0.12 | 0.10 | 0.00 | 0.09  | 0.09  | -0.03 | -0.03 | -0.07 | 0.14  | 0.03 | 9.90  | 1.20 | 9.90  | 1.27 | A+ | A+ | A+ |
| 5 | 488670  | 10 | D.1.1.4 | 2 | 4981  | 0.17 | 0.16 | 0.55 | 0.12 | 0.17 | 0.00 | 0.17  | -0.03 | -0.01 | -0.14 | 0.17  | 2.03  | 0.04 | 0.51  | 1.01 | 6.66  | 1.30 | A+ | A- | A+ |
| 5 | 847095  | 10 | D.2.1.2 | 3 | 4981  | 0.38 | 0.16 | 0.17 | 0.38 | 0.28 | 0.00 | 0.30  | -0.21 | -0.03 | 0.30  | -0.12 | 0.76  | 0.03 | -1.93 | 0.98 | 0.28  | 1.01 | A- | A+ | A- |
| 5 | 697254  | 10 | D.1.2.1 | 2 | 4981  | 0.57 | 0.23 | 0.13 | 0.57 | 0.08 | 0.00 | 0.38  | -0.17 | -0.17 | 0.38  | -0.21 | -0.13 | 0.03 | -6.86 | 0.92 | -6.90 | 0.89 | A+ | A+ | A- |
| 5 | 820919  | 10 | D.1.2.2 | 2 | 4981  | 0.77 | 0.06 | 0.10 | 0.07 | 0.77 | 0.00 | 0.46  | -0.26 | -0.26 | -0.21 | 0.46  | -1.25 | 0.04 | -9.25 | 0.83 | -9.90 | 0.70 | A+ | A+ | A+ |
| 5 | 321274  | 10 | D.2.1.1 | 3 | 4981  | 0.50 | 0.12 | 0.50 | 0.12 | 0.26 | 0.00 | 0.32  | -0.16 | 0.32  | -0.11 | -0.16 | 0.22  | 0.03 | -2.46 | 0.97 | -1.52 | 0.98 | A+ | A- | B- |
| 5 | 434122  | 11 | D.1.1.6 | 2 | 4922  | 0.44 | 0.12 | 0.38 | 0.44 | 0.06 | 0.00 | 0.31  | -0.11 | -0.16 | 0.31  | -0.16 | 0.50  | 0.03 | -0.08 | 1.00 | 1.06  | 1.02 | A+ | A+ | A- |
| 5 | 853750  | 11 | D.1.2.3 | 2 | 4922  | 0.82 | 0.82 | 0.04 | 0.09 | 0.05 | 0.00 | 0.39  | 0.39  | -0.18 | -0.26 | -0.17 | -1.59 | 0.04 | -5.33 | 0.88 | -7.81 | 0.71 | A+ | B- | A- |
| 5 | 879605  | 11 | D.1.1.7 | 2 | 4922  | 0.55 | 0.55 | 0.12 | 0.19 | 0.14 | 0.00 | 0.32  | 0.32  | -0.15 | -0.14 | -0.15 | -0.04 | 0.03 | -0.23 | 1.00 | -0.67 | 0.99 | Α- | A+ | B+ |
| 5 | 837301  | 11 | D.1.1.5 | 2 | 4922  | 0.45 | 0.22 | 0.14 | 0.45 | 0.19 | 0.00 | 0.33  | -0.20 | -0.15 | 0.33  | -0.07 | 0.45  | 0.03 | -0.74 | 0.99 | -0.51 | 0.99 | A+ | A+ | A- |
| 5 | 759978  | 11 | D.1.1.4 | 2 | 4922  | 0.46 | 0.17 | 0.46 | 0.20 | 0.17 | 0.00 | 0.29  | -0.10 | 0.29  | -0.16 | -0.10 | 0.41  | 0.03 | 2.44  | 1.03 | 1.97  | 1.03 | A- | A- | A- |
| 5 | 175718  | 11 | D.2.1.2 | 3 | 4922  | 0.45 | 0.27 | 0.14 | 0.14 | 0.45 | 0.00 | 0.37  | -0.07 | -0.23 | -0.21 | 0.37  | 0.44  | 0.03 | -4.85 | 0.94 | -4.39 | 0.93 | A- | A+ | A- |
| 5 | 547434  | 11 | D.1.2.1 | 2 | 4922  | 0.33 | 0.21 | 0.23 | 0.23 | 0.33 | 0.00 | 0.24  | -0.15 | -0.02 | -0.10 | 0.24  | 1.03  | 0.03 | 3.72  | 1.05 | 6.19  | 1.15 | A- | A+ | A+ |
| 5 | 642412  | 11 | D.1.2.2 | 2 | 4922  | 0.46 | 0.25 | 0.13 | 0.46 | 0.15 | 0.00 | 0.33  | -0.11 | -0.21 | 0.33  | -0.12 | 0.39  | 0.03 | -1.40 | 0.98 | -0.28 | 1.00 |    |    |    |
| 5 | 642412  | 11 | D.1.2.2 | 2 | 4922  | 0.46 | 0.25 | 0.13 | 0.46 | 0.15 | 0.00 | 0.33  | -0.11 | -0.21 | 0.33  | -0.12 | 0.39  | 0.03 | -1.40 | 0.98 | -0.28 | 1.00 | A+ | A+ | A+ |

| _ | 210005 |    | D 2 1 1 |   | 1022 | 0.40 | 0.11 | 0.25 | 0.40 | 0.12 | 0.00 | 0.00  | 0.20  | 0.05  | 0.00  | 0.21  | 0.00  | 0.02 | 0.44  | 0.00 | 0.62  | 1.01 |    |    |    |
|---|--------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 5 | 318907 | 11 | D.2.1.1 | 3 | 4922 | 0.49 | 0.11 | 0.27 | 0.49 | 0.13 | 0.00 | 0.32  | -0.20 | -0.06 | 0.32  | -0.21 | 0.22  | 0.03 | -0.44 | 0.99 | 0.62  | 1.01 | A+ | A- | A+ |
| 5 | 763945 | 11 | D.2.1.3 | 3 | 4922 | 0.30 | 0.21 | 0.34 | 0.16 | 0.30 | 0.00 | 0.35  | -0.23 | -0.08 | -0.08 | 0.35  | 1.23  | 0.03 | -3.70 | 0.94 | -1.48 | 0.96 | A- | A- | A- |
| 5 | 808339 | 12 | D.1.1.5 | 3 | 4951 | 0.40 | 0.35 | 0.40 | 0.11 | 0.13 | 0.00 | 0.10  | 0.08  | 0.10  | -0.14 | -0.13 | 0.61  | 0.03 | 9.90  | 1.17 | 9.90  | 1.26 | A+ | A+ | B+ |
| 5 | 708469 | 12 | D.1.2.3 | 2 | 4951 | 0.57 | 0.05 | 0.26 | 0.13 | 0.57 | 0.00 | 0.48  | -0.20 | -0.28 | -0.21 | 0.48  | -0.18 | 0.03 | -9.90 | 0.84 | -9.90 | 0.79 | A+ | A- | A- |
| 5 | 756913 | 12 | D.1.1.6 | 2 | 4951 | 0.23 | 0.05 | 0.08 | 0.64 | 0.23 | 0.00 | 0.19  | -0.17 | -0.15 | 0.00  | 0.19  | 1.54  | 0.04 | 1.65  | 1.03 | 7.99  | 1.28 | A- | A- | A- |
| 5 | 700451 | 12 | D.1.1.6 | 2 | 4951 | 0.78 | 0.78 | 0.04 | 0.14 | 0.05 | 0.00 | 0.34  | 0.34  | -0.20 | -0.19 | -0.18 | -1.33 | 0.04 | -3.71 | 0.93 | -3.91 | 0.88 | A- | A+ | A- |
| 5 | 736778 | 12 | D.2.1.4 | 3 | 4951 | 0.36 | 0.36 | 0.24 | 0.17 | 0.23 | 0.00 | 0.17  | 0.17  | 0.01  | -0.08 | -0.13 | 0.82  | 0.03 | 7.24  | 1.10 | 8.80  | 1.19 | A- | A- | A+ |
| 5 | 352228 | 12 | D.1.1.4 | 3 | 4951 | 0.39 | 0.19 | 0.18 | 0.39 | 0.24 | 0.00 | 0.16  | -0.04 | -0.05 | 0.16  | -0.10 | 0.67  | 0.03 | 9.35  | 1.12 | 9.84  | 1.19 | A- | A- | A+ |
| 5 | 738258 | 12 | D.2.1.2 | 3 | 4951 | 0.27 | 0.08 | 0.15 | 0.27 | 0.50 | 0.00 | 0.25  | -0.14 | -0.18 | 0.25  | -0.02 | 1.33  | 0.03 | -0.66 | 0.99 | 4.57  | 1.13 | A- | A- | A- |
| 5 | 965119 | 12 | D.1.2.2 | 2 | 4951 | 0.66 | 0.66 | 0.11 | 0.15 | 0.08 | 0.00 | 0.41  | 0.41  | -0.24 | -0.19 | -0.19 | -0.68 | 0.03 | -7.97 | 0.89 | -7.65 | 0.84 | A- | A+ | A- |
| 5 | 575992 | 12 | D.2.1.1 | 3 | 4951 | 0.52 | 0.11 | 0.52 | 0.17 | 0.20 | 0.00 | 0.31  | -0.18 | 0.31  | -0.10 | -0.14 | 0.06  | 0.03 | -1.17 | 0.99 | -1.05 | 0.98 | A+ | A+ | A+ |
| 5 | 791319 | 12 | D.1.2.1 | 2 | 4951 | 0.68 | 0.07 | 0.14 | 0.12 | 0.68 | 0.00 | 0.40  | -0.22 | -0.27 | -0.13 | 0.40  | -0.75 | 0.03 | -7.59 | 0.89 | -7.93 | 0.83 | A+ | A- | A+ |
| 5 | 163215 | 13 | D.1.2.5 | 2 | 4884 | 0.78 | 0.07 | 0.10 | 0.78 | 0.06 | 0.00 | 0.36  | -0.24 | -0.17 | 0.36  | -0.17 | -1.31 | 0.04 | -5.05 | 0.90 | -6.45 | 0.80 | A+ | A+ | A- |
| 5 | 718663 | 13 | D.1.1.7 | 3 | 4884 | 0.36 | 0.36 | 0.10 | 0.38 | 0.16 | 0.00 | 0.24  | 0.24  | -0.13 | -0.11 | -0.06 | 0.82  | 0.03 | 2.54  | 1.03 | 4.01  | 1.08 | A- | B+ | A- |
| 5 | 184375 | 13 | D.1.1.5 | 2 | 4884 | 0.90 | 0.90 | 0.01 | 0.03 | 0.06 | 0.00 | 0.27  | 0.27  | -0.08 | -0.18 | -0.18 | -2.35 | 0.05 | -1.84 | 0.94 | -3.64 | 0.79 | B- | A- | A- |
| 5 | 936635 | 13 | D.1.2.3 | 2 | 4884 | 0.71 | 0.15 | 0.06 | 0.08 | 0.71 | 0.00 | 0.40  | -0.23 | -0.20 | -0.19 | 0.40  | -0.92 | 0.03 | -7.59 | 0.89 | -8.24 | 0.80 | A+ | A- | A- |
| 5 | 356488 | 13 | D.2.1.4 | 3 | 4884 | 0.39 | 0.25 | 0.39 | 0.13 | 0.22 | 0.00 | 0.06  | 0.06  | 0.06  | -0.13 | -0.03 | 0.65  | 0.03 | 9.90  | 1.20 | 9.90  | 1.30 | A+ | A- | A+ |
| 5 | 763536 | 13 | D.1.1.4 | 2 | 4884 | 0.49 | 0.16 | 0.11 | 0.25 | 0.49 | 0.00 | 0.17  | -0.06 | -0.14 | -0.04 | 0.17  | 0.20  | 0.03 | 9.90  | 1.11 | 8.94  | 1.15 | A- | A- | A+ |
| 5 | 727150 | 13 | D.2.1.2 | 3 | 4884 | 0.40 | 0.16 | 0.05 | 0.39 | 0.40 | 0.00 | 0.27  | -0.15 | -0.08 | -0.13 | 0.27  | 0.61  | 0.03 | 0.35  | 1.00 | 2.48  | 1.04 | A- | A- | A- |
| 5 | 511428 | 13 | D.1.2.1 | 2 | 4884 | 0.53 | 0.11 | 0.28 | 0.53 | 0.07 | 0.00 | 0.29  | -0.17 | -0.11 | 0.29  | -0.17 | -0.02 | 0.03 | -0.08 | 1.00 | -0.10 | 1.00 | A- | A+ | A+ |
| 5 | 724634 | 13 | D.1.2.2 | 2 | 4884 | 0.47 | 0.23 | 0.20 | 0.47 | 0.09 | 0.00 | 0.34  | -0.14 | -0.17 | 0.34  | -0.15 | 0.27  | 0.03 | -4.76 | 0.95 | -3.02 | 0.95 | A- | A- | A- |
| 5 | 427079 | 13 | D.2.1.1 | 3 | 4884 | 0.47 | 0.08 | 0.04 | 0.47 | 0.41 | 0.00 | 0.33  | -0.25 | -0.16 | 0.33  | -0.14 | 0.28  | 0.03 | -4.25 | 0.95 | -3.17 | 0.95 | A- | A- | A+ |
| 5 | 435466 | 14 | D.1.1.2 | 2 | 4926 | 0.57 | 0.20 | 0.03 | 0.20 | 0.57 | 0.00 | 0.41  | -0.22 | -0.18 | -0.21 | 0.41  | -0.16 | 0.03 | -9.90 | 0.89 | -9.54 | 0.86 | A+ | A- | A+ |
| 5 | 993104 | 14 | D.1.1.8 | 2 | 4926 | 0.39 | 0.07 | 0.10 | 0.43 | 0.39 | 0.00 | 0.29  | -0.22 | -0.24 | -0.01 | 0.29  | 0.68  | 0.03 | -1.61 | 0.98 | -0.42 | 0.99 | A- | A+ | A- |
| 5 | 173408 | 14 | D.1.2.4 | 2 | 4926 | 0.15 | 0.16 | 0.26 | 0.43 | 0.15 | 0.00 | -0.04 | -0.10 | -0.05 | 0.15  | -0.04 | 2.17  | 0.04 | 5.68  | 1.16 | 9.90  | 1.77 | A- | A- | A+ |
| 5 | 876575 | 14 | D.1.2.3 | 2 | 4926 | 0.74 | 0.08 | 0.14 | 0.74 | 0.04 | 0.00 | 0.40  | -0.23 | -0.23 | 0.40  | -0.18 | -1.06 | 0.03 | -7.26 | 0.88 | -8.74 | 0.78 | A- | A- | A- |
| 5 | 148281 | 14 | D.1.1.6 | 2 | 4926 | 0.48 | 0.11 | 0.12 | 0.48 | 0.29 | 0.00 | 0.33  | -0.15 | -0.14 | 0.33  | -0.15 | 0.24  | 0.03 | -4.05 | 0.96 | -3.58 | 0.95 | A- | A- | B- |
| 5 | 310118 | 14 | D.2.1.4 | 3 | 4926 | 0.44 | 0.20 | 0.44 | 0.20 | 0.15 | 0.00 | 0.21  | -0.07 | 0.21  | -0.09 | -0.09 | 0.43  | 0.03 | 4.63  | 1.05 | 4.82  | 1.08 | A+ | A+ | A+ |
| 5 | 666849 | 14 | D.1.1.3 | 2 | 4926 | 0.55 | 0.22 | 0.15 | 0.55 | 0.08 | 0.00 | 0.39  | -0.20 | -0.20 | 0.39  | -0.16 | -0.09 | 0.03 | -8.83 | 0.91 | -8.55 | 0.87 | A- | A- | A- |
| 5 | 108019 | 14 | D.2.1.2 | 3 | 4926 | 0.58 | 0.58 | 0.14 | 0.16 | 0.12 | 0.00 | 0.20  | 0.20  | -0.13 | -0.01 | -0.15 | -0.23 | 0.03 | 5.83  | 1.07 | 5.12  | 1.09 | A+ | A- | A- |
| 5 | 686043 | 14 | D.1.1.1 | 2 | 4926 | 0.28 | 0.36 | 0.21 | 0.15 | 0.28 | 0.00 | 0.02  | 0.01  | -0.03 | 0.00  | 0.02  | 1.25  | 0.03 | 9.90  | 1.19 | 9.90  | 1.45 | A- | A+ | A+ |
| 5 | 180525 | 14 | D.2.1.1 | 3 | 4926 | 0.49 | 0.49 | 0.18 | 0.20 | 0.12 | 0.00 | 0.17  | 0.17  | -0.08 | -0.04 | -0.10 | 0.19  | 0.03 | 8.45  | 1.09 | 8.65  | 1.13 | A- | A+ | A+ |

| 5 | 509538 | 15 | D.1.2.5 | 1 | 4903 | 0.72 | 0.03 | 0.09 | 0.15 | 0.72 | 0.00 | 0.21  | -0.17 | -0.11 | -0.09 | 0.21  | -0.94 | 0.03 | 3.72  | 1.06 | 4.54  |        | 4+         | B+ | A+ |
|---|--------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|--------|------------|----|----|
| 5 | 191659 | 15 | D.1.1.5 | 2 | 4903 | 0.76 | 0.10 | 0.02 | 0.12 | 0.76 | 0.00 | 0.31  | -0.22 | -0.13 | -0.14 | 0.31  | -1.16 | 0.04 | -1.57 | 0.97 | -2.81 | 0.92 A | 4-         | A- | A- |
| 5 | 564181 | 15 | D.1.2.4 | 2 | 4903 | 0.20 | 0.30 | 0.15 | 0.34 | 0.20 | 0.00 | -0.04 | -0.01 | 0.00  | 0.05  | -0.04 | 1.80  | 0.04 | 9.74  | 1.22 | 9.90  | 1.72 A | 4+         | A+ | A+ |
| 5 | 835115 | 15 | D.1.1.4 | 2 | 4903 | 0.77 | 0.07 | 0.08 | 0.77 | 0.09 | 0.00 | 0.42  | -0.26 | -0.23 | 0.42  | -0.18 | -1.22 | 0.04 | -7.25 | 0.87 | -7.92 | 0.77   | <b>A</b> - | B- | B- |
| 5 | 681723 | 15 | D.1.2.1 | 2 | 4903 | 0.67 | 0.12 | 0.12 | 0.67 | 0.09 | 0.00 | 0.39  | -0.20 | -0.20 | 0.39  | -0.17 | -0.64 | 0.03 | -6.38 | 0.91 | -6.95 | 0.85 A | 4+         | A- | A+ |
| 5 | 557208 | 15 | D.2.1.1 | 3 | 4903 | 0.92 | 0.04 | 0.02 | 0.92 | 0.02 | 0.00 | 0.35  | -0.20 | -0.22 | 0.35  | -0.16 | -2.60 | 0.05 | -3.39 | 0.87 | -6.98 | 0.58 A | 4+         | A- | A- |
| 5 | 128788 | 15 | D.2.1.1 | 3 | 4903 | 0.76 | 0.02 | 0.14 | 0.09 | 0.76 | 0.00 | 0.37  | -0.17 | -0.24 | -0.20 | 0.37  | -1.14 | 0.04 | -4.84 | 0.91 | -5.92 | 0.83 A | 4-         | A+ | A- |
| 5 | 408043 | 15 | D.1.1.1 | 2 | 4903 | 0.42 | 0.29 | 0.42 | 0.17 | 0.12 | 0.00 | 0.16  | -0.06 | 0.16  | -0.04 | -0.11 | 0.60  | 0.03 | 9.11  | 1.11 | 9.90  | 1.19 A | 4+         | A+ | A- |
| 5 | 290678 | 15 | D.2.1.3 | 3 | 4903 | 0.24 | 0.22 | 0.24 | 0.19 | 0.35 | 0.00 | 0.10  | -0.05 | 0.10  | -0.14 | 0.07  | 1.55  | 0.04 | 4.15  | 1.08 | 9.90  | 1.46 A | 4-         | A+ | A+ |
| 5 | 544547 | 15 | D.2.1.2 | 3 | 4903 | 0.69 | 0.69 | 0.13 | 0.04 | 0.13 | 0.00 | 0.32  | 0.32  | -0.20 | -0.16 | -0.14 | -0.77 | 0.03 | -2.06 | 0.97 | -2.48 | 0.94 A | 4-         | A- | A+ |
| 5 | 181059 | 16 | D.1.1.2 | 2 | 4956 | 0.15 | 0.17 | 0.15 | 0.12 | 0.56 | 0.00 | 0.03  | -0.01 | 0.03  | -0.07 | 0.03  | 2.13  | 0.04 | 4.64  | 1.13 | 9.90  | 1.60 A | 4+         | A+ | A+ |
| 5 | 496239 | 16 | D.1.1.8 | 3 | 4956 | 0.54 | 0.16 | 0.15 | 0.15 | 0.54 | 0.00 | 0.25  | -0.03 | -0.11 | -0.20 | 0.25  | -0.04 | 0.03 | 2.36  | 1.03 | 2.17  | 1.03 A | 4+         | A- | A- |
| 5 | 487005 | 16 | D.1.1.5 | 3 | 4956 | 0.51 | 0.23 | 0.16 | 0.09 | 0.51 | 0.00 | 0.36  | -0.23 | -0.10 | -0.15 | 0.36  | 0.10  | 0.03 | -7.00 | 0.93 | -4.81 | 0.93 I | 3-         | A+ | A+ |
| 5 | 156157 | 16 | D.1.2.3 | 2 | 4956 | 0.40 | 0.31 | 0.07 | 0.40 | 0.23 | 0.00 | 0.28  | -0.13 | -0.18 | 0.28  | -0.07 | 0.65  | 0.03 | -0.99 | 0.99 | 1.31  | 1.02 A | 4+         | A+ | A- |
| 5 | 870134 | 16 | D.1.1.6 | 2 | 4956 | 0.36 | 0.36 | 0.29 | 0.25 | 0.09 | 0.00 | 0.35  | 0.35  | -0.14 | -0.13 | -0.16 | 0.82  | 0.03 | -6.71 | 0.92 | -3.12 | 0.94 A | <b>A</b> - | A+ | A+ |
| 5 | 591771 | 16 | D.2.1.4 | 3 | 4956 | 0.40 | 0.40 | 0.08 | 0.22 | 0.30 | 0.00 | 0.14  | 0.14  | -0.12 | -0.07 | -0.01 | 0.65  | 0.03 | 9.42  | 1.11 | 9.51  | 1.18   | 4-         | A+ | A+ |
| 5 | 223419 | 16 | D.1.1.4 | 3 | 4956 | 0.24 | 0.23 | 0.36 | 0.24 | 0.17 | 0.00 | 0.20  | 0.03  | -0.13 | 0.20  | -0.08 | 1.51  | 0.04 | 1.10  | 1.02 | 4.45  | 1.14   | <b>A</b> - | A- | A- |
| 5 | 855718 | 16 | D.2.1.2 | 3 | 4956 | 0.19 | 0.05 | 0.19 | 0.70 | 0.07 | 0.00 | 0.17  | -0.16 | 0.17  | 0.01  | -0.13 | 1.88  | 0.04 | 0.86  | 1.02 | 5.68  | 1.23 A | <b>A</b> - | A- | A- |
| 5 | 827669 | 16 | D.1.2.2 | 3 | 4956 | 0.47 | 0.16 | 0.47 | 0.24 | 0.13 | 0.00 | 0.29  | -0.12 | 0.29  | -0.09 | -0.19 | 0.33  | 0.03 | -1.74 | 0.98 | 0.06  | 1.00   | <b>A</b> - | A- | A- |
| 5 | 277585 | 16 | D.2.1.1 | 3 | 4956 | 0.90 | 0.02 | 0.06 | 0.02 | 0.90 | 0.00 | 0.26  | -0.15 | -0.13 | -0.17 | 0.26  | -2.31 | 0.05 | -1.88 | 0.94 | -3.99 | 0.79 I | B+         | В- | A- |
| 5 | 317776 | 17 | D.2.1.1 | 3 | 5004 | 0.49 | 0.35 | 0.08 | 0.49 | 0.08 | 0.00 | 0.36  | -0.18 | -0.13 | 0.36  | -0.21 | 0.24  | 0.03 | -6.46 | 0.93 | -3.70 | 0.94 A | 4-         | A- | A- |
| 5 | 297791 | 17 | D.1.2.5 | 1 | 5004 | 0.86 | 0.86 | 0.06 | 0.05 | 0.04 | 0.00 | 0.28  | 0.28  | -0.13 | -0.19 | -0.15 | -1.90 | 0.04 | -1.51 | 0.96 | -1.93 | 0.91   | 4+         | B+ | A+ |
| 5 | 681789 | 17 | D.1.1.7 | 2 | 5004 | 0.87 | 0.87 | 0.03 | 0.06 | 0.03 | 0.00 | 0.39  | 0.39  | -0.17 | -0.25 | -0.21 | -2.05 | 0.04 | -4.86 | 0.86 | -7.51 | 0.66   | 4-         | A- | A- |
| 5 | 693089 | 17 | D.1.1.5 | 3 | 5004 | 0.31 | 0.22 | 0.31 | 0.28 | 0.18 | 0.00 | 0.20  | -0.09 | 0.20  | -0.08 | -0.05 | 1.12  | 0.03 | 2.90  | 1.04 | 6.01  | 1.15   | <b>A</b> - | A+ | A+ |
| 5 | 573595 | 17 | D.1.2.4 | 2 | 5004 | 0.18 | 0.36 | 0.18 | 0.29 | 0.17 | 0.00 | -0.06 | 0.07  | -0.06 | 0.02  | -0.05 | 1.98  | 0.04 | 8.19  | 1.20 | 9.90  | 1.97 A | <b>A</b> + | B+ | A+ |
| 5 | 127049 | 17 | D.1.1.4 | 2 | 5004 | 0.84 | 0.04 | 0.05 | 0.84 | 0.07 | 0.00 | 0.44  | -0.24 | -0.21 | 0.44  | -0.26 | -1.74 | 0.04 | -7.24 | 0.83 | -9.42 | 0.65 I | B+         | B- | B- |
| 5 | 576195 | 17 | D.1.2.1 | 2 | 5004 | 0.74 | 0.06 | 0.16 | 0.74 | 0.04 | 0.00 | 0.33  | -0.19 | -0.15 | 0.33  | -0.21 | -1.04 | 0.03 | -2.29 | 0.96 | -3.45 | 0.91 A | Δ+         | A- | A- |
| 5 | 949289 | 17 | D.1.1.1 | 2 | 5004 | 0.31 | 0.40 | 0.17 | 0.12 | 0.31 | 0.00 | -0.01 | 0.06  | -0.05 | -0.03 | -0.01 | 1.17  | 0.03 | 9.90  | 1.23 | 9.90  | 1.56 A | ۸-         | A- | A+ |
| 5 | 168287 | 17 | D.2.1.3 | 3 | 5004 | 0.22 | 0.25 | 0.28 | 0.24 | 0.22 | 0.00 | 0.24  | -0.11 | -0.08 | -0.03 | 0.24  | 1.66  | 0.04 | -1.54 | 0.97 | 2.55  |        | <b>1</b> + | A- | A- |
| 5 | 803412 | 17 | D.2.1.2 | 3 | 5004 | 0.67 | 0.06 | 0.05 | 0.67 | 0.22 | 0.00 | 0.45  | -0.24 | -0.15 | 0.45  | -0.29 | -0.64 | 0.03 | -9.90 | 0.86 | -9.90 |        | <b>4</b> - | B- | A- |
| 5 | 491411 | 18 | D.1.1.7 | 2 | 4973 | 0.86 | 0.86 | 0.06 | 0.05 | 0.02 | 0.00 | 0.35  | 0.35  | -0.19 | -0.22 | -0.17 | -1.97 | 0.04 | -4.48 | 0.88 | -7.18 |        | <b>A</b> - | A- | A+ |
| 5 | 964700 | 18 | D.1.2.4 | 2 | 4973 | 0.33 | 0.18 | 0.33 | 0.34 | 0.15 | 0.00 | 0.03  | 0.01  | 0.03  | 0.07  | -0.14 | 0.95  | 0.03 | 9.90  | 1.19 | 9.90  |        | <b>A</b> - | A- | A- |

| 5 | 811678 | 18 | D.1.1.3 | 2 | 4973  | 0.46 | 0.23 | 0.18 | 0.46 | 0.13 | 0.00 | 0.26 | -0.04 | -0.17 | 0.26  | -0.13 | 0.33  | 0.03 | 0.82  | 1.01 | 1.91  |      | A- | A+ | A- |
|---|--------|----|---------|---|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 5 | 781720 | 18 | D.1.1.4 | 2 | 4973  | 0.45 | 0.14 | 0.45 | 0.23 | 0.18 | 0.00 | 0.31 | -0.15 | 0.31  | -0.22 | -0.02 | 0.40  | 0.03 | -3.53 | 0.96 | -1.38 |      | A- | Α- | A- |
| 5 | 691934 | 18 | D.2.1.2 | 3 | 4973  | 0.55 | 0.55 | 0.07 | 0.13 | 0.24 | 0.00 | 0.33 | 0.33  | -0.08 | -0.19 | -0.18 | -0.12 | 0.03 | -4.05 | 0.96 | -4.47 | 0.93 | B- | A- | A- |
| 5 | 194574 | 18 | D.1.2.1 | 2 | 4973  | 0.67 | 0.17 | 0.07 | 0.09 | 0.67 | 0.00 | 0.37 | -0.17 | -0.21 | -0.20 | 0.37  | -0.68 | 0.03 | -6.49 | 0.91 | -6.87 | 0.86 | B+ | A- | A+ |
| 5 | 536763 | 18 | D.1.2.2 | 2 | 4973  | 0.55 | 0.12 | 0.12 | 0.20 | 0.55 | 0.00 | 0.37 | -0.18 | -0.19 | -0.16 | 0.37  | -0.12 | 0.03 | -7.91 | 0.92 | -7.32 | 0.89 | A+ | A- | A- |
| 5 | 443817 | 18 | D.2.1.1 | 3 | 4973  | 0.29 | 0.28 | 0.26 | 0.29 | 0.16 | 0.00 | 0.08 | 0.06  | -0.09 | 0.08  | -0.07 | 1.16  | 0.03 | 8.66  | 1.14 | 9.90  | 1.32 | A+ | A- | A+ |
| 5 | 570899 | 18 | D.2.1.3 | 3 | 4973  | 0.23 | 0.48 | 0.23 | 0.20 | 0.09 | 0.00 | 0.08 | 0.10  | 0.08  | -0.10 | -0.14 | 1.55  | 0.04 | 4.91  | 1.09 | 9.90  | 1.38 | A+ | A+ | A+ |
| 5 | 974921 | 18 | D.1.1.1 | 2 | 4973  | 0.25 | 0.33 | 0.16 | 0.26 | 0.25 | 0.00 | 0.09 | 0.08  | -0.09 | -0.09 | 0.09  | 1.42  | 0.03 | 6.55  | 1.12 | 7.92  | 1.25 | A- | A+ | A+ |
| 5 | 877519 | 19 | D.1.1.7 | 2 | 4955  | 0.84 | 0.03 | 0.10 | 0.84 | 0.02 | 0.00 | 0.33 | -0.19 | -0.21 | 0.33  | -0.15 | -1.83 | 0.04 | -2.88 | 0.93 | -5.05 | 0.79 | A+ | A- | A- |
| 5 | 691137 | 19 | D.1.2.4 | 2 | 4955  | 0.22 | 0.31 | 0.18 | 0.22 | 0.29 | 0.00 | 0.04 | -0.12 | -0.02 | 0.04  | 0.11  | 1.64  | 0.04 | 8.64  | 1.18 | 9.90  | 1.58 | A- | A- | A+ |
| 5 | 743512 | 19 | D.1.1.3 | 3 | 4955  | 0.32 | 0.08 | 0.44 | 0.16 | 0.32 | 0.00 | 0.23 | -0.09 | -0.05 | -0.15 | 0.23  | 1.08  | 0.03 | 1.67  | 1.02 | 7.14  | 1.18 | A- | A- | C- |
| 5 | 302319 | 19 | D.1.1.4 | 3 | 4955  | 0.45 | 0.13 | 0.45 | 0.26 | 0.16 | 0.00 | 0.33 | -0.11 | 0.33  | -0.12 | -0.19 | 0.39  | 0.03 | -3.16 | 0.96 | -2.11 | 0.96 | A+ | A- | A- |
| 5 | 913888 | 19 | D.2.1.2 | 3 | 4955  | 0.71 | 0.71 | 0.06 | 0.15 | 0.08 | 0.00 | 0.28 | 0.28  | -0.16 | -0.05 | -0.26 | -0.91 | 0.03 | -0.16 | 1.00 | 0.85  | 1.02 | A+ | B- | A- |
| 5 | 462171 | 19 | D.1.2.1 | 2 | 4955  | 0.70 | 0.16 | 0.70 | 0.09 | 0.04 | 0.00 | 0.41 | -0.21 | 0.41  | -0.26 | -0.18 | -0.88 | 0.03 | -7.67 | 0.89 | -8.15 | 0.81 | A+ | A+ | A+ |
| 5 | 312536 | 19 | D.1.2.2 | 2 | 4955  | 0.65 | 0.09 | 0.16 | 0.65 | 0.10 | 0.00 | 0.39 | -0.20 | -0.19 | 0.39  | -0.18 | -0.59 | 0.03 | -6.28 | 0.92 | -6.32 | 0.87 | A- | A- | A+ |
| 5 | 443395 | 19 | D.2.1.1 | 3 | 4955  | 0.58 | 0.58 | 0.16 | 0.19 | 0.07 | 0.00 | 0.28 | 0.28  | -0.06 | -0.14 | -0.22 | -0.24 | 0.03 | 1.76  | 1.02 | 2.01  | 1.04 | A+ | A- | B+ |
| 5 | 417744 | 19 | D.1.1.1 | 2 | 4955  | 0.22 | 0.20 | 0.22 | 0.31 | 0.27 | 0.00 | 0.12 | -0.02 | 0.12  | -0.06 | -0.03 | 1.68  | 0.04 | 4.73  | 1.10 | 9.07  | 1.35 | A+ | B+ | B+ |
| 5 | 115049 | 19 | D.2.1.3 | 3 | 4955  | 0.29 | 0.32 | 0.29 | 0.22 | 0.17 | 0.00 | 0.26 | -0.17 | 0.26  | 0.03  | -0.14 | 1.25  | 0.03 | -0.18 | 1.00 | 2.92  | 1.08 | A- | A- | A- |
| 5 | 147026 | 20 | D.1.1.2 | 2 | 4973  | 0.74 | 0.10 | 0.07 | 0.74 | 0.09 | 0.00 | 0.34 | -0.17 | -0.18 | 0.34  | -0.18 | -1.10 | 0.04 | -2.60 | 0.96 | -3.62 | 0.90 | A+ | A+ | A+ |
| 5 | 245742 | 20 | D.1.1.8 | 3 | 4973  | 0.24 | 0.16 | 0.34 | 0.25 | 0.24 | 0.00 | 0.02 | -0.09 | 0.13  | -0.08 | 0.02  | 1.49  | 0.04 | 9.90  | 1.22 | 9.90  | 1.56 | A+ | B+ | A+ |
| 5 | 848933 | 20 | D.1.1.5 | 2 | 4973  | 0.48 | 0.06 | 0.24 | 0.48 | 0.22 | 0.00 | 0.37 | -0.16 | -0.14 | 0.37  | -0.21 | 0.27  | 0.03 | -5.99 | 0.93 | -2.57 | 0.96 | A+ | A- | A- |
| 5 | 180208 | 20 | D.1.2.3 | 2 | 4973  | 0.59 | 0.09 | 0.16 | 0.16 | 0.59 | 0.00 | 0.38 | -0.24 | -0.15 | -0.17 | 0.38  | -0.29 | 0.03 | -5.60 | 0.93 | -5.93 | 0.90 | A- | A- | A- |
| 5 | 191765 | 20 | D.1.1.6 | 2 | 4973  | 0.82 | 0.07 | 0.82 | 0.07 | 0.05 | 0.00 | 0.36 | -0.18 | 0.36  | -0.25 | -0.15 | -1.63 | 0.04 | -3.68 | 0.92 | -4.87 | 0.82 | A+ | A- | B- |
| 5 | 251471 | 20 | D.2.1.2 | 3 | 4973  | 0.70 | 0.06 | 0.17 | 0.70 | 0.06 | 0.00 | 0.28 | -0.06 | -0.15 | 0.28  | -0.24 | -0.89 | 0.03 | 0.99  | 1.02 | 1.38  | 1.03 | A- | A- | A- |
| 5 | 366856 | 20 | D.2.1.4 | 3 | 4973  | 0.62 | 0.18 | 0.62 | 0.09 | 0.11 | 0.00 | 0.39 | -0.26 | 0.39  | -0.16 | -0.15 | -0.42 | 0.03 | -6.04 | 0.92 | -6.44 | 0.88 | A- | B- | B- |
| 5 | 685146 | 20 | D.1.1.4 | 3 | 4973  | 0.24 | 0.19 | 0.21 | 0.35 | 0.24 | 0.00 | 0.10 | -0.05 | -0.06 | 0.00  | 0.10  | 1.50  | 0.04 | 6.24  | 1.12 | 9.90  | 1.42 | A- | A+ | A+ |
| 5 | 891255 | 20 | D.1.2.2 | 2 | 4973  | 0.63 | 0.11 | 0.10 | 0.15 | 0.63 | 0.00 | 0.44 | -0.18 | -0.24 | -0.22 | 0.44  | -0.51 | 0.03 | -9.04 | 0.88 | -9.26 | 0.83 | A+ | A- | A+ |
| 5 | 322551 | 20 | D.2.1.1 | 3 | 4973  | 0.62 | 0.10 | 0.62 | 0.15 | 0.14 | 0.00 | 0.33 | -0.21 | 0.33  | -0.11 | -0.18 | -0.43 | 0.03 | -1.37 | 0.98 | -2.01 | 0.96 | Α- | A+ | A+ |
| 6 | 219562 | 0  | D.1.1.3 | 2 | 80846 | 0.37 | 0.09 | 0.18 | 0.37 | 0.36 | 0.00 | 0.16 | -0.12 | -0.10 | 0.16  | 0.00  | 0.83  | 0.01 | 9.90  | 1.05 | 9.90  |      | A+ | A+ | A+ |
| 6 | 320304 | 0  | D.1.1.1 | 2 | 80846 | 0.27 | 0.14 | 0.48 | 0.27 | 0.11 | 0.00 | 0.03 | -0.10 | 0.10  | 0.03  | -0.08 | 1.34  | 0.01 | 9.90  | 1.16 | 9.90  |      | A- | A+ | A+ |
| 6 | 124328 | 0  | D.1.2.3 | 2 | 80846 | 0.54 | 0.10 | 0.12 | 0.24 | 0.54 | 0.00 | 0.33 | -0.19 | -0.19 | -0.10 | 0.33  | 0.02  | 0.01 | -9.90 | 0.89 | -9.90 |      | A+ | A- | A- |
| 6 | 402584 | 0  |         | 2 | 80846 | 0.72 | 0.18 | 0.72 | 0.06 | 0.05 | 0.00 | 0.22 | -0.07 | 0.22  | -0.15 | -0.15 | -0.88 | 0.01 | 0.64  | 1.00 | 0.42  |      | A+ | A- | A- |

| 6 | 680662 | 0 | D.1.2.1 | 2 | 80846 | 0.24 | 0.24 | 0.20 | 0.16 | 0.40 | 0.00 | 0.12  | 0.12  | -0.03 | -0.08 | -0.01 | 1.53  | 0.01 | 9.90  | 1.05 | 9.90  |      | A- | A+ | A+ |
|---|--------|---|---------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 6 | 135307 | 0 | D.2.1.1 | 2 | 80846 | 0.63 | 0.63 | 0.17 | 0.08 | 0.12 | 0.00 | 0.16  | 0.16  | -0.11 | -0.12 | 0.00  | -0.43 | 0.01 | 9.90  | 1.07 | 9.90  |      | A- | A+ | A+ |
| 6 | 589482 | 0 | D.1.1.7 | 2 | 80846 | 0.72 | 0.03 | 0.19 | 0.72 | 0.06 | 0.00 | 0.31  | -0.18 | -0.18 | 0.31  | -0.17 | -0.92 | 0.01 | -9.90 | 0.89 | -9.90 | 0.82 | A- | B- | B- |
| 6 | 547131 | 0 | D.1.1.8 | 2 | 80846 | 0.56 | 0.56 | 0.10 | 0.18 | 0.16 | 0.00 | 0.29  | 0.29  | -0.15 | -0.17 | -0.09 | -0.08 | 0.01 | -9.90 | 0.92 | -9.90 | 0.91 | A+ | B- | A- |
| 6 | 951902 | 0 | D.1.1.5 | 2 | 80846 | 0.46 | 0.14 | 0.11 | 0.28 | 0.46 | 0.00 | 0.18  | -0.06 | -0.10 | -0.08 | 0.18  | 0.37  | 0.01 | 9.90  | 1.06 | 9.90  | 1.08 | A+ | A+ | A+ |
| 6 | 238181 | 0 | D.1.2.2 | 2 | 80846 | 0.82 | 0.06 | 0.03 | 0.09 | 0.82 | 0.00 | 0.31  | -0.18 | -0.16 | -0.16 | 0.31  | -1.55 | 0.01 | -9.90 | 0.88 | -9.90 | 0.76 | A+ | A+ | A- |
| 6 | 453598 | 0 | D.2.1.3 | 2 | 80846 | 0.86 | 0.86 | 0.03 | 0.09 | 0.02 | 0.00 | 0.22  | 0.22  | -0.16 | -0.08 | -0.16 | -1.85 | 0.01 | -7.46 | 0.95 | -2.10 | 0.98 | A+ | A- | A- |
| 6 | 976415 | 0 | D.2.1.4 | 2 | 80846 | 0.41 | 0.16 | 0.34 | 0.09 | 0.41 | 0.00 | 0.17  | -0.13 | 0.04  | -0.18 | 0.17  | 0.63  | 0.01 | 9.90  | 1.06 | 9.90  | 1.09 | A+ | A+ | A+ |
| 6 | 106358 | 0 | D.2.1.2 | 2 | 80846 | 0.35 | 0.21 | 0.30 | 0.35 | 0.14 | 0.00 | 0.16  | -0.10 | 0.02  | 0.16  | -0.12 | 0.91  | 0.01 | 9.90  | 1.04 | 9.90  | 1.10 | A- | A- | A- |
| 6 | 735279 | 1 | D.1.1.3 | 2 | 4505  | 0.73 | 0.11 | 0.73 | 0.10 | 0.05 | 0.00 | 0.43  | -0.22 | 0.43  | -0.22 | -0.22 | -0.95 | 0.04 | -7.85 | 0.87 | -8.71 | 0.77 | A- | A- | A- |
| 6 | 945288 | 1 | D.1.1.1 | 2 | 4505  | 0.84 | 0.11 | 0.84 | 0.02 | 0.03 | 0.00 | 0.34  | -0.19 | 0.34  | -0.18 | -0.23 | -1.69 | 0.04 | -3.51 | 0.91 | -3.79 | 0.84 | A+ | A- | B- |
| 6 | 328406 | 1 | D.1.2.3 | 2 | 4505  | 0.67 | 0.11 | 0.17 | 0.05 | 0.67 | 0.00 | 0.38  | -0.21 | -0.20 | -0.18 | 0.38  | -0.61 | 0.03 | -5.66 | 0.92 | -6.06 | 0.87 | A- | B- | A- |
| 6 | 920627 | 1 | D.1.2.4 | 2 | 4505  | 0.21 | 0.18 | 0.21 | 0.24 | 0.37 | 0.00 | -0.03 | -0.13 | -0.03 | -0.04 | 0.17  | 1.77  | 0.04 | 8.60  | 1.19 | 9.90  | 1.72 | A+ | A+ | A- |
| 6 | 292663 | 1 | D.2.1.1 | 2 | 4505  | 0.46 | 0.05 | 0.46 | 0.15 | 0.34 | 0.00 | 0.28  | -0.18 | 0.28  | -0.19 | -0.06 | 0.44  | 0.03 | 0.96  | 1.01 | 1.95  | 1.03 | B- | A+ | A- |
| 6 | 152478 | 1 | D.1.1.5 | 2 | 4505  | 0.37 | 0.37 | 0.21 | 0.15 | 0.27 | 0.00 | 0.31  | 0.31  | -0.16 | -0.16 | -0.06 | 0.84  | 0.03 | -3.88 | 0.95 | 1.34  | 1.03 | A+ | A- | A- |
| 6 | 196334 | 1 | D.1.1.7 | 2 | 4505  | 0.80 | 0.03 | 0.13 | 0.80 | 0.04 | 0.00 | 0.39  | -0.21 | -0.23 | 0.39  | -0.19 | -1.36 | 0.04 | -4.86 | 0.90 | -6.80 | 0.77 | A+ | A+ | A+ |
| 6 | 443236 | 1 | D.1.1.2 | 2 | 4505  | 0.90 | 0.05 | 0.02 | 0.03 | 0.90 | 0.00 | 0.36  | -0.25 | -0.16 | -0.18 | 0.36  | -2.32 | 0.05 | -3.26 | 0.88 | -6.68 | 0.63 | A+ | A- | A- |
| 6 | 505264 | 1 | D.1.2.2 | 2 | 4505  | 0.40 | 0.09 | 0.32 | 0.40 | 0.19 | 0.00 | 0.20  | -0.15 | -0.04 | 0.20  | -0.08 | 0.72  | 0.03 | 4.86  | 1.06 | 7.23  | 1.15 | A+ | A+ | A- |
| 6 | 917203 | 1 | D.2.1.3 | 2 | 4505  | 0.85 | 0.09 | 0.85 | 0.03 | 0.03 | 0.01 | 0.35  | -0.22 | 0.35  | -0.15 | -0.20 | -1.83 | 0.04 | -3.69 | 0.90 | -4.43 | 0.80 | A+ | A- | B- |
| 6 | 463183 | 1 | D.2.1.2 | 2 | 4505  | 0.50 | 0.06 | 0.17 | 0.28 | 0.50 | 0.00 | 0.29  | -0.12 | -0.17 | -0.11 | 0.29  | 0.25  | 0.03 | -0.19 | 1.00 | 0.60  | 1.01 | B- | A- | A+ |
| 6 | 524496 | 2 | D.1.1.1 | 2 | 4506  | 0.57 | 0.57 | 0.14 | 0.15 | 0.13 | 0.01 | 0.39  | 0.39  | -0.19 | -0.21 | -0.14 | -0.12 | 0.03 | -9.90 | 0.89 | -9.67 | 0.86 | A+ | B- | A- |
| 6 | 232297 | 2 | D.1.1.2 | 2 | 4506  | 0.38 | 0.30 | 0.18 | 0.14 | 0.38 | 0.00 | 0.19  | -0.01 | -0.12 | -0.12 | 0.19  | 0.76  | 0.03 | 4.01  | 1.05 | 4.58  | 1.08 | A+ | A+ | A+ |
| 6 | 884562 | 2 | D.1.1.3 | 2 | 4506  | 0.52 | 0.20 | 0.11 | 0.52 | 0.17 | 0.00 | 0.15  | -0.07 | -0.14 | 0.15  | -0.01 | 0.10  | 0.03 | 8.13  | 1.09 | 6.92  | 1.10 | A+ | A+ | A- |
| 6 | 772371 | 2 | D.1.2.3 | 2 | 4506  | 0.53 | 0.29 | 0.53 | 0.06 | 0.12 | 0.00 | 0.40  | -0.27 | 0.40  | -0.09 | -0.17 | 0.07  | 0.03 | -9.90 | 0.88 | -9.90 | 0.86 | A+ | B- | B- |
| 6 | 742728 | 2 | D.1.2.1 | 2 | 4506  | 0.43 | 0.21 | 0.43 | 0.15 | 0.20 | 0.00 | 0.36  | -0.17 | 0.36  | -0.15 | -0.13 | 0.51  | 0.03 | -8.24 | 0.91 | -6.35 | 0.91 | A+ | A- | A+ |
| 6 | 888321 | 2 | D.2.1.1 | 2 | 4506  | 0.38 | 0.23 | 0.38 | 0.22 | 0.16 | 0.00 | 0.20  | -0.08 | 0.20  | -0.14 | 0.00  | 0.78  | 0.03 | 3.48  | 1.04 | 4.06  | 1.07 | A- | A+ | A- |
| 6 | 565068 | 2 | D.1.1.5 | 2 | 4506  | 0.47 | 0.14 | 0.25 | 0.15 | 0.47 | 0.00 | 0.20  | -0.09 | -0.05 | -0.12 | 0.20  | 0.36  | 0.03 | 4.08  | 1.04 | 3.65  | 1.05 | A- | A- | A+ |
| 6 | 160363 | 2 | D.1.1.7 | 2 | 4506  | 0.61 | 0.06 | 0.61 | 0.25 | 0.08 | 0.00 | 0.27  | -0.22 | 0.27  | -0.01 | -0.26 | -0.33 | 0.03 | -1.68 | 0.98 | -1.06 | 0.98 | A- | A+ | A+ |
| 6 | 293963 | 2 | D.1.2.2 | 2 | 4506  | 0.62 | 0.31 | 0.62 | 0.03 | 0.04 | 0.00 | 0.32  | -0.22 | 0.32  | -0.11 | -0.17 | -0.36 | 0.03 | -4.46 | 0.95 | -5.23 | 0.91 | A- | A+ | A- |
| 6 | 759052 | 2 | D.2.1.3 | 2 | 4506  | 0.28 | 0.13 | 0.55 | 0.28 | 0.04 | 0.01 | 0.23  | -0.13 | -0.04 | 0.23  | -0.18 | 1.29  | 0.04 | 0.31  | 1.01 | 0.99  | 1.02 | C- | B- | A- |
| 6 | 955288 | 2 | D.2.1.2 | 2 | 4506  | 0.43 | 0.21 | 0.43 | 0.28 | 0.07 | 0.00 | 0.12  | 0.00  | 0.12  | -0.06 | -0.11 | 0.52  | 0.03 | 9.90  | 1.12 | 9.89  |      | A- | A- | A- |
| 6 | 125086 | 3 |         | 2 | 4481  | 0.28 | 0.21 | 0.14 | 0.36 | 0.28 | 0.00 | 0.20  | -0.09 | -0.14 | -0.01 | 0.20  | 1.28  | 0.04 | 0.08  | 1.00 | 4.05  |      | A- | A- | A+ |

|   | 400500 |   | D       |   | 4404 | 0.00 | 0.00 | 0.04 | 0.02 | 0.02 | 0.00 | 0.05  | 0.25  | 0.20  | 0.21  | 0.15  | 2.25  | 0.05 | 2.05  | 0.05 | 5.00  | 0.54 |    |    |    |
|---|--------|---|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 6 | 480589 | 3 |         | 2 | 4481 | 0.90 | 0.90 | 0.04 | 0.03 | 0.03 | 0.00 | 0.35  | 0.35  | -0.20 | -0.21 | -0.16 | -2.25 | 0.05 | -3.85 | 0.86 | -6.90 |      | A+ | A- | A- |
| 6 | 366181 | 3 | D.1.2.3 | 3 | 4481 | 0.34 | 0.08 | 0.53 | 0.05 | 0.34 | 0.00 | 0.08  | -0.18 | 0.09  | -0.15 | 0.08  | 0.99  | 0.03 | 8.25  | 1.12 | 9.90  |      | A+ | A+ | A+ |
| 6 | 692682 | 3 |         | 2 | 4481 | 0.74 | 0.05 | 0.15 | 0.06 | 0.74 | 0.00 | 0.30  | -0.20 | -0.11 | -0.20 | 0.30  | -1.01 | 0.04 | -3.53 | 0.94 | -2.99 |      | A+ | A- | A+ |
| 6 | 954670 | 3 | D.2.1.1 | 2 | 4481 | 0.14 | 0.39 | 0.35 | 0.14 | 0.11 | 0.00 | 0.03  | 0.03  | 0.01  | 0.03  | -0.06 | 2.27  | 0.05 | 2.15  | 1.07 | 9.90  | 1.68 | A+ | A- | A- |
| 6 | 837580 | 3 | D.1.1.5 | 2 | 4481 | 0.31 | 0.50 | 0.31 | 0.08 | 0.10 | 0.00 | 0.01  | 0.14  | 0.01  | -0.13 | -0.13 | 1.13  | 0.03 | 9.90  | 1.18 | 9.90  | 1.36 | A- | A+ | A+ |
| 6 | 398889 | 3 | D.1.1.7 | 2 | 4481 | 0.79 | 0.79 | 0.05 | 0.01 | 0.15 | 0.00 | 0.34  | 0.34  | -0.20 | -0.18 | -0.20 | -1.28 | 0.04 | -4.27 | 0.91 | -5.50 | 0.83 | A+ | A- | A- |
| 6 | 910377 | 3 | D.1.1.2 | 3 | 4481 | 0.61 | 0.08 | 0.61 | 0.16 | 0.15 | 0.00 | 0.24  | -0.16 | 0.24  | -0.05 | -0.15 | -0.28 | 0.03 | 0.84  | 1.01 | 0.83  | 1.01 | A- | A+ | A+ |
| 6 | 709469 | 3 | D.1.2.2 | 2 | 4481 | 0.71 | 0.17 | 0.09 | 0.02 | 0.71 | 0.00 | 0.25  | -0.11 | -0.17 | -0.12 | 0.25  | -0.84 | 0.04 | -0.61 | 0.99 | -0.50 | 0.99 | A+ | A+ | A- |
| 6 | 755256 | 3 | D.2.1.3 | 2 | 4481 | 0.65 | 0.17 | 0.65 | 0.09 | 0.08 | 0.01 | 0.40  | -0.24 | 0.40  | -0.18 | -0.15 | -0.52 | 0.03 | -9.44 | 0.88 | -8.59 | 0.83 | A+ | B- | C- |
| 6 | 896113 | 3 | D.2.1.2 | 2 | 4481 | 0.69 | 0.04 | 0.10 | 0.17 | 0.69 | 0.00 | 0.34  | -0.15 | -0.18 | -0.18 | 0.34  | -0.70 | 0.03 | -5.14 | 0.92 | -5.89 | 0.87 | A+ | A+ | A- |
| 6 | 198768 | 4 | D.1.1.3 | 2 | 4493 | 0.09 | 0.10 | 0.09 | 0.09 | 0.72 | 0.00 | -0.03 | -0.05 | -0.03 | -0.01 | 0.06  | 2.86  | 0.05 | 2.87  | 1.12 | 9.90  | 2.10 | A- | A+ | A- |
| 6 | 808591 | 4 | D.1.1.1 | 2 | 4493 | 0.47 | 0.11 | 0.34 | 0.47 | 0.07 | 0.00 | 0.20  | -0.19 | 0.03  | 0.20  | -0.20 | 0.33  | 0.03 | 4.52  | 1.05 | 3.81  | 1.06 | A+ | A+ | A+ |
| 6 | 290513 | 4 | D.1.2.3 | 2 | 4493 | 0.62 | 0.20 | 0.12 | 0.62 | 0.05 | 0.00 | 0.37  | -0.17 | -0.18 | 0.37  | -0.20 | -0.36 | 0.03 | -7.57 | 0.91 | -7.24 | 0.87 | A+ | A- | A+ |
| 6 | 614069 | 4 | D.1.2.1 | 2 | 4493 | 0.30 | 0.30 | 0.35 | 0.06 | 0.28 | 0.00 | 0.31  | 0.31  | -0.09 | -0.18 | -0.12 | 1.19  | 0.03 | -5.08 | 0.92 | -1.30 | 0.97 | A- | A- | A+ |
| 6 | 434905 | 4 | D.2.1.1 | 2 | 4493 | 0.55 | 0.06 | 0.55 | 0.22 | 0.17 | 0.00 | 0.28  | -0.24 | 0.28  | -0.17 | -0.03 | -0.01 | 0.03 | -2.06 | 0.98 | -1.55 | 0.98 | A- | A- | A- |
| 6 | 117966 | 4 | D.1.1.5 | 2 | 4493 | 0.61 | 0.61 | 0.11 | 0.16 | 0.12 | 0.00 | 0.25  | 0.25  | -0.12 | -0.10 | -0.14 | -0.31 | 0.03 | 0.68  | 1.01 | 0.37  | 1.01 | A- | A+ | A- |
| 6 | 978839 | 4 | D.1.1.7 | 2 | 4493 | 0.70 | 0.24 | 0.70 | 0.03 | 0.02 | 0.00 | 0.27  | -0.16 | 0.27  | -0.15 | -0.18 | -0.79 | 0.03 | -1.20 | 0.98 | -1.80 | 0.96 | A+ | A+ | A- |
| 6 | 831124 | 4 | D.1.1.2 | 3 | 4493 | 0.48 | 0.20 | 0.48 | 0.09 | 0.22 | 0.00 | 0.27  | -0.06 | 0.27  | -0.17 | -0.13 | 0.29  | 0.03 | -0.96 | 0.99 | -0.50 | 0.99 | A- | A- | A- |
| 6 | 912278 | 4 | D.1.2.2 | 2 | 4493 | 0.95 | 0.02 | 0.01 | 0.95 | 0.02 | 0.00 | 0.28  | -0.18 | -0.11 | 0.28  | -0.17 | -3.03 | 0.07 | -1.68 | 0.91 | -5.85 | 0.55 | A- | A- | B- |
| 6 | 608882 | 4 | D.2.1.3 | 2 | 4493 | 0.81 | 0.12 | 0.81 | 0.02 | 0.04 | 0.01 | 0.33  | -0.19 | 0.33  | -0.15 | -0.20 | -1.43 | 0.04 | -3.89 | 0.91 | -5.14 | 0.82 | A- | A- | A+ |
| 6 | 695592 | 4 | D.2.1.2 | 2 | 4493 | 0.40 | 0.02 | 0.54 | 0.03 | 0.40 | 0.00 | 0.12  | -0.10 | -0.07 | -0.04 | 0.12  | 0.67  | 0.03 | 8.92  | 1.11 | 9.41  | 1.17 | A- | A+ | A+ |
| 6 | 673374 | 5 | D.1.1.3 | 3 | 4478 | 0.12 | 0.04 | 0.66 | 0.19 | 0.12 | 0.00 | 0.06  | -0.17 | 0.15  | -0.16 | 0.06  | 2.44  | 0.05 | 2.35  | 1.08 | 5.93  | 1.35 | A- | A- | A+ |
| 6 | 518579 | 5 | D.1.1.1 | 2 | 4478 | 0.77 | 0.02 | 0.77 | 0.03 | 0.18 | 0.00 | 0.10  | -0.17 | 0.10  | -0.11 | 0.01  | -1.21 | 0.04 | 4.03  | 1.08 | 7.87  | 1.27 | A- | A- | A- |
| 6 | 444267 | 5 | D.1.2.3 | 2 | 4478 | 0.91 | 0.91 | 0.02 | 0.04 | 0.02 | 0.00 | 0.28  | 0.28  | -0.14 | -0.16 | -0.19 | -2.48 | 0.06 | -2.21 | 0.91 | -4.93 | 0.70 | A+ | A- | A- |
| 6 | 198375 | 5 | D.1.2.1 | 2 | 4478 | 0.27 | 0.24 | 0.29 | 0.20 | 0.27 | 0.00 | 0.23  | -0.03 | -0.11 | -0.09 | 0.23  | 1.33  | 0.04 | -1.13 | 0.98 | 1.38  | 1.04 | A+ | A- | A+ |
| 6 | 510678 | 5 | D.2.1.1 | 2 | 4478 | 0.60 | 0.17 | 0.60 | 0.08 | 0.14 | 0.01 | 0.31  | -0.12 | 0.31  | -0.19 | -0.14 | -0.29 | 0.03 | -4.94 | 0.94 | -4.15 | 0.93 | A+ | A- | A- |
| 6 | 695240 | 5 | D.1.1.5 | 2 | 4478 | 0.38 | 0.28 | 0.08 | 0.38 | 0.25 | 0.00 | 0.24  | -0.15 | -0.09 | 0.24  | -0.06 | 0.72  | 0.03 | -0.64 | 0.99 | 1.18  | 1.02 | A- | A+ | A- |
| 6 | 630161 | 5 | D.1.1.7 | 2 | 4478 | 0.93 | 0.03 | 0.02 | 0.93 | 0.02 | 0.00 | 0.29  | -0.18 | -0.15 | 0.29  | -0.15 | -2.65 | 0.06 | -2.12 | 0.90 | -5.11 | 0.67 | A- | A+ | A+ |
| 6 | 974232 | 5 | D.1.1.2 | 2 | 4478 | 0.58 | 0.07 | 0.58 | 0.15 | 0.20 | 0.00 | 0.22  | -0.11 | 0.22  | -0.09 | -0.12 | -0.17 | 0.03 | 1.60  | 1.02 | 1.75  | 1.03 | A- | A+ | A- |
| 6 | 826301 | 5 | D.1.2.2 | 2 | 4478 | 0.72 | 0.18 | 0.72 | 0.06 | 0.04 | 0.00 | 0.33  | -0.19 | 0.33  | -0.16 | -0.18 | -0.93 | 0.04 | -5.03 | 0.92 | -4.64 | 0.88 | A- | A+ | A- |
| 6 | 979254 | 5 | D.2.1.2 | 2 | 4478 | 0.38 | 0.21 | 0.38 | 0.24 | 0.17 | 0.01 | 0.22  | -0.07 | 0.22  | -0.07 | -0.11 | 0.76  | 0.03 | 0.22  | 1.00 | 3.04  |      | A+ | A- | A- |
| 6 | 357251 | 5 |         | 2 | 4478 | 0.61 | 0.13 | 0.13 | 0.61 | 0.12 | 0.00 | 0.23  | -0.19 | -0.13 | 0.23  | 0.00  | -0.35 | 0.03 | 1.05  | 1.01 | 1.75  |      | A- | A+ | A- |

|   | 601601 |   | D 1 1 2 | 2 | 4400 | 0.22 | 0.22 | 0.22 | 0.20 | 0.07 | 0.00 | 0.00 | 0.06  | 0.00  | 0.00  | 0.05  | 1.60  | 0.04 | 7.75  | 1.17 | 0.00  | 1.40 |    |    |    |
|---|--------|---|---------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 6 | 681691 | 6 |         | 3 | 4480 | 0.22 | 0.22 | 0.22 | 0.29 | 0.27 | 0.00 | 0.00 | 0.06  | 0.00  | 0.00  | -0.05 | 1.68  | 0.04 | 7.75  | 1.17 | 9.90  | 1.48 | A- | A- | A+ |
| 6 | 650295 | 6 | D.1.1.1 | 2 | 4480 | 0.63 | 0.12 | 0.12 | 0.13 | 0.63 | 0.00 | 0.26 | -0.15 | -0.11 | -0.12 | 0.26  | -0.41 | 0.03 | -0.38 | 1.00 | -0.41 | 0.99 | A- | A- | A- |
| 6 | 324147 | 6 |         | 2 | 4480 | 0.70 | 0.06 | 0.05 | 0.20 | 0.70 | 0.00 | 0.40 | -0.20 | -0.19 | -0.25 | 0.40  | -0.72 | 0.03 | -8.38 | 0.88 | -8.59 | 0.81 | A+ | A- | A- |
| 6 | 599000 | 6 |         | 2 | 4480 | 0.53 | 0.09 | 0.53 | 0.22 | 0.15 | 0.00 | 0.37 | -0.23 | 0.37  | -0.10 | -0.19 | 0.10  | 0.03 | -8.76 | 0.91 | -7.64 | 0.89 | A+ | A- | A- |
| 6 | 776211 | 6 |         | 2 | 4480 | 0.49 | 0.49 | 0.14 | 0.09 | 0.28 | 0.00 | 0.32 | 0.32  | -0.18 | -0.20 | -0.07 | 0.29  | 0.03 | -4.58 | 0.95 | -3.05 | 0.95 | A- | A- | A- |
| 6 | 687041 | 6 |         | 2 | 4480 | 0.28 | 0.36 | 0.23 | 0.13 | 0.28 | 0.00 | 0.09 | 0.05  | -0.10 | -0.06 | 0.09  | 1.32  | 0.04 | 6.59  | 1.11 | 9.90  | 1.29 | A+ | A+ | B+ |
| 6 | 279709 | 6 | D.1.1.7 | 2 | 4480 | 0.90 | 0.02 | 0.02 | 0.90 | 0.06 | 0.00 | 0.30 | -0.17 | -0.17 | 0.30  | -0.18 | -2.21 | 0.05 | -2.61 | 0.91 | -5.43 | 0.71 | A- | A- | A- |
| 6 | 589039 | 6 | D.1.1.2 | 3 | 4480 | 0.43 | 0.03 | 0.43 | 0.02 | 0.52 | 0.00 | 0.27 | -0.09 | 0.27  | -0.13 | -0.20 | 0.57  | 0.03 | -1.00 | 0.99 | 0.68  | 1.01 | A- | B+ | A+ |
| 6 | 775383 | 6 | D.1.2.2 | 2 | 4480 | 0.72 | 0.09 | 0.72 | 0.14 | 0.05 | 0.00 | 0.26 | -0.16 | 0.26  | -0.13 | -0.12 | -0.86 | 0.04 | -0.66 | 0.99 | -1.42 | 0.96 | A+ | A+ | A+ |
| 6 | 889302 | 6 | D.2.1.3 | 2 | 4480 | 0.85 | 0.09 | 0.85 | 0.03 | 0.03 | 0.00 | 0.34 | -0.19 | 0.34  | -0.19 | -0.19 | -1.73 | 0.04 | -4.23 | 0.89 | -5.20 | 0.79 | A+ | A- | B- |
| 6 | 523580 | 6 | D.2.1.4 | 1 | 4480 | 0.45 | 0.06 | 0.45 | 0.19 | 0.30 | 0.01 | 0.26 | -0.17 | 0.26  | -0.12 | -0.08 | 0.49  | 0.03 | -0.57 | 0.99 | 0.29  | 1.00 | A+ | A- | A+ |
| 6 | 859184 | 7 | D.1.1.3 | 2 | 4471 | 0.61 | 0.19 | 0.09 | 0.61 | 0.11 | 0.00 | 0.31 | -0.20 | -0.11 | 0.31  | -0.13 | -0.33 | 0.03 | -3.30 | 0.96 | -2.39 | 0.96 | A+ | A+ | A- |
| 6 | 399282 | 7 | D.1.1.1 | 2 | 4471 | 0.11 | 0.16 | 0.11 | 0.31 | 0.42 | 0.00 | 0.08 | 0.03  | 0.08  | 0.11  | -0.17 | 2.52  | 0.05 | 1.47  | 1.05 | 7.89  | 1.50 | A+ | A+ | A+ |
| 6 | 693776 | 7 | D.1.2.3 | 2 | 4471 | 0.58 | 0.13 | 0.18 | 0.58 | 0.11 | 0.00 | 0.35 | -0.09 | -0.21 | 0.35  | -0.18 | -0.19 | 0.03 | -6.24 | 0.93 | -5.59 | 0.91 | A+ | A- | A+ |
| 6 | 345157 | 7 | D.1.2.1 | 2 | 4471 | 0.58 | 0.11 | 0.58 | 0.22 | 0.10 | 0.00 | 0.41 | -0.14 | 0.41  | -0.25 | -0.18 | -0.18 | 0.03 | -9.90 | 0.88 | -9.77 | 0.84 | A+ | B- | B- |
| 6 | 308885 | 7 | D.2.1.1 | 2 | 4471 | 0.42 | 0.26 | 0.42 | 0.24 | 0.08 | 0.00 | 0.24 | -0.09 | 0.24  | -0.10 | -0.11 | 0.55  | 0.03 | 1.31  | 1.02 | 1.67  | 1.03 | A- | A- | A+ |
| 6 | 913703 | 7 | D.1.1.7 | 2 | 4471 | 0.65 | 0.18 | 0.07 | 0.09 | 0.65 | 0.00 | 0.30 | -0.11 | -0.20 | -0.17 | 0.30  | -0.55 | 0.03 | -2.80 | 0.96 | -3.45 | 0.93 | B- | A+ | A- |
| 6 | 871760 | 7 | D.1.1.2 | 2 | 4471 | 0.32 | 0.32 | 0.16 | 0.43 | 0.09 | 0.00 | 0.16 | 0.16  | -0.18 | 0.08  | -0.14 | 1.08  | 0.03 | 4.70  | 1.07 | 5.64  | 1.13 | A- | A- | A+ |
| 6 | 710034 | 7 | D.1.1.5 | 2 | 4471 | 0.95 | 0.95 | 0.01 | 0.02 | 0.01 | 0.00 | 0.18 | 0.18  | -0.11 | -0.06 | -0.15 | -3.18 | 0.07 | -0.62 | 0.96 | -2.83 | 0.74 | A+ | A- | A- |
| 6 | 418223 | 7 | D.1.2.2 | 2 | 4471 | 0.58 | 0.22 | 0.58 | 0.09 | 0.12 | 0.00 | 0.24 | -0.18 | 0.24  | -0.01 | -0.12 | -0.18 | 0.03 | 1.67  | 1.02 | 1.72  | 1.03 | A+ | A+ | A+ |
| 6 | 252812 | 7 | D.2.1.4 | 2 | 4471 | 0.51 | 0.15 | 0.51 | 0.20 | 0.13 | 0.00 | 0.26 | -0.06 | 0.26  | -0.20 | -0.08 | 0.12  | 0.03 | 0.70  | 1.01 | 1.26  | 1.02 | A- | A+ | A- |
| 6 | 848707 | 7 | D.2.1.2 | 2 | 4471 | 0.73 | 0.06 | 0.13 | 0.08 | 0.73 | 0.00 | 0.23 | -0.15 | -0.11 | -0.09 | 0.23  | -0.95 | 0.04 | 0.20  | 1.00 | 0.47  | 1.01 | A- | A+ | A+ |
| 6 | 161913 | 8 | D.1.1.3 | 2 | 4457 | 0.74 | 0.06 | 0.18 | 0.02 | 0.74 | 0.00 | 0.20 | -0.15 | -0.07 | -0.15 | 0.20  | -1.00 | 0.04 | 2.96  | 1.05 | 3.93  | 1.12 | A+ | A+ | A+ |
| 6 | 951639 | 8 | D.1.1.1 | 2 | 4457 | 0.76 | 0.13 | 0.76 | 0.05 | 0.05 | 0.00 | 0.33 | -0.18 | 0.33  | -0.18 | -0.18 | -1.16 | 0.04 | -3.17 | 0.94 | -3.79 | 0.88 | A+ | A- | A- |
| 6 | 816014 | 8 | D.1.2.3 | 2 | 4457 | 0.70 | 0.08 | 0.09 | 0.13 | 0.70 | 0.01 | 0.46 | -0.25 | -0.22 | -0.23 | 0.46  | -0.79 | 0.04 | -9.90 | 0.85 | -9.90 | 0.76 | A+ | A+ | A- |
| 6 | 176713 | 8 | D.1.2.1 | 2 | 4457 | 0.55 | 0.55 | 0.18 | 0.10 | 0.16 | 0.00 | 0.36 | 0.36  | -0.14 | -0.28 | -0.11 | -0.04 | 0.03 | -5.63 | 0.94 | -5.37 | 0.91 | A+ | A- | A- |
| 6 | 940473 | 8 | D.2.1.1 | 2 | 4457 | 0.69 | 0.16 | 0.69 | 0.07 | 0.07 | 0.00 | 0.30 | -0.07 | 0.30  | -0.17 | -0.24 | -0.72 | 0.03 | -1.84 | 0.97 | -0.85 | 0.98 | A- | A+ | A+ |
| 6 | 202041 | 8 | D.1.1.7 | 2 | 4457 | 0.92 | 0.02 | 0.92 | 0.05 | 0.01 | 0.00 | 0.32 | -0.17 | 0.32  | -0.21 | -0.17 | -2.62 | 0.06 | -2.57 | 0.89 | -5.94 | 0.61 | A+ | A- | A- |
| 6 | 216662 | 8 | D.1.1.2 | 3 | 4457 | 0.48 | 0.13 | 0.32 | 0.07 | 0.48 | 0.00 | 0.26 | -0.11 | -0.14 | -0.11 | 0.26  | 0.32  | 0.03 | 1.67  | 1.02 | 2.18  | 1.04 | A- | A+ | A+ |
| 6 | 930719 | 8 | D.1.1.5 | 2 | 4457 | 0.64 | 0.08 | 0.12 | 0.64 | 0.15 | 0.00 | 0.30 | -0.18 | -0.17 | 0.30  | -0.11 | -0.46 | 0.03 | -0.97 | 0.99 | -1.53 | 0.97 | A- | A- | B- |
| 6 | 619205 | 8 | D.1.2.2 | 2 | 4457 | 0.65 | 0.13 | 0.65 | 0.14 | 0.08 | 0.00 | 0.25 | -0.14 | 0.25  | -0.09 | -0.14 | -0.50 | 0.03 | 2.17  | 1.03 | 0.86  | 1.02 | A- | A+ | A- |
| 6 | 367919 | 8 |         | 2 | 4457 | 0.73 | 0.06 | 0.05 | 0.73 | 0.15 | 0.01 | 0.41 | -0.17 | -0.25 | 0.41  | -0.21 | -0.95 | 0.04 | -6.77 | 0.89 | -7.58 | 0.80 | B+ | A- | A- |

| 6 \$77936  |     |        |    |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
|--|-----|--------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 6         447782         9         D.1.11         2         4455         0.50         0.06         0.09         0.00         0.01         -0.18         0.02         -0.17         0.18         0.03         4.01         1.64         3.61         1.05         A.         A.               6             259487             9             D.1.11             2             4455             0.62             0.18             0.01             0.02             0.07             0.20             0.17             0.17             -0.39             0.03             7.86             0.91             8.24             0.86             A.                   6                 644106                 9                 D.1.17                 2                 24555                 0.83                 0.00                 0.03                 0.01                 0.10                 0.10                 3.04                 0.01                 3.04                 0.01                 3.04                 0.01                 3.04                 0.01                 0.02                 0.05                 0.05                  0.03                 4.81                 0.06                 0.06                  0.06                 0.06                  0.06                  0.06                  0.04   |     |        |    |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    | A- |
| 6         259487         9         D.1.21         2         4455         0.62         0.18         0.11         0.62         0.09         0.00         0.37         -0.20         -0.17         0.37         -0.03         0.03         7.86         0.91         8.24         0.86         A         A           6         644106         9         D.1.17         2         4455         0.51         0.23         0.11         0.11         0.14         0.17         0.30         0.12         0.03         3.88         0.96         -3.66         0.95         A+         A-           6         707818         9         D.1.17         2         4455         0.83         0.02         0.06         0.00         0.83         0.00         0.13         0.13         0.01         0.14         0.00         0.56         0.03         4.84         1.06         5.70         1.10         A+         A-   | 30' | 07206  | 9  | D.1.1.3 | 2 | 4455 | 0.54 | 0.14 | 0.17 | 0.54 | 0.15 | 0.00 | 0.22  | -0.10 | -0.03 | 0.22  | -0.17 | 0.01  | 0.03 | 2.38  | 1.03 | 2.37  | 1.04 | A- | A+ | B+ |
| 6 644106 9 D.21.1 2 4455 0.51 0.23 0.17 0.08 0.51 0.01 0.30 0.11 0.14 0.17 0.30 0.12 0.03 3.38 0.96 3.66 0.95 A+ A-6 707818 9 D.11.2 2 4455 0.83 0.02 0.06 0.09 0.83 0.00 0.32 0.20 0.20 0.15 0.32 1.64 0.04 3.64 0.91 4.81 0.82 A+ A+6 327444 9 D.11.2 2 4455 0.83 0.03 0.83 0.08 0.06 0.00 0.18 0.18 0.08 0.05 0.05 0.05 0.05 0.05 0.05 0.0  | 44′ | 47782  | 9  | D.1.1.1 | 2 | 4455 | 0.50 | 0.36 | 0.08 | 0.50 | 0.05 | 0.00 | 0.20  | -0.01 | -0.18 | 0.20  | -0.17 | 0.18  | 0.03 | 4.01  | 1.04 | 3.61  | 1.05 | A+ | Α- | A- |
| 6 707818 9 D.1.1.7 2 4455 0.83 0.02 0.06 0.09 0.83 0.00 0.32 0.20 0.15 0.32 -1.64 0.04 -3.64 0.91 -4.81 0.82 A+ A+ 6 327444 9 D.1.1.2 2 4455 0.42 0.42 0.37 0.15 0.07 0.00 0.18 0.18 0.03 -0.15 0.06 0.06 0.05 0.03 4.84 1.06 5.70 1.10 A- A- 6 140689 9 D.1.1.5 2 4455 0.40 0.03 0.83 0.08 0.06 0.00 0.26 0.15 0.26 0.14 -0.15 -1.59 0.04 -1.84 0.95 -2.46 0.91 A- A+ 6 876539 9 D.1.2 2 2 4455 0.54 0.11 0.54 0.20 0.14 0.00 0.24 0.18 0.04 0.08 0.09 0.01 0.03 1.08 1.01 1.77 1.03 A- A- 6 464547 9 D.1.1 2 2 4455 0.23 0.19 0.23 0.53 0.04 0.00 0.02 0.03 0.02 0.03 0.02 0.03 0.00 0.03 1.00 1.00 0.03 1.00 1.17 9.90 1.41 A+ A- 6 876926 9 D.1.2 3 2 4455 0.04 0.17 0.54 0.10 0.00 0.24 0.18 0.04 0.00 0.02 0.03 0.00 0.03 0.60 0.99 0.31 1.00 A- A- 6 476926 9 D.1.2 3 2 4455 0.00 0.17 0.60 0.12 0.11 0.00 0.39 0.16 0.39 0.22 0.17 0.31 0.03 9.90 0.88 8-8.74 0.86 A+ A- 6 217234 10 D.1.1.3 2 4451 0.61 0.07 0.12 0.20 0.61 0.00 0.38 0.17 0.20 0.25 0.00 0.38 0.31 0.03 9.90 0.88 8-8.74 0.86 A+ A- 6 171086 10 D.1.1.3 2 4451 0.05 0.81 0.04 0.00 0.05 0.00 0.17 0.17 0.15 0.04 0.12 1.10 0.03 4.73 1.07 0.10 1.15 A+ A- 6 440088 10 D.1.1.1 2 4451 0.05 0.81 0.04 0.00 0.05 0.00 0.17 0.17 0.15 0.04 0.12 1.10 0.03 4.73 1.07 0.10 1.15 A+ A- 6 440088 10 D.1.1.1 2 4451 0.05 0.81 0.04 0.05 0.05 0.00 0.17 0.17 0.15 0.04 0.12 1.10 0.03 4.73 1.07 0.10 1.15 A+ A- 6 440088 10 D.1.1.1 2 4451 0.05 0.81 0.04 0.05 0.05 0.00 0.01 0.07 0.07 0.01 0.03 0.04 0.09 0.03 0.05 0.00 0.03 0.05 0.09 0.03 0.05 0.09 0.09 0.09 0.09 0.09 0.09 0.09   | 25  | 250487 | 9  | D.1.2.1 | 2 | 4455 | 0.62 | 0.18 | 0.11 | 0.62 | 0.09 | 0.00 | 0.37  | -0.20 | -0.17 | 0.37  | -0.17 | -0.39 | 0.03 | -7.86 | 0.91 | -8.24 | 0.86 | A- | A- | A- |
| 6         327444         9         D.1.1.2         2         4455         0.42         0.42         0.37         0.15         0.07         0.00         0.18         0.18         -0.03         -0.15         -0.06         0.56         0.03         4.84         1.06         5.70         1.10         A         A           6         140689         9         D.1.1.5         2         4455         0.83         0.03         0.83         0.08         0.06         0.00         0.26         -0.14         -0.15         -1.59         0.04         -1.84         0.95         -2.46         0.91         A         A           6         876539         9         D.1.2.3         2         4455         0.54         0.11         0.54         0.02         0.01         0.02         -0.09         -0.01         0.03         1.08         1.17         1.90         0.01         0.02         0.03         -0.02         0.03         -0.02         1.15         0.00         0.02         0.02         0.03         0.02         0.11         0.00         0.08         0.09         -0.01         0.00         0.08         0.09         0.03         1.08         1.14         A         A  | 64  | 544106 | 9  | D.2.1.1 | 2 | 4455 | 0.51 | 0.23 | 0.17 | 0.08 | 0.51 | 0.01 | 0.30  | -0.11 | -0.14 | -0.17 | 0.30  | 0.12  | 0.03 | -3.88 | 0.96 | -3.66 | 0.95 | A+ | A- | A+ |
| 6   140689   9   D.1.1.5   2   24455   0.83   0.03   0.83   0.08   0.06   0.00   0.26   0.15   0.26   0.14   0.15   0.15   0.15   0.00   0.04   0.18   0.04   0.18   0.09   0.01   0.03   1.08   1.01   1.77   1.03   A. A+6   464547   9   D.2.1.3   2   24455   0.54   0.17   0.54   0.15   0.14   0.00   0.02   0.03   0.02   0.03   0.02   0.13   0.21   1.54   0.04   8.05   1.17   9.90   1.41   A. A+6   979146   9   D.2.1.3   2   24455   0.54   0.17   0.54   0.15   0.14   0.00   0.26   0.06   0.26   0.19   0.11   0.00   0.03   0.06   0.99   0.31   1.00   A. A+6   476926   9   D.2.1.3   2   24455   0.60   0.17   0.60   0.12   0.11   0.00   0.39   0.12   0.17   0.31   0.03   9.90   0.88   8.74   0.86   A. A-6   217234   1.0   D.1.1.3   2   24451   0.61   0.07   0.12   0.20   0.61   0.00   0.38   0.17   0.17   0.01   0.04   0.15   0.14   0.00   0.38   0.17   0.17   0.05   0.05   0.18   0.15   0.15   0.04   0.15   0.15   0.04   0.15   0.15   0.04   0.15   0.15   0.04   0.15   0.15   0.04   0.15   0.15   0.04   0.15   0. | 70  | 07818  | 9  | D.1.1.7 | 2 | 4455 | 0.83 | 0.02 | 0.06 | 0.09 | 0.83 | 0.00 | 0.32  | -0.20 | -0.20 | -0.15 | 0.32  | -1.64 | 0.04 | -3.64 | 0.91 | -4.81 | 0.82 | A+ | A+ | A+ |
| 6 876539 9 D.1.2.2 2 4455 0.54 0.11 0.54 0.20 0.14 0.00 0.24 -0.18 0.24 -0.08 -0.09 -0.01 0.03 1.08 1.01 1.77 1.03 A- A- 6 464547 9 D.2.1.3 2 4455 0.23 0.19 0.23 0.53 0.04 0.00 -0.02 -0.03 -0.02 0.13 -0.21 1.54 0.04 8.05 1.17 9.90 1.44 A+ A- A- 6 937146 9 D.2.1.4 2 4455 0.54 0.17 0.54 0.15 0.14 0.00 0.26 -0.06 0.26 -0.06 0.26 -0.19 -0.11 0.00 0.03 0.60 0.99 -0.31 1.00 A+ A- A- 6 476926 9 D.1.2.3 2 4455 0.60 0.17 0.60 0.12 0.11 0.00 0.39 -0.16 0.39 -0.22 -0.17 -0.31 0.03 -9.90 0.88 -8.74 0.86 A+ A- 6 171086 10 D.1.1.3 2 4451 0.61 0.07 0.12 0.20 0.61 0.00 0.38 -0.17 -0.20 0.20 0.38 -0.31 0.03 -9.90 0.88 -8.74 0.86 A+ A- 6 440048 10 D.1.1.1 2 4451 0.05 0.81 0.04 0.10 0.05 0.00 -0.11 0.25 -0.17 -0.15 0.04 -0.12 1.10 0.03 4.73 1.07 6.10 1.15 A+ A- 6 45960 10 D.1.2.3 2 4451 0.63 0.23 0.63 0.04 0.00 0.00 0.03 0.00 0.31 0.01 0.35 0.07 1.78 1.11 9.90 2.72 A+ A- 6 45960 10 D.1.2.1 2 4451 0.63 0.23 0.63 0.04 0.00 0.00 0.31 0.07 0.31 0.03 0.05 0.05 0.05 0.05 0.05 0.05 0.05  | 32  | 27444  | 9  | D.1.1.2 | 2 | 4455 | 0.42 | 0.42 | 0.37 | 0.15 | 0.07 | 0.00 | 0.18  | 0.18  | -0.03 | -0.15 | -0.06 | 0.56  | 0.03 | 4.84  | 1.06 | 5.70  | 1.10 | A- | A- | A+ |
| 6 464547 9 D.2.1.3 2 4455 D.23 0.19 D.23 0.53 D.04 D.00 D.25 D.05 D.05 D.05 D.05 D.05 D.05 D.05 D.0  | 140 | 40689  | 9  | D.1.1.5 | 2 | 4455 | 0.83 | 0.03 | 0.83 | 0.08 | 0.06 | 0.00 | 0.26  | -0.15 | 0.26  | -0.14 | -0.15 | -1.59 | 0.04 | -1.84 | 0.95 | -2.46 | 0.91 | A+ | A+ | A- |
| 6 937146 9 D.2.1.4 2 4455 0.54 0.17 0.54 0.15 0.14 0.00 0.26 -0.06 0.26 -0.19 -0.11 0.00 0.03 -0.60 0.99 -0.31 1.00 A+   | 87  | 76539  | 9  | D.1.2.2 | 2 | 4455 | 0.54 | 0.11 | 0.54 | 0.20 | 0.14 | 0.00 | 0.24  | -0.18 | 0.24  | -0.08 | -0.09 | -0.01 | 0.03 | 1.08  | 1.01 | 1.77  | 1.03 | A- | A+ | A+ |
| 6 476926 9 D.1.2.3 2 4455 0.60 0.17 0.60 0.12 0.11 0.00 0.39 -0.16 0.39 -0.22 -0.17 -0.31 0.03 -9.90 0.88 -8.74 0.86 A+ A-6 0.77 0.78 0.78 0.78 0.78 0.78 0.78 0.78  | 46  | 64547  | 9  | D.2.1.3 | 2 | 4455 | 0.23 | 0.19 | 0.23 | 0.53 | 0.04 | 0.00 | -0.02 | -0.03 | -0.02 | 0.13  | -0.21 | 1.54  | 0.04 | 8.05  | 1.17 | 9.90  | 1.41 | A+ | A+ | A- |
| 6 217234 10 D.1.1.3 2 4451 0.61 0.07 0.12 0.20 0.61 0.00 0.38 -0.17 0.20 0.20 0.38 -0.31 0.03 -7.69 0.91 -7.91 0.86 A+   | 93′ | 37146  | 9  | D.2.1.4 | 2 | 4455 | 0.54 | 0.17 | 0.54 | 0.15 | 0.14 | 0.00 | 0.26  | -0.06 | 0.26  | -0.19 | -0.11 | 0.00  | 0.03 | -0.60 | 0.99 | -0.31 | 1.00 | A+ | A+ | A- |
| 6 171086 10 D.1.13 2 4451 0.32 0.32 0.15 0.37 0.15 0.00 0.17 0.17 0.15 0.04 0.12 1.10 0.03 4.73 1.07 6.10 1.15 A+ A-6 440048 10 D.1.1.1 2 4451 0.05 0.81 0.04 0.10 0.05 0.00 0.01 0.25 0.17 0.13 0.11 3.55 0.07 1.78 1.11 9.90 2.72 A+ A+6 397205 10 D.1.2.3 2 4451 0.63 0.23 0.63 0.04 0.09 0.00 0.31 0.17 0.31 0.12 0.18 0.04 0.03 0.257 0.97 0.257 0.95 A- A-6 465960 10 D.1.2.1 2 4451 0.54 0.05 0.05 0.05 0.54 0.36 0.00 0.28 0.11 0.19 0.28 0.15 0.06 0.03 0.45 0.99 0.093 0.98 A+ A+6 0.49724 10 D.2.1.1 2 4451 0.62 0.15 0.62 0.13 0.10 0.00 0.33 0.13 0.33 0.21 0.14 0.25 0.01 0.14 0.14 0.15 0.69 0.02 0.00 0.07 0.07 0.07 0.18 0.23 0.14 0.29 0.04 0.15 1.19 9.90 1.95 A+ A-6 936107 10 D.1.1.2 2 4451 0.14 0.14 0.15 0.69 0.02 0.00 0.07 0.07 0.07 0.18 0.23 0.14 0.29 0.04 0.15 1.19 9.90 1.95 A+ A-6 0.40066 0.05 0.12 0.12 0.14 0.14 0.14 0.15 0.69 0.02 0.00 0.07 0.07 0.07 0.18 0.23 0.14 0.29 0.04 0.15 1.19 9.90 1.95 A+ A-6 0.40066 0.05 0.05 0.05 0.05 0.05 0.05 0.05   | 47  | 76926  | 9  | D.1.2.3 | 2 | 4455 | 0.60 | 0.17 | 0.60 | 0.12 | 0.11 | 0.00 | 0.39  | -0.16 | 0.39  | -0.22 | -0.17 | -0.31 | 0.03 | -9.90 | 0.88 | -8.74 | 0.86 | A+ | A- | A- |
| 6 440048 10 D.1.1.1 2 4451 0.05 0.81 0.04 0.10 0.05 0.00 -0.11 0.25 -0.17 -0.13 -0.11 3.55 0.07 1.78 1.11 9.90 2.72 A+ A+ A+ 6 397205 10 D.1.2.3 2 4451 0.63 0.23 0.63 0.04 0.09 0.00 0.31 -0.17 0.31 -0.12 -0.18 -0.40 0.03 -2.57 0.97 -2.57 0.95 A- A- 6 465960 10 D.1.2.1 2 4451 0.54 0.05 0.05 0.54 0.36 0.00 0.28 -0.11 -0.19 0.28 -0.15 0.06 0.03 -0.45 0.99 -0.93 0.98 A+ A+ 6 449724 10 D.2.1.1 2 4451 0.62 0.15 0.62 0.13 0.10 0.00 0.33 -0.13 0.33 -0.21 -0.14 -0.32 0.03 -4.08 0.95 -4.25 0.92 A- A+ 6 936107 10 D.1.1.7 2 4451 0.14 0.14 0.15 0.69 0.02 0.00 -0.07 -0.07 -0.18 0.23 -0.14 2.29 0.04 6.15 1.19 9.90 1.95 A+ A- 6 760497 10 D.1.1.2 2 4451 0.63 0.18 0.63 0.11 0.71 0.05 0.00 0.31 -0.18 -0.20 0.31 -0.08 -0.79 0.04 -3.10 0.95 -3.80 0.91 A+ B- 6 400676 10 D.1.2.2 2 4451 0.63 0.18 0.63 0.11 0.07 0.00 0.39 -0.23 0.39 -0.15 -0.18 -0.40 0.03 -7.69 0.90 -7.38 0.86 A- B+ 6 439719 10 D.2.1.3 2 4451 0.82 0.08 0.82 0.05 0.05 0.05 0.00 0.39 -0.23 0.39 -0.15 -0.18 -0.40 0.03 -7.69 0.90 -7.38 0.86 A- B- 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 0.08 1.00 0.02 1.00 A- A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.35 -0.18 -0.24 0.12 0.17 0.25 0.04 -4.62 0.94 -4.87 0.91 A+ A- 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.35 -0.18 -0.24 0.12 0.17 0.25 0.04 -9.90 0.88 -9.21 0.88 A+ A-   | 21  | 17234  | 10 | D.1.1.3 | 2 | 4451 | 0.61 | 0.07 | 0.12 | 0.20 | 0.61 | 0.00 | 0.38  | -0.17 | -0.20 | -0.20 | 0.38  | -0.31 | 0.03 | -7.69 | 0.91 | -7.91 | 0.86 | A+ | A+ | A- |
| 6 397205 10 D.1.2.3 2 4451 0.63 0.23 0.63 0.04 0.09 0.00 0.31 -0.17 0.31 -0.12 -0.18 -0.40 0.03 -2.57 0.97 -2.57 0.95 A- A- 6 465960 10 D.1.2.1 2 4451 0.54 0.05 0.05 0.54 0.36 0.00 0.28 -0.11 -0.19 0.28 -0.15 0.06 0.03 -0.45 0.99 -0.93 0.98 A+ A+ A+ 6 449724 10 D.2.1.1 2 4451 0.62 0.15 0.62 0.13 0.10 0.00 0.33 -0.13 0.33 -0.21 -0.14 -0.32 0.03 -4.08 0.95 -4.25 0.92 A- A+ 6 936107 10 D.1.1.7 2 4451 0.14 0.14 0.15 0.69 0.02 0.00 -0.07 -0.07 -0.07 -0.18 0.23 -0.14 2.29 0.04 6.15 1.19 9.90 1.95 A+ A- 6 760497 10 D.1.1.2 2 4451 0.63 0.18 0.63 0.11 0.71 0.05 0.00 0.31 -0.18 -0.20 0.31 -0.08 -0.79 0.04 -3.10 0.95 -3.80 0.91 A+ B- 6 439719 10 D.2.1.3 2 4451 0.82 0.08 0.82 0.05 0.05 0.05 0.05 0.00 0.39 -0.23 0.39 -0.15 -0.18 -0.40 0.03 -7.69 0.90 -7.38 0.86 A- B+ 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 -0.08 1.00 0.02 1.00 A- A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.05 0.00 0.42 -0.24 0.42 -0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A- A- A- A- 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.13 0.35 -0.22 0.04 -9.90 0.88 -9.21 0.85 A+ A-  | 17  | 71086  | 10 | D.1.1.3 | 2 | 4451 | 0.32 | 0.32 | 0.15 | 0.37 | 0.15 | 0.00 | 0.17  | 0.17  | -0.15 | 0.04  | -0.12 | 1.10  | 0.03 | 4.73  | 1.07 | 6.10  | 1.15 | A+ | A- | A- |
| 6 465960 10 D.1.2.1 2 4451 0.54 0.05 0.05 0.54 0.36 0.00 0.28 -0.11 -0.19 0.28 -0.15 0.06 0.03 -0.45 0.99 -0.93 0.98 A+ A+ A+ 6 449724 10 D.2.1.1 2 4451 0.62 0.15 0.62 0.13 0.10 0.00 0.33 -0.13 0.33 -0.21 -0.14 -0.32 0.03 -4.08 0.95 -4.25 0.92 A- A+ 6 936107 10 D.1.1.7 2 4451 0.14 0.14 0.15 0.69 0.02 0.00 -0.07 -0.07 -0.18 0.23 -0.14 2.29 0.04 6.15 1.19 9.90 1.95 A+ A- 6 760497 10 D.1.1.2 2 4451 0.71 0.13 0.11 0.71 0.05 0.00 0.31 -0.18 -0.20 0.31 -0.08 -0.79 0.04 -3.10 0.95 -3.80 0.91 A+ B- 6 400676 10 D.1.2.2 2 4451 0.63 0.18 0.63 0.11 0.07 0.00 0.39 -0.23 0.39 -0.15 -0.18 -0.40 0.03 -7.69 0.90 -7.38 0.86 A- B+ 6 439719 10 D.2.1.3 2 4451 0.82 0.08 0.82 0.05 0.05 0.00 0.39 -0.23 0.39 -0.17 -0.23 -1.54 0.04 -5.89 0.86 -7.65 0.72 A- B- 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 -0.08 1.00 0.02 1.00 A- A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 -0.18 -0.24 0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-  | 440 | 40048  | 10 | D.1.1.1 | 2 | 4451 | 0.05 | 0.81 | 0.04 | 0.10 | 0.05 | 0.00 | -0.11 | 0.25  | -0.17 | -0.13 | -0.11 | 3.55  | 0.07 | 1.78  | 1.11 | 9.90  | 2.72 | A+ | A+ | A+ |
| 6 449724 10 D.2.1.1 2 4451 0.62 0.15 0.62 0.13 0.10 0.00 0.33 -0.13 0.33 -0.21 -0.14 -0.32 0.03 -4.08 0.95 -4.25 0.92 A- A+ 6 936107 10 D.1.1.7 2 4451 0.14 0.14 0.15 0.69 0.02 0.00 -0.07 -0.07 -0.18 0.23 -0.14 2.29 0.04 6.15 1.19 9.90 1.95 A+ A- 6 760497 10 D.1.1.2 2 4451 0.71 0.13 0.11 0.71 0.05 0.00 0.31 -0.18 -0.20 0.31 -0.08 -0.79 0.04 -3.10 0.95 -3.80 0.91 A+ B- 6 400676 10 D.1.2.2 2 4451 0.63 0.18 0.63 0.11 0.07 0.00 0.39 -0.23 0.39 -0.15 -0.18 -0.40 0.03 -7.69 0.90 -7.38 0.86 A- B+ 6 439719 10 D.2.1.3 2 4451 0.82 0.08 0.82 0.05 0.05 0.05 0.00 0.39 -0.23 0.39 -0.17 -0.23 -1.54 0.04 -5.89 0.86 -7.65 0.72 A- B- 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 -0.08 1.00 0.02 1.00 A- A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 0.00 0.42 -0.24 0.42 -0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A- 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 0.47 0.25 0.04 0.42 -0.21 0.47 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-  | 39  | 97205  | 10 | D.1.2.3 | 2 | 4451 | 0.63 | 0.23 | 0.63 | 0.04 | 0.09 | 0.00 | 0.31  | -0.17 | 0.31  | -0.12 | -0.18 | -0.40 | 0.03 | -2.57 | 0.97 | -2.57 | 0.95 | A- | A- | A+ |
| 6 936107 10 D.1.1.7 2 4451 0.14 0.14 0.15 0.69 0.02 0.00 -0.07 -0.07 -0.18 0.23 -0.14 2.29 0.04 6.15 1.19 9.90 1.95 A+ A- 6 760497 10 D.1.1.2 2 4451 0.71 0.13 0.11 0.71 0.05 0.00 0.31 -0.18 -0.20 0.31 -0.08 -0.79 0.04 -3.10 0.95 -3.80 0.91 A+ B- 6 400676 10 D.1.2.2 2 4451 0.63 0.18 0.63 0.11 0.07 0.00 0.39 -0.23 0.39 -0.15 -0.18 -0.40 0.03 -7.69 0.90 -7.38 0.86 A- B+ 6 439719 10 D.2.1.3 2 4451 0.82 0.08 0.82 0.05 0.05 0.05 0.00 0.39 -0.23 0.39 -0.17 -0.23 -1.54 0.04 -5.89 0.86 -7.65 0.72 A- B- 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 -0.08 1.00 0.02 1.00 A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 -0.18 -0.24 0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-  | 46  | 65960  | 10 | D.1.2.1 | 2 | 4451 | 0.54 | 0.05 | 0.05 | 0.54 | 0.36 | 0.00 | 0.28  | -0.11 | -0.19 | 0.28  | -0.15 | 0.06  | 0.03 | -0.45 | 0.99 | -0.93 | 0.98 | A+ | A+ | A+ |
| 6       760497       10       D.1.1.2       2       4451       0.71       0.13       0.11       0.71       0.05       0.00       0.31       -0.18       -0.20       0.31       -0.08       -0.79       0.04       -3.10       0.95       -3.80       0.91       A+       B-         6       400676       10       D.1.2.2       2       4451       0.63       0.18       0.63       0.11       0.07       0.00       0.39       -0.23       0.39       -0.15       -0.18       -0.40       0.03       -7.69       0.90       -7.38       0.86       A-       B+         6       439719       10       D.2.1.3       2       4451       0.82       0.08       0.82       0.05       0.05       0.00       0.39       -0.23       0.39       -0.17       -0.23       -1.54       0.04       -5.89       0.86       -7.65       0.72       A-         6       800246       10       D.2.1.4       1       4451       0.59       0.13       0.21       0.07       0.59       0.01       0.28       -0.19       0.00       -0.27       0.28       -0.17       0.03       -0.08       1.00       0.0       -0.12       1.52 <t< td=""><td>44</td><td>49724</td><td>10</td><td>D.2.1.1</td><td>2</td><td>4451</td><td>0.62</td><td>0.15</td><td>0.62</td><td>0.13</td><td>0.10</td><td>0.00</td><td>0.33</td><td>-0.13</td><td>0.33</td><td>-0.21</td><td>-0.14</td><td>-0.32</td><td>0.03</td><td>-4.08</td><td>0.95</td><td>-4.25</td><td>0.92</td><td>A-</td><td>A+</td><td>A+</td></t<>   | 44  | 49724  | 10 | D.2.1.1 | 2 | 4451 | 0.62 | 0.15 | 0.62 | 0.13 | 0.10 | 0.00 | 0.33  | -0.13 | 0.33  | -0.21 | -0.14 | -0.32 | 0.03 | -4.08 | 0.95 | -4.25 | 0.92 | A- | A+ | A+ |
| 6 400676 10 D.1.2.2 2 4451 0.63 0.18 0.63 0.11 0.07 0.00 0.39 -0.23 0.39 -0.15 -0.18 -0.40 0.03 -7.69 0.90 -7.38 0.86 A- B+ 6 439719 10 D.2.1.3 2 4451 0.82 0.08 0.82 0.05 0.05 0.00 0.39 -0.23 0.39 -0.17 -0.23 -1.54 0.04 -5.89 0.86 -7.65 0.72 A- B- 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 -0.08 1.00 0.02 1.00 A- A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 -0.18 -0.24 -0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-   | 93  | 36107  | 10 | D.1.1.7 | 2 | 4451 | 0.14 | 0.14 | 0.15 | 0.69 | 0.02 | 0.00 | -0.07 | -0.07 | -0.18 | 0.23  | -0.14 | 2.29  | 0.04 | 6.15  | 1.19 | 9.90  | 1.95 | A+ | A- | A- |
| 6 439719 10 D.2.1.3 2 4451 0.82 0.08 0.82 0.05 0.05 0.00 0.39 -0.23 0.39 -0.17 -0.23 -1.54 0.04 -5.89 0.86 -7.65 0.72 A- B- 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 -0.08 1.00 0.02 1.00 A- A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 -0.18 -0.24 -0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-   | 76  | 60497  | 10 | D.1.1.2 | 2 | 4451 | 0.71 | 0.13 | 0.11 | 0.71 | 0.05 | 0.00 | 0.31  | -0.18 | -0.20 | 0.31  | -0.08 | -0.79 | 0.04 | -3.10 | 0.95 | -3.80 | 0.91 | A+ | B- | A- |
| 6 800246 10 D.2.1.4 1 4451 0.59 0.13 0.21 0.07 0.59 0.01 0.28 -0.19 0.00 -0.27 0.28 -0.17 0.03 -0.08 1.00 0.02 1.00 A- A- 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 -0.18 -0.24 -0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-   | 40  | 00676  | 10 | D.1.2.2 | 2 | 4451 | 0.63 | 0.18 | 0.63 | 0.11 | 0.07 | 0.00 | 0.39  | -0.23 | 0.39  | -0.15 | -0.18 | -0.40 | 0.03 | -7.69 | 0.90 | -7.38 | 0.86 | A- | B+ | A+ |
| 6 179150 11 D.1.1.1 2 3593 0.24 0.33 0.24 0.18 0.00 0.15 0.11 0.15 -0.16 -0.12 1.52 0.04 3.05 1.07 6.13 1.22 A- A+ 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 -0.18 -0.24 -0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-  | 439 | 39719  | 10 | D.2.1.3 | 2 | 4451 | 0.82 | 0.08 | 0.82 | 0.05 | 0.05 | 0.00 | 0.39  | -0.23 | 0.39  | -0.17 | -0.23 | -1.54 | 0.04 | -5.89 | 0.86 | -7.65 | 0.72 | A- | B- | B- |
| 6 848694 11 D.1.2.3 2 3593 0.59 0.06 0.10 0.25 0.59 0.00 0.35 -0.18 -0.24 -0.13 0.35 -0.22 0.04 -4.62 0.94 -4.87 0.91 A+ A+ 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-   | 80  | 300246 | 10 | D.2.1.4 | 1 | 4451 | 0.59 | 0.13 | 0.21 | 0.07 | 0.59 | 0.01 | 0.28  | -0.19 | 0.00  | -0.27 | 0.28  | -0.17 | 0.03 | -0.08 | 1.00 | 0.02  | 1.00 | A- | A- | A- |
| 6 236524 11 D.1.1.6 2 3593 0.49 0.38 0.49 0.08 0.05 0.00 0.42 -0.24 0.42 -0.21 -0.17 0.25 0.04 -9.90 0.88 -9.21 0.85 A+ A-   | 179 | 79150  | 11 | D.1.1.1 | 2 | 3593 | 0.24 | 0.33 | 0.24 | 0.24 | 0.18 | 0.00 | 0.15  | 0.11  | 0.15  | -0.16 | -0.12 | 1.52  | 0.04 | 3.05  | 1.07 | 6.13  | 1.22 | A- | A+ | A+ |
|  | 84  | 348694 | 11 | D.1.2.3 | 2 | 3593 | 0.59 | 0.06 | 0.10 | 0.25 | 0.59 | 0.00 | 0.35  | -0.18 | -0.24 | -0.13 | 0.35  | -0.22 | 0.04 | -4.62 | 0.94 | -4.87 | 0.91 | A+ | A+ | A- |
| 6 171484 11 D.2.1.1 2 3593 0.53 0.18 0.16 0.53 0.13 0.00 0.38 -0.18 -0.20 0.38 -0.13 0.05 0.04 -7.66 0.91 -6.22 0.90 A+ A-   | 23  | 36524  | 11 | D.1.1.6 | 2 | 3593 | 0.49 | 0.38 | 0.49 | 0.08 | 0.05 | 0.00 | 0.42  | -0.24 | 0.42  | -0.21 | -0.17 | 0.25  | 0.04 | -9.90 | 0.88 | -9.21 | 0.85 | A+ | A- | A- |
|  | 17  | 71484  | 11 | D.2.1.1 | 2 | 3593 | 0.53 | 0.18 | 0.16 | 0.53 | 0.13 | 0.00 | 0.38  | -0.18 | -0.20 | 0.38  | -0.13 | 0.05  | 0.04 | -7.66 | 0.91 | -6.22 | 0.90 | A+ | A- | A- |
| 6 365643 11 D.1.1.5 2 3593 0.39 0.23 0.25 0.39 0.14 0.00 0.24 -0.08 -0.07 0.24 -0.15 0.71 0.04 1.30 1.02 2.29 1.05 A- A-   | 36: | 65643  | 11 | D.1.1.5 | 2 | 3593 | 0.39 | 0.23 | 0.25 | 0.39 | 0.14 | 0.00 | 0.24  | -0.08 | -0.07 | 0.24  | -0.15 | 0.71  |      | 1.30  | 1.02 | 2.29  | 1.05 | A- | A- | A- |
| 6 478088 11 D.1.1.8 2 3593 0.48 0.14 0.48 0.15 0.23 0.00 0.27 -0.19 0.27 -0.13 -0.05 0.29 0.04 0.33 1.00 0.53 1.01 A- A-   |     |        |    |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    | A- |
| 6 268322 11 D.1.2.1 2 3593 0.67 0.67 0.04 0.04 0.25 0.00 0.38 0.38 -0.17 -0.15 -0.27 -0.66 0.04 -6.10 0.90 -6.67 0.84 A+ A-  |     |        |    |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    | A- |
| 6 984405 11 D.1.1.4 2 3593 0.23 0.22 0.23 0.29 0.26 0.00 -0.03 -0.07 -0.03 0.17 -0.08 1.58 0.04 9.24 1.22 9.90 1.51 A+ A+  |     |        |    |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    | A- |
| 6 437376 11 D.1.2.2 2 3593 0.64 0.15 0.64 0.10 0.11 0.00 0.31 -0.17 0.31 -0.12 -0.16 -0.51 0.04 -2.64 0.96 -2.96 0.93 A- B+  |     |        |    |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    | A+ |

| 6 988882 11 D.2.1.4 1 3593 0.47 0.47 0.12 0.28 0.12 0.01 0.17 0.17 40.11 0.05 4.02 0.32 0.04 7.09 1.09 7.06 1.13 A+ A+ A+ 6 87669 12 D.1.1.3 3 3602 0.43 0.19 0.18 0.19 0.43 0.00 0.23 -0.14 -0.05 -0.10 0.23 0.53 0.04 2.26 1.03 4.01 1.08 A+ A- A+ 6 66410 12 D.1.1.1 2 3602 0.38 0.11 0.29 0.38 0.23 0.00 0.13 -0.00 0.13 0.00 0.23 -0.10 0.23 0.00 0.04 7.63 1.11 9.46 1.22 A- A+ 6 66410 12 D.1.1.1 2 3602 0.73 0.10 0.73 0.09 0.08 0.00 0.00 0.00 0.00 0.13 0.00 0.00 0.00   |       |       |    |         |   |      |      |      |      |      |      |      |      |       |       |       |       |       |      |       |      |       |      |    | _  | T _ |
|--|-------|-------|----|---------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|-----|
| 6 876469 12 D.1.13 3 3602 0.43 0.19 0.18 0.19 0.43 0.00 0.23 -0.14 -0.05 -0.10 0.23 0.53 0.04 2.26 1.03 4.01 1.05 A+ A-6 660410 12 D.1.11 2 3602 0.38 0.11 0.29 0.38 0.23 0.00 0.13 -0.09 -0.10 0.13 0.02 0.80 0.04 7.63 1.11 9.46 1.22 A- A-6 690463 12 D.1.16 2 3602 0.81 0.10 0.73 0.09 0.08 0.00 0.40 -0.13 0.40 0.25 -0.23 0.95 0.04 5.83 0.89 -6.92 0.80 A+ B-6 567186 12 D.1.2 2 3602 0.81 0.10 0.81 0.07 0.02 0.00 0.39 0.26 0.39 0.21 0.15 1.50 0.05 4.72 0.88 -6.58 0.74 A+ A-6 680254 12 D.1.18 2 3602 0.30 0.30 0.36 0.17 0.17 0.00 0.04 0.04 0.09 0.12 0.04 0.13 0.04 0.25 0.33 1.18 9.90 1.34 A- A-6 880254 12 D.1.18 2 3602 0.38 0.18 0.26 0.38 0.18 0.00 0.26 0.01 0.04 0.04 0.04 0.04 0.00 0.04 1.20 0.04 0.35 1.18 9.90 1.34 A- A-6 880254 12 D.1.14 2 3602 0.66 0.17 0.05 0.12 0.66 0.00 0.25 0.18 0.13 0.00 0.25 0.18 0.13 0.00 0.25 0.05 0.04 0.87 0.99 0.06 1.00 A- A-6 686023 12 D.1.2 2 3602 0.80 0.80 0.80 0.80 0.80 0.05 0.00 0.39 0.012 0.15 0.12 0.29 0.26 0.04 0.87 0.99 0.06 1.00 A- A-6 686023 12 D.1.2 2 3602 0.80 0.80 0.80 0.80 0.05 0.05 0.00 0.39 0.12 0.15 0.12 0.29 0.25 0.18 0.13 0.00 0.25 0.18 0.13 0.00 0.25 0.18 0.13 0.00 0.25 0.25 0.05 0.04 0.87 0.99 0.06 1.00 A- A-6 686023 12 D.1.2 2 3602 0.80 0.80 0.80 0.05 0.05 0.00 0.39 0.12 0.15 0.12 0.29 0.25 0.04 0.87 0.99 0.06 0.05 0.00 0.39 0.12 0.15 0.12 0.29 0.25 0.04 0.08 0.05 0.04 0.05 0.00 0.05 0.00 0.39 0.19 0.39 0.22 0.20 0.165 0.04 0.04 0.00 0.89 0.39 0.06 0.05 0.00 0.39 0.19 0.39 0.22 0.20 0.165 0.04 0.04 0.00 0.89 0.39 0.08 0.04 0.05 0.05 0.00 0.39 0.19 0.39 0.22 0.20 0.165 0.05 0.04 0.05 0.99 0.39 0.08 0.04 0.05 0.05 0.00 0.39 0.19 0.39 0.22 0.20 0.165 0.04 0.04 0.00 0.89 0.39 0.08 0.04 0.05 0.00 0.00 0.00 0.00 0.00 0.00  |       |       |    |         |   |      |      |      |      |      |      |      |      |       |       |       |       |       |      |       |      |       |      |    |    | C-  |
| 6 660410 12 D1.1.1 2 3602 0.38 0.11 0.29 0.38 0.23 0.00 0.13 0.09 0.10 0.13 0.02 0.80 0.04 7.63 1.11 9.46 1.22 \( \lambda \) \(\ |       |       |    |         |   |      |      |      |      |      |      |      |      |       |       |       |       |       |      |       |      |       |      | A+ | A+ | A-  |
| 6 690463 12 D.1.1.6 2 3602 0.73 0.10 0.73 0.09 0.08 0.00 0.40 -0.13 0.40 -0.25 -0.23 -0.93 0.04 5.83 0.89 -6.92 0.80 A+ B-6 567186 12 D.1.2.1 2 3602 0.81 0.10 0.81 0.07 0.02 0.00 0.39 -0.26 0.39 -0.21 -0.15 -1.50 0.05 -4.72 0.88 -6.58 0.74 A+ A-6 510122 12 D.2.1.1 2 3602 0.30 0.30 0.36 0.77 0.17 0.00 0.40 0.09 0.12 -0.04 1.20 0.04 9.33 1.18 9.90 1.34 A- A-6 890254 12 D.1.1.8 2 3602 0.38 0.18 0.26 0.38 0.18 0.00 0.26 -0.13 -0.02 0.26 -0.17 0.76 0.04 1.34 0.98 3.58 1.08 0.4 A-6 6 977303 12 D.1.1.4 2 3602 0.66 0.17 0.05 0.12 0.66 0.00 0.25 -0.18 0.13 -0.00 0.25 -0.57 0.04 1.34 0.98 3.58 1.08 0.4 A-A-6 6 977303 12 D.1.1.4 2 3602 0.66 0.17 0.05 0.12 0.09 0.49 0.00 0.29 -0.12 -0.15 -0.12 0.29 0.26 0.04 0.37 0.99 0.06 1.00 A-A-6 6 98039 12 D.1.2 2 2 3602 0.49 0.30 0.12 0.09 0.49 0.00 0.29 -0.12 -0.15 -0.12 0.29 0.26 0.04 0.37 0.99 0.06 1.00 A-A-6 89139 12 D.1.2 2 2 3602 0.49 0.30 0.63 0.06 0.03 0.00 0.39 0.01 0.36 0.21 0.12 0.12 0.12 0.12 0.12 0.12 0.12   | 6 87  | 76469 | 12 | D.1.1.3 | 3 | 3602 | 0.43 | 0.19 | 0.18 | 0.19 | 0.43 | 0.00 | 0.23 | -0.14 | -0.05 | -0.10 | 0.23  | 0.53  | 0.04 | 2.26  | 1.03 | 4.01  | 1.08 | A+ | A- | A-  |
| 6 567186 12 D.1.2.1 2 3602 0.81 0.10 0.81 0.07 0.02 0.00 0.39 -0.26 0.39 -0.21 -0.15 -1.50 0.05 -4.72 0.88 -6.58 0.74 A+ A- 6 510122 12 D.2.1.1 2 3602 0.30 0.30 0.36 0.17 0.17 0.00 0.04 0.04 0.09 -0.12 -0.04 1.20 0.04 9.53 1.18 9.90 1.34 A- A- 6 880254 12 D.1.1.8 2 3602 0.38 0.18 0.26 0.38 0.18 0.00 0.26 -0.13 0.02 0.26 -0.17 0.76 0.04 1.34 0.98 3.58 1.08 A+ A- 6 977303 12 D.1.1.4 2 3602 0.66 0.17 0.05 0.12 0.66 0.00 0.25 -0.18 0.13 -0.06 0.25 -0.57 0.04 1.48 1.02 0.77 1.02 A+ A+ 6 981039 12 D.1.2.2 2 3602 0.49 0.30 0.12 0.09 0.49 0.00 0.29 -0.12 0.15 0.12 0.29 0.26 0.04 0.87 0.99 0.06 1.00 A- A- 6 56123 12 D.2.1.3 2 3602 0.83 0.06 0.83 0.06 0.83 0.06 0.05 0.00 0.39 -0.19 0.39 -0.21 0.15 0.12 0.29 0.26 0.04 0.89 0.99 0.06 1.00 A- A- 6 487799 12 D.2.1.4 1 3602 0.81 0.07 0.07 0.81 0.05 0.01 0.36 -0.21 0.17 0.36 0.20 -1.45 0.05 4.91 0.86 -5.16 0.77 A+ B- 6 492107 12 D.1.2.3 2 3602 0.61 0.12 0.61 0.16 0.11 0.00 0.33 -0.16 0.33 0.17 0.15 0.34 0.04 3.02 0.96 2.92 0.94 A- A+ 6 230965 13 D.1.1.3 2 3603 0.31 0.26 0.26 0.31 0.17 0.00 0.09 0.02 0.00 0.09 -0.11 1.14 0.04 6.99 1.12 7.88 1.21 A+ A+ 6 6 43692 13 D.1.1.1 2 3603 0.04 0.04 0.12 0.78 0.06 0.00 0.03 0.00 0.03 0.09 0.00 0.09 0.01 1.14 0.04 0.99 0.00 0.22 0.04 0.95 0.92 4.55 0.92 A- 6 6 63692 13 D.1.1.1 2 3603 0.04 0.04 0.12 0.78 0.06 0.00 0.03 0.00 0.00 0.09 0.01 0.16 0.52 0.04 0.69 0.92 0.25 0.94 0.26 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94   | 6 66  | 60410 | 12 | D.1.1.1 | 2 | 3602 | 0.38 | 0.11 | 0.29 | 0.38 | 0.23 | 0.00 | 0.13 | -0.09 | -0.10 | 0.13  | 0.02  | 0.80  | 0.04 | 7.63  | 1.11 | 9.46  | 1.22 | A- | A+ | A-  |
| 6 510122 12 D.2.1.1 2 3602 0.30 0.30 0.36 0.17 0.17 0.00 0.04 0.04 0.09 0.12 0.04 1.20 0.04 9.53 1.18 9.90 1.34 A. A. A. 6 850254 12 D.1.1.8 2 3602 0.38 0.18 0.26 0.38 0.18 0.00 0.26 0.13 0.00 0.26 0.13 0.00 0.26 0.17 0.76 0.04 1.34 0.98 3.58 1.08 A.+ A. 6 971303 12 D.1.1.4 2 3602 0.66 0.17 0.05 0.12 0.66 0.00 0.25 0.18 0.13 0.06 0.25 0.57 0.04 1.48 1.02 0.77 1.02 A.+ A.+ 6 981039 12 D.1.2.2 2 3602 0.49 0.30 0.12 0.99 0.49 0.00 0.29 0.12 0.15 0.12 0.29 0.26 0.04 0.87 0.99 0.06 1.00 A. A. 6 566123 12 D.2.1.3 2 3602 0.49 0.30 0.6 0.83 0.06 0.05 0.00 0.39 0.19 0.39 0.22 0.20 0.165 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.   | 6 69  | 90463 | 12 | D.1.1.6 | 2 | 3602 | 0.73 | 0.10 | 0.73 | 0.09 | 0.08 | 0.00 | 0.40 | -0.13 | 0.40  | -0.25 | -0.23 | -0.93 | 0.04 | -5.83 | 0.89 | -6.92 | 0.80 | A+ | B- | B-  |
| 6 850254 12 D1.1.8 2 3602 0.38 0.18 0.26 0.38 0.18 0.00 0.26 -0.13 -0.02 0.26 -0.17 0.76 0.04 -1.34 0.98 3.58 1.08 A+ A- 6 977303 12 D1.1.4 2 3602 0.66 0.17 0.05 0.12 0.66 0.00 0.25 -0.18 -0.13 -0.06 0.25 0.57 0.04 1.48 1.02 0.77 1.02 A+ A+ 6 981039 12 D1.2.2 2 3602 0.49 0.30 0.12 0.09 0.49 0.00 0.29 -0.12 -0.15 -0.12 0.29 0.26 0.04 -0.87 0.99 -0.06 1.00 A- 6 566123 12 D2.1.3 2 3602 0.83 0.06 0.83 0.06 0.05 0.00 0.39 -0.19 0.39 -0.22 -0.20 -1.65 0.05 -4.91 0.86 -5.16 0.77 A+ B- 6 457799 12 D2.1.4 1 3602 0.81 0.07 0.07 0.81 0.05 0.01 0.36 -0.21 -0.17 0.36 -0.20 -1.45 0.04 -4.60 0.89 3.90 0.84 A+ A+ 6 492107 12 D1.2.3 2 3602 0.61 0.12 0.61 0.16 0.11 0.00 0.33 -0.16 0.33 -0.17 0.15 -0.34 0.04 -3.02 0.96 -2.92 0.94 A- 6 230965 13 D1.1.1 2 3603 0.31 0.26 0.26 0.31 0.17 0.00 0.09 0.02 0.00 0.09 0.01 1.14 0.04 6.99 1.12 7.88 1.21 A+ A+ 6 6 643692 13 D1.1.1 2 3603 0.43 0.43 0.43 0.18 0.24 0.15 0.00 0.35 -0.09 0.20 -0.14 0.62 0.04 -6.95 0.92 -4.55 0.92 A- 6 6 677052 13 D1.1.1 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 0.21 0.07 0.02 0.02 -0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ 6 6 64879 13 D1.1.4 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 0.21 0.27 0.17 0.04 0.35 0.04 -6.95 0.92 -4.55 0.92 A- 6 6 677052 13 D1.1.4 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 0.21 0.07 0.04 0.35 0.04 0.66 0.99 -0.82 0.99 A+ 6 6 68872 13 D1.1.4 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 0.21 0.27 0.17 0.04 0.35 0.04 0.66 0.99 -0.82 0.99 A+ 6 6 698872 13 D1.1.4 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.01 -0.02 0.04 -0.15 0.00 0.41 0.04 0.17 0.98 0.98 0.99 A+ 6 819357 13 D1.1.4 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 0.19 0.28 0.05 0.41 0.04 0.17 0.98 1.13 0.98 A- 6 481038 13 D2.1.3 2 3603 0.40 0.40 0.10 0.11 0.46 0.28 0.00 0.28 0.11 0.11 0.11 0.11 0.12 0.12 0.22 0.04 0.95 0.91 0.51 0.98 0.98 A- 6 481038 13 D2.1.3 2 3603 0.40 0.40 0.90 0.25 0.69 0.03 0.02 0.00 0.03 0.01 0.00 0.08 0.07 0.08 0.07 0.08 0.04 0.46 0.99 0.51 0.98 0.98 A- 6 481038 13 D2.1.3 2 3603 0.40 0.40 0.40 0.10 0.01 0.02 0.04 0.10 0.00 0.22 0.04 0.15 0.00 0.04 0.25 0.04 0.9 | 6 56  | 67186 | 12 | D.1.2.1 | 2 | 3602 | 0.81 | 0.10 | 0.81 | 0.07 | 0.02 | 0.00 | 0.39 | -0.26 | 0.39  | -0.21 | -0.15 | -1.50 | 0.05 | -4.72 | 0.88 | -6.58 | 0.74 | A+ | A- | A-  |
| 6 977303   12   D.1.1.4   2   3602   0.66   0.17   0.05   0.12   0.66   0.00   0.25   -0.18   -0.13   -0.06   0.25   -0.57   0.04   1.48   1.02   0.77   1.02   A+   A+   A+   6   981039   12   D.1.2.2   2   3602   0.49   0.30   0.12   0.09   0.49   0.00   0.29   -0.12   -0.15   -0.12   0.29   0.26   0.04   -0.87   0.99   -0.06   1.00   A-   A-   A-   A-   A-   A-   A-   | 6 510 | 10122 | 12 | D.2.1.1 | 2 | 3602 | 0.30 | 0.30 | 0.36 | 0.17 | 0.17 | 0.00 | 0.04 | 0.04  | 0.09  | -0.12 | -0.04 | 1.20  | 0.04 | 9.53  | 1.18 | 9.90  | 1.34 | A- | A- | A-  |
| 6 981039 12 D.1.2.2 2 3602 0.49 0.30 0.12 0.09 0.49 0.00 0.29 -0.12 -0.15 -0.12 0.29 0.26 0.04 -0.87 0.99 -0.06 1.00 A- A- B- 6 566123 12 D.2.1.3 2 3602 0.83 0.06 0.83 0.06 0.05 0.00 0.39 -0.19 0.39 -0.22 -0.20 -1.65 0.05 -4.91 0.86 -5.16 0.77 A+ B- 6 457799 12 D.2.1.4 1 3602 0.81 0.07 0.07 0.81 0.05 0.01 0.36 -0.21 -0.17 0.36 -0.20 -1.45 0.04 -4.60 0.89 -3.90 0.84 A+ A+ A+ 6 492107 12 D.1.2.3 2 3603 0.31 0.26 0.26 0.31 0.17 0.00 0.03 -0.16 0.33 -0.16 0.33 -0.17 -0.15 -0.34 0.04 -3.02 0.96 -2.92 0.94 A- A+ 6 6 43692 13 D.1.1.1 2 3603 0.06 0.04 0.12 0.78 0.06 0.00 0.00 0.00 -0.11 -0.12 0.15 0.00 3.28 0.07 1.24 1.07 9.14 2.08 A+ A+ A+ 6 6 643692 13 D.1.1.6 2 3603 0.43 0.43 0.43 0.48 0.44 0.10 0.00 0.35 0.35 0.09 -0.20 -0.16 0.52 0.04 -6.95 0.92 -4.55 0.92 A- A+ 6 6 677052 13 D.1.1.8 2 3603 0.44 0.44 0.34 0.44 0.10 0.00 0.22 -0.21 0.02 0.22 -0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ 6 6 606872 13 D.1.1.8 2 3603 0.40 0.40 0.35 0.37 0.11 0.16 0.00 0.10 0.02 0.04 -0.15 0.10 2.07 0.05 2.01 1.06 5.64 1.28 A+ A+ 6 6 606872 13 D.1.1.1 2 3603 0.40 0.59 0.31 0.59 0.08 0.02 0.00 0.10 0.02 0.04 0.15 0.10 2.07 0.05 2.01 1.06 5.64 1.28 A+ A+ 6 6 915447 13 D.1.2.2 2 3603 0.40 0.59 0.31 0.59 0.08 0.02 0.00 0.20 0.01 0.01 0.11 0.11 0.12 0.12  | 6 850 | 50254 | 12 | D.1.1.8 | 2 | 3602 | 0.38 | 0.18 | 0.26 | 0.38 | 0.18 | 0.00 | 0.26 | -0.13 | -0.02 | 0.26  | -0.17 | 0.76  | 0.04 | -1.34 | 0.98 | 3.58  | 1.08 | A+ | A- | A+  |
| 6 566123 12 D.2.1.3 2 3602 0.83 0.06 0.83 0.06 0.05 0.00 0.39 -0.19 0.39 -0.22 -0.20 -1.65 0.05 -4.91 0.86 -5.16 0.77 A+ B-6 457799 12 D.2.1.4 1 3602 0.81 0.07 0.07 0.81 0.05 0.01 0.36 -0.21 -0.17 0.36 -0.20 -1.45 0.04 -4.60 0.89 -3.90 0.84 A+ A+ A+ B-6 492107 12 D.12.3 2 3602 0.61 0.12 0.61 0.16 0.11 0.00 0.33 -0.16 0.33 -0.17 -0.15 -0.34 0.04 -3.02 0.96 -2.92 0.94 A- A+ B-6 230965 13 D.1.1.3 2 3603 0.31 0.26 0.26 0.31 0.17 0.00 0.09 0.02 0.00 0.09 -0.11 1.14 0.04 6.99 1.12 7.88 1.21 A+ A+ B-6 643692 13 D.1.1.1 2 3603 0.06 0.04 0.12 0.78 0.06 0.00 0.00 0.00 -0.11 0.12 0.15 0.00 3.28 0.07 1.24 1.07 9.14 2.08 A+ A+ B-6 643692 13 D.1.1.6 2 3603 0.43 0.43 0.43 0.44 0.15 0.00 0.35 0.35 0.39 0.09 -0.20 -0.16 0.52 0.04 -6.95 0.92 -4.55 0.92 A- A+ B-6 677052 13 D.2.1.1 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 0.22 0.21 0.02 0.22 0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ B-6 324858 13 D.1.1.8 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 0.21 0.27 0.01 0.04 0.35 0.04 0.66 0.99 0.82 0.99 0.82 0.99 A+ A- B-6 606872 13 D.1.1.4 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.22 0.00 0.11 0.11 0.11 0.12 0.28 0.05 0.41 0.04 0.47 0.99 0.88 0.20 0.00 0.11 0.01 0.11 0.11 0.12 0.12  | 6 97  | 77303 | 12 | D.1.1.4 | 2 | 3602 | 0.66 | 0.17 | 0.05 | 0.12 | 0.66 | 0.00 | 0.25 | -0.18 | -0.13 | -0.06 | 0.25  | -0.57 | 0.04 | 1.48  | 1.02 | 0.77  | 1.02 | A+ | A+ | A+  |
| 6 457799 12 D.2.1.4 1 3602 0.81 0.07 0.07 0.81 0.05 0.01 0.36 -0.21 -0.17 0.36 -0.20 -1.45 0.04 -4.60 0.89 -3.90 0.84 A+ A+ A+ 6 492107 12 D.1.2.3 2 3602 0.61 0.12 0.61 0.16 0.11 0.00 0.33 -0.16 0.33 -0.17 0.15 -0.34 0.04 -3.02 0.96 -2.92 0.94 A- A+ A+ 6 230965 13 D.1.1.3 2 3603 0.31 0.26 0.26 0.31 0.17 0.00 0.09 0.02 0.00 0.09 -0.11 1.14 0.04 6.99 1.12 7.88 1.21 A+ A+ A+ 6 643692 13 D.1.1.1 2 3603 0.06 0.04 0.12 0.78 0.06 0.00 0.00 -0.11 -0.12 0.15 0.00 3.28 0.07 1.24 1.07 9.14 2.08 A+ A+ 6 624190 13 D.1.1.6 2 3603 0.43 0.43 0.18 0.24 0.15 0.00 0.35 0.35 -0.09 -0.20 -0.16 0.52 0.04 -6.95 0.92 -4.55 0.92 A- A+ 6 677052 13 D.2.1.1 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 -0.21 0.02 0.22 -0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ 6 666872 13 D.1.1.8 2 3603 0.46 0.35 0.37 0.11 0.16 0.00 0.10 -0.02 0.04 -0.15 0.10 2.07 0.05 2.01 1.06 5.64 1.28 A+ A+ 6 666872 13 D.1.2.1 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 -0.21 0.27 -0.17 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.1.4 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.22 -0.21 0.21 0.22 0.04 0.35 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.1.4 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 819357 13 D.1.2.3 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.2.3 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -0.65 0.99 0.51 0.99 A- A- 6 819357 13 D.1.2.3 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 0.00 0.00 0.00 0.00 0.00 0.0   | 6 98  | 81039 | 12 | D.1.2.2 | 2 | 3602 | 0.49 | 0.30 | 0.12 | 0.09 | 0.49 | 0.00 | 0.29 | -0.12 | -0.15 | -0.12 | 0.29  | 0.26  | 0.04 | -0.87 | 0.99 | -0.06 | 1.00 | A- | A- | A+  |
| 6 492107 12 D.1.2.3 2 3602 0.61 0.12 0.61 0.16 0.11 0.00 0.33 -0.16 0.33 -0.17 -0.15 -0.34 0.04 -3.02 0.96 -2.92 0.94 A- A+ A+ C 230965 13 D.1.1.3 2 3603 0.31 0.26 0.26 0.31 0.17 0.00 0.09 0.02 0.00 0.09 -0.11 1.14 0.04 6.99 1.12 7.88 1.21 A+ A+ A+ C 6 43692 13 D.1.1.1 2 3603 0.06 0.04 0.12 0.78 0.06 0.00 0.00 0.00 -0.11 -0.12 0.15 0.00 3.28 0.07 1.24 1.07 9.14 2.08 A+ A+ A+ C 6 264190 13 D.1.1.6 2 3603 0.43 0.43 0.43 0.18 0.24 0.15 0.00 0.35 0.35 0.09 0.02 0.016 0.52 0.04 6.95 0.92 -4.55 0.92 A- A+ C 6 677052 13 D.2.1.1 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 0.21 0.02 0.22 0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ C 6 324858 13 D.1.1.8 2 3603 0.16 0.35 0.37 0.11 0.16 0.00 0.10 0.02 0.04 0.15 0.10 2.07 0.05 2.01 1.06 5.64 1.28 A+ A+ C 6 606872 13 D.1.1 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 0.21 0.27 0.17 0.04 0.35 0.04 0.66 0.99 0.82 0.99 A+ A- C 6 819357 13 D.1.1.4 2 3603 0.40 0.59 0.31 0.59 0.08 0.02 0.00 0.11 0.01 0.01 0.01 0.01 0.01   | 6 56  | 66123 | 12 | D.2.1.3 | 2 | 3602 | 0.83 | 0.06 | 0.83 | 0.06 | 0.05 | 0.00 | 0.39 | -0.19 | 0.39  | -0.22 | -0.20 | -1.65 | 0.05 | -4.91 | 0.86 | -5.16 | 0.77 | A+ | B- | A-  |
| 6 230965 13 D.1.1.3 2 3603 0.31 0.26 0.26 0.31 0.17 0.00 0.09 0.02 0.00 0.09 -0.11 1.14 0.04 6.99 1.12 7.88 1.21 A+  | 6 45  | 57799 | 12 | D.2.1.4 | 1 | 3602 | 0.81 | 0.07 | 0.07 | 0.81 | 0.05 | 0.01 | 0.36 | -0.21 | -0.17 | 0.36  | -0.20 | -1.45 | 0.04 | -4.60 | 0.89 | -3.90 | 0.84 | A+ | A+ | A-  |
| 6 643692 13 D.1.1.1 2 3603 0.06 0.04 0.12 0.78 0.06 0.00 0.00 -0.11 -0.12 0.15 0.00 3.28 0.07 1.24 1.07 9.14 2.08 A+ A+ A+ 6 264190 13 D.1.1.6 2 3603 0.43 0.43 0.18 0.24 0.15 0.00 0.35 0.35 -0.09 -0.20 -0.16 0.52 0.04 -6.95 0.92 -4.55 0.92 A- A+ 6 677052 13 D.2.1.1 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 -0.21 0.02 0.22 -0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ 6 324858 13 D.1.1.8 2 3603 0.16 0.35 0.37 0.11 0.16 0.00 0.10 -0.02 0.04 -0.15 0.10 2.07 0.05 2.01 1.06 5.64 1.28 A+ A+ 6 66872 13 D.1.2.1 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 -0.21 0.27 -0.17 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.1.4 2 3603 0.59 0.31 0.59 0.08 0.02 0.00 0.11 -0.01 0.11 -0.11 -0.12 -0.22 0.04 8.94 1.12 7.76 1.16 A- A+ 6 915447 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 481038 13 D.2.1.3 2 3603 0.40 0.69 0.25 0.69 0.03 0.02 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- B- 6 289163 13 D.1.2.3 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ A- 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+ 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+  | 6 49  | 92107 | 12 | D.1.2.3 | 2 | 3602 | 0.61 | 0.12 | 0.61 | 0.16 | 0.11 | 0.00 | 0.33 | -0.16 | 0.33  | -0.17 | -0.15 | -0.34 | 0.04 | -3.02 | 0.96 | -2.92 | 0.94 | A- | A+ | A+  |
| 6 264190 13 D.1.1.6 2 3603 0.43 0.43 0.18 0.24 0.15 0.00 0.35 0.35 -0.09 -0.20 -0.16 0.52 0.04 -6.95 0.92 -4.55 0.92 A- A+ A+ 6 677052 13 D.2.1.1 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 -0.21 0.02 0.22 -0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ A+ 6 666872 13 D.1.2.1 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 -0.21 0.27 -0.17 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.1.4 2 3603 0.59 0.31 0.59 0.08 0.02 0.00 0.11 -0.01 0.11 -0.11 -0.12 -0.22 0.04 8.94 1.12 7.76 1.16 A- A+ 6 915447 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 481038 13 D.2.1.3 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- B- 6 28163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+   | 6 23  | 30965 | 13 | D.1.1.3 | 2 | 3603 | 0.31 | 0.26 | 0.26 | 0.31 | 0.17 | 0.00 | 0.09 | 0.02  | 0.00  | 0.09  | -0.11 | 1.14  | 0.04 | 6.99  | 1.12 | 7.88  | 1.21 | A+ | A+ | A+  |
| 6 677052 13 D.2.1.1 2 3603 0.41 0.14 0.34 0.41 0.10 0.00 0.22 -0.21 0.02 0.22 -0.14 0.62 0.04 1.97 1.03 2.55 1.05 A+ A+ A+ 6 324858 13 D.1.1.8 2 3603 0.16 0.35 0.37 0.11 0.16 0.00 0.10 -0.02 0.04 -0.15 0.10 2.07 0.05 2.01 1.06 5.64 1.28 A+ A+ 6 606872 13 D.1.2.1 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 -0.21 0.27 -0.17 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.1.4 2 3603 0.59 0.31 0.59 0.08 0.02 0.00 0.11 -0.01 0.11 -0.11 -0.12 -0.22 0.04 8.94 1.12 7.76 1.16 A- A+ 6 915447 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 481038 13 D.2.1.3 2 3603 0.69 0.25 0.69 0.03 0.02 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- B- 6 289163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ A- 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+   | 6 64  | 43692 | 13 | D.1.1.1 | 2 | 3603 | 0.06 | 0.04 | 0.12 | 0.78 | 0.06 | 0.00 | 0.00 | -0.11 | -0.12 | 0.15  | 0.00  | 3.28  | 0.07 | 1.24  | 1.07 | 9.14  | 2.08 | A+ | A+ | A+  |
| 6 324858 13 D.1.1.8 2 3603 0.16 0.35 0.37 0.11 0.16 0.00 0.10 -0.02 0.04 -0.15 0.10 2.07 0.05 2.01 1.06 5.64 1.28 A+ A+ 6 606872 13 D.1.2.1 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 -0.21 0.27 -0.17 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.1.4 2 3603 0.59 0.31 0.59 0.08 0.02 0.00 0.11 -0.01 0.11 -0.11 -0.12 -0.22 0.04 8.94 1.12 7.76 1.16 A- A+ 6 915447 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 481038 13 D.2.1.3 2 3603 0.69 0.25 0.69 0.03 0.02 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- 6 289163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ A- 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+   | 6 26  | 64190 | 13 | D.1.1.6 | 2 | 3603 | 0.43 | 0.43 | 0.18 | 0.24 | 0.15 | 0.00 | 0.35 | 0.35  | -0.09 | -0.20 | -0.16 | 0.52  | 0.04 | -6.95 | 0.92 | -4.55 | 0.92 | A- | A+ | A-  |
| 6 606872 13 D.1.2.1 2 3603 0.47 0.19 0.47 0.16 0.18 0.00 0.27 -0.21 0.27 -0.17 0.04 0.35 0.04 -0.66 0.99 -0.82 0.99 A+ A- 6 819357 13 D.1.1.4 2 3603 0.59 0.31 0.59 0.08 0.02 0.00 0.11 -0.01 0.11 -0.11 -0.12 -0.22 0.04 8.94 1.12 7.76 1.16 A- A+ 6 915447 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 481038 13 D.2.1.3 2 3603 0.69 0.25 0.69 0.03 0.02 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- 6 289163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ A- 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+   | 6 67  | 77052 | 13 | D.2.1.1 | 2 | 3603 | 0.41 | 0.14 | 0.34 | 0.41 | 0.10 | 0.00 | 0.22 | -0.21 | 0.02  | 0.22  | -0.14 | 0.62  | 0.04 | 1.97  | 1.03 | 2.55  | 1.05 | A+ | A+ | A-  |
| 6 819357 13 D.1.1.4 2 3603 0.59 0.31 0.59 0.08 0.02 0.00 0.11 -0.01 0.11 -0.12 -0.22 0.04 8.94 1.12 7.76 1.16 A- A+ 6 915447 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 481038 13 D.2.1.3 2 3603 0.69 0.25 0.69 0.03 0.02 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- 6 289163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+  | 6 32  | 24858 | 13 | D.1.1.8 | 2 | 3603 | 0.16 | 0.35 | 0.37 | 0.11 | 0.16 | 0.00 | 0.10 | -0.02 | 0.04  | -0.15 | 0.10  | 2.07  | 0.05 | 2.01  | 1.06 | 5.64  | 1.28 | A+ | A+ | A+  |
| 6 915447 13 D.1.2.2 2 3603 0.46 0.15 0.11 0.46 0.28 0.00 0.28 -0.14 -0.19 0.28 -0.05 0.41 0.04 -1.72 0.98 -1.30 0.98 A- A+ 6 481038 13 D.2.1.3 2 3603 0.69 0.25 0.69 0.03 0.02 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- B- 6 289163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ A- 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+  | 6 60  | 06872 | 13 | D.1.2.1 | 2 | 3603 | 0.47 | 0.19 | 0.47 | 0.16 | 0.18 | 0.00 | 0.27 | -0.21 | 0.27  | -0.17 | 0.04  | 0.35  | 0.04 | -0.66 | 0.99 | -0.82 | 0.99 | A+ | Α- | A+  |
| 6 481038 13 D.2.1.3 2 3603 0.69 0.25 0.69 0.03 0.02 0.00 0.36 -0.27 0.36 -0.18 -0.08 -0.72 0.04 -6.25 0.90 -5.13 0.87 A- B- 6 289163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ A- 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+   | 6 819 | 19357 | 13 | D.1.1.4 | 2 | 3603 | 0.59 | 0.31 | 0.59 | 0.08 | 0.02 | 0.00 | 0.11 | -0.01 | 0.11  | -0.11 | -0.12 | -0.22 | 0.04 | 8.94  | 1.12 | 7.76  | 1.16 | A- | A+ | A+  |
| 6 289163 13 D.2.1.5 2 3603 0.40 0.20 0.40 0.19 0.21 0.00 0.30 -0.19 0.30 -0.08 -0.07 0.68 0.04 -3.13 0.96 -2.13 0.96 A+ A-6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+  | 6 91: | 15447 | 13 | D.1.2.2 | 2 | 3603 | 0.46 | 0.15 | 0.11 | 0.46 | 0.28 | 0.00 | 0.28 | -0.14 | -0.19 | 0.28  | -0.05 | 0.41  | 0.04 | -1.72 | 0.98 | -1.30 | 0.98 | A- | A+ | A+  |
| 6 201507 13 D.1.2.3 2 3603 0.57 0.14 0.16 0.13 0.57 0.00 0.32 -0.19 -0.15 -0.11 0.32 -0.09 0.04 -4.82 0.94 -2.60 0.95 A- A+  | 6 48  | 81038 | 13 | D.2.1.3 | 2 | 3603 | 0.69 | 0.25 | 0.69 | 0.03 | 0.02 | 0.00 | 0.36 | -0.27 | 0.36  | -0.18 | -0.08 | -0.72 | 0.04 | -6.25 | 0.90 | -5.13 | 0.87 | A- | B- | C-  |
|  | 6 289 | 89163 | 13 | D.2.1.5 | 2 | 3603 | 0.40 | 0.20 | 0.40 | 0.19 | 0.21 | 0.00 | 0.30 | -0.19 | 0.30  | -0.08 | -0.07 | 0.68  | 0.04 | -3.13 | 0.96 | -2.13 | 0.96 | A+ | A- | A+  |
| 6 860178 14 D.1.1.3 2 3621 0.68 0.12 0.68 0.04 0.16 0.00 0.30 -0.24 0.30 -0.17 -0.08 -0.75 0.04 -2.61 0.96 -3.48 0.91 A+ A+  | 6 20  | 01507 | 13 | D.1.2.3 | 2 | 3603 | 0.57 | 0.14 | 0.16 | 0.13 | 0.57 | 0.00 | 0.32 | -0.19 | -0.15 | -0.11 | 0.32  | -0.09 | 0.04 | -4.82 | 0.94 | -2.60 | 0.95 | Α- | A+ | A-  |
|  | 6 86  | 60178 | 14 | D.1.1.3 | 2 | 3621 | 0.68 | 0.12 | 0.68 | 0.04 | 0.16 | 0.00 | 0.30 | -0.24 | 0.30  | -0.17 | -0.08 | -0.75 | 0.04 | -2.61 | 0.96 | -3.48 | 0.91 | A+ | A+ | A+  |
| 6 878737 14 D.1.1.1 2 3621 0.45 0.28 0.45 0.16 0.10 0.00 0.31 -0.17 0.31 -0.14 -0.09 0.35 0.04 -3.93 0.95 -2.86 0.95 A+ A-   | 6 87  | 78737 | 14 | D.1.1.1 | 2 | 3621 | 0.45 | 0.28 | 0.45 | 0.16 | 0.10 | 0.00 | 0.31 | -0.17 | 0.31  | -0.14 | -0.09 | 0.35  | 0.04 | -3.93 | 0.95 | -2.86 | 0.95 | A+ | A- | A-  |
| 6 602203 14 D.1.2.3 2 3621 0.54 0.23 0.11 0.54 0.12 0.00 0.34 -0.15 -0.17 0.34 -0.15 -0.05 0.04 -5.57 0.93 -4.35 0.93 A+ A+  | 6 60  | 02203 | 14 | D.1.2.3 | 2 | 3621 | 0.54 | 0.23 | 0.11 | 0.54 | 0.12 | 0.00 | 0.34 | -0.15 | -0.17 | 0.34  | -0.15 | -0.05 | 0.04 | -5.57 | 0.93 | -4.35 | 0.93 | A+ | A+ | A-  |
|  | 6 850 | 50641 | 14 | D.1.1.6 | 2 | 3621 | 0.39 | 0.42 | 0.08 | 0.11 | 0.39 | 0.00 | 0.25 | -0.10 | -0.14 | -0.10 | 0.25  | 0.67  | 0.04 | -0.26 | 1.00 | 2.42  | 1.05 | A+ | A- | A+  |
|  |       |       | 14 |         | 2 |      |      |      |      | 0.34 |      | 0.00 |      |       |       |       |       | 0.89  |      |       |      |       |      |    |    | A-  |
|  |       |       |    |         |   |      |      |      |      |      |      |      |      |       |       |       |       |       |      |       |      |       |      |    |    | A+  |
|  |       |       |    |         |   |      |      |      |      |      |      |      |      |       |       |       |       |       |      |       |      |       |      |    |    | A-  |
|  |       |       |    |         |   |      |      |      |      |      |      |      |      |       |       |       |       |       |      |       |      |       |      |    |    | A+  |

|   | 005665 | 1.4 | D 1 2 1 | 2 | 2621 | 0.22 | 0.20 | 0.22 | 0.24 | 0.24 | 0.00 | 0.15  | 0.04  | 0.15  | 0.02  | 0.12  | 1.52  | 0.04 | 2.00  | 1.05 | 6.71  | 1.25 |    | ъ. |    |
|---|--------|-----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 6 | 985667 | 14  | D.1.2.1 | 2 | 3621 | 0.23 | 0.28 | 0.23 | 0.24 | 0.24 | 0.00 | 0.15  | -0.04 | 0.15  | 0.03  | -0.13 | 1.53  | 0.04 | 2.08  | 1.05 | 6.71  |      | A- | B+ | A+ |
| 6 | 358904 | 14  | D.2.1.3 | 2 | 3621 | 0.64 | 0.23 | 0.09 | 0.64 | 0.04 | 0.00 | 0.11  | 0.06  | -0.12 | 0.11  | -0.21 | -0.54 | 0.04 | 7.02  | 1.10 | 9.41  |      | A+ | A- | A- |
| 6 | 677361 | 14  | D.2.1.5 | 2 | 3621 | 0.64 | 0.09 | 0.64 | 0.16 | 0.11 | 0.00 | 0.37  | -0.19 | 0.37  | -0.20 | -0.15 | -0.52 | 0.04 | -7.24 | 0.90 | -6.68 |      | Α- | B- | B- |
| 6 | 157220 | 15  | D.1.1.3 | 2 | 3599 | 0.46 | 0.16 | 0.46 | 0.27 | 0.11 | 0.00 | 0.30  | -0.09 | 0.30  | -0.14 | -0.18 | 0.33  | 0.04 | -0.93 | 0.99 | 0.69  |      | A- | A+ | A+ |
| 6 | 769563 | 15  | D.1.1.1 | 2 | 3599 | 0.79 | 0.08 | 0.06 | 0.79 | 0.06 | 0.01 | 0.43  | -0.17 | -0.24 | 0.43  | -0.26 | -1.43 | 0.04 | -6.82 | 0.84 | -6.57 |      | B+ | A- | A- |
| 6 | 325425 | 15  | D.1.2.3 | 2 | 3599 | 0.71 | 0.08 | 0.15 | 0.06 | 0.71 | 0.00 | 0.46  | -0.22 | -0.24 | -0.24 | 0.46  | -0.90 | 0.04 | -9.36 | 0.84 | -9.03 |      | A+ | A- | A- |
| 6 | 363556 | 15  | D.1.1.6 | 2 | 3599 | 0.52 | 0.06 | 0.09 | 0.52 | 0.34 | 0.00 | 0.38  | -0.18 | -0.09 | 0.38  | -0.25 | 0.05  | 0.04 | -6.05 | 0.93 | -5.41 | 0.90 | A+ | A+ | A+ |
| 6 | 625942 | 15  | D.2.1.1 | 2 | 3599 | 0.58 | 0.12 | 0.58 | 0.17 | 0.12 | 0.01 | 0.35  | -0.20 | 0.35  | -0.11 | -0.17 | -0.25 | 0.04 | -4.18 | 0.94 | -3.18 | 0.94 | Α- | A- | A+ |
| 6 | 933683 | 15  | D.1.1.8 | 2 | 3599 | 0.52 | 0.20 | 0.19 | 0.09 | 0.52 | 0.00 | 0.29  | -0.14 | -0.10 | -0.17 | 0.29  | 0.04  | 0.04 | 0.71  | 1.01 | 0.32  | 1.01 | A- | A- | A+ |
| 6 | 870125 | 15  | D.1.2.1 | 2 | 3599 | 0.60 | 0.16 | 0.07 | 0.60 | 0.17 | 0.00 | 0.37  | -0.21 | -0.22 | 0.37  | -0.12 | -0.36 | 0.04 | -4.40 | 0.94 | -4.26 | 0.91 | A- | A+ | A- |
| 6 | 791008 | 15  | D.1.1.4 | 2 | 3599 | 0.41 | 0.18 | 0.41 | 0.26 | 0.15 | 0.00 | 0.05  | 0.02  | 0.05  | 0.00  | -0.09 | 0.57  | 0.04 | 9.90  | 1.22 | 9.90  | 1.34 | A- | A+ | A+ |
| 6 | 921844 | 15  | D.1.2.2 | 2 | 3599 | 0.46 | 0.46 | 0.16 | 0.34 | 0.04 | 0.00 | 0.36  | 0.36  | -0.15 | -0.16 | -0.20 | 0.34  | 0.04 | -4.74 | 0.94 | -3.33 | 0.94 | A- | A+ | A+ |
| 6 | 137741 | 15  | D.2.1.3 | 2 | 3599 | 0.21 | 0.46 | 0.21 | 0.12 | 0.21 | 0.00 | 0.20  | -0.02 | 0.20  | -0.17 | -0.04 | 1.68  | 0.04 | 0.99  | 1.02 | 5.26  | 1.23 | C- | B- | A- |
| 6 | 900942 | 15  | D.2.1.5 | 2 | 3599 | 0.62 | 0.11 | 0.12 | 0.14 | 0.62 | 0.00 | 0.33  | -0.24 | -0.11 | -0.11 | 0.33  | -0.46 | 0.04 | -2.46 | 0.96 | -1.50 | 0.97 | A+ | A- | A- |
| 6 | 255601 | 16  | D.1.1.3 | 2 | 3602 | 0.64 | 0.08 | 0.21 | 0.64 | 0.07 | 0.00 | 0.34  | -0.16 | -0.20 | 0.34  | -0.15 | -0.48 | 0.04 | -4.72 | 0.93 | -4.48 | 0.91 | A+ | A- | A- |
| 6 | 508069 | 16  | D.1.1.1 | 2 | 3602 | 0.84 | 0.84 | 0.04 | 0.04 | 0.08 | 0.00 | 0.37  | 0.37  | -0.19 | -0.22 | -0.20 | -1.72 | 0.05 | -4.72 | 0.86 | -6.26 | 0.73 | A+ | A- | A- |
| 6 | 357519 | 16  | D.1.2.3 | 2 | 3602 | 0.66 | 0.10 | 0.66 | 0.06 | 0.18 | 0.00 | 0.28  | -0.17 | 0.28  | -0.12 | -0.14 | -0.56 | 0.04 | -1.69 | 0.97 | -2.32 | 0.95 | A+ | A+ | A+ |
| 6 | 408625 | 16  | D.1.1.6 | 2 | 3602 | 0.17 | 0.12 | 0.06 | 0.65 | 0.17 | 0.00 | 0.17  | -0.12 | -0.18 | 0.04  | 0.17  | 2.01  | 0.05 | -0.57 | 0.98 | 4.17  | 1.21 | A- | A- | A- |
| 6 | 488943 | 16  | D.2.1.1 | 2 | 3602 | 0.44 | 0.19 | 0.44 | 0.09 | 0.27 | 0.00 | 0.18  | -0.18 | 0.18  | -0.17 | 0.08  | 0.45  | 0.04 | 4.96  | 1.06 | 5.65  | 1.10 | Α- | A- | B+ |
| 6 | 294643 | 16  | D.1.1.8 | 2 | 3602 | 0.52 | 0.12 | 0.07 | 0.52 | 0.28 | 0.00 | 0.17  | -0.20 | -0.14 | 0.17  | 0.04  | 0.09  | 0.04 | 6.06  | 1.07 | 5.58  | 1.10 | A- | A+ | A- |
| 6 | 756340 | 16  | D.1.2.1 | 2 | 3602 | 0.51 | 0.51 | 0.16 | 0.17 | 0.16 | 0.00 | 0.24  | 0.24  | -0.06 | -0.13 | -0.13 | 0.13  | 0.04 | 0.93  | 1.01 | 0.66  | 1.01 | A+ | A+ | A+ |
| 6 | 858394 | 16  | D.1.1.4 | 2 | 3602 | 0.20 | 0.20 | 0.20 | 0.25 | 0.34 | 0.00 | -0.07 | -0.11 | -0.07 | 0.00  | 0.16  | 1.75  | 0.04 | 8.01  | 1.21 | 9.90  | 1.64 | A- | A+ | A+ |
| 6 | 432376 | 16  | D.1.2.2 | 2 | 3602 | 0.65 | 0.16 | 0.65 | 0.03 | 0.16 | 0.00 | 0.37  | -0.16 | 0.37  | -0.17 | -0.24 | -0.51 | 0.04 | -6.52 | 0.91 | -6.83 | 0.86 | A+ | A+ | A+ |
| 6 | 287253 | 16  | D.2.1.3 | 2 | 3602 | 0.87 | 0.03 | 0.03 | 0.08 | 0.87 | 0.00 | 0.24  | -0.11 | -0.04 | -0.21 | 0.24  | -1.93 | 0.05 | -1.34 | 0.95 | -1.64 | 0.91 | A- | A+ | A+ |
| 6 | 183775 | 16  | D.2.1.5 | 2 | 3602 | 0.40 | 0.17 | 0.40 | 0.16 | 0.27 | 0.00 | 0.29  | -0.17 | 0.29  | -0.13 | -0.05 | 0.66  | 0.04 | -2.95 | 0.96 | -1.65 | 0.97 | A+ | A- | A- |
| 6 | 686322 | 17  | D.1.1.3 | 2 | 3618 | 0.41 | 0.23 | 0.21 | 0.41 | 0.15 | 0.00 | 0.13  | 0.00  | -0.11 | 0.13  | -0.05 | 0.62  | 0.04 | 7.91  | 1.11 | 8.25  | 1.16 | A+ | A+ | A+ |
| 6 | 939178 | 17  | D.1.1.1 | 2 | 3618 | 0.19 | 0.19 | 0.13 | 0.16 | 0.52 | 0.00 | -0.01 | -0.01 | -0.14 | -0.02 | 0.13  | 1.90  | 0.05 | 5.47  | 1.15 | 9.90  | 1.55 | A- | A+ | B+ |
| 6 | 287763 | 17  | D.1.2.3 | 2 | 3618 | 0.65 | 0.19 | 0.65 | 0.08 | 0.08 | 0.00 | 0.36  | -0.20 | 0.36  | -0.17 | -0.18 | -0.49 | 0.04 | -5.46 | 0.92 | -6.08 | 0.87 | A+ | B- | A+ |
| 6 | 370476 | 17  | D.1.1.6 | 2 | 3618 | 0.77 | 0.77 | 0.06 | 0.13 | 0.04 | 0.00 | 0.44  | 0.44  | -0.22 | -0.28 | -0.20 | -1.16 | 0.04 | -7.47 | 0.84 | -9.10 | 0.72 | A+ | A+ | A- |
| 6 | 314847 | 17  | D.1.2.1 | 2 | 3618 | 0.67 | 0.06 | 0.23 | 0.67 | 0.04 | 0.00 | 0.39  | -0.25 | -0.22 | 0.39  | -0.17 | -0.63 | 0.04 | -6.71 | 0.90 | -7.13 | 0.84 | A- | A- | A- |
| 6 | 495765 | 17  | D.2.1.1 | 2 | 3618 | 0.63 | 0.15 | 0.63 | 0.15 | 0.07 | 0.00 | 0.37  | -0.17 | 0.37  | -0.18 | -0.18 | -0.39 | 0.04 | -6.10 | 0.92 | -6.13 |      | A+ | A- | A- |
| 6 | 194508 | 17  | D.1.1.8 | 2 | 3618 | 0.41 | 0.29 | 0.41 | 0.13 | 0.17 | 0.00 | 0.20  | 0.02  | 0.20  | -0.13 | -0.16 | 0.64  | 0.04 | 3.55  | 1.05 | 3.96  |      | A- | A- | A+ |

| 6 | 381381 | 17 | D.1.1.4 | 2 | 3618 | 0.24 | 0.15 | 0.15 | 0.45 | 0.24 | 0.00 | 0.07 | -0.15 | -0.08 | 0.11  | 0.07  | 1.52  | 0.04 | 5.59  | 1.12 | 7.81  | 1.29 | A-         | A+ | A- |
|---|--------|----|---------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|------------|----|----|
| 6 | 158951 | 17 | D.1.2.2 | 2 | 3618 | 0.69 | 0.05 | 0.69 | 0.07 | 0.19 | 0.00 | 0.28 | -0.12 | 0.28  | -0.20 | -0.12 | -0.70 | 0.04 | -0.68 | 0.99 | -1.54 | 0.96 | A-         | A+ | B+ |
| 6 | 857640 | 17 | D.2.1.3 | 2 | 3618 | 0.76 | 0.04 | 0.15 | 0.04 | 0.76 | 0.00 | 0.25 | -0.21 | -0.04 | -0.21 | 0.25  | -1.15 | 0.04 | -0.49 | 0.99 | 1.89  | 1.07 | A+         | A- | C- |
| 6 | 238080 | 17 | D.2.1.5 | 2 | 3618 | 0.55 | 0.15 | 0.13 | 0.55 | 0.17 | 0.01 | 0.36 | -0.17 | -0.18 | 0.36  | -0.13 | -0.01 | 0.04 | -6.41 | 0.92 | -5.85 | 0.90 | A-         | A- | A- |
| 6 | 743801 | 18 | D.1.1.1 | 2 | 3583 | 0.65 | 0.13 | 0.10 | 0.12 | 0.65 | 0.00 | 0.33 | -0.16 | -0.15 | -0.17 | 0.33  | -0.51 | 0.04 | -3.95 | 0.94 | -4.14 | 0.91 | A-         | Α- | A- |
| 6 | 800277 | 18 | D.1.2.3 | 2 | 3583 | 0.66 | 0.05 | 0.13 | 0.14 | 0.66 | 0.01 | 0.32 | -0.21 | -0.16 | -0.12 | 0.32  | -0.59 | 0.04 | -3.85 | 0.94 | -4.27 | 0.90 | A+         | A+ | A+ |
| 6 | 918470 | 18 | D.1.1.6 | 2 | 3583 | 0.68 | 0.05 | 0.22 | 0.68 | 0.05 | 0.00 | 0.32 | -0.16 | -0.19 | 0.32  | -0.14 | -0.67 | 0.04 | -3.53 | 0.94 | -4.14 | 0.90 | A+         | Α- | A- |
| 6 | 920362 | 18 | D.1.1.3 | 2 | 3583 | 0.67 | 0.23 | 0.06 | 0.04 | 0.67 | 0.00 | 0.25 | -0.18 | -0.10 | -0.10 | 0.25  | -0.64 | 0.04 | -0.34 | 0.99 | -0.35 | 0.99 | B+         | C+ | A+ |
| 6 | 461238 | 18 | D.2.1.1 | 2 | 3583 | 0.34 | 0.19 | 0.34 | 0.17 | 0.30 | 0.00 | 0.27 | -0.07 | 0.27  | -0.04 | -0.18 | 0.96  | 0.04 | -1.17 | 0.98 | 0.84  | 1.02 | A-         | A- | A+ |
| 6 | 383878 | 18 | D.1.1.8 | 2 | 3583 | 0.16 | 0.25 | 0.54 | 0.16 | 0.05 | 0.00 | 0.10 | 0.08  | -0.08 | 0.10  | -0.14 | 2.12  | 0.05 | 2.43  | 1.08 | 7.14  | 1.39 | A-         | B- | A+ |
| 6 | 664897 | 18 | D.1.1.4 | 2 | 3583 | 0.45 | 0.45 | 0.26 | 0.15 | 0.13 | 0.00 | 0.20 | 0.20  | -0.09 | -0.10 | -0.05 | 0.41  | 0.04 | 4.98  | 1.06 | 4.71  | 1.08 | A-         | Α- | A- |
| 6 | 407499 | 18 | D.1.2.2 | 2 | 3583 | 0.68 | 0.09 | 0.11 | 0.68 | 0.12 | 0.00 | 0.30 | -0.19 | -0.12 | 0.30  | -0.14 | -0.69 | 0.04 | -2.55 | 0.96 | -2.58 | 0.93 | A+         | A+ | B+ |
| 6 | 543984 | 18 | D.1.2.1 | 2 | 3583 | 0.27 | 0.45 | 0.27 | 0.12 | 0.15 | 0.00 | 0.23 | 0.02  | 0.23  | -0.15 | -0.17 | 1.33  | 0.04 | -0.07 | 1.00 | 4.88  | 1.15 | A+         | A- | A+ |
| 6 | 319020 | 18 | D.2.1.3 | 2 | 3583 | 0.31 | 0.63 | 0.31 | 0.03 | 0.02 | 0.00 | 0.31 | -0.20 | 0.31  | -0.13 | -0.15 | 1.11  | 0.04 | -2.90 | 0.95 | -1.28 | 0.97 | A-         | C- | B- |
| 6 | 567750 | 18 | D.2.1.5 | 2 | 3583 | 0.23 | 0.42 | 0.23 | 0.09 | 0.25 | 0.01 | 0.17 | 0.01  | 0.17  | -0.15 | -0.06 | 1.56  | 0.04 | 2.42  | 1.05 | 4.61  | 1.17 | A-         | A+ | A+ |
| 6 | 995400 | 19 | D.1.1.1 | 2 | 3619 | 0.38 | 0.38 | 0.04 | 0.06 | 0.52 | 0.00 | 0.08 | 0.08  | -0.22 | -0.18 | 0.09  | 0.69  | 0.04 | 9.90  | 1.14 | 9.66  | 1.21 | A-         | A+ | A+ |
| 6 | 341632 | 19 | D.1.2.3 | 2 | 3619 | 0.73 | 0.10 | 0.07 | 0.73 | 0.10 | 0.00 | 0.33 | -0.11 | -0.19 | 0.33  | -0.21 | -1.04 | 0.04 | -4.22 | 0.92 | -5.24 | 0.85 | A+         | A- | A- |
| 6 | 423388 | 19 | D.1.1.6 | 2 | 3619 | 0.25 | 0.05 | 0.05 | 0.65 | 0.25 | 0.00 | 0.13 | -0.17 | -0.21 | 0.05  | 0.13  | 1.40  | 0.04 | 2.66  | 1.06 | 8.10  | 1.28 | A-         | A+ | A+ |
| 6 | 226989 | 19 | D.2.1.1 | 2 | 3619 | 0.48 | 0.19 | 0.18 | 0.15 | 0.48 | 0.00 | 0.31 | -0.16 | -0.17 | -0.06 | 0.31  | 0.21  | 0.04 | -3.92 | 0.95 | -2.90 | 0.95 | A-         | A- | A- |
| 6 | 157879 | 19 | D.1.1.8 | 2 | 3619 | 0.54 | 0.11 | 0.16 | 0.54 | 0.19 | 0.00 | 0.29 | -0.12 | -0.10 | 0.29  | -0.18 | -0.06 | 0.04 | -2.73 | 0.97 | -2.23 | 0.96 | A-         | A- | A- |
| 6 | 197476 | 19 | D.1.1.4 | 1 | 3619 | 0.43 | 0.15 | 0.10 | 0.32 | 0.43 | 0.00 | 0.11 | -0.07 | -0.11 | 0.01  | 0.11  | 0.45  | 0.04 | 9.63  | 1.12 | 8.94  | 1.17 | A+         | A+ | A+ |
| 6 | 234422 | 19 | D.1.2.2 | 2 | 3619 | 0.64 | 0.11 | 0.64 | 0.09 | 0.16 | 0.00 | 0.37 | -0.13 | 0.37  | -0.20 | -0.21 | -0.53 | 0.04 | -7.21 | 0.90 | -6.38 | 0.87 | A-         | A+ | A+ |
| 6 | 212781 | 19 | D.1.2.1 | 2 | 3619 | 0.13 | 0.50 | 0.17 | 0.21 | 0.13 | 0.00 | 0.06 | -0.09 | -0.03 | 0.09  | 0.06  | 2.31  | 0.05 | 2.02  | 1.07 | 8.50  | 1.55 | A+         | A+ | A- |
| 6 | 107539 | 19 | D.2.1.3 | 2 | 3619 | 0.82 | 0.06 | 0.82 | 0.06 | 0.06 | 0.00 | 0.34 | -0.20 | 0.34  | -0.10 | -0.23 | -1.60 | 0.05 | -4.10 | 0.89 | -3.82 | 0.84 | A+         | A- | A- |
| 6 | 376425 | 19 | D.2.1.5 | 2 | 3619 | 0.61 | 0.13 | 0.61 | 0.07 | 0.19 | 0.00 | 0.29 | -0.15 | 0.29  | -0.17 | -0.12 | -0.37 | 0.04 | -2.89 | 0.96 | -3.34 | 0.93 | A+         | Α- | A- |
| 6 | 324741 | 19 | D.1.1.3 |   | 3619 | 0.69 | 0.69 | 0.16 | 0.08 | 0.06 | 0.01 | 0.39 | 0.39  | -0.17 | -0.22 | -0.23 | -0.79 | 0.04 | -7.34 | 0.88 | -7.39 | 0.82 | A+         | A+ | A- |
| 6 | 529656 | 20 | D.1.1.1 | 2 | 3629 | 0.48 | 0.29 | 0.11 | 0.11 | 0.48 | 0.00 | 0.06 | 0.03  | -0.08 | -0.05 | 0.06  | 0.26  | 0.04 | 9.90  | 1.17 | 9.90  | 1.23 | A+         | A+ | A- |
| 6 | 420333 | 20 | D.1.2.3 | 2 | 3629 | 0.69 | 0.69 | 0.13 | 0.12 | 0.06 | 0.00 | 0.41 | 0.41  | -0.21 | -0.23 | -0.18 | -0.75 | 0.04 | -7.82 | 0.87 | -8.13 | 0.81 | A+         | A- | A- |
| 6 | 561068 | 20 | D.1.1.6 | 2 | 3629 | 0.49 | 0.25 | 0.08 | 0.49 | 0.18 | 0.00 | 0.40 | -0.19 | -0.18 | 0.40  | -0.17 | 0.20  | 0.04 | -9.90 | 0.89 | -8.31 | 0.87 | <b>A</b> + | A+ | A- |
| 6 | 600659 | 20 | D.2.1.1 | 2 | 3629 | 0.31 | 0.17 | 0.25 | 0.26 | 0.31 | 0.00 | 0.21 | -0.17 | -0.05 | -0.02 | 0.21  | 1.07  | 0.04 | 1.44  | 1.02 | 2.45  | 1.06 | A-         | A- | A- |
| 6 | 590811 | 20 | D.1.1.8 | 2 | 3629 | 0.65 | 0.11 | 0.65 | 0.07 | 0.17 | 0.00 | 0.42 | -0.24 | 0.42  | -0.23 | -0.17 | -0.53 | 0.04 | -9.02 | 0.87 | -9.08 | 0.82 | A-         | B- | A- |
| 6 | 459990 | 20 | D.1.2.1 | 2 | 3629 | 0.47 | 0.17 | 0.47 | 0.10 | 0.26 | 0.00 | 0.31 | -0.22 | 0.31  | -0.19 | -0.04 | 0.32  | 0.04 | -3.77 | 0.96 | -3.40 | 0.94 | A-         | A- | A- |

| 6 | 621257 | 20 | D.1.1.4 | 2 | 3629  | 0.24 | 0.22 | 0.24 | 0.37 | 0.17 | 0.01 | 0.07 | -0.07 | 0.07  | 0.08  | -0.09 | 1.49  | 0.04 | 5.16  | 1.11 | 9.07  | 1.33 | A+ | A+ | A+ |
|---|--------|----|---------|---|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 6 | 483450 | 20 | D.1.1.3 | 2 | 3629  | 0.19 | 0.17 | 0.34 | 0.30 | 0.19 | 0.00 | 0.01 | -0.14 | 0.08  | 0.03  | 0.01  | 1.85  | 0.04 | 4.91  | 1.13 | 9.16  | 1.43 | Α- | A+ | A- |
| 6 | 870536 | 20 | D.1.2.2 | 2 | 3629  | 0.40 | 0.17 | 0.30 | 0.40 | 0.12 | 0.00 | 0.15 | -0.14 | 0.04  | 0.15  | -0.12 | 0.62  | 0.04 | 6.59  | 1.09 | 5.51  | 1.11 | A+ | A+ | A+ |
| 6 | 662221 | 20 | D.2.1.3 | 2 | 3629  | 0.69 | 0.04 | 0.69 | 0.03 | 0.23 | 0.00 | 0.25 | -0.19 | 0.25  | -0.16 | -0.10 | -0.76 | 0.04 | -0.69 | 0.99 | 0.50  | 1.01 | A+ | B- | A- |
| 6 | 966073 | 20 | D.2.1.5 | 2 | 3629  | 0.71 | 0.14 | 0.06 | 0.71 | 0.09 | 0.00 | 0.38 | -0.25 | -0.20 | 0.38  | -0.13 | -0.84 | 0.04 | -6.28 | 0.89 | -6.37 | 0.84 | A- | B- | B- |
| 7 | 755737 | 0  | D.1.1.5 | 2 | 78481 | 0.27 | 0.22 | 0.36 | 0.27 | 0.14 | 0.00 | 0.08 | -0.01 | -0.05 | 0.08  | -0.01 | 1.17  | 0.01 | 9.90  | 1.15 | 9.90  | 1.32 | A- | A+ | A+ |
| 7 | 238935 | 0  | D.1.1.1 | 2 | 78481 | 0.61 | 0.61 | 0.12 | 0.14 | 0.13 | 0.00 | 0.31 | 0.31  | -0.20 | -0.13 | -0.11 | -0.49 | 0.01 | -9.90 | 0.94 | -9.90 | 0.95 | A+ | A- | A- |
| 7 | 904296 | 0  | D.1.2.1 | 2 | 78481 | 0.56 | 0.22 | 0.56 | 0.13 | 0.10 | 0.00 | 0.31 | -0.17 | 0.31  | -0.15 | -0.10 | -0.23 | 0.01 | -9.90 | 0.95 | -9.90 | 0.94 | A+ | A- | A- |
| 7 | 675564 | 0  | D.1.1.7 | 2 | 78481 | 0.66 | 0.17 | 0.66 | 0.07 | 0.10 | 0.00 | 0.26 | -0.10 | 0.26  | -0.18 | -0.11 | -0.75 | 0.01 | -5.69 | 0.98 | -8.74 | 0.95 | A+ | A- | A- |
| 7 | 269210 | 0  | D.2.1.2 | 3 | 78481 | 0.41 | 0.15 | 0.13 | 0.30 | 0.41 | 0.00 | 0.23 | -0.12 | -0.07 | -0.10 | 0.23  | 0.45  | 0.01 | 4.79  | 1.01 | 8.18  | 1.03 | A+ | A+ | A+ |
| 7 | 498396 | 0  | D.1.1.6 | 2 | 78481 | 0.33 | 0.13 | 0.33 | 0.35 | 0.19 | 0.00 | 0.19 | -0.15 | 0.19  | -0.03 | -0.04 | 0.88  | 0.01 | 9.90  | 1.04 | 9.90  | 1.13 | A- | A+ | A+ |
| 7 | 424674 | 0  | D.1.1.8 | 2 | 78481 | 0.81 | 0.04 | 0.81 | 0.13 | 0.02 | 0.00 | 0.27 | -0.18 | 0.27  | -0.14 | -0.15 | -1.64 | 0.01 | -9.90 | 0.93 | -9.90 | 0.87 | A+ | A- | A- |
| 7 | 606557 | 0  | D.2.1.1 | 2 | 78481 | 0.43 | 0.27 | 0.43 | 0.08 | 0.22 | 0.00 | 0.24 | -0.07 | 0.24  | -0.16 | -0.10 | 0.35  | 0.01 | 7.27  | 1.02 | 8.45  | 1.03 | A+ | A- | A- |
| 7 | 965669 | 0  | D.1.2.3 | 2 | 78481 | 0.56 | 0.56 | 0.08 | 0.21 | 0.15 | 0.00 | 0.27 | 0.27  | -0.16 | -0.14 | -0.09 | -0.24 | 0.01 | -3.15 | 0.99 | -5.80 | 0.98 | A- | A- | A- |
| 7 | 610346 | 0  | D.1.1.3 | 2 | 78481 | 0.62 | 0.16 | 0.05 | 0.16 | 0.62 | 0.00 | 0.24 | -0.13 | -0.19 | -0.06 | 0.24  | -0.53 | 0.01 | -0.62 | 1.00 | 3.85  | 1.02 | A- | A- | A- |
| 7 | 240630 | 0  | D.1.2.2 | 2 | 78481 | 0.36 | 0.20 | 0.39 | 0.05 | 0.36 | 0.00 | 0.30 | -0.21 | -0.06 | -0.13 | 0.30  | 0.69  | 0.01 | -9.90 | 0.96 | -8.20 | 0.96 | Α- | A- | A- |
| 7 | 555973 | 0  | D.2.1.3 | 2 | 78481 | 0.68 | 0.10 | 0.15 | 0.07 | 0.68 | 0.00 | 0.33 | -0.16 | -0.20 | -0.14 | 0.33  | -0.86 | 0.01 | -9.90 | 0.90 | -9.90 | 0.85 | A- | A- | A- |
| 7 | 583205 | 0  | D.2.1.4 | 2 | 78481 | 0.21 | 0.21 | 0.38 | 0.06 | 0.36 | 0.00 | 0.23 | 0.23  | 0.08  | -0.16 | -0.20 | 1.58  | 0.01 | -3.94 | 0.98 | 9.90  | 1.12 | A+ | A+ | A+ |
| 7 | 799155 | 1  | D.1.2.1 | 2 | 4371  | 0.56 | 0.07 | 0.06 | 0.56 | 0.32 | 0.00 | 0.37 | -0.19 | -0.17 | 0.37  | -0.21 | -0.25 | 0.03 | -6.66 | 0.92 | -5.88 | 0.90 | A- | A- | A+ |
| 7 | 994666 | 1  | D.1.1.7 | 2 | 4371  | 0.72 | 0.07 | 0.08 | 0.13 | 0.72 | 0.00 | 0.34 | -0.20 | -0.19 | -0.14 | 0.34  | -1.04 | 0.04 | -4.28 | 0.93 | -4.52 | 0.88 | A+ | A- | A+ |
| 7 | 581841 | 1  | D.1.2.3 | 2 | 4371  | 0.21 | 0.21 | 0.42 | 0.12 | 0.25 | 0.00 | 0.23 | 0.23  | -0.03 | -0.09 | -0.11 | 1.60  | 0.04 | -0.71 | 0.98 | 4.42  | 1.17 | A+ | A+ | A- |
| 7 | 768612 | 1  | D.2.1.2 | 3 | 4371  | 0.42 | 0.16 | 0.28 | 0.42 | 0.14 | 0.00 | 0.24 | -0.12 | -0.11 | 0.24  | -0.07 | 0.41  | 0.03 | 2.91  | 1.04 | 3.90  | 1.07 | A- | A- | A- |
| 7 | 277686 | 1  | D.1.1.5 | 2 | 4371  | 0.23 | 0.23 | 0.29 | 0.26 | 0.21 | 0.00 | 0.04 | 0.04  | -0.07 | -0.01 | 0.05  | 1.47  | 0.04 | 7.88  | 1.17 | 9.78  | 1.36 | A- | A+ | A+ |
| 7 | 412799 | 1  | D.1.1.1 | 2 | 4371  | 0.30 | 0.30 | 0.22 | 0.18 | 0.30 | 0.00 | 0.20 | -0.02 | -0.11 | -0.08 | 0.20  | 1.04  | 0.04 | 2.91  | 1.05 | 4.41  | 1.11 | A- | A- | A- |
| 7 | 875415 | 1  | D.2.1.1 | 2 | 4371  | 0.64 | 0.09 | 0.09 | 0.18 | 0.64 | 0.00 | 0.36 | -0.23 | -0.21 | -0.12 | 0.36  | -0.66 | 0.03 | -5.92 | 0.92 | -5.65 | 0.89 | A+ | A+ | A+ |
| 7 | 431699 | 1  | D.1.1.2 | 2 | 4371  | 0.78 | 0.11 | 0.06 | 0.78 | 0.04 | 0.00 | 0.40 | -0.24 | -0.22 | 0.40  | -0.16 | -1.42 | 0.04 | -6.76 | 0.87 | -8.29 | 0.74 | B+ | A- | A- |
| 7 | 945978 | 1  | D.1.1.3 | 2 | 4371  | 0.31 | 0.24 | 0.31 | 0.11 | 0.35 | 0.00 | 0.14 | -0.12 | 0.14  | -0.19 | 0.11  | 1.00  | 0.04 | 6.48  | 1.11 | 7.87  | 1.20 | A- | A+ | A+ |
| 7 | 659002 | 1  | D.1.2.2 | 2 | 4371  | 0.25 | 0.34 | 0.19 | 0.21 | 0.25 | 0.00 | 0.22 | 0.03  | -0.18 | -0.08 | 0.22  | 1.33  | 0.04 | 1.48  | 1.03 | 3.72  | 1.12 | A- | B+ | A+ |
| 7 | 559891 | 1  | D.2.1.3 | 2 | 4371  | 0.55 | 0.30 | 0.01 | 0.55 | 0.13 | 0.00 | 0.14 | -0.09 | -0.04 | 0.14  | -0.08 | -0.22 | 0.03 | 9.64  | 1.12 | 9.70  | 1.17 | A+ | A+ | A- |
| 7 | 671505 | 2  | D.1.2.1 | 2 | 4358  | 0.52 | 0.04 | 0.18 | 0.52 | 0.25 | 0.00 | 0.28 | -0.15 | -0.04 | 0.28  | -0.21 | -0.09 | 0.03 | -1.09 | 0.99 | -1.00 | 0.98 | A- | A- | A- |
| 7 | 301284 | 2  | D.1.1.7 | 2 | 4358  | 0.71 | 0.71 | 0.11 | 0.06 | 0.11 | 0.00 | 0.40 | 0.40  | -0.20 | -0.21 | -0.21 | -0.99 | 0.03 | -8.33 | 0.99 | -8.77 | 0.79 | A+ | A- | B- |
| 7 | 489362 | 2  |         | 2 | 4358  | 0.71 | 0.71 | 0.38 | 0.20 | 0.11 | 0.00 | 0.40 | -0.05 | -0.12 | -0.21 | 0.24  | 1.13  | 0.04 | -0.79 | 0.99 | 3.82  |      |    |    |    |
| / | 409302 |    | D.1.2.3 |   | 4338  | 0.28 | 0.15 | 0.38 | 0.20 | 0.28 | 0.00 | 0.24 | -0.05 | -0.12 | -0.07 | 0.24  | 1.13  | 0.04 | -0.79 | 0.99 | 3.82  | 1.10 | A- | A- | A+ |

| 7 | 129152 | 2 | D.2.1.2 | 3 | 4358 | 0.30 | 0.22 | 0.09 | 0.30 | 0.39 | 0.00 | 0.21  | -0.17 | -0.14 | 0.21  | 0.03  | 1.02  | 0.04 | 1.49  | 1.02 | 4.10  |      | A+ | A- | A+ |
|---|--------|---|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 7 | 507455 | 2 | D.1.1.5 | 2 | 4358 | 0.49 | 0.12 | 0.49 | 0.18 | 0.21 | 0.00 | 0.25  | -0.15 | 0.25  | -0.09 | -0.10 | 0.09  | 0.03 | 1.18  | 1.01 | 1.20  |      | Α- | A+ | A+ |
| 7 | 825879 | 2 | D.1.1.1 | 2 | 4358 | 0.30 | 0.30 | 0.15 | 0.21 | 0.33 | 0.00 | 0.15  | 0.15  | -0.13 | -0.01 | -0.02 | 0.99  | 0.04 | 4.80  | 1.08 | 7.03  | 1.18 | A- | A- | A+ |
| 7 | 495216 | 2 | D.2.1.1 | 2 | 4358 | 0.43 | 0.23 | 0.13 | 0.43 | 0.21 | 0.00 | 0.13  | -0.02 | -0.11 | 0.13  | -0.04 | 0.37  | 0.03 | 9.69  | 1.12 | 9.03  | 1.15 | A- | A+ | A+ |
| 7 | 349086 | 2 | D.1.1.2 | 2 | 4358 | 0.20 | 0.24 | 0.20 | 0.19 | 0.37 | 0.01 | -0.02 | -0.10 | -0.02 | -0.07 | 0.18  | 1.63  | 0.04 | 7.07  | 1.17 | 9.90  | 1.54 | A- | A+ | A+ |
| 7 | 792756 | 2 | D.1.1.3 | 2 | 4358 | 0.70 | 0.10 | 0.07 | 0.70 | 0.13 | 0.00 | 0.36  | -0.12 | -0.22 | 0.36  | -0.20 | -0.94 | 0.04 | -6.14 | 0.91 | -6.47 | 0.85 | B- | A- | B- |
| 7 | 651251 | 2 | D.1.2.2 | 2 | 4358 | 0.79 | 0.08 | 0.09 | 0.79 | 0.05 | 0.00 | 0.28  | -0.10 | -0.17 | 0.28  | -0.17 | -1.48 | 0.04 | -2.33 | 0.95 | -2.29 | 0.92 | A+ | A- | A+ |
| 7 | 846193 | 2 | D.2.1.3 | 2 | 4358 | 0.61 | 0.05 | 0.27 | 0.06 | 0.61 | 0.00 | 0.21  | -0.11 | -0.10 | -0.13 | 0.21  | -0.50 | 0.03 | 3.25  | 1.04 | 2.83  | 1.05 | A+ | A+ | A+ |
| 7 | 810098 | 3 | D.1.2.1 | 2 | 4344 | 0.34 | 0.34 | 0.39 | 0.13 | 0.14 | 0.00 | 0.34  | 0.34  | -0.11 | -0.13 | -0.18 | 0.82  | 0.03 | -4.36 | 0.94 | -2.03 | 0.96 | A+ | A- | A- |
| 7 | 129715 | 3 | D.1.1.7 | 2 | 4344 | 0.61 | 0.61 | 0.07 | 0.24 | 0.07 | 0.00 | 0.43  | 0.43  | -0.23 | -0.23 | -0.18 | -0.49 | 0.03 | -9.90 | 0.88 | -9.90 | 0.82 | A+ | A+ | A+ |
| 7 | 373695 | 3 | D.2.1.2 | 3 | 4344 | 0.56 | 0.20 | 0.18 | 0.56 | 0.06 | 0.00 | 0.30  | -0.09 | -0.19 | 0.30  | -0.16 | -0.26 | 0.03 | -0.97 | 0.99 | -1.82 | 0.97 | A- | A+ | A+ |
| 7 | 543352 | 3 | D.1.2.3 | 2 | 4344 | 0.52 | 0.17 | 0.26 | 0.52 | 0.05 | 0.00 | 0.34  | -0.22 | -0.13 | 0.34  | -0.13 | -0.07 | 0.03 | -4.09 | 0.95 | -3.83 | 0.94 | A- | A- | A- |
| 7 | 246281 | 3 | D.1.1.5 | 2 | 4344 | 0.33 | 0.20 | 0.16 | 0.33 | 0.30 | 0.00 | 0.21  | -0.11 | -0.12 | 0.21  | -0.03 | 0.85  | 0.03 | 3.64  | 1.06 | 4.77  | 1.11 | A- | A+ | A- |
| 7 | 109881 | 3 | D.1.1.1 | 2 | 4344 | 0.36 | 0.18 | 0.36 | 0.29 | 0.18 | 0.00 | 0.13  | -0.03 | 0.13  | -0.08 | -0.03 | 0.70  | 0.03 | 9.89  | 1.14 | 8.91  | 1.20 | A- | A+ | A+ |
| 7 | 122518 | 3 | D.2.1.1 | 2 | 4344 | 0.32 | 0.40 | 0.13 | 0.15 | 0.32 | 0.00 | 0.24  | -0.17 | -0.08 | 0.00  | 0.24  | 0.91  | 0.04 | 2.30  | 1.04 | 2.34  | 1.06 | A+ | A+ | A+ |
| 7 | 414972 | 3 | D.1.1.2 | 2 | 4344 | 0.47 | 0.21 | 0.47 | 0.15 | 0.16 | 0.00 | 0.21  | -0.17 | 0.21  | -0.06 | -0.02 | 0.15  | 0.03 | 5.58  | 1.07 | 6.35  | 1.11 | A- | A- | A- |
| 7 | 991027 | 3 | D.1.1.3 | 2 | 4344 | 0.57 | 0.24 | 0.10 | 0.08 | 0.57 | 0.00 | 0.36  | -0.18 | -0.18 | -0.16 | 0.36  | -0.32 | 0.03 | -5.69 | 0.93 | -5.28 | 0.91 | A+ | A- | A- |
| 7 | 922668 | 3 | D.1.2.2 | 2 | 4344 | 0.21 | 0.43 | 0.25 | 0.11 | 0.21 | 0.00 | 0.12  | -0.12 | -0.01 | 0.04  | 0.12  | 1.60  | 0.04 | 4.46  | 1.10 | 7.69  | 1.31 | A- | A+ | A- |
| 7 | 352584 | 3 | D.2.1.3 | 2 | 4344 | 0.10 | 0.07 | 0.05 | 0.77 | 0.10 | 0.00 | -0.01 | -0.17 | -0.16 | 0.20  | -0.01 | 2.48  | 0.05 | 3.61  | 1.14 | 9.82  | 1.73 | A+ | B+ | A+ |
| 7 | 665227 | 4 | D.1.2.1 | 2 | 4342 | 0.65 | 0.08 | 0.20 | 0.65 | 0.07 | 0.00 | 0.39  | -0.24 | -0.18 | 0.39  | -0.17 | -0.71 | 0.03 | -7.56 | 0.90 | -7.66 | 0.85 | A+ | A- | Α- |
| 7 | 895746 | 4 | D.1.1.7 | 2 | 4342 | 0.57 | 0.09 | 0.21 | 0.57 | 0.13 | 0.00 | 0.35  | -0.21 | -0.13 | 0.35  | -0.18 | -0.32 | 0.03 | -5.23 | 0.94 | -5.71 | 0.91 | A+ | A- | A+ |
| 7 | 522562 | 4 | D.1.2.3 | 2 | 4342 | 0.43 | 0.16 | 0.43 | 0.24 | 0.17 | 0.00 | 0.29  | -0.14 | 0.29  | -0.10 | -0.13 | 0.37  | 0.03 | -0.93 | 0.99 | 0.16  | 1.00 | A- | A- | A+ |
| 7 | 683754 | 4 | D.2.1.2 | 3 | 4342 | 0.80 | 0.05 | 0.09 | 0.06 | 0.80 | 0.00 | 0.34  | -0.17 | -0.20 | -0.18 | 0.34  | -1.58 | 0.04 | -4.60 | 0.90 | -5.44 | 0.81 | A- | A- | A+ |
| 7 | 440595 | 4 | D.1.1.5 | 2 | 4342 | 0.50 | 0.50 | 0.23 | 0.10 | 0.17 | 0.00 | 0.18  | 0.18  | -0.06 | -0.14 | -0.06 | 0.04  | 0.03 | 6.82  | 1.08 | 6.32  | 1.10 | A- | A- | A- |
| 7 | 837883 | 4 | D.1.1.1 | 2 | 4342 | 0.42 | 0.14 | 0.16 | 0.27 | 0.42 | 0.00 | 0.18  | -0.10 | -0.06 | -0.06 | 0.18  | 0.39  | 0.03 | 6.31  | 1.08 | 6.77  | 1.12 | A- | A+ | A+ |
| 7 | 210363 | 4 | D.2.1.1 | 2 | 4342 | 0.27 | 0.09 | 0.25 | 0.27 | 0.39 | 0.00 | -0.05 | -0.11 | -0.01 | -0.05 | 0.13  | 1.17  | 0.04 | 9.90  | 1.26 | 9.90  | 1.50 | A- | A+ | A+ |
| 7 | 676713 | 4 | D.1.1.2 | 2 | 4342 | 0.53 | 0.18 | 0.17 | 0.11 | 0.53 | 0.00 | 0.35  | -0.16 | -0.15 | -0.16 | 0.35  | -0.11 | 0.03 | -6.04 | 0.93 | -5.44 | 0.92 | A+ | A+ | A+ |
| 7 | 205136 | 4 | D.1.1.3 | 2 | 4342 | 0.32 | 0.32 | 0.33 | 0.10 | 0.25 | 0.00 | 0.08  | 0.08  | -0.03 | -0.20 | 0.09  | 0.93  | 0.04 | 9.44  | 1.15 | 9.58  | 1.24 | A- | A+ | A+ |
| 7 | 492870 | 4 | D.1.2.2 | 2 | 4342 | 0.67 | 0.06 | 0.67 | 0.22 | 0.04 | 0.00 | 0.36  | -0.17 | 0.36  | -0.24 | -0.12 | -0.80 | 0.03 | -5.88 | 0.92 | -5.88 | 0.87 | A+ | A- | Α- |
| 7 | 179634 | 4 | D.2.1.3 | 2 | 4342 | 0.43 | 0.14 | 0.14 | 0.43 | 0.29 | 0.00 | 0.20  | -0.17 | -0.13 | 0.20  | 0.02  | 0.35  | 0.03 | 5.48  | 1.07 | 6.29  | 1.11 | A- | A+ | A- |
| 7 | 665640 | 5 | D.2.1.2 | 3 | 4328 | 0.56 | 0.22 | 0.09 | 0.12 | 0.56 | 0.00 | 0.40  | -0.17 | -0.26 | -0.15 | 0.40  | -0.26 | 0.03 | -6.01 | 0.93 | -5.64 |      | A- | A+ | A+ |
| 7 | 597549 | 5 |         | 2 | 4328 | 0.61 | 0.61 | 0.15 | 0.11 | 0.13 | 0.00 | 0.38  | 0.38  | -0.14 | -0.22 | -0.19 | -0.47 | 0.03 | -4.54 | 0.94 | -4.20 |      | A- | A- | A- |

| 7 | 936301 | 5 | D.1.1.7 | 2 | 4328 | 0.68 | 0.07 | 0.68 | 0.09 | 0.15 | 0.00 | 0.42  | -0.20 | 0.42  | -0.24 | -0.19 | -0.86 | 0.04 | -6.62 | 0.90 | -6.63 | 0.84 | A+ | A- | A- |
|---|--------|---|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 7 | 432277 | 5 | D.1.2.3 | 2 | 4328 | 0.51 | 0.26 | 0.06 | 0.51 | 0.16 | 0.00 | 0.31  | -0.15 | -0.14 | 0.31  | -0.15 | -0.02 | 0.03 | 0.67  | 1.01 | 0.29  | 1.01 | A+ | A+ | A- |
| 7 | 892857 | 5 | D.1.1.5 | 2 | 4328 | 0.34 | 0.14 | 0.12 | 0.40 | 0.34 | 0.00 | 0.20  | -0.17 | -0.23 | 0.08  | 0.20  | 0.85  | 0.04 | 6.67  | 1.10 | 7.07  | 1.18 | A+ | A- | A+ |
| 7 | 616701 | 5 | D.1.1.1 | 2 | 4328 | 0.21 | 0.37 | 0.21 | 0.31 | 0.11 | 0.00 | 0.09  | 0.06  | 0.09  | -0.07 | -0.10 | 1.61  | 0.04 | 7.04  | 1.16 | 9.90  | 1.49 | A- | B- | A- |
| 7 | 361734 | 5 | D.2.1.1 | 2 | 4328 | 0.60 | 0.13 | 0.60 | 0.12 | 0.15 | 0.00 | 0.27  | -0.06 | 0.27  | -0.19 | -0.13 | -0.43 | 0.03 | 3.82  | 1.05 | 2.99  | 1.06 | A- | A+ | A+ |
| 7 | 945740 | 5 | D.1.1.2 | 2 | 4328 | 0.82 | 0.82 | 0.06 | 0.05 | 0.07 | 0.00 | 0.39  | 0.39  | -0.25 | -0.23 | -0.15 | -1.72 | 0.04 | -5.36 | 0.87 | -5.70 | 0.77 | A+ | A- | B- |
| 7 | 582388 | 5 | D.1.1.3 | 2 | 4328 | 0.68 | 0.09 | 0.68 | 0.16 | 0.07 | 0.00 | 0.39  | -0.26 | 0.39  | -0.15 | -0.19 | -0.83 | 0.04 | -4.87 | 0.93 | -4.70 | 0.88 | A+ | A+ | A+ |
| 7 | 673955 | 5 | D.1.2.2 | 2 | 4328 | 0.90 | 0.05 | 0.02 | 0.90 | 0.03 | 0.00 | 0.35  | -0.23 | -0.18 | 0.35  | -0.17 | -2.49 | 0.05 | -3.22 | 0.88 | -6.07 | 0.64 | A- | A- | A- |
| 7 | 544503 | 5 | D.2.1.3 | 2 | 4328 | 0.63 | 0.06 | 0.30 | 0.63 | 0.01 | 0.00 | 0.36  | -0.21 | -0.23 | 0.36  | -0.14 | -0.59 | 0.03 | -3.16 | 0.96 | -2.42 | 0.95 | A- | B- | C- |
| 7 | 442267 | 6 | D.1.2.1 | 2 | 4331 | 0.74 | 0.74 | 0.10 | 0.07 | 0.09 | 0.00 | 0.42  | 0.42  | -0.22 | -0.22 | -0.22 | -1.25 | 0.04 | -7.86 | 0.86 | -8.47 | 0.76 | A+ | A- | B- |
| 7 | 292010 | 6 | D.1.1.7 | 2 | 4331 | 0.72 | 0.09 | 0.05 | 0.14 | 0.72 | 0.00 | 0.38  | -0.18 | -0.23 | -0.19 | 0.38  | -1.13 | 0.04 | -5.75 | 0.90 | -6.10 | 0.84 | A+ | A- | A+ |
| 7 | 881576 | 6 | D.2.1.2 | 3 | 4331 | 0.61 | 0.08 | 0.16 | 0.61 | 0.14 | 0.00 | 0.33  | -0.19 | -0.18 | 0.33  | -0.12 | -0.54 | 0.03 | -3.40 | 0.96 | -3.73 | 0.93 | A- | A+ | A+ |
| 7 | 133003 | 6 | D.1.2.3 | 2 | 4331 | 0.67 | 0.67 | 0.11 | 0.09 | 0.13 | 0.00 | 0.27  | 0.27  | -0.07 | -0.21 | -0.13 | -0.83 | 0.03 | -0.26 | 1.00 | 1.01  | 1.02 | A+ | A- | A- |
| 7 | 761755 | 6 | D.1.1.5 | 2 | 4331 | 0.26 | 0.20 | 0.23 | 0.31 | 0.26 | 0.00 | 0.19  | -0.09 | -0.09 | -0.01 | 0.19  | 1.25  | 0.04 | 2.34  | 1.04 | 5.84  | 1.18 | A- | A+ | A+ |
| 7 | 570490 | 6 | D.1.1.1 | 2 | 4331 | 0.23 | 0.19 | 0.23 | 0.47 | 0.11 | 0.01 | -0.01 | -0.17 | -0.01 | 0.26  | -0.18 | 1.39  | 0.04 | 9.82  | 1.21 | 9.90  | 1.54 | A- | A- | A+ |
| 7 | 281799 | 6 | D.2.1.1 | 2 | 4331 | 0.34 | 0.04 | 0.34 | 0.16 | 0.45 | 0.00 | 0.13  | -0.13 | 0.13  | -0.07 | -0.02 | 0.76  | 0.03 | 9.14  | 1.14 | 9.90  | 1.24 | A+ | A+ | A- |
| 7 | 182797 | 6 | D.1.1.2 | 2 | 4331 | 0.59 | 0.17 | 0.15 | 0.59 | 0.09 | 0.00 | 0.35  | -0.16 | -0.16 | 0.35  | -0.17 | -0.43 | 0.03 | -4.23 | 0.95 | -4.64 | 0.92 | A+ | A+ | A+ |
| 7 | 321701 | 6 | D.1.1.3 | 2 | 4331 | 0.84 | 0.04 | 0.07 | 0.84 | 0.05 | 0.00 | 0.39  | -0.19 | -0.24 | 0.39  | -0.17 | -1.91 | 0.04 | -5.49 | 0.86 | -7.32 | 0.70 | A+ | A+ | A+ |
| 7 | 569919 | 6 | D.1.2.2 | 2 | 4331 | 0.30 | 0.37 | 0.21 | 0.12 | 0.30 | 0.00 | 0.17  | -0.06 | -0.07 | -0.07 | 0.17  | 0.97  | 0.04 | 4.63  | 1.08 | 7.22  | 1.19 | A- | A+ | B+ |
| 7 | 174179 | 6 | D.2.1.4 | 2 | 4331 | 0.67 | 0.04 | 0.25 | 0.67 | 0.04 | 0.00 | 0.22  | -0.13 | -0.08 | 0.22  | -0.21 | -0.82 | 0.03 | 3.13  | 1.05 | 2.85  | 1.07 | A- | A- | B- |
| 7 | 867178 | 7 | D.1.2.1 | 2 | 4311 | 0.58 | 0.05 | 0.58 | 0.32 | 0.05 | 0.00 | 0.35  | -0.17 | 0.35  | -0.22 | -0.16 | -0.35 | 0.03 | -4.62 | 0.95 | -4.91 | 0.91 | A- | A- | A- |
| 7 | 505418 | 7 | D.1.1.7 | 2 | 4311 | 0.53 | 0.06 | 0.53 | 0.13 | 0.27 | 0.00 | 0.27  | -0.18 | 0.27  | -0.14 | -0.09 | -0.12 | 0.03 | 1.25  | 1.01 | 0.23  | 1.00 | A+ | A- | A- |
| 7 | 293994 | 7 | D.2.1.2 | 3 | 4311 | 0.57 | 0.13 | 0.57 | 0.19 | 0.10 | 0.00 | 0.38  | -0.19 | 0.38  | -0.15 | -0.20 | -0.28 | 0.03 | -7.54 | 0.91 | -7.27 | 0.88 | A+ | A+ | A+ |
| 7 | 691370 | 7 | D.1.2.3 | 2 | 4311 | 0.76 | 0.04 | 0.08 | 0.76 | 0.12 | 0.01 | 0.41  | -0.20 | -0.23 | 0.41  | -0.20 | -1.29 | 0.04 | -7.32 | 0.87 | -7.89 | 0.76 | A+ | A- | B- |
| 7 | 181940 | 7 | D.1.1.5 | 2 | 4311 | 0.51 | 0.51 | 0.06 | 0.18 | 0.25 | 0.01 | 0.32  | 0.32  | -0.23 | -0.19 | -0.06 | -0.01 | 0.03 | -2.53 | 0.97 | -2.79 | 0.95 | A+ | A+ | A- |
| 7 | 649396 | 7 | D.1.1.1 | 2 | 4311 | 0.81 | 0.08 | 0.06 | 0.81 | 0.05 | 0.00 | 0.30  | -0.14 | -0.18 | 0.30  | -0.16 | -1.65 | 0.04 | -2.09 | 0.95 | -3.97 | 0.85 | A+ | A+ | A+ |
| 7 | 263370 | 7 | D.2.1.1 | 2 | 4311 | 0.71 | 0.07 | 0.11 | 0.71 | 0.12 | 0.00 | 0.15  | -0.14 | -0.14 | 0.15  | 0.04  | -0.98 | 0.04 | 5.29  | 1.09 | 6.87  | 1.20 | A+ | A- | A- |
| 7 | 639861 | 7 | D.1.1.2 | 2 | 4311 | 0.64 | 0.64 | 0.09 | 0.19 | 0.08 | 0.00 | 0.34  | 0.34  | -0.20 | -0.14 | -0.17 | -0.62 | 0.03 | -4.54 | 0.94 | -3.08 | 0.94 | A- | A- | A+ |
| 7 | 100660 | 7 | D.1.1.3 | 2 | 4311 | 0.51 | 0.04 | 0.09 | 0.19 | 0.51 | 0.00 | 0.26  | -0.15 | -0.16 | -0.05 | 0.26  | -0.02 | 0.03 | 2.52  | 1.03 | 2.52  | 1.04 | A- | A- | A+ |
| 7 |        | 7 |         |   |      | 0.31 |      |      |      |      |      |       |       |       | -0.03 |       | 0.92  | 0.03 |       |      | 1.59  |      |    |    |    |
|   | 818137 | 7 | D.1.2.2 | 2 | 4311 |      | 0.30 | 0.26 | 0.12 | 0.32 | 0.00 | 0.27  | -0.13 | -0.10 |       | 0.27  |       |      | 0.35  | 1.01 |       | 2.02 | A+ | A- | A+ |
| 7 | 802295 |   | D.2.1.4 |   | 4311 | 0.12 | 0.37 | 0.24 | 0.12 | 0.27 | 0.00 | -0.02 | 0.04  | -0.08 | -0.02 | 0.05  | 2.37  | 0.05 | 4.05  | 1.15 | 9.90  | 2.03 | A+ | A+ | A- |
| 7 | 306225 | 8 | D.1.2.1 | 2 | 4341 | 0.60 | 0.10 | 0.14 | 0.60 | 0.16 | 0.00 | 0.28  | -0.12 | -0.21 | 0.28  | -0.08 | -0.45 | 0.03 | -1.94 | 0.98 | -1.49 | 0.97 | A+ | B- | A- |

| _ | 202655 | 0  | D 1 1 5 | 2 | 12.11 | 0.25 | 0.25 | 0.12 | 0.51 | 0.12 | 0.00 | 0.15  | 0.15  | 0.14  | 0.01  | 0.05  | 1.20  | 0.04 | 2.50  | 1.05 | 5.22  | 1.10 |    |    |    |
|---|--------|----|---------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 7 | 393655 | 8  | D.1.1.7 | 2 | 4341  | 0.25 | 0.25 | 0.12 | 0.51 | 0.12 | 0.00 | 0.15  | 0.15  | -0.14 | 0.01  | -0.07 | 1.29  | 0.04 | 2.60  | 1.05 | 6.22  | 1.19 | A+ | A+ | A+ |
| 7 | 977127 | 8  | D.1.2.3 | 2 | 4341  | 0.43 | 0.18 | 0.43 | 0.08 | 0.30 | 0.00 | 0.44  | -0.17 | 0.44  | -0.18 | -0.22 | 0.34  | 0.03 | -9.90 | 0.85 | -9.90 | 0.83 | A+ | Α- | A- |
| 7 | 368819 | 8  | D.2.1.2 | 3 | 4341  | 0.74 | 0.13 | 0.74 | 0.08 | 0.05 | 0.00 | 0.36  | -0.21 | 0.36  | -0.17 | -0.17 | -1.17 | 0.04 | -5.84 | 0.90 | -7.18 | 0.81 | A+ | A+ | A- |
| 7 | 149083 | 8  | D.1.1.5 | 2 | 4341  | 0.26 | 0.31 | 0.13 | 0.30 | 0.26 | 0.00 | 0.06  | -0.05 | -0.13 | 0.11  | 0.06  | 1.22  | 0.04 | 7.96  | 1.15 | 7.97  | 1.24 | A- | A- | A- |
| 7 | 674025 | 8  | D.1.1.1 | 2 | 4341  | 0.23 | 0.23 | 0.26 | 0.36 | 0.14 | 0.01 | 0.04  | 0.04  | 0.04  | 0.08  | -0.19 | 1.40  | 0.04 | 6.68  | 1.14 | 9.87  | 1.34 | A- | A- | A+ |
| 7 | 477682 | 8  | D.2.1.1 | 2 | 4341  | 0.37 | 0.17 | 0.37 | 0.22 | 0.24 | 0.00 | 0.16  | -0.06 | 0.16  | -0.04 | -0.09 | 0.64  | 0.03 | 5.48  | 1.07 | 5.35  | 1.10 | A- | A+ | A+ |
| 7 | 266044 | 8  | D.1.1.2 | 2 | 4341  | 0.65 | 0.13 | 0.09 | 0.65 | 0.13 | 0.01 | 0.20  | -0.12 | -0.06 | 0.20  | -0.09 | -0.66 | 0.03 | 2.09  | 1.03 | 3.50  | 1.07 | A+ | A+ | A+ |
| 7 | 422164 | 8  | D.1.1.3 | 2 | 4341  | 0.14 | 0.38 | 0.38 | 0.10 | 0.14 | 0.00 | 0.07  | -0.01 | 0.03  | -0.11 | 0.07  | 2.10  | 0.05 | 2.54  | 1.08 | 7.72  | 1.42 | A- | A- | A+ |
| 7 | 256978 | 8  | D.1.2.2 | 2 | 4341  | 0.67 | 0.09 | 0.15 | 0.08 | 0.67 | 0.00 | 0.37  | -0.13 | -0.26 | -0.15 | 0.37  | -0.77 | 0.03 | -7.97 | 0.89 | -7.73 | 0.84 | A+ | A- | A- |
| 7 | 674549 | 8  | D.2.1.4 | 2 | 4341  | 0.20 | 0.49 | 0.14 | 0.20 | 0.16 | 0.00 | 0.12  | 0.12  | -0.18 | 0.12  | -0.10 | 1.61  | 0.04 | 2.66  | 1.06 | 5.77  | 1.22 | A+ | A+ | A- |
| 7 | 103980 | 9  | D.1.2.1 | 2 | 4391  | 0.62 | 0.08 | 0.62 | 0.24 | 0.06 | 0.00 | 0.44  | -0.23 | 0.44  | -0.25 | -0.18 | -0.56 | 0.03 | -9.90 | 0.85 | -9.90 | 0.80 | A+ | A- | B- |
| 7 | 584628 | 9  | D.1.1.7 | 2 | 4391  | 0.57 | 0.05 | 0.06 | 0.57 | 0.32 | 0.00 | 0.33  | -0.20 | -0.19 | 0.33  | -0.15 | -0.27 | 0.03 | -5.21 | 0.94 | -5.16 | 0.92 | A- | A+ | A- |
| 7 | 571843 | 9  | D.1.2.3 | 2 | 4391  | 0.84 | 0.84 | 0.04 | 0.04 | 0.08 | 0.00 | 0.36  | 0.36  | -0.16 | -0.21 | -0.23 | -1.85 | 0.04 | -4.75 | 0.88 | -8.04 | 0.69 | A+ | B- | B- |
| 7 | 961352 | 9  | D.1.1.5 | 2 | 4391  | 0.38 | 0.30 | 0.15 | 0.38 | 0.16 | 0.00 | -0.03 | 0.07  | -0.09 | -0.03 | 0.05  | 0.61  | 0.03 | 9.90  | 1.25 | 9.90  | 1.32 | A- | A+ | A+ |
| 7 | 250504 | 9  | D.1.1.1 | 2 | 4391  | 0.37 | 0.22 | 0.37 | 0.23 | 0.17 | 0.01 | 0.21  | -0.05 | 0.21  | -0.02 | -0.17 | 0.65  | 0.03 | 3.09  | 1.04 | 3.25  | 1.06 | A- | A+ | A+ |
| 7 | 732681 | 9  | D.2.1.1 | 2 | 4391  | 0.27 | 0.20 | 0.20 | 0.27 | 0.33 | 0.00 | 0.04  | -0.15 | -0.10 | 0.04  | 0.18  | 1.18  | 0.04 | 8.92  | 1.16 | 9.90  | 1.34 | A+ | A+ | A- |
| 7 | 753798 | 9  | D.1.1.2 | 2 | 4391  | 0.74 | 0.12 | 0.08 | 0.06 | 0.74 | 0.00 | 0.42  | -0.24 | -0.19 | -0.21 | 0.42  | -1.14 | 0.04 | -8.94 | 0.85 | -9.63 | 0.75 | A+ | B- | B- |
| 7 | 808263 | 9  | D.1.1.3 | 2 | 4391  | 0.33 | 0.33 | 0.25 | 0.16 | 0.26 | 0.00 | 0.20  | 0.20  | -0.17 | -0.08 | 0.03  | 0.85  | 0.03 | 2.59  | 1.04 | 4.55  | 1.10 | A- | A+ | A+ |
| 7 | 900656 | 9  | D.1.2.2 | 2 | 4391  | 0.51 | 0.12 | 0.51 | 0.30 | 0.07 | 0.00 | 0.31  | -0.12 | 0.31  | -0.20 | -0.08 | -0.03 | 0.03 | -3.48 | 0.96 | -3.32 | 0.95 | A+ | A+ | A+ |
| 7 | 240326 | 9  | D.2.1.3 | 2 | 4391  | 0.39 | 0.17 | 0.19 | 0.39 | 0.25 | 0.00 | 0.09  | -0.07 | -0.14 | 0.09  | 0.08  | 0.57  | 0.03 | 9.90  | 1.14 | 9.90  | 1.20 | A- | A+ | A+ |
| 7 | 284482 | 9  | D.2.1.4 | 2 | 4391  | 0.06 | 0.12 | 0.49 | 0.33 | 0.06 | 0.00 | 0.03  | -0.22 | 0.17  | -0.05 | 0.03  | 3.14  | 0.07 | 0.86  | 1.05 | 7.80  | 1.81 | A+ | A+ | A+ |
| 7 | 957599 | 10 | D.1.2.1 | 2 | 4385  | 0.58 | 0.21 | 0.06 | 0.15 | 0.58 | 0.00 | 0.45  | -0.23 | -0.18 | -0.22 | 0.45  | -0.40 | 0.03 | -9.90 | 0.86 | -9.90 | 0.81 | A+ | A- | A- |
| 7 | 999715 | 10 | D.1.1.7 | 2 | 4385  | 0.52 | 0.52 | 0.11 | 0.21 | 0.16 | 0.00 | 0.44  | 0.44  | -0.18 | -0.18 | -0.25 | -0.10 | 0.03 | -9.90 | 0.86 | -9.90 | 0.82 | A- | A- | B- |
| 7 | 216108 | 10 | D.1.2.3 | 2 | 4385  | 0.39 | 0.38 | 0.39 | 0.09 | 0.14 | 0.00 | 0.45  | -0.20 | 0.45  | -0.21 | -0.17 | 0.53  | 0.03 | -9.90 | 0.85 | -8.97 | 0.85 | A- | A- | A- |
| 7 | 760134 | 10 | D.1.1.5 | 2 | 4385  | 0.36 | 0.36 | 0.23 | 0.23 | 0.17 | 0.01 | 0.13  | 0.13  | -0.02 | -0.07 | -0.05 | 0.65  | 0.03 | 9.17  | 1.13 | 7.97  | 1.16 | A- | A- | A+ |
| 7 | 276836 | 10 | D.1.1.1 | 2 | 4385  | 0.61 | 0.12 | 0.14 | 0.61 | 0.12 | 0.00 | 0.38  | -0.21 | -0.17 | 0.38  | -0.16 | -0.51 | 0.03 | -8.03 | 0.91 | -7.56 | 0.87 | A- | A- | A- |
| 7 | 771119 | 10 | D.2.1.1 | 2 | 4385  | 0.40 | 0.40 | 0.40 | 0.10 | 0.10 | 0.00 | 0.18  | -0.01 | 0.18  | -0.15 | -0.12 | 0.47  | 0.03 | 6.43  | 1.08 | 6.02  | 1.11 | A+ | A+ | A+ |
| 7 | 958802 | 10 | D.1.1.2 | 2 | 4385  | 0.58 | 0.14 | 0.58 | 0.10 | 0.18 | 0.01 | 0.38  | -0.23 | 0.38  | -0.17 | -0.14 | -0.37 | 0.03 | -7.69 | 0.91 | -7.44 | 0.88 | A+ | A+ | B+ |
| 7 | 278939 | 10 | D.1.1.3 | 2 | 4385  | 0.21 | 0.21 | 0.13 | 0.39 | 0.27 | 0.00 | -0.08 | -0.08 | -0.13 | 0.07  | 0.11  | 1.52  | 0.04 | 9.90  | 1.27 | 9.90  | 1.58 | A- | A+ | A+ |
| 7 | 735148 | 10 | D.1.2.2 | 2 | 4385  | 0.53 | 0.07 | 0.05 | 0.53 | 0.35 | 0.00 | 0.30  | -0.05 | -0.09 | 0.30  | -0.24 | -0.14 | 0.03 | -1.50 | 0.98 | -1.96 | 0.97 | A+ | A- | A- |
| 7 | 618341 | 10 | D.2.1.3 | 2 | 4385  | 0.45 | 0.15 | 0.45 | 0.21 | 0.20 | 0.00 | 0.14  | -0.11 | 0.14  | -0.08 | 0.01  | 0.25  | 0.03 | 9.90  | 1.12 | 8.94  | 1.15 | A- | A- | A+ |
| 7 | 771857 | 10 | D.2.1.4 | 2 | 4385  | 0.35 | 0.35 | 0.14 | 0.22 | 0.28 | 0.00 | 0.17  | 0.17  | -0.11 | -0.13 | 0.03  | 0.71  | 0.03 | 6.26  | 1.09 | 5.44  | 1.11 | A+ | A+ | A+ |

| 7 | 539287 | 11 | D.1.1.4 | 2 | 3474 | 0.47 | 0.12 | 0.18 | 0.22 | 0.47 | 0.00 | 0.26  | -0.11 | -0.13 | -0.10 | 0.26  | 0.19  | 0.04 | 3.93  | 1.05 | 3.16  |      | A+ | A- | A+ |
|---|--------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 7 | 778130 | 11 | D.1.2.4 | 2 | 3474 | 0.71 | 0.71 | 0.08 | 0.11 | 0.09 | 0.00 | 0.35  | 0.35  | -0.17 | -0.23 | -0.13 | -1.06 | 0.04 | -3.40 | 0.94 | -2.73 |      | A+ | B- | A- |
| 7 | 475205 | 11 | D.1.2.1 | 2 | 3474 | 0.61 | 0.05 | 0.08 | 0.26 | 0.61 | 0.00 | 0.37  | -0.22 | -0.15 | -0.20 | 0.37  | -0.50 | 0.04 | -3.76 | 0.95 | -2.98 | 0.93 | A+ | A- | A- |
| 7 | 890689 | 11 | D.1.1.6 | 2 | 3474 | 0.74 | 0.08 | 0.13 | 0.05 | 0.74 | 0.00 | 0.41  | -0.20 | -0.22 | -0.21 | 0.41  | -1.19 | 0.04 | -6.34 | 0.88 | -5.99 | 0.80 | A+ | A- | Α- |
| 7 | 273496 | 11 | D.1.1.8 | 2 | 3474 | 0.46 | 0.08 | 0.46 | 0.13 | 0.32 | 0.00 | 0.41  | -0.19 | 0.41  | -0.16 | -0.19 | 0.22  | 0.04 | -6.14 | 0.92 | -5.19 | 0.90 | A- | A+ | B+ |
| 7 | 575530 | 11 | D.1.1.1 | 2 | 3474 | 0.66 | 0.66 | 0.08 | 0.11 | 0.15 | 0.01 | 0.43  | 0.43  | -0.25 | -0.22 | -0.17 | -0.74 | 0.04 | -7.33 | 0.89 | -7.08 | 0.82 | A- | A- | A+ |
| 7 | 868180 | 11 | D.2.1.1 | 2 | 3474 | 0.46 | 0.18 | 0.27 | 0.46 | 0.09 | 0.00 | 0.26  | -0.19 | -0.03 | 0.26  | -0.16 | 0.24  | 0.04 | 3.89  | 1.05 | 3.39  | 1.07 | A+ | A- | A- |
| 7 | 357713 | 11 | D.1.1.2 | 2 | 3474 | 0.56 | 0.23 | 0.08 | 0.56 | 0.13 | 0.01 | 0.35  | -0.14 | -0.23 | 0.35  | -0.13 | -0.25 | 0.04 | -2.07 | 0.97 | -2.56 | 0.95 | A- | A- | A- |
| 7 | 284004 | 11 | D.1.2.2 | 2 | 3474 | 0.80 | 0.07 | 0.10 | 0.80 | 0.03 | 0.00 | 0.31  | -0.19 | -0.17 | 0.31  | -0.14 | -1.58 | 0.05 | -1.63 | 0.96 | -2.29 | 0.90 | A+ | A+ | A- |
| 7 | 884502 | 11 | D.2.1.3 | 2 | 3474 | 0.53 | 0.12 | 0.53 | 0.13 | 0.22 | 0.00 | 0.20  | -0.09 | 0.20  | -0.22 | 0.01  | -0.11 | 0.04 | 8.02  | 1.11 | 6.99  | 1.15 | A+ | A+ | A+ |
| 7 | 890087 | 11 | D.2.1.4 | 2 | 3474 | 0.10 | 0.44 | 0.28 | 0.10 | 0.18 | 0.00 | -0.05 | 0.12  | 0.01  | -0.05 | -0.12 | 2.56  | 0.06 | 4.15  | 1.18 | 9.90  | 2.20 | A- | A+ | Α- |
| 7 | 705229 | 12 | D.1.1.4 | 2 | 3501 | 0.40 | 0.27 | 0.15 | 0.40 | 0.18 | 0.00 | 0.26  | -0.05 | -0.18 | 0.26  | -0.10 | 0.52  | 0.04 | 2.14  | 1.03 | 3.32  | 1.07 | A- | A- | B- |
| 7 | 907191 | 12 | D.1.2.4 | 2 | 3501 | 0.59 | 0.05 | 0.10 | 0.27 | 0.59 | 0.00 | 0.38  | -0.17 | -0.23 | -0.19 | 0.38  | -0.39 | 0.04 | -4.84 | 0.93 | -4.70 | 0.90 | A- | A- | A- |
| 7 | 595131 | 12 | D.1.2.1 | 2 | 3501 | 0.51 | 0.21 | 0.51 | 0.07 | 0.22 | 0.00 | 0.44  | -0.24 | 0.44  | -0.22 | -0.17 | 0.00  | 0.04 | -9.24 | 0.88 | -7.91 | 0.86 | A- | B- | A- |
| 7 | 767875 | 12 | D.1.1.6 | 2 | 3501 | 0.58 | 0.15 | 0.58 | 0.17 | 0.09 | 0.00 | 0.39  | -0.19 | 0.39  | -0.18 | -0.17 | -0.37 | 0.04 | -4.94 | 0.93 | -5.60 | 0.89 | A- | A- | A+ |
| 7 | 423455 | 12 | D.1.1.8 | 2 | 3501 | 0.86 | 0.08 | 0.05 | 0.86 | 0.02 | 0.00 | 0.35  | -0.23 | -0.22 | 0.35  | -0.12 | -2.07 | 0.05 | -3.28 | 0.90 | -5.69 | 0.70 | A+ | A+ | A+ |
| 7 | 182696 | 12 | D.1.1.1 | 2 | 3501 | 0.16 | 0.21 | 0.24 | 0.38 | 0.16 | 0.01 | -0.07 | -0.02 | -0.03 | 0.11  | -0.07 | 1.96  | 0.05 | 7.90  | 1.25 | 9.90  | 1.97 | A- | A- | A- |
| 7 | 689201 | 12 | D.2.1.1 | 2 | 3501 | 0.53 | 0.11 | 0.19 | 0.53 | 0.17 | 0.00 | 0.30  | -0.19 | -0.17 | 0.30  | -0.07 | -0.10 | 0.04 | 0.42  | 1.01 | 1.07  | 1.02 | A+ | A- | A+ |
| 7 | 440162 | 12 | D.1.1.2 | 2 | 3501 | 0.70 | 0.13 | 0.07 | 0.09 | 0.70 | 0.01 | 0.43  | -0.24 | -0.25 | -0.17 | 0.43  | -0.99 | 0.04 | -7.96 | 0.86 | -7.78 | 0.78 | A+ | A+ | A+ |
| 7 | 897784 | 12 | D.1.2.2 | 2 | 3501 | 0.66 | 0.08 | 0.66 | 0.11 | 0.15 | 0.00 | 0.38  | -0.24 | 0.38  | -0.17 | -0.18 | -0.77 | 0.04 | -5.04 | 0.92 | -5.46 | 0.86 | A- | A+ | A+ |
| 7 | 229694 | 12 | D.2.1.3 | 2 | 3501 | 0.56 | 0.12 | 0.16 | 0.16 | 0.56 | 0.00 | 0.37  | -0.20 | -0.21 | -0.11 | 0.37  | -0.25 | 0.04 | -4.07 | 0.95 | -3.21 | 0.94 | A- | A- | A- |
| 7 | 388776 | 12 | D.2.1.4 | 2 | 3501 | 0.46 | 0.46 | 0.16 | 0.18 | 0.20 | 0.00 | 0.15  | 0.15  | 0.08  | -0.20 | -0.07 | 0.25  | 0.04 | 9.90  | 1.16 | 9.64  | 1.20 | A- | A- | B- |
| 7 | 678846 | 13 | D.1.2.4 | 2 | 3484 | 0.79 | 0.07 | 0.02 | 0.11 | 0.79 | 0.00 | 0.39  | -0.20 | -0.19 | -0.25 | 0.39  | -1.50 | 0.04 | -4.81 | 0.88 | -5.91 | 0.77 | A+ | A+ | A+ |
| 7 | 336904 | 13 | D.1.2.1 | 2 | 3484 | 0.70 | 0.70 | 0.09 | 0.08 | 0.12 | 0.00 | 0.38  | 0.38  | -0.21 | -0.19 | -0.17 | -0.94 | 0.04 | -4.61 | 0.92 | -5.32 | 0.85 | A+ | A- | Α- |
| 7 | 382738 | 13 | D.1.1.4 | 2 | 3484 | 0.30 | 0.19 | 0.25 | 0.26 | 0.30 | 0.00 | 0.18  | -0.04 | -0.05 | -0.08 | 0.18  | 1.10  | 0.04 | 3.23  | 1.06 | 6.81  | 1.22 | A- | A+ | A+ |
| 7 | 418086 | 13 | D.1.1.6 | 2 | 3484 | 0.27 | 0.09 | 0.31 | 0.32 | 0.27 | 0.00 | 0.08  | -0.17 | 0.07  | -0.03 | 0.08  | 1.27  | 0.04 | 6.65  | 1.14 | 9.90  | 1.39 | A- | A- | A- |
| 7 | 328263 | 13 | D.1.1.8 | 2 | 3484 | 0.86 | 0.06 | 0.05 | 0.03 | 0.86 | 0.00 | 0.37  | -0.23 | -0.19 | -0.17 | 0.37  | -2.04 | 0.05 | -4.14 | 0.87 | -5.13 | 0.73 | A- | A- | A- |
| 7 | 209449 | 13 | D.1.1.1 | 2 | 3484 | 0.20 | 0.36 | 0.20 | 0.14 | 0.30 | 0.01 | 0.03  | 0.09  | 0.03  | -0.05 | -0.07 | 1.72  | 0.05 | 6.11  | 1.17 | 9.90  | 1.54 | A- | A+ | A+ |
| 7 | 171466 | 13 | D.2.1.1 | 2 | 3484 | 0.36 | 0.33 | 0.36 | 0.16 | 0.15 | 0.00 | 0.27  | -0.03 | 0.27  | -0.12 | -0.20 | 0.75  | 0.04 | 0.56  | 1.01 | 0.70  | 1.02 | A+ | A+ | A+ |
| 7 | 478197 | 13 | D.1.1.2 | 2 | 3484 | 0.58 | 0.10 | 0.11 | 0.58 | 0.21 | 0.00 | 0.27  | -0.22 | -0.21 | 0.27  | 0.01  | -0.30 | 0.04 | 1.15  | 1.02 | 1.14  | 1.02 | A+ | A+ | A+ |
| 7 | 214413 | 13 | D.1.2.2 | 2 | 3484 | 0.90 | 0.06 | 0.03 | 0.90 | 0.01 | 0.00 | 0.32  | -0.20 | -0.18 | 0.32  | -0.17 | -2.43 | 0.06 | -2.89 | 0.88 | -3.93 |      | A+ | A- | A- |
| 7 | 256252 | 13 | D.2.1.3 | 2 | 3484 | 0.44 | 0.44 | 0.27 | 0.19 | 0.10 | 0.00 | 0.34  | 0.34  | -0.16 | -0.16 | -0.11 | 0.36  | 0.04 | -3.49 | 0.95 | -2.34 |      | A- | A- | A- |

| _ | 0.42052 | 10 | D 2 1 5 |   | 2404 | 0.70 | 0.05 | 0.11 | 0.70 | 0.05 | 0.00 | 0.00  | 0.15  | 0.20  | 0.22  | 0.15  | 1.42  | 0.04 | 2.20  | 0.02 | 2.12  | 0.02 |    |    | Τ. |
|---|---------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 7 | 943853  | 13 | D.2.1.5 | 2 | 3484 | 0.78 | 0.05 | 0.11 | 0.78 | 0.06 | 0.00 | 0.33  | -0.17 | -0.20 | 0.33  | -0.17 | -1.42 | 0.04 | -3.28 | 0.92 | -2.12 |      | A+ | A- | A- |
| 7 | 719233  | 14 | D.1.2.4 | 2 | 3524 | 0.88 | 0.05 | 0.04 | 0.04 | 0.88 | 0.00 | 0.35  | -0.21 | -0.20 | -0.17 | 0.35  | -2.15 | 0.05 | -3.47 | 0.88 | -7.16 |      | B+ | A+ | A- |
| 7 | 528463  | 14 | D.1.2.1 | 2 | 3524 | 0.42 | 0.10 | 0.36 | 0.42 | 0.11 | 0.00 | 0.03  | -0.19 | 0.23  | 0.03  | -0.23 | 0.42  | 0.04 | 9.90  | 1.17 | 9.90  |      | Α- | A+ | A+ |
| 7 | 400987  | 14 | D.1.1.4 | 2 | 3524 | 0.69 | 0.11 | 0.12 | 0.07 | 0.69 | 0.00 | 0.37  | -0.13 | -0.21 | -0.21 | 0.37  | -0.87 | 0.04 | -6.34 | 0.89 | -6.82 | 0.84 | A+ | A- | A- |
| 7 | 572635  | 14 | D.1.1.6 | 2 | 3524 | 0.32 | 0.12 | 0.11 | 0.45 | 0.32 | 0.00 | 0.31  | -0.16 | -0.15 | -0.08 | 0.31  | 0.94  | 0.04 | -4.73 | 0.93 | -2.47 | 0.94 | A+ | A- | A- |
| 7 | 563938  | 14 | D.1.1.8 | 2 | 3524 | 0.78 | 0.78 | 0.11 | 0.04 | 0.06 | 0.00 | 0.40  | 0.40  | -0.28 | -0.16 | -0.17 | -1.40 | 0.04 | -6.41 | 0.86 | -7.72 | 0.75 | A- | A+ | A- |
| 7 | 721490  | 14 | D.1.1.1 | 2 | 3524 | 0.36 | 0.16 | 0.19 | 0.28 | 0.36 | 0.00 | -0.02 | -0.10 | -0.07 | 0.17  | -0.02 | 0.71  | 0.04 | 9.90  | 1.21 | 9.90  | 1.30 | A- | A+ | B- |
| 7 | 130683  | 14 | D.2.1.1 | 2 | 3524 | 0.46 | 0.11 | 0.26 | 0.46 | 0.17 | 0.00 | 0.22  | -0.08 | -0.14 | 0.22  | -0.06 | 0.25  | 0.04 | 1.37  | 1.02 | 1.78  | 1.03 | A+ | A- | A+ |
| 7 | 826257  | 14 | D.1.1.2 | 2 | 3524 | 0.41 | 0.18 | 0.41 | 0.30 | 0.11 | 0.00 | 0.31  | -0.21 | 0.31  | -0.05 | -0.14 | 0.49  | 0.04 | -4.77 | 0.94 | -2.80 | 0.95 | A- | A- | A- |
| 7 | 331325  | 14 | D.1.2.2 | 2 | 3524 | 0.13 | 0.13 | 0.41 | 0.29 | 0.17 | 0.00 | 0.03  | 0.03  | 0.03  | -0.07 | 0.01  | 2.19  | 0.05 | 2.13  | 1.08 | 6.26  | 1.39 | A+ | A- | A- |
| 7 | 347333  | 14 | D.2.1.3 | 2 | 3524 | 0.20 | 0.22 | 0.05 | 0.20 | 0.53 | 0.00 | -0.05 | -0.14 | -0.14 | -0.05 | 0.22  | 1.63  | 0.04 | 6.38  | 1.17 | 9.90  | 1.49 | A- | A+ | A+ |
| 7 | 944373  | 14 | D.2.1.5 | 2 | 3524 | 0.21 | 0.21 | 0.22 | 0.10 | 0.46 | 0.00 | -0.02 | -0.02 | -0.07 | -0.03 | 0.09  | 1.56  | 0.04 | 5.97  | 1.15 | 9.90  | 1.46 | A- | A+ | A- |
| 7 | 981275  | 15 | D.1.2.4 | 2 | 3506 | 0.80 | 0.06 | 0.80 | 0.06 | 0.08 | 0.00 | 0.36  | -0.17 | 0.36  | -0.23 | -0.18 | -1.59 | 0.04 | -4.62 | 0.89 | -5.97 | 0.77 | A+ | B- | B- |
| 7 | 906345  | 15 | D.1.2.1 | 2 | 3506 | 0.57 | 0.07 | 0.21 | 0.15 | 0.57 | 0.00 | 0.36  | -0.13 | -0.19 | -0.17 | 0.36  | -0.29 | 0.04 | -5.44 | 0.93 | -4.70 | 0.91 | A+ | A- | A+ |
| 7 | 156693  | 15 | D.1.1.4 | 2 | 3506 | 0.19 | 0.22 | 0.21 | 0.38 | 0.19 | 0.00 | 0.06  | -0.05 | -0.13 | 0.11  | 0.06  | 1.67  | 0.05 | 4.57  | 1.12 | 9.13  | 1.44 | A- | A+ | A+ |
| 7 | 173995  | 15 | D.1.1.6 | 2 | 3506 | 0.40 | 0.10 | 0.13 | 0.37 | 0.40 | 0.00 | 0.30  | -0.15 | -0.15 | -0.09 | 0.30  | 0.51  | 0.04 | -1.48 | 0.98 | -0.82 | 0.98 | A- | A+ | A- |
| 7 | 751716  | 15 | D.1.1.8 | 2 | 3506 | 0.85 | 0.03 | 0.04 | 0.85 | 0.09 | 0.00 | 0.38  | -0.17 | -0.20 | 0.38  | -0.23 | -1.93 | 0.05 | -4.58 | 0.86 | -7.29 | 0.67 | A+ | A- | A+ |
| 7 | 994416  | 15 | D.1.1.1 | 2 | 3506 | 0.52 | 0.14 | 0.19 | 0.52 | 0.15 | 0.01 | 0.33  | -0.17 | -0.12 | 0.33  | -0.15 | -0.06 | 0.04 | -3.72 | 0.95 | -3.19 | 0.94 | A+ | A- | A- |
| 7 | 613144  | 15 | D.2.1.1 | 2 | 3506 | 0.31 | 0.08 | 0.31 | 0.44 | 0.17 | 0.00 | 0.21  | -0.11 | 0.21  | 0.01  | -0.19 | 0.96  | 0.04 | 2.44  | 1.04 | 3.30  | 1.09 | A- | B- | A- |
| 7 | 496472  | 15 | D.1.1.2 | 2 | 3506 | 0.40 | 0.14 | 0.35 | 0.40 | 0.11 | 0.00 | 0.19  | -0.11 | 0.03  | 0.19  | -0.21 | 0.50  | 0.04 | 4.98  | 1.07 | 5.51  | 1.12 | A+ | A- | A- |
| 7 | 588062  | 15 | D.1.2.2 | 2 | 3506 | 0.34 | 0.34 | 0.06 | 0.52 | 0.08 | 0.00 | 0.15  | 0.15  | -0.14 | -0.03 | -0.08 | 0.79  | 0.04 | 6.01  | 1.10 | 6.89  | 1.18 | C- | A- | A- |
| 7 | 220220  | 15 | D.2.1.3 | 2 | 3506 | 0.44 | 0.13 | 0.44 | 0.26 | 0.16 | 0.00 | 0.02  | -0.05 | 0.02  | 0.08  | -0.07 | 0.30  | 0.04 | 9.90  | 1.23 | 9.90  | 1.32 | A- | A+ | A+ |
| 7 | 145596  | 15 | D.2.1.5 | 2 | 3506 | 0.43 | 0.43 | 0.12 | 0.14 | 0.31 | 0.00 | 0.29  | 0.29  | -0.13 | -0.12 | -0.12 | 0.36  | 0.04 | -0.61 | 0.99 | 0.40  | 1.01 | A+ | A+ | B- |
| 7 | 616205  | 16 | D.1.2.4 | 2 | 3486 | 0.62 | 0.12 | 0.62 | 0.15 | 0.11 | 0.00 | 0.37  | -0.19 | 0.37  | -0.18 | -0.17 | -0.52 | 0.04 | -6.97 | 0.91 | -6.62 | 0.87 | A- | A- | A- |
| 7 | 388799  | 16 | D.1.2.1 | 2 | 3486 | 0.57 | 0.12 | 0.12 | 0.57 | 0.18 | 0.00 | 0.29  | -0.18 | -0.14 | 0.29  | -0.09 | -0.31 | 0.04 | -2.21 | 0.97 | -1.56 | 0.97 | A+ | A+ | A- |
| 7 | 786709  | 16 | D.1.1.4 | 2 | 3486 | 0.39 | 0.17 | 0.39 | 0.15 | 0.28 | 0.00 | 0.15  | -0.11 | 0.15  | -0.13 | 0.04  | 0.56  | 0.04 | 5.99  | 1.09 | 6.13  | 1.13 | A+ | A- | A+ |
| 7 | 253282  | 16 | D.1.1.9 | 2 | 3486 | 0.29 | 0.38 | 0.29 | 0.15 | 0.17 | 0.00 | 0.11  | 0.10  | 0.11  | -0.13 | -0.13 | 1.05  | 0.04 | 5.50  | 1.10 | 7.57  | 1.22 | A+ | A- | A+ |
| 7 | 386382  | 16 | D.1.1.6 | 2 | 3486 | 0.23 | 0.23 | 0.22 | 0.41 | 0.13 | 0.00 | 0.17  | 0.17  | -0.08 | 0.01  | -0.12 | 1.38  | 0.04 | 0.90  | 1.02 | 5.09  | 1.19 | A- | A- | A- |
| 7 | 107397  | 16 | D.1.1.1 | 2 | 3486 | 0.32 | 0.32 | 0.36 | 0.13 | 0.19 | 0.01 | 0.02  | 0.02  | 0.08  | -0.05 | -0.06 | 0.90  | 0.04 | 9.90  | 1.19 | 9.90  | 1.29 | A+ | A+ | B+ |
| 7 | 376533  | 16 | D.2.1.1 | 2 | 3486 | 0.44 | 0.31 | 0.07 | 0.19 | 0.44 | 0.00 | 0.11  | -0.06 | -0.14 | 0.02  | 0.11  | 0.32  | 0.04 | 9.26  | 1.12 | 8.78  | 1.16 | A+ | A+ | A- |
| 7 | 414994  | 16 | D.1.1.2 | 2 | 3486 | 0.53 | 0.16 | 0.53 | 0.18 | 0.12 | 0.00 | 0.29  | -0.21 | 0.29  | -0.08 | -0.09 | -0.13 | 0.04 | -2.34 | 0.97 | -0.95 |      | A+ | A- | A+ |
| 7 | 597537  | 16 | D.1.2.2 | 2 | 3486 | 0.42 | 0.35 | 0.19 | 0.42 | 0.03 | 0.00 | 0.08  | -0.07 | 0.05  | 0.08  | -0.11 | 0.38  | 0.04 | 9.90  | 1.15 | 9.84  |      | A- | A- | A+ |

| 7 | 070540 | 16 | D212    | 2 | 2496 | 0.80 | 0.02 | 0.10 | 0.00 | 0.07 | 0.00 | 0.25  | 0.11  | 0.14  | 0.25  | 0.16  | 1.50  | 0.04 | 1.27  | 0.07 | 1.54  | 0.04 |    |    |    |
|---|--------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
|   | 979540 | 16 | D.2.1.3 | 2 | 3486 | 0.80 | 0.03 | 0.10 | 0.80 | 0.07 | 0.00 | 0.25  | -0.11 | -0.14 | 0.25  | -0.16 | -1.59 | 0.04 | -1.27 | 0.97 | -1.54 | 0.94 | A- | A- | A- |
| 7 | 349914 | 16 | D.2.1.5 | 2 | 3486 | 0.60 | 0.19 | 0.16 | 0.60 | 0.05 | 0.00 | 0.38  | -0.26 | -0.14 | 0.38  | -0.15 | -0.44 | 0.04 | -8.34 | 0.89 | -7.40 | 0.86 | A- | A- | A- |
| 7 | 374822 | 17 | D.1.2.4 | 2 | 3512 | 0.53 | 0.10 | 0.13 | 0.24 | 0.53 | 0.00 | 0.25  | -0.16 | -0.11 | -0.09 | 0.25  | -0.12 | 0.04 | 1.59  | 1.02 | 1.50  | 1.03 | A+ | A+ | A- |
| 7 | 403938 | 17 | D.1.2.1 | 2 | 3512 | 0.45 | 0.25 | 0.23 | 0.07 | 0.45 | 0.00 | 0.36  | -0.22 | -0.08 | -0.19 | 0.36  | 0.24  | 0.04 | -5.75 | 0.93 | -4.70 | 0.92 | A- | A- | В- |
| 7 | 287986 | 17 | D.1.1.4 | 2 | 3512 | 0.31 | 0.31 | 0.27 | 0.23 | 0.19 | 0.00 | 0.13  | 0.13  | -0.06 | -0.01 | -0.06 | 0.96  | 0.04 | 6.72  | 1.12 | 6.27  | 1.17 | A- | Α- | Α- |
| 7 | 794631 | 17 | D.1.1.9 | 2 | 3512 | 0.38 | 0.19 | 0.13 | 0.30 | 0.38 | 0.00 | 0.25  | -0.08 | -0.08 | -0.12 | 0.25  | 0.60  | 0.04 | 1.93  | 1.03 | 1.77  | 1.04 | A+ | A- | A- |
| 7 | 941307 | 17 | D.1.1.6 | 2 | 3512 | 0.61 | 0.09 | 0.61 | 0.18 | 0.13 | 0.00 | 0.32  | -0.14 | 0.32  | -0.19 | -0.12 | -0.47 | 0.04 | -3.24 | 0.96 | -4.06 | 0.92 | A- | A- | A- |
| 7 | 497592 | 17 | D.1.1.1 | 2 | 3512 | 0.25 | 0.19 | 0.25 | 0.30 | 0.27 | 0.01 | 0.07  | -0.14 | 0.07  | 0.06  | 0.01  | 1.33  | 0.04 | 7.03  | 1.16 | 7.69  | 1.28 | A- | A+ | A+ |
| 7 | 858113 | 17 | D.2.1.1 | 2 | 3512 | 0.45 | 0.08 | 0.44 | 0.45 | 0.03 | 0.00 | 0.19  | -0.02 | -0.14 | 0.19  | -0.11 | 0.24  | 0.04 | 6.23  | 1.08 | 5.90  | 1.11 | A+ | A- | A+ |
| 7 | 537793 | 17 | D.1.1.2 | 2 | 3512 | 0.58 | 0.58 | 0.15 | 0.16 | 0.10 | 0.01 | 0.27  | 0.27  | -0.20 | 0.00  | -0.17 | -0.35 | 0.04 | -0.14 | 1.00 | 1.24  | 1.02 | A- | A- | A- |
| 7 | 476784 | 17 | D.1.2.2 | 2 | 3512 | 0.32 | 0.29 | 0.32 | 0.26 | 0.13 | 0.00 | 0.26  | -0.17 | 0.26  | -0.08 | -0.03 | 0.87  | 0.04 | -0.13 | 1.00 | 1.66  | 1.04 | A+ | A- | A- |
| 7 | 211785 | 17 | D.2.1.3 | 2 | 3512 | 0.32 | 0.18 | 0.23 | 0.32 | 0.27 | 0.00 | 0.18  | -0.07 | -0.10 | 0.18  | -0.04 | 0.90  | 0.04 | 4.18  | 1.07 | 5.79  | 1.15 | A- | A+ | A+ |
| 7 | 147454 | 17 | D.2.1.5 | 2 | 3512 | 0.60 | 0.02 | 0.07 | 0.60 | 0.31 | 0.00 | 0.27  | -0.16 | -0.13 | 0.27  | -0.16 | -0.45 | 0.04 | 0.10  | 1.00 | -0.38 | 0.99 | A- | A- | A+ |
| 7 | 789410 | 18 | D.1.2.4 | 2 | 3495 | 0.71 | 0.06 | 0.08 | 0.71 | 0.15 | 0.00 | 0.36  | -0.18 | -0.19 | 0.36  | -0.19 | -1.04 | 0.04 | -4.44 | 0.92 | -2.67 | 0.92 | A- | A+ | A- |
| 7 | 244774 | 18 | D.1.2.1 | 2 | 3495 | 0.50 | 0.20 | 0.08 | 0.50 | 0.21 | 0.00 | 0.36  | -0.20 | -0.16 | 0.36  | -0.12 | 0.04  | 0.04 | -3.47 | 0.96 | -3.70 | 0.93 | A- | A- | A+ |
| 7 | 403663 | 18 | D.1.1.4 | 2 | 3495 | 0.30 | 0.27 | 0.23 | 0.19 | 0.30 | 0.00 | 0.18  | -0.03 | -0.06 | -0.10 | 0.18  | 1.03  | 0.04 | 4.60  | 1.09 | 6.76  | 1.21 | A- | A+ | A+ |
| 7 | 725288 | 18 | D.1.1.9 | 2 | 3495 | 0.83 | 0.04 | 0.83 | 0.10 | 0.03 | 0.00 | 0.33  | -0.19 | 0.33  | -0.17 | -0.18 | -1.77 | 0.05 | -2.77 | 0.92 | -3.75 | 0.82 | A- | A+ | A+ |
| 7 | 481921 | 18 | D.1.1.6 | 2 | 3495 | 0.39 | 0.21 | 0.15 | 0.39 | 0.24 | 0.01 | 0.21  | -0.03 | -0.17 | 0.21  | -0.04 | 0.60  | 0.04 | 4.34  | 1.07 | 6.08  | 1.15 | A+ | A- | A+ |
| 7 | 986723 | 18 | D.1.1.1 | 2 | 3495 | 0.23 | 0.23 | 0.38 | 0.24 | 0.15 | 0.00 | -0.07 | -0.07 | 0.24  | -0.10 | -0.11 | 1.47  | 0.04 | 9.90  | 1.30 | 9.90  | 1.69 | A- | A+ | A+ |
| 7 | 221011 | 18 | D.2.1.1 | 2 | 3495 | 0.61 | 0.04 | 0.61 | 0.07 | 0.28 | 0.00 | 0.29  | -0.10 | 0.29  | -0.19 | -0.16 | -0.49 | 0.04 | 0.82  | 1.01 | 1.77  | 1.04 | A- | A- | A- |
| 7 | 781708 | 18 | D.1.1.2 | 2 | 3495 | 0.54 | 0.18 | 0.20 | 0.54 | 0.07 | 0.01 | 0.40  | -0.17 | -0.20 | 0.40  | -0.16 | -0.14 | 0.04 | -6.80 | 0.91 | -5.94 | 0.89 | A+ | A- | A- |
| 7 | 420139 | 18 | D.1.2.2 | 2 | 3495 | 0.81 | 0.07 | 0.81 | 0.07 | 0.04 | 0.00 | 0.34  | -0.23 | 0.34  | -0.18 | -0.13 | -1.68 | 0.05 | -3.19 | 0.92 | -4.54 | 0.80 | A- | A+ | A- |
| 7 | 677242 | 18 | D.2.1.3 | 2 | 3495 | 0.63 | 0.15 | 0.12 | 0.09 | 0.63 | 0.00 | 0.37  | -0.13 | -0.18 | -0.24 | 0.37  | -0.59 | 0.04 | -4.78 | 0.93 | -4.23 | 0.90 | A- | A- | A+ |
| 7 | 299493 | 18 | D.2.1.5 | 2 | 3495 | 0.64 | 0.27 | 0.03 | 0.06 | 0.64 | 0.00 | 0.33  | -0.17 | -0.18 | -0.22 | 0.33  | -0.63 | 0.04 | -3.23 | 0.95 | 0.17  | 1.00 | A- | B- | A- |
| 7 | 938938 | 19 | D.1.2.4 | 2 | 3510 | 0.78 | 0.07 | 0.78 | 0.12 | 0.03 | 0.00 | 0.39  | -0.26 | 0.39  | -0.19 | -0.19 | -1.39 | 0.04 | -5.06 | 0.89 | -6.13 | 0.79 | A- | A- | A- |
| 7 | 189909 | 19 | D.1.2.1 | 2 | 3510 | 0.73 | 0.10 | 0.73 | 0.09 | 0.07 | 0.00 | 0.43  | -0.26 | 0.43  | -0.20 | -0.21 | -1.11 | 0.04 | -7.38 | 0.86 | -8.40 | 0.76 | A- | B- | В- |
| 7 | 464161 | 19 | D.1.1.4 | 2 | 3510 | 0.48 | 0.48 | 0.11 | 0.06 | 0.35 | 0.00 | 0.29  | 0.29  | -0.19 | -0.23 | -0.05 | 0.18  | 0.04 | -1.61 | 0.98 | -0.33 | 0.99 | A- | A+ | A- |
| 7 | 440281 | 19 | D.1.1.6 | 2 | 3510 | 0.48 | 0.19 | 0.23 | 0.48 | 0.11 | 0.00 | 0.30  | -0.09 | -0.13 | 0.30  | -0.18 | 0.17  | 0.04 | -1.83 | 0.98 | -1.49 | 0.97 | A- | A- | A+ |
| 7 | 330880 | 19 | D.1.1.9 | 2 | 3510 | 0.40 | 0.22 | 0.14 | 0.24 | 0.40 | 0.00 | 0.05  | 0.01  | -0.05 | -0.02 | 0.05  | 0.54  | 0.04 | 9.90  | 1.20 | 9.90  | 1.27 | A+ | A+ | A+ |
| 7 | 906454 | 19 | D.1.1.1 | 2 | 3510 | 0.20 | 0.30 | 0.29 | 0.20 | 0.20 | 0.01 | 0.03  | -0.07 | 0.11  | -0.05 | 0.03  | 1.67  | 0.04 | 5.49  | 1.14 | 9.90  | 1.53 | A- | A- | A+ |
| 7 | 670990 | 19 | D.2.1.1 | 2 | 3510 | 0.24 | 0.37 | 0.08 | 0.30 | 0.24 | 0.00 | 0.01  | 0.06  | -0.11 | 0.00  | 0.01  | 1.41  | 0.04 | 7.59  | 1.17 | 9.90  | 1.48 | A- | A- | B+ |
| 7 | 274028 | 19 | D.1.1.2 | 2 | 3510 | 0.70 | 0.15 | 0.06 | 0.70 | 0.08 | 0.01 | 0.40  | -0.23 | -0.23 | 0.40  | -0.14 | -0.91 | 0.04 | -6.75 | 0.88 | -6.33 | 0.84 | A+ | A- | B- |

| 7 | 806822 | 19 | D.1.2.2 | 2 | 3510  | 0.67 | 0.17 | 0.05 | 0.12 | 0.67 | 0.00 | 0.28  | -0.12 | -0.15 | -0.17 | 0.28  | -0.75 | 0.04 | -0.30 | 0.99 | -0.88 | 0.98 | A+ | A+ | A+ |
|---|--------|----|---------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 7 | 562034 | 19 | D.2.1.3 | 2 | 3510  | 0.58 | 0.58 | 0.15 | 0.11 | 0.16 | 0.00 | 0.05  | 0.05  | -0.05 | 0.09  | -0.09 | -0.28 | 0.04 | 9.90  | 1.20 | 9.90  | 1.29 | A- | A+ | A+ |
| 7 | 249602 | 19 | D.2.1.5 | 2 | 3510  | 0.84 | 0.05 | 0.04 | 0.84 | 0.07 | 0.00 | 0.37  | -0.20 | -0.16 | 0.37  | -0.24 | -1.82 | 0.05 | -4.22 | 0.88 | -5.37 | 0.76 | A+ | A+ | B- |
| 7 | 807015 | 20 | D.1.2.4 | 2 | 3487  | 0.84 | 0.84 | 0.05 | 0.04 | 0.06 | 0.00 | 0.37  | 0.37  | -0.19 | -0.19 | -0.22 | -1.91 | 0.05 | -4.24 | 0.87 | -4.73 | 0.77 | A+ | A- | A- |
| 7 | 255547 | 20 | D.1.2.1 | 2 | 3487  | 0.85 | 0.85 | 0.05 | 0.07 | 0.03 | 0.00 | 0.35  | 0.35  | -0.22 | -0.15 | -0.20 | -1.98 | 0.05 | -3.38 | 0.89 | -4.55 | 0.77 | A+ | A- | B- |
| 7 | 517356 | 20 | D.1.1.4 | 2 | 3487  | 0.89 | 0.03 | 0.89 | 0.04 | 0.04 | 0.00 | 0.38  | -0.21 | 0.38  | -0.19 | -0.22 | -2.38 | 0.06 | -3.88 | 0.85 | -6.95 | 0.59 | A+ | A- | A- |
| 7 | 255060 | 20 | D.1.1.6 | 2 | 3487  | 0.29 | 0.31 | 0.21 | 0.18 | 0.29 | 0.00 | 0.19  | 0.13  | -0.14 | -0.21 | 0.19  | 1.11  | 0.04 | 3.30  | 1.06 | 5.41  | 1.18 | A- | Α- | A- |
| 7 | 354855 | 20 | D.1.1.9 | 2 | 3487  | 0.47 | 0.30 | 0.06 | 0.16 | 0.47 | 0.01 | 0.35  | -0.17 | -0.21 | -0.11 | 0.35  | 0.22  | 0.04 | -3.95 | 0.95 | -2.78 | 0.95 | A+ | A- | A+ |
| 7 | 202806 | 20 | D.1.1.1 | 2 | 3487  | 0.29 | 0.27 | 0.18 | 0.29 | 0.26 | 0.00 | 0.00  | 0.04  | -0.07 | 0.00  | 0.03  | 1.13  | 0.04 | 9.90  | 1.25 | 9.90  | 1.49 | A- | A- | B+ |
| 7 | 336976 | 20 | D.2.1.1 | 2 | 3487  | 0.58 | 0.17 | 0.17 | 0.58 | 0.08 | 0.00 | 0.35  | -0.14 | -0.18 | 0.35  | -0.19 | -0.33 | 0.04 | -3.54 | 0.95 | -3.38 | 0.93 | A- | A+ | A- |
| 7 | 551544 | 20 | D.1.1.2 | 2 | 3487  | 0.46 | 0.23 | 0.16 | 0.46 | 0.15 | 0.01 | 0.29  | -0.12 | -0.16 | 0.29  | -0.09 | 0.24  | 0.04 | -0.32 | 1.00 | 0.44  | 1.01 | A+ | A+ | A+ |
| 7 | 372094 | 20 | D.1.2.2 | 2 | 3487  | 0.51 | 0.09 | 0.28 | 0.12 | 0.51 | 0.00 | 0.20  | -0.16 | -0.05 | -0.09 | 0.20  | 0.01  | 0.04 | 6.66  | 1.09 | 5.86  | 1.11 | A- | A+ | A+ |
| 7 | 787569 | 20 | D.2.1.3 | 2 | 3487  | 0.59 | 0.16 | 0.03 | 0.59 | 0.21 | 0.00 | 0.23  | -0.11 | -0.09 | 0.23  | -0.13 | -0.39 | 0.04 | 4.35  | 1.06 | 3.72  | 1.08 | A- | Α- | A- |
| 7 | 983031 | 20 | D.2.1.5 | 2 | 3487  | 0.83 | 0.04 | 0.83 | 0.08 | 0.05 | 0.00 | 0.34  | -0.15 | 0.34  | -0.19 | -0.20 | -1.79 | 0.05 | -2.94 | 0.92 | -3.94 | 0.82 | A+ | В- | B- |
| 8 | 348017 | 0  | D.2.1.2 | 2 | 74573 | 0.69 | 0.06 | 0.08 | 0.16 | 0.69 | 0.00 | 0.20  | -0.08 | -0.12 | -0.10 | 0.20  | -1.03 | 0.01 | -3.95 | 0.99 | 1.29  | 1.01 | A- | A- | A- |
| 8 | 104396 | 0  | D.1.1.3 | 2 | 74573 | 0.15 | 0.40 | 0.25 | 0.19 | 0.15 | 0.01 | -0.04 | 0.18  | -0.06 | -0.11 | -0.04 | 1.84  | 0.01 | 9.90  | 1.16 | 9.90  | 1.53 | A- | A+ | A+ |
| 8 | 238134 | 0  | D.1.2.1 | 2 | 74573 | 0.82 | 0.03 | 0.82 | 0.08 | 0.07 | 0.00 | 0.23  | -0.13 | 0.23  | -0.12 | -0.13 | -1.82 | 0.01 | -9.90 | 0.93 | -9.90 | 0.84 | B+ | A- | A- |
| 8 | 990202 | 0  | D.1.1.6 | 2 | 74573 | 0.26 | 0.03 | 0.68 | 0.26 | 0.02 | 0.00 | 0.11  | -0.11 | -0.01 | 0.11  | -0.14 | 1.08  | 0.01 | 9.90  | 1.05 | 9.90  | 1.16 | A- | A+ | A+ |
| 8 | 530781 | 0  | D.2.1.3 | 2 | 74573 | 0.70 | 0.70 | 0.10 | 0.09 | 0.11 | 0.00 | 0.28  | 0.28  | -0.17 | -0.16 | -0.10 | -1.09 | 0.01 | -9.90 | 0.91 | -9.90 | 0.86 | A+ | Α- | A- |
| 8 | 308096 | 0  | D.1.1.7 | 2 | 74573 | 0.78 | 0.78 | 0.04 | 0.12 | 0.05 | 0.00 | 0.27  | 0.27  | -0.15 | -0.14 | -0.14 | -1.56 | 0.01 | -9.90 | 0.90 | -9.90 | 0.82 | A+ | Α- | A- |
| 8 | 647431 | 0  | D.1.1.8 | 2 | 74573 | 0.30 | 0.21 | 0.22 | 0.27 | 0.30 | 0.00 | 0.20  | -0.01 | -0.09 | -0.09 | 0.20  | 0.87  | 0.01 | -7.01 | 0.97 | 1.37  | 1.01 | A+ | Α- | A- |
| 8 | 650127 | 0  | D.1.2.2 | 2 | 74573 | 0.30 | 0.21 | 0.39 | 0.30 | 0.09 | 0.00 | 0.14  | -0.12 | 0.10  | 0.14  | -0.19 | 0.83  | 0.01 | 6.07  | 1.02 | 9.90  | 1.09 | A+ | A- | A- |
| 8 | 811443 | 0  | D.1.1.5 | 2 | 74573 | 0.29 | 0.10 | 0.29 | 0.19 | 0.42 | 0.00 | 0.12  | -0.12 | 0.12  | -0.03 | -0.01 | 0.89  | 0.01 | 9.66  | 1.04 | 9.90  | 1.13 | A- | A+ | A+ |
| 8 | 334158 | 0  | D.1.1.1 | 2 | 74573 | 0.28 | 0.32 | 0.16 | 0.28 | 0.24 | 0.00 | 0.09  | 0.00  | -0.09 | 0.09  | -0.01 | 0.97  | 0.01 | 9.90  | 1.07 | 9.90  | 1.18 | A- | A+ | A+ |
| 8 | 750433 | 0  | D.1.2.3 | 2 | 74573 | 0.68 | 0.68 | 0.17 | 0.05 | 0.10 | 0.00 | 0.12  | 0.12  | 0.02  | -0.13 | -0.12 | -0.98 | 0.01 | 9.90  | 1.06 | 9.90  | 1.11 | A+ | A+ | A+ |
| 8 | 903020 | 0  | D.2.1.1 | 2 | 74573 | 0.38 | 0.15 | 0.30 | 0.17 | 0.38 | 0.00 | 0.20  | -0.09 | -0.08 | -0.07 | 0.20  | 0.43  | 0.01 | -5.41 | 0.98 | 1.12  | 1.00 | A- | A- | A- |
| 8 | 864456 | 0  | D.2.1.4 | 2 | 74573 | 0.70 | 0.06 | 0.70 | 0.13 | 0.11 | 0.00 | 0.27  | -0.13 | 0.27  | -0.14 | -0.13 | -1.06 | 0.01 | -9.90 | 0.92 | -9.90 | 0.88 | A+ | В- | A- |
| 8 | 132058 | 1  | D.1.2.4 | 2 | 4120  | 0.66 | 0.10 | 0.06 | 0.18 | 0.66 | 0.00 | 0.37  | -0.23 | -0.22 | -0.14 | 0.37  | -0.89 | 0.04 | -8.31 | 0.89 | -8.73 | 0.83 | A+ | A- | A- |
| 8 | 208230 | 1  | D.1.1.8 | 2 | 4120  | 0.28 | 0.25 | 0.20 | 0.28 | 0.26 | 0.01 | 0.06  | 0.01  | -0.10 | 0.06  | 0.04  | 0.94  | 0.04 | 5.70  | 1.10 | 8.15  | 1.22 | A- | A- | A+ |
| 8 | 698537 | 1  | D.1.1.3 | 2 | 4120  | 0.64 | 0.15 | 0.64 | 0.16 | 0.05 | 0.00 | 0.29  | -0.16 | 0.29  | -0.17 | -0.10 | -0.76 | 0.03 | -4.08 | 0.95 | -4.49 | 0.92 | A+ | A- | A- |
| 8 | 225081 | 1  | D.2.1.2 | 2 | 4120  | 0.49 | 0.08 | 0.12 | 0.30 | 0.49 | 0.00 | 0.16  | -0.13 | -0.11 | 0.00  | 0.16  | -0.07 | 0.03 | 4.86  | 1.05 | 3.91  | 1.06 | A+ | A- | A- |
|   |        | 1  |         |   |       |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
| 8 | 675794 | 1  | D.1.1.2 | 2 | 4120  | 0.91 | 0.91 | 0.02 | 0.05 | 0.02 | 0.00 | 0.28  | 0.28  | -0.13 | -0.17 | -0.16 | -2.64 | 0.06 | -2.15 | 0.91 | -5.22 | 0.71 | A+ | A- | A- |

|     | 194333 | 1 | D.1.2.1 | 2 | 4120 | 0.47 | 0.31 | 0.47 | 0.07 | 0.15 | 0.00 | 0.32  | -0.19 | 0.32  | -0.05 | -0.15 | 0.03  | 0.03 | -7.19 | 0.93 | -6.43 | 0.91 | A- | B- | B- |
|-----|--------|---|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
|     | 774917 | 1 | D.1.2.2 | 2 | 4120 | 0.21 | 0.33 | 0.21 | 0.13 | 0.32 | 0.01 | 0.13  | 0.07  | 0.13  | -0.24 | 0.01  | 1.39  | 0.04 | 0.67  | 1.01 | 5.82  | 1.21 | A- | A+ | A- |
| 8   | 990420 | 1 | D.1.1.5 | 2 | 4120 | 0.59 | 0.08 | 0.11 | 0.59 | 0.21 | 0.00 | 0.23  | -0.11 | -0.14 | 0.23  | -0.07 | -0.54 | 0.03 | -0.81 | 0.99 | -0.63 | 0.99 | A+ | A+ | A+ |
| 8 ! | 975803 | 1 | D.1.1.1 | 2 | 4120 | 0.32 | 0.18 | 0.29 | 0.32 | 0.20 | 0.01 | 0.02  | -0.08 | 0.07  | 0.02  | 0.00  | 0.73  | 0.04 | 9.81  | 1.15 | 9.35  | 1.22 | A- | A+ | A- |
| 8   | 370167 | 1 | D.2.1.1 | 2 | 4120 | 0.43 | 0.43 | 0.16 | 0.27 | 0.14 | 0.00 | 0.27  | 0.27  | -0.12 | -0.09 | -0.13 | 0.23  | 0.03 | -3.78 | 0.96 | -2.29 | 0.96 | A+ | A+ | A- |
| 8   | 123996 | 1 | D.2.1.4 | 2 | 4120 | 0.50 | 0.09 | 0.19 | 0.50 | 0.22 | 0.00 | 0.20  | -0.08 | -0.16 | 0.20  | -0.03 | -0.09 | 0.03 | 1.43  | 1.01 | 1.85  | 1.03 | A+ | A- | A- |
| 8   | 439328 | 2 | D.1.2.4 | 2 | 4162 | 0.53 | 0.53 | 0.05 | 0.35 | 0.07 | 0.00 | 0.36  | 0.36  | -0.12 | -0.24 | -0.14 | -0.25 | 0.03 | -9.90 | 0.89 | -9.77 | 0.87 | A- | C- | A- |
| 8   | 740770 | 2 | D.1.1.8 | 2 | 4162 | 0.30 | 0.16 | 0.22 | 0.30 | 0.31 | 0.01 | 0.03  | 0.00  | -0.06 | 0.03  | 0.03  | 0.85  | 0.04 | 7.82  | 1.13 | 8.91  | 1.21 | A- | A- | A- |
| 8   | 569584 | 2 | D.1.1.3 | 3 | 4162 | 0.35 | 0.15 | 0.25 | 0.24 | 0.35 | 0.00 | 0.25  | -0.17 | -0.06 | -0.05 | 0.25  | 0.59  | 0.03 | -2.30 | 0.97 | -1.42 | 0.97 | A- | A+ | A- |
| 8   | 124960 | 2 | D.2.1.2 | 2 | 4162 | 0.20 | 0.06 | 0.20 | 0.41 | 0.32 | 0.00 | 0.03  | -0.19 | 0.03  | -0.02 | 0.10  | 1.44  | 0.04 | 4.24  | 1.10 | 8.49  | 1.31 | A+ | A+ | A- |
| 8   | 237850 | 2 | D.1.1.2 | 2 | 4162 | 0.43 | 0.27 | 0.15 | 0.43 | 0.15 | 0.00 | 0.12  | 0.08  | -0.12 | 0.12  | -0.13 | 0.24  | 0.03 | 6.09  | 1.07 | 5.67  | 1.09 | A+ | A+ | A+ |
| 8   | 126051 | 2 | D.1.2.1 | 2 | 4162 | 0.69 | 0.05 | 0.69 | 0.06 | 0.20 | 0.00 | 0.19  | -0.12 | 0.19  | -0.13 | -0.08 | -0.97 | 0.04 | 0.54  | 1.01 | 1.03  | 1.02 | A- | A+ | A+ |
| 8   | 864382 | 2 | D.1.2.2 | 2 | 4162 | 0.13 | 0.04 | 0.13 | 0.19 | 0.64 | 0.00 | 0.29  | -0.18 | 0.29  | 0.10  | -0.21 | 2.05  | 0.05 | -3.41 | 0.89 | -1.79 | 0.91 | A+ | A- | A- |
| 8   | 965373 | 2 | D.1.1.5 | 2 | 4162 | 0.49 | 0.18 | 0.14 | 0.20 | 0.49 | 0.00 | 0.22  | -0.05 | -0.18 | -0.07 | 0.22  | -0.03 | 0.03 | -0.64 | 0.99 | -0.54 | 0.99 | A- | A- | A- |
| 8   | 876954 | 2 | D.1.1.1 | 2 | 4162 | 0.28 | 0.28 | 0.27 | 0.24 | 0.21 | 0.01 | 0.02  | 0.02  | -0.02 | 0.03  | -0.01 | 0.97  | 0.04 | 7.42  | 1.13 | 8.91  | 1.24 | A+ | A+ | A+ |
| 8   | 618795 | 2 | D.2.1.1 | 2 | 4162 | 0.57 | 0.23 | 0.10 | 0.57 | 0.10 | 0.00 | 0.35  | -0.18 | -0.15 | 0.35  | -0.17 | -0.41 | 0.03 | -9.90 | 0.89 | -9.30 | 0.87 | A+ | A- | A- |
| 8   | 712301 | 2 | D.2.1.4 | 2 | 4162 | 0.55 | 0.10 | 0.15 | 0.19 | 0.55 | 0.00 | 0.31  | -0.16 | -0.18 | -0.10 | 0.31  | -0.34 | 0.03 | -6.79 | 0.93 | -6.48 | 0.91 | Α- | B- | A- |
| 8   | 541829 | 3 | D.1.2.4 | 2 | 4118 | 0.24 | 0.20 | 0.09 | 0.47 | 0.24 | 0.00 | 0.14  | 0.01  | -0.08 | -0.08 | 0.14  | 1.23  | 0.04 | 1.67  | 1.03 | 5.93  | 1.21 | A+ | A- | A- |
| 8   | 816299 | 3 | D.1.1.8 | 2 | 4118 | 0.61 | 0.19 | 0.61 | 0.11 | 0.09 | 0.00 | 0.29  | -0.06 | 0.29  | -0.20 | -0.21 | -0.62 | 0.03 | -3.11 | 0.96 | -2.82 | 0.95 | A- | A- | A- |
| 8   | 109155 | 3 | D.1.1.3 | 2 | 4118 | 0.73 | 0.73 | 0.08 | 0.08 | 0.11 | 0.00 | 0.37  | 0.37  | -0.20 | -0.22 | -0.16 | -1.27 | 0.04 | -6.20 | 0.89 | -7.65 | 0.80 | A+ | B- | C- |
| 8   | 117251 | 3 | D.2.1.2 | 2 | 4118 | 0.72 | 0.72 | 0.18 | 0.04 | 0.06 | 0.00 | 0.27  | 0.27  | -0.13 | -0.17 | -0.16 | -1.20 | 0.04 | -1.63 | 0.97 | -1.14 | 0.97 | A+ | A+ | A- |
| 8   | 571124 | 3 | D.1.1.2 | 2 | 4118 | 0.87 | 0.04 | 0.87 | 0.04 | 0.04 | 0.00 | 0.38  | -0.18 | 0.38  | -0.21 | -0.21 | -2.28 | 0.05 | -5.01 | 0.84 | -7.35 | 0.66 | A+ | A+ | A- |
| 8   | 111500 | 3 | D.1.2.1 | 2 | 4118 | 0.21 | 0.61 | 0.07 | 0.21 | 0.11 | 0.00 | 0.12  | 0.04  | -0.09 | 0.12  | -0.14 | 1.40  | 0.04 | 3.07  | 1.07 | 4.79  | 1.18 | A- | A+ | A+ |
| 8   | 661801 | 3 | D.1.2.2 | 2 | 4118 | 0.08 | 0.79 | 0.05 | 0.08 | 0.08 | 0.00 | -0.01 | 0.17  | -0.22 | -0.01 | -0.05 | 2.58  | 0.06 | 1.06  | 1.05 | 9.90  | 2.12 | A+ | A+ | A+ |
| 8   | 327376 | 3 | D.1.1.5 | 2 | 4118 | 0.86 | 0.04 | 0.86 | 0.05 | 0.04 | 0.00 | 0.37  | -0.20 | 0.37  | -0.21 | -0.19 | -2.22 | 0.05 | -4.88 | 0.85 | -7.49 | 0.67 | A+ | C- | A- |
| 8   | 285688 | 3 | D.1.1.1 | 2 | 4118 | 0.31 | 0.18 | 0.23 | 0.31 | 0.28 | 0.00 | 0.10  | -0.07 | 0.01  | 0.10  | -0.04 | 0.81  | 0.04 | 6.12  | 1.10 | 7.98  | 1.21 | A- | A+ | A+ |
| 8   | 409899 | 3 | D.2.1.1 | 2 | 4118 | 0.37 | 0.11 | 0.37 | 0.17 | 0.35 | 0.00 | 0.26  | -0.16 | 0.26  | -0.13 | -0.05 | 0.52  | 0.03 | -2.86 | 0.96 | 2.16  | 1.04 | A- | A- | A+ |
| 8   | 100314 | 3 | D.2.1.4 | 2 | 4118 | 0.42 | 0.10 | 0.21 | 0.27 | 0.42 | 0.00 | 0.25  | -0.15 | -0.15 | -0.04 | 0.25  | 0.26  | 0.03 | -0.82 | 0.99 | -0.71 | 0.99 | A+ | A- | A+ |
| 8   | 548416 | 4 | D.1.2.4 | 2 | 4147 | 0.31 | 0.31 | 0.35 | 0.12 | 0.21 | 0.00 | 0.14  | 0.14  | 0.01  | -0.09 | -0.09 | 0.78  | 0.04 | 2.51  | 1.04 | 4.01  | 1.09 | A+ | A+ | A+ |
|     | 737944 | 4 | D.1.1.8 | 2 | 4147 | 0.46 | 0.07 | 0.21 | 0.46 | 0.25 | 0.01 | 0.28  | -0.16 | -0.11 | 0.28  | -0.11 | 0.08  | 0.03 | -5.09 | 0.95 | -4.66 | 0.94 | A- | A- | A- |
|     | 833476 | 4 | D.1.1.3 | 2 | 4147 | 0.34 | 0.11 | 0.33 | 0.22 | 0.34 | 0.00 | 0.24  | -0.16 | -0.04 | -0.10 | 0.24  | 0.61  | 0.03 | -2.20 | 0.97 | -0.77 | 0.99 | A+ | A- | A+ |
|     | 605773 | 4 | D.2.1.2 | 2 | 4147 | 0.72 | 0.11 | 0.08 | 0.72 | 0.09 | 0.00 | 0.23  | -0.05 | -0.13 | 0.23  | -0.17 | -1.16 | 0.04 | -1.90 | 0.97 | -0.96 | 0.98 | A- | A- | A- |

| 8 313891 4 D.121 2 4147 0.44 0.19 0.43 0.29 0.16 0.00 0.32 0.11 0.32 0.18 0.11 0.32 0.03 0.32 0.01 0.32 0.01 0.32 0.01 0.32 0.01 0.32 0.01 0.32 0.01 0.32 0.01 0.32 0.01 0.32 0.01 0.32 0.01 0.03 0.04 0.07 0.05 0.04 0.07 0.07 0.07 0.07 0.07 0.07 0.07   |   |        |   |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    | T  |
|--|---|--------|---|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 8         90/2000         4         D122         2         41/7         000         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.00         0.01         0.00         0.01         0.00 </td <td>8</td> <td>912300</td> <td>4</td> <td></td> <td>2</td> <td>4147</td> <td>0.46</td> <td>0.12</td> <td>0.20</td> <td>0.22</td> <td>0.46</td> <td>0.00</td> <td>0.20</td> <td>-0.01</td> <td>-0.14</td> <td>-0.09</td> <td>0.20</td> <td>0.04</td> <td>0.03</td> <td>0.99</td> <td>1.01</td> <td>0.83</td> <td>1.01</td> <td>A+</td> <td>A+</td> <td>A-</td> | 8 | 912300 | 4 |         | 2 | 4147 | 0.46 | 0.12 | 0.20 | 0.22 | 0.46 | 0.00 | 0.20  | -0.01 | -0.14 | -0.09 | 0.20  | 0.04  | 0.03 | 0.99  | 1.01 | 0.83  | 1.01 | A+ | A+ | A- |
| S  | 8 | 313891 | 4 | D.1.2.1 | 2 | 4147 | 0.43 | 0.19 | 0.43 | 0.22 | 0.16 | 0.00 | 0.32  | -0.11 | 0.32  | -0.18 | -0.11 | 0.22  | 0.03 | -8.25 | 0.91 | -6.81 | 0.90 | A+ | В- | В- |
| R  | 8 | 362690 | 4 | D.1.2.2 | 2 | 4147 | 0.09 | 0.07 | 0.09 | 0.59 | 0.25 | 0.00 | 0.06  | -0.14 | 0.06  | 0.11  | -0.07 | 2.41  | 0.06 | 0.16  | 1.01 | 6.91  | 1.48 | A- | A+ | A+ |
| 8 955121 4 D2.1.1 2 4147 0.30 0.37 0.17 0.16 0.30 0.00 0.16 0.00 0.07 0.11 0.16 0.85 0.04 1.28 1.02 3.28 1.08 A A A A A S 878436 4 D2.1.4 2 4147 0.57 0.05 0.02 0.07 0.28 0.00 0.12 0.14 0.12 0.12 0.05 0.02 0.03 0.36 0.10 1.07 5.92 1.08 A B A A A S 878436 4 D2.1.4 2 4167 0.56 0.56 0.09 0.25 0.09 0.00 0.01 0.04 0.04 0.18 0.18 0.12 0.07 0.03 0.03 0.08 0.08 0.08 0.08 0.08 0.08   | 8 | 806177 | 4 | D.1.1.5 | 2 | 4147 | 0.58 | 0.13 | 0.58 | 0.17 | 0.12 | 0.01 | 0.23  | -0.09 | 0.23  | -0.11 | -0.09 | -0.47 | 0.03 | -1.50 | 0.98 | -1.09 | 0.98 | A- | A- | A+ |
| 8 78436 4 D2.14 2 4447 0.47 0.05 0.20 0.47 0.28 0.00 0.12 0.14 0.12 0.12 0.05 0.02 0.03 6.36 1.07 5.92 1.08 A+ B+ A+ B+ S+   | 8 | 997491 | 4 | D.1.1.1 | 2 | 4147 | 0.27 | 0.27 | 0.20 | 0.29 | 0.24 | 0.00 | -0.07 | -0.07 | -0.03 | 0.04  | 0.07  | 0.99  | 0.04 | 9.90  | 1.20 | 9.90  | 1.30 | A- | A+ | A+ |
| 8         272943         5         D.1.24         2         4467         0.56         0.56         0.09         0.22         0.09         0.00         0.34         -0.18         -0.12         -0.37         0.03         9.90         0.89         9.60         0.87         A+         B-A-8           8         961832         5         D.1.18         2         4167         0.23         0.23         0.10         0.00         0.15         0.13         0.02         0.00         1.25         0.04         0.10         1.00         4.56         1.11         0.4         4.27         1.18         A+         A-         A-           8         431192         5         D.2.1.2         2         4167         0.21         0.11         0.94         0.01         0.00         0.00         0.01         0.04         1.16         1.16         A-         A-         A-           8         1375414         5         D.1.12         2         4167         0.14         0.16         0.01         0.02         0.01         0.11         1.11         4.02         4.03         0.00         0.02         0.01         0.01         1.91         0.05         2.58         0.92  | 8 | 955121 | 4 | D.2.1.1 | 2 | 4147 | 0.30 | 0.37 | 0.17 | 0.16 | 0.30 | 0.00 | 0.16  | 0.00  | -0.07 | -0.11 | 0.16  | 0.85  | 0.04 | 1.28  | 1.02 | 3.28  | 1.08 | A- | A+ | A- |
| 8         96/822         5         D.1.18         2         4167         0.23         0.23         0.16         0.30         0.00         0.15         0.13         0.02         0.00         1.25         0.04         0.10         1.00         4.35         1.14         A+         A+         A-         A-                 8             943192             5             D.1.13             2             4167             0.21             0.11             0.48             0.00             0.10             0.01             0.01             0.01             1.01             4.00             0.00             0.00             0.01             0.01             1.00             4.00             0.00             0.01             0.01  | 8 | 785436 | 4 | D.2.1.4 | 2 | 4147 | 0.47 | 0.05 | 0.20 | 0.47 | 0.28 | 0.00 | 0.12  | -0.14 | -0.12 | 0.12  | 0.05  | 0.02  | 0.03 | 6.36  | 1.07 | 5.92  | 1.08 | A+ | B+ | A+ |
| 8         943192         5         D.1.13         2         4167         0.19         0.47         0.20         0.19         0.13         0.00         0.10         0.04         0.10         0.04         1.54         0.04         1.61         1.04         4.62         1.18         A+         A-         A-               8             111699             5             D.2.12             2             4167             0.21             0.11             0.48             0.20             0.21             0.01             0.09             0.06             0.03             0.00             0.02             0.03             0.00             0.02             0.01             0.03             0.00             0.02             0.01             0.03             0.00             0.02             0.01             0.03             0.00             0.02             0.01             0.01             0.01             0.01             0.05             0.01             0.01             0.01             0.01             0.01             0.01             0.01             0.02             0.01             0.01             0.01             0.01             0.01             0.01             0.01             0.01             0.01             0.02             0.01             0.01  | 8 | 272943 | 5 | D.1.2.4 | 2 | 4167 | 0.56 | 0.56 | 0.09 | 0.25 | 0.09 | 0.00 | 0.34  | 0.34  | -0.18 | -0.18 | -0.12 | -0.37 | 0.03 | -9.90 | 0.89 | -9.60 | 0.87 | A+ | B- | A- |
| 8         111659         5         D.2.1.2         2         4167         0.21         0.11         0.48         0.20         0.21         0.01         0.09         -0.06         0.03         -0.06         0.09         1.39         0.04         2.00         1.04         4.70         1.16         A.         A.         A.         B.         C.           8         178414         5         D.1.1.2         2         4167         0.46         0.02         0.09         0.86         0.03         0.00         0.26         -0.12         -0.18         0.26         -0.12         -2.10         0.05         -2.58         0.92         4.63         0.80         A.         B.         C.         8.         1.02         1.01         1.01         4.84         1.22         A.         A.<  | 8 | 961822 | 5 | D.1.1.8 | 2 | 4167 | 0.23 | 0.23 | 0.16 | 0.30 | 0.30 | 0.00 | 0.15  | 0.15  | -0.13 | -0.02 | 0.00  | 1.25  | 0.04 | 0.10  | 1.00 | 4.35  | 1.14 | A+ | A+ | A- |
| 8         375414         5         D.1.1.2         2         4167         0.86         0.02         0.09         0.86         0.03         0.00         0.26         -0.12         -0.18         0.26         -0.12         -2.10         0.05         2.58         0.92         4.63         0.80         A.         B.         C.           8         198944         5         D.1.2.1         2         4167         0.14         0.16         0.14         0.26         0.44         0.00         0.05         -0.01         0.11         1.91         0.05         2.10         1.07         4.58         1.23         A+         A+         A+           8         1.11.5         2         4167         0.01         0.02         0.01         0.02         0.01         2.07         0.03         0.03         3.49         0.97         2.64         0.96         A+         A+         A-           8         907291         5         D.1.1.1         2         4167         0.23         0.21         0.03         0.03         0.03         0.03         3.349         0.97         2.64         0.96         A+         A-           8         8077291         5         D.  | 8 | 943192 | 5 | D.1.1.3 | 2 | 4167 | 0.19 | 0.47 | 0.20 | 0.19 | 0.13 | 0.00 | 0.10  | 0.04  | -0.10 | 0.10  | -0.04 | 1.54  | 0.04 | 1.61  | 1.04 | 4.62  | 1.18 | A+ | A- | A- |
| 8         198944         5         D.1.2.1         2         4167         0.14         0.16         0.14         0.26         0.44         0.00         0.05         -0.01         0.11         1.91         0.05         2.10         1.07         4.58         1.23         A+         A+         A+         B         79808         5         D.1.2.2         2         4167         0.12         0.07         0.12         0.01         0.12         0.01         2.07         0.03         -0.26         0.09         4.54         1.25         A-         A-         A+         A-           8         807291         5         D.1.1.5         2         4167         0.49         0.15         0.49         0.20         0.16         0.00         0.02         -0.05         0.08         -0.02         -0.03         0.03         -3.49         0.97         -2.64         0.96         A+         A+         A-           8         5071.1         2         4167         0.23         0.21         0.43         0.23         0.01         0.00         -0.02         -0.05         0.08         -0.04         0.11         1.03         0.82         0.04         1.03         1.02         0.04   | 8 | 111659 | 5 | D.2.1.2 | 2 | 4167 | 0.21 | 0.11 | 0.48 | 0.20 | 0.21 | 0.01 | 0.09  | -0.06 | 0.03  | -0.06 | 0.09  | 1.39  | 0.04 | 2.00  | 1.04 | 4.70  | 1.16 | A- | A- | A+ |
| 8         796808         5         D.1.2.2         2         4167         0.12         0.01         0.01         0.01         0.01         0.02         0.00         0.12         0.01         0.02         0.01         2.07         0.05         0.26         0.99         4.54         1.25         A.         A.         A.         B         8         807291         5         D.1.1.5         2         4167         0.49         0.15         0.49         0.20         0.16         0.00         0.24         -0.12         0.02         -0.03         0.03         -3.49         0.97         -2.64         0.96         A.         A.         A.           8         788898         5         D.1.1.1         2         4167         0.31         0.14         0.31         0.02         -0.05         0.08         -0.02         -0.04         1.23         0.04         6.41         1.13         7.93         1.26         A.         A.         A.           8         640976         5         D.2.1.1         2         4167         0.88         0.04         0.03         0.08         0.00         0.13         0.01         -0.13         0.02         0.05         0.33         1.01   | 8 | 375414 | 5 | D.1.1.2 | 2 | 4167 | 0.86 | 0.02 | 0.09 | 0.86 | 0.03 | 0.00 | 0.26  | -0.12 | -0.18 | 0.26  | -0.12 | -2.10 | 0.05 | -2.58 | 0.92 | -4.63 | 0.80 | A- | B- | C- |
| 8         807291         5         D.1.1.5         2         4167         0.49         0.15         0.49         0.20         0.16         0.00         0.24         -0.12         -0.07         -0.03         0.03         -3.49         0.97         -2.64         0.96         A+         A+         A-           8         788898         5         D.1.1.1         2         4167         0.23         0.21         0.43         0.23         0.13         0.00         -0.02         -0.05         0.08         -0.02         -0.04         1.23         0.04         6.41         1.13         7.93         1.26         A-         A-           8         640976         5         D.2.1.1         2         4167         0.31         0.42         0.13         0.01         0.12         -0.03         0.12         0.01         -0.13         0.82         0.04         3.08         1.01         1.85         1.11         A+         A+         A+           8         67193         5         D.2.1.4         2         4169         0.04         0.03         0.08         0.85         0.00         0.13         -0.06         0.11         -0.06         0.13         -0.11         -0.05   | 8 | 198944 | 5 | D.1.2.1 | 2 | 4167 | 0.14 | 0.16 | 0.14 | 0.26 | 0.44 | 0.00 | 0.05  | -0.19 | 0.05  | -0.01 | 0.11  | 1.91  | 0.05 | 2.10  | 1.07 | 4.58  | 1.23 | A+ | A+ | A+ |
| 8         788898         5         D.1.1.1         2         4167         0.23         0.21         0.43         0.23         0.13         0.00         -0.02         -0.05         0.08         -0.02         -0.04         1.23         0.04         6.41         1.13         7.93         1.26         A.         A.         A.           8         640976         5         D.2.1.1         2         4167         0.31         0.14         0.31         0.04         0.03         0.08         0.00         0.13         -0.06         -0.11         -0.06         0.13         -2.02         0.05         0.33         1.01         1.85         1.08         A.         A.         A.           8         857142         6         D.1.1.9         2         4169         0.44         0.09         0.41         0.44         0.06         0.00         0.18         -0.11         -0.06         0.18         -0.11         0.05         0.33         1.01         1.85         1.08         A.         A.         A.           8         825352         6         D.1.2.4         2         4169         0.33         0.71         0.00         0.03         -0.11         -0.01         0.03 <td>8</td> <td>796808</td> <td>5</td> <td>D.1.2.2</td> <td>2</td> <td>4167</td> <td>0.12</td> <td>0.07</td> <td>0.12</td> <td>0.61</td> <td>0.20</td> <td>0.00</td> <td>0.12</td> <td>-0.17</td> <td>0.12</td> <td>0.02</td> <td>-0.01</td> <td>2.07</td> <td>0.05</td> <td>-0.26</td> <td>0.99</td> <td>4.54</td> <td>1.25</td> <td>A-</td> <td>A-</td> <td>A+</td>                                 | 8 | 796808 | 5 | D.1.2.2 | 2 | 4167 | 0.12 | 0.07 | 0.12 | 0.61 | 0.20 | 0.00 | 0.12  | -0.17 | 0.12  | 0.02  | -0.01 | 2.07  | 0.05 | -0.26 | 0.99 | 4.54  | 1.25 | A- | A- | A+ |
| 8         640976         5         D.2.1.1         2         4167         0.31         0.14         0.31         0.42         0.13         0.01         0.12         0.03         0.12         0.01         -0.13         0.82         0.04         3.08         1.05         4.78         1.11         A+         A+         A+         B           8         719903         5         D.2.1.4         2         4167         0.85         0.04         0.03         0.08         0.85         0.00         0.13         -0.06         -0.11         -0.06         0.13         -2.02         0.05         0.33         1.01         1.85         1.08         A+         A-         B-           8         857142         6         D.1.1.9         2         4169         0.44         0.09         0.01         0.04         0.06         0.00         0.18         -0.11         -0.06         0.18         -0.11         0.15         0.03         1.83         1.02         1.70         1.02         A-         A-           8         253552         6         D.1.2.4         2         4169         0.50         0.52         0.08         0.50         0.17         0.00         0.34  | 8 | 807291 | 5 | D.1.1.5 | 2 | 4167 | 0.49 | 0.15 | 0.49 | 0.20 | 0.16 | 0.00 | 0.24  | -0.12 | 0.24  | -0.12 | -0.07 | -0.03 | 0.03 | -3.49 | 0.97 | -2.64 | 0.96 | A+ | A+ | A- |
| 8 719903 5 D.2.1.4 2 4167 0.85 0.04 0.03 0.08 0.85 0.00 0.13 -0.06 -0.11 -0.06 0.13 -2.02 0.05 0.33 1.01 1.85 1.08 A+ A- B- 8 857142 6 D.1.1.9 2 4169 0.44 0.09 0.41 0.44 0.06 0.00 0.18 -0.11 -0.06 0.18 -0.11 0.15 0.03 1.83 1.02 1.70 1.02 A- A- A- 8 825352 6 D.1.2.4 2 4169 0.50 0.25 0.08 0.50 0.17 0.00 0.34 -0.17 -0.09 0.34 -0.19 -0.11 0.03 -9.90 0.90 -9.81 0.87 A+ B- A- 8 173646 6 D.1.1.3 2 4169 0.13 0.71 0.13 0.07 0.09 0.00 -0.02 0.19 -0.02 -0.13 -0.16 2.04 0.05 2.79 1.10 9.09 1.51 A- A+ A- 8 440341 6 D.2.1.2 2 4169 0.45 0.14 0.45 0.16 0.25 0.00 0.12 -0.14 0.12 -0.04 0.01 0.11 0.03 5.40 1.06 4.97 1.07 A+ A+ A- 8 747815 6 D.1.1.2 2 4169 0.35 0.35 0.19 0.25 0.20 0.00 0.17 0.17 0.05 0.17 -0.08 0.05 0.57 0.03 1.76 1.02 2.07 1.04 A+ A- A- 8 853819 6 D.1.2.1 2 4169 0.44 0.37 0.44 0.11 0.08 0.00 0.17 0.05 0.17 -0.05 0.17 0.08 0.05 0.57 0.03 1.76 1.02 2.07 1.04 A+ A- A- A- 8 853819 6 D.1.2.1 2 4169 0.44 0.37 0.44 0.11 0.08 0.00 0.17 0.05 0.17 0.05 0.17 0.08 0.05 0.57 0.03 1.76 1.02 2.07 1.04 A+ A- A- A- 8 853819 6 D.1.2.1 2 4169 0.49 0.49 0.75 0.10 0.08 0.00 0.07 0.07 0.05 0.17 0.12 0.08 0.17 0.03 2.46 1.03 3.57 1.05 A- A- A- 8 8249685 6 D.1.2.2 2 4169 0.04 0.07 0.07 0.08 0.00 0.09 0.07 0.07 0.00 0.09 0.09 0.09  | 8 | 788898 | 5 | D.1.1.1 | 2 | 4167 | 0.23 | 0.21 | 0.43 | 0.23 | 0.13 | 0.00 | -0.02 | -0.05 | 0.08  | -0.02 | -0.04 | 1.23  | 0.04 | 6.41  | 1.13 | 7.93  | 1.26 | A- | A- | A- |
| 8         857142         6         D.1.1.9         2         4169         0.44         0.09         0.41         0.44         0.06         0.00         0.18         -0.11         -0.15         0.03         1.83         1.02         1.70         1.02         A.         A.         A.           8         825352         6         D.1.2.4         2         4169         0.50         0.25         0.08         0.50         0.17         0.00         0.34         -0.19         -0.11         0.03         -9.90         0.90         -9.81         0.87         A+         B-         A-           8         173646         6         D.1.1.3         2         4169         0.13         0.71         0.13         0.07         0.09         0.00         -0.02         -0.13         -0.16         2.04         0.05         2.79         1.10         9.09         1.51         A-         A+         A-         A-         8         440341         6         D.2.1.2         2         4169         0.45         0.14         0.45         0.16         0.25         0.00         0.12         -0.14         0.12         -0.04         0.01         0.01         0.03         1.06         4.97 <td>8</td> <td>640976</td> <td>5</td> <td>D.2.1.1</td> <td>2</td> <td>4167</td> <td>0.31</td> <td>0.14</td> <td>0.31</td> <td>0.42</td> <td>0.13</td> <td>0.01</td> <td>0.12</td> <td>-0.03</td> <td>0.12</td> <td>0.01</td> <td>-0.13</td> <td>0.82</td> <td>0.04</td> <td>3.08</td> <td>1.05</td> <td>4.78</td> <td>1.11</td> <td>A+</td> <td>A+</td> <td>A+</td>                           | 8 | 640976 | 5 | D.2.1.1 | 2 | 4167 | 0.31 | 0.14 | 0.31 | 0.42 | 0.13 | 0.01 | 0.12  | -0.03 | 0.12  | 0.01  | -0.13 | 0.82  | 0.04 | 3.08  | 1.05 | 4.78  | 1.11 | A+ | A+ | A+ |
| 8         825352         6         D.1.2.4         2         4169         0.50         0.25         0.08         0.50         0.17         0.00         0.34         -0.19         -0.11         0.03         -9.90         0.90         -9.81         0.87         A+         B-         A-           8         173646         6         D.1.1.3         2         4169         0.13         0.71         0.13         0.07         0.09         0.00         -0.02         -0.13         -0.16         2.04         0.05         2.79         1.10         9.09         1.51         A-         A+         A-           8         440341         6         D.2.1.2         2         4169         0.45         0.14         0.45         0.16         0.25         0.00         0.12         -0.14         0.12         -0.04         0.01         0.11         0.03         5.40         1.06         4.97         1.07         A+         A+         A+           8         440341         6         D.1.1.2         2         4169         0.35         0.35         0.10         0.00         0.01         0.01         0.01         0.01         0.01         0.01         0.01         0.01  | 8 | 719903 | 5 | D.2.1.4 | 2 | 4167 | 0.85 | 0.04 | 0.03 | 0.08 | 0.85 | 0.00 | 0.13  | -0.06 | -0.11 | -0.06 | 0.13  | -2.02 | 0.05 | 0.33  | 1.01 | 1.85  | 1.08 | A+ | A- | B- |
| 8       173646       6       D.1.1.3       2       4169       0.13       0.71       0.13       0.07       0.09       0.00       -0.02       0.19       -0.02       -0.13       -0.16       2.04       0.05       2.79       1.10       9.09       1.51       A-       A+       A-         8       440341       6       D.2.1.2       2       4169       0.45       0.14       0.45       0.16       0.25       0.00       0.12       -0.14       0.12       -0.04       0.01       0.11       0.03       5.40       1.06       4.97       1.07       A+       A+       A+         8       747815       6       D.1.1.2       2       4169       0.35       0.35       0.19       0.25       0.20       0.00       0.17       -0.07       -0.08       -0.05       0.57       0.03       1.76       1.02       2.07       1.04       A+       A-         8       243685       6       D.1.2.1       2       4169       0.44       0.37       0.44       0.11       0.08       0.00       0.09       -0.17       0.14       -0.13       0.09       2.58       0.06       -0.03       1.00       4.88       1.35 <t< td=""><td>8</td><td>857142</td><td>6</td><td>D.1.1.9</td><td>2</td><td>4169</td><td>0.44</td><td>0.09</td><td>0.41</td><td>0.44</td><td>0.06</td><td>0.00</td><td>0.18</td><td>-0.11</td><td>-0.06</td><td>0.18</td><td>-0.11</td><td>0.15</td><td>0.03</td><td>1.83</td><td>1.02</td><td>1.70</td><td>1.02</td><td>A-</td><td>Α-</td><td>A-</td></t<>  | 8 | 857142 | 6 | D.1.1.9 | 2 | 4169 | 0.44 | 0.09 | 0.41 | 0.44 | 0.06 | 0.00 | 0.18  | -0.11 | -0.06 | 0.18  | -0.11 | 0.15  | 0.03 | 1.83  | 1.02 | 1.70  | 1.02 | A- | Α- | A- |
| 8       440341       6       D.2.1.2       2       4169       0.45       0.14       0.45       0.16       0.25       0.00       0.12       -0.14       0.12       -0.04       0.01       0.11       0.03       5.40       1.06       4.97       1.07       A+       A+       A+         8       747815       6       D.1.1.2       2       4169       0.35       0.35       0.19       0.25       0.20       0.00       0.17       -0.07       -0.08       -0.05       0.57       0.03       1.76       1.02       2.07       1.04       A+       A-         8       853819       6       D.1.2.1       2       4169       0.44       0.37       0.44       0.11       0.08       0.00       0.17       -0.05       0.17       -0.12       -0.08       0.17       0.03       2.46       1.03       3.57       1.05       A-       A-         8       249685       6       D.1.2.2       2       4169       0.08       0.07       0.00       0.09       -0.17       0.14       -0.13       0.09       2.58       0.06       -0.03       1.00       4.88       1.35       A-       A+       A-         8 <td>8</td> <td>825352</td> <td>6</td> <td>D.1.2.4</td> <td>2</td> <td>4169</td> <td>0.50</td> <td>0.25</td> <td>0.08</td> <td>0.50</td> <td>0.17</td> <td>0.00</td> <td>0.34</td> <td>-0.17</td> <td>-0.09</td> <td>0.34</td> <td>-0.19</td> <td>-0.11</td> <td>0.03</td> <td>-9.90</td> <td>0.90</td> <td>-9.81</td> <td>0.87</td> <td>A+</td> <td>B-</td> <td>A-</td>   | 8 | 825352 | 6 | D.1.2.4 | 2 | 4169 | 0.50 | 0.25 | 0.08 | 0.50 | 0.17 | 0.00 | 0.34  | -0.17 | -0.09 | 0.34  | -0.19 | -0.11 | 0.03 | -9.90 | 0.90 | -9.81 | 0.87 | A+ | B- | A- |
| 8       747815       6       D.1.1.2       2       4169       0.35       0.35       0.19       0.25       0.20       0.00       0.17       -0.07       -0.08       -0.05       0.57       0.03       1.76       1.02       2.07       1.04       A+       A-       A+         8       853819       6       D.1.2.1       2       4169       0.44       0.37       0.44       0.11       0.08       0.00       0.17       -0.05       0.17       -0.12       -0.08       0.17       0.03       2.46       1.03       3.57       1.05       A-       A-         8       249685       6       D.1.2.2       2       4169       0.08       0.08       0.05       0.01       0.08       0.00       0.09       -0.17       0.14       -0.13       0.09       2.58       0.06       -0.03       1.00       4.88       1.35       A-       A+       A+         8       870895       6       D.1.1.5       2       4169       0.49       0.17       0.49       0.27       0.08       0.00       0.26       -0.13       0.26       -0.11       -0.13       -0.07       0.03       -4.19       0.96       -3.52       0.95  | 8 | 173646 | 6 | D.1.1.3 | 2 | 4169 | 0.13 | 0.71 | 0.13 | 0.07 | 0.09 | 0.00 | -0.02 | 0.19  | -0.02 | -0.13 | -0.16 | 2.04  | 0.05 | 2.79  | 1.10 | 9.09  | 1.51 | A- | A+ | A- |
| 8       853819       6       D.1.2.1       2       4169       0.44       0.37       0.44       0.11       0.08       0.00       0.17       -0.05       0.17       -0.02       -0.08       0.17       0.03       2.46       1.03       3.57       1.05       A-       A-       A-         8       249685       6       D.1.2.2       2       4169       0.08       0.08       0.75       0.10       0.08       0.00       0.09       -0.17       0.14       -0.13       0.09       2.58       0.06       -0.03       1.00       4.88       1.35       A-       A+       A+         8       870895       6       D.1.1.5       2       4169       0.49       0.17       0.49       0.27       0.08       0.00       0.26       -0.13       0.26       -0.11       -0.13       -0.07       0.03       -4.19       0.96       -3.52       0.95       A-       A+       A-         8       224697       6       D.1.1.1       2       4169       0.26       0.26       0.31       0.18       0.24       0.00       0.11       0.11       -0.02       -0.05       -0.04       1.08       0.04       2.67       1.05       <  | 8 | 440341 | 6 | D.2.1.2 | 2 | 4169 | 0.45 | 0.14 | 0.45 | 0.16 | 0.25 | 0.00 | 0.12  | -0.14 | 0.12  | -0.04 | 0.01  | 0.11  | 0.03 | 5.40  | 1.06 | 4.97  | 1.07 | A+ | A+ | A+ |
| 8       249685       6       D.1.2.2       2       4169       0.08       0.08       0.75       0.10       0.08       0.00       0.09       -0.17       0.14       -0.13       0.09       2.58       0.06       -0.03       1.00       4.88       1.35       A-       A+       A+         8       870895       6       D.1.1.5       2       4169       0.49       0.17       0.49       0.27       0.08       0.00       0.26       -0.11       -0.13       -0.07       0.03       -4.19       0.96       -3.52       0.95       A-       A+       A-         8       224697       6       D.1.1.1       2       4169       0.26       0.26       0.31       0.18       0.24       0.00       0.11       -0.02       -0.05       -0.04       1.08       0.04       2.67       1.05       4.52       1.12       A-       A-         8       388416       6       D.2.1.1       2       4169       0.58       0.12       0.13       0.58       0.17       0.00       0.28       -0.17       -0.12       0.28       -0.11       -0.49       0.03       -6.08       0.94       -5.41       0.92       A-       A- <td>8</td> <td>747815</td> <td>6</td> <td>D.1.1.2</td> <td>2</td> <td>4169</td> <td>0.35</td> <td>0.35</td> <td>0.19</td> <td>0.25</td> <td>0.20</td> <td>0.00</td> <td>0.17</td> <td>0.17</td> <td>-0.07</td> <td>-0.08</td> <td>-0.05</td> <td>0.57</td> <td>0.03</td> <td>1.76</td> <td>1.02</td> <td>2.07</td> <td>1.04</td> <td>A+</td> <td>A-</td> <td>A+</td>   | 8 | 747815 | 6 | D.1.1.2 | 2 | 4169 | 0.35 | 0.35 | 0.19 | 0.25 | 0.20 | 0.00 | 0.17  | 0.17  | -0.07 | -0.08 | -0.05 | 0.57  | 0.03 | 1.76  | 1.02 | 2.07  | 1.04 | A+ | A- | A+ |
| 8       870895       6       D.1.1.5       2       4169       0.49       0.17       0.49       0.27       0.08       0.00       0.26       -0.11       -0.13       -0.07       0.03       -4.19       0.96       -3.52       0.95       A-       A+       A-         8       224697       6       D.1.1.1       2       4169       0.26       0.26       0.31       0.18       0.24       0.00       0.11       -0.02       -0.05       -0.04       1.08       0.04       2.67       1.05       4.52       1.12       A-       A-         8       388416       6       D.2.1.1       2       4169       0.58       0.12       0.13       0.58       0.17       0.00       0.28       -0.17       -0.12       0.28       -0.11       -0.49       0.03       -6.08       0.94       -5.41       0.92       A-       A-         8       135467       6       D.2.1.4       2       4169       0.43       0.10       0.35       0.12       0.43       0.00       0.28       -0.16       -0.09       -0.15       0.28       0.19       0.03       -5.81       0.94       -5.61       0.92       A-       B-   | 8 | 853819 | 6 | D.1.2.1 | 2 | 4169 | 0.44 | 0.37 | 0.44 | 0.11 | 0.08 | 0.00 | 0.17  | -0.05 | 0.17  | -0.12 | -0.08 | 0.17  | 0.03 | 2.46  | 1.03 | 3.57  | 1.05 | A- | A- | A- |
| 8       224697       6       D.1.1.1       2       4169       0.26       0.26       0.31       0.18       0.24       0.00       0.11       0.01       -0.02       -0.05       -0.04       1.08       0.04       2.67       1.05       4.52       1.12       A-       A-         8       388416       6       D.2.1.1       2       4169       0.58       0.12       0.13       0.58       0.17       0.00       0.28       -0.17       -0.12       0.28       -0.11       -0.49       0.03       -6.08       0.94       -5.41       0.92       A-       A-         8       135467       6       D.2.1.4       2       4169       0.43       0.10       0.35       0.12       0.43       0.00       0.28       -0.16       -0.09       -0.15       0.28       0.19       0.03       -5.81       0.94       -5.61       0.92       A-       B-         8       771469       7       D.1.1.9       2       4208       0.53       0.32       0.00       0.53       0.00       0.38       -0.26       -0.16       -0.11       0.38       -0.23       0.03       -9.90       0.88       -9.90       0.85       A+       A-   | 8 | 249685 | 6 | D.1.2.2 | 2 | 4169 | 0.08 | 0.08 | 0.75 | 0.10 | 0.08 | 0.00 | 0.09  | -0.17 | 0.14  | -0.13 | 0.09  | 2.58  | 0.06 | -0.03 | 1.00 | 4.88  | 1.35 | A- | A+ | A+ |
| 8       388416       6       D.2.1.1       2       4169       0.58       0.12       0.13       0.58       0.17       0.00       0.28       -0.17       -0.12       0.28       -0.11       -0.49       0.03       -6.08       0.94       -5.41       0.92       A-       A-       B-         8       135467       6       D.2.1.4       2       4169       0.43       0.10       0.35       0.12       0.43       0.00       0.28       -0.16       -0.09       -0.15       0.28       0.19       0.03       -5.81       0.94       -5.61       0.92       A-       B-         8       771469       7       D.1.1.9       2       4208       0.53       0.32       0.00       0.53       0.00       0.38       -0.26       -0.16       -0.11       0.38       -0.23       0.03       -9.90       0.88       -9.90       0.85       A+       A-       B-   | 8 | 870895 | 6 | D.1.1.5 | 2 | 4169 | 0.49 | 0.17 | 0.49 | 0.27 | 0.08 | 0.00 | 0.26  | -0.13 | 0.26  | -0.11 | -0.13 | -0.07 | 0.03 | -4.19 | 0.96 | -3.52 | 0.95 | A- | A+ | A- |
| 8       388416       6       D.2.1.1       2       4169       0.58       0.12       0.13       0.58       0.17       0.00       0.28       -0.17       -0.12       0.28       -0.11       -0.49       0.03       -6.08       0.94       -5.41       0.92       A-       A-         8       135467       6       D.2.1.4       2       4169       0.43       0.10       0.35       0.12       0.43       0.00       0.28       -0.16       -0.09       -0.15       0.28       0.19       0.03       -5.81       0.94       -5.61       0.92       A-       B-         8       771469       7       D.1.1.9       2       4208       0.53       0.32       0.00       0.53       0.00       0.38       -0.26       -0.16       -0.11       0.38       -0.23       0.03       -9.90       0.88       -9.90       0.85       A+       A-       B-  | 8 | 224697 | 6 | D.1.1.1 | 2 | 4169 | 0.26 | 0.26 | 0.31 | 0.18 | 0.24 | 0.00 | 0.11  | 0.11  | -0.02 | -0.05 | -0.04 | 1.08  | 0.04 | 2.67  | 1.05 | 4.52  | 1.12 | A- | A- | A- |
| 8 135467 6 D.2.1.4 2 4169 0.43 0.10 0.35 0.12 0.43 0.00 0.28 -0.16 -0.09 -0.15 0.28 0.19 0.03 -5.81 0.94 -5.61 0.92 A- B- A- 8 771469 7 D.1.1.9 2 4208 0.53 0.32 0.07 0.08 0.53 0.00 0.38 -0.26 -0.16 -0.11 0.38 -0.23 0.03 -9.90 0.88 -9.90 0.85 A+ A- B-   | 8 | 388416 | 6 | D.2.1.1 | 2 | 4169 | 0.58 | 0.12 | 0.13 | 0.58 | 0.17 | 0.00 | 0.28  | -0.17 | -0.12 | 0.28  | -0.11 | -0.49 | 0.03 | -6.08 | 0.94 | -5.41 | 0.92 | A- | A- |    |
| 8 771469 7 D.1.1.9 2 4208 0.53 0.32 0.07 0.08 0.53 0.00 0.38 -0.26 -0.16 -0.11 0.38 -0.23 0.03 -9.90 0.88 -9.90 0.85 A+ A- B-  |   |        |   |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
|  |   |        |   |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
| 8   /55041     /   D.1.2.4     2   4208     0.82   0.07   0.82   0.04   0.06   0.00   0.54   -0.20   0.54   -0.16   -0.18   -1.80   0.04   -4.61   0.89   -7.00   0.75   A+   B-   C-  | 8 | 755041 | 7 | D.1.2.4 | 2 | 4208 | 0.82 | 0.07 | 0.82 | 0.04 | 0.06 | 0.00 | 0.34  | -0.20 | 0.34  | -0.16 | -0.18 | -1.80 | 0.04 | -4.61 | 0.89 | -7.00 | 0.75 | A+ | B- | C- |
| 8 859751 7 D.1.1.3 2 4208 0.65 0.08 0.11 0.15 0.65 0.00 0.37 -0.18 -0.16 -0.20 0.37 -0.82 0.03 -9.23 0.88 -8.75 0.83 A+ A+ A-  |   |        |   |         |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |

|        | 40514 | 7  | D212 1  |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    | 1 . |
|--------|-------|----|---------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|-----|
| 8   38 |       |    | D.2.1.2 | 2 | 4208 | 0.26 | 0.59 | 0.07 | 0.26 | 0.08 | 0.00 | 0.08  | 0.10  | -0.16 | 0.08  | -0.16 | 1.08  | 0.04 | 5.81  | 1.11 | 7.52  | 1.22 | A- | A+ | A+  |
|        | 86799 | 7  | D.1.1.2 | 2 | 4208 | 0.31 | 0.19 | 0.31 | 0.32 | 0.18 | 0.00 | 0.05  | -0.01 | 0.05  | 0.02  | -0.06 | 0.84  | 0.04 | 8.39  | 1.14 | 9.20  | 1.23 | A+ | A+ | A+  |
| 8 80   | 00693 | 7  | D.1.2.1 | 2 | 4208 | 0.15 | 0.15 | 0.09 | 0.26 | 0.50 | 0.00 | 0.31  | 0.31  | -0.24 | -0.01 | -0.07 | 1.87  | 0.05 | -3.68 | 0.90 | -1.27 | 0.94 | A+ | A+ | A-  |
| 8 449  | 49216 | 7  | D.1.2.2 | 2 | 4208 | 0.17 | 0.30 | 0.46 | 0.17 | 0.06 | 0.00 | 0.12  | -0.06 | 0.05  | 0.12  | -0.16 | 1.68  | 0.04 | 1.21  | 1.03 | 5.65  | 1.25 | A+ | A+ | A+  |
| 8 26   | 68350 | 7  | D.1.1.5 | 2 | 4208 | 0.81 | 0.05 | 0.81 | 0.10 | 0.04 | 0.00 | 0.25  | -0.10 | 0.25  | -0.18 | -0.13 | -1.75 | 0.04 | -1.81 | 0.96 | -2.93 | 0.89 | A+ | B- | A-  |
| 8 613  | 12862 | 7  | D.1.1.1 | 2 | 4208 | 0.22 | 0.21 | 0.36 | 0.21 | 0.22 | 0.00 | 0.08  | -0.01 | 0.02  | -0.08 | 0.08  | 1.35  | 0.04 | 4.10  | 1.09 | 6.95  | 1.25 | A- | A- | A+  |
| 8 26   | 68676 | 7  | D.2.1.1 | 2 | 4208 | 0.46 | 0.46 | 0.13 | 0.24 | 0.16 | 0.00 | 0.29  | 0.29  | -0.10 | -0.14 | -0.13 | 0.09  | 0.03 | -4.45 | 0.95 | -1.96 | 0.97 | A- | A- | B-  |
| 8 38   | 85108 | 7  | D.2.1.4 | 2 | 4208 | 0.43 | 0.16 | 0.21 | 0.43 | 0.19 | 0.00 | 0.25  | -0.05 | -0.14 | 0.25  | -0.11 | 0.20  | 0.03 | -1.58 | 0.98 | -0.08 | 1.00 | A+ | Α- | A-  |
| 8 87   | 74565 | 8  | D.1.1.9 | 2 | 4130 | 0.17 | 0.08 | 0.05 | 0.70 | 0.17 | 0.00 | 0.22  | -0.11 | -0.16 | -0.04 | 0.22  | 1.70  | 0.04 | -1.10 | 0.97 | 1.26  | 1.05 | A- | A+ | A+  |
| 8 44   | 47349 | 8  | D.1.2.4 | 2 | 4130 | 0.60 | 0.12 | 0.09 | 0.60 | 0.19 | 0.00 | 0.28  | -0.15 | -0.11 | 0.28  | -0.15 | -0.54 | 0.03 | -3.66 | 0.96 | -3.68 | 0.94 | A- | A- | A+  |
| 8 639  | 39296 | 8  | D.1.1.3 | 3 | 4130 | 0.50 | 0.14 | 0.20 | 0.50 | 0.16 | 0.00 | 0.25  | -0.13 | -0.14 | 0.25  | -0.05 | -0.08 | 0.03 | -1.34 | 0.99 | -1.45 | 0.98 | A+ | Α- | A+  |
| 8 96   | 60044 | 8  | D.2.1.2 | 2 | 4130 | 0.29 | 0.38 | 0.29 | 0.13 | 0.20 | 0.00 | 0.11  | 0.10  | 0.11  | -0.18 | -0.09 | 0.93  | 0.04 | 5.26  | 1.09 | 6.91  | 1.18 | A- | A+ | A-  |
| 8 14:  | 42619 | 8  | D.1.1.2 | 2 | 4130 | 0.70 | 0.70 | 0.10 | 0.17 | 0.03 | 0.00 | 0.16  | 0.16  | 0.00  | -0.13 | -0.11 | -1.05 | 0.04 | 1.85  | 1.03 | 5.70  | 1.15 | A+ | A- | A-  |
| 8 94:  | 45314 | 8  | D.1.2.1 | 2 | 4130 | 0.40 | 0.40 | 0.40 | 0.07 | 0.12 | 0.00 | 0.29  | 0.29  | -0.08 | -0.16 | -0.18 | 0.36  | 0.03 | -3.87 | 0.95 | -2.76 | 0.95 | A- | B- | A-  |
| 8 483  | 82423 | 8  | D.1.2.2 | 2 | 4130 | 0.15 | 0.59 | 0.15 | 0.08 | 0.18 | 0.00 | 0.20  | -0.04 | 0.20  | -0.25 | 0.05  | 1.90  | 0.05 | -1.16 | 0.97 | 3.69  | 1.18 | A- | B+ | A+  |
| 8 679  | 79776 | 8  | D.1.1.5 | 2 | 4130 | 0.57 | 0.16 | 0.11 | 0.16 | 0.57 | 0.01 | 0.31  | -0.12 | -0.15 | -0.15 | 0.31  | -0.41 | 0.03 | -5.69 | 0.94 | -4.99 | 0.92 | A+ | Α- | B-  |
| 8 28:  | 85692 | 8  | D.1.1.1 | 2 | 4130 | 0.25 | 0.31 | 0.31 | 0.25 | 0.13 | 0.00 | 0.10  | -0.05 | 0.00  | 0.10  | -0.06 | 1.16  | 0.04 | 4.54  | 1.09 | 6.84  | 1.21 | A+ | A+ | A+  |
| 8 893  | 92350 | 8  | D.2.1.1 | 2 | 4130 | 0.85 | 0.04 | 0.85 | 0.10 | 0.01 | 0.00 | 0.23  | -0.13 | 0.23  | -0.17 | -0.07 | -2.02 | 0.05 | -1.40 | 0.96 | -3.55 | 0.85 | A+ | B- | C-  |
| 8 26   | 67963 | 8  | D.2.1.4 | 2 | 4130 | 0.60 | 0.02 | 0.29 | 0.09 | 0.60 | 0.00 | 0.26  | -0.08 | -0.14 | -0.19 | 0.26  | -0.56 | 0.03 | -2.82 | 0.97 | -2.06 | 0.96 | A- | A- | A-  |
| 8 98   | 85483 | 9  | D.1.1.9 | 2 | 4129 | 0.75 | 0.13 | 0.75 | 0.06 | 0.06 | 0.00 | 0.33  | -0.17 | 0.33  | -0.18 | -0.15 | -1.32 | 0.04 | -5.11 | 0.91 | -5.76 | 0.84 | A+ | A- | A-  |
| 8 28   | 86835 | 9  | D.1.2.4 | 2 | 4129 | 0.67 | 0.67 | 0.12 | 0.10 | 0.11 | 0.00 | 0.28  | 0.28  | -0.09 | -0.14 | -0.17 | -0.89 | 0.04 | -2.86 | 0.96 | -1.59 | 0.97 | A+ | A+ | A+  |
| 8 47   | 73212 | 9  | D.2.1.3 | 2 | 4129 | 0.37 | 0.29 | 0.11 | 0.37 | 0.23 | 0.01 | 0.19  | -0.06 | -0.15 | 0.19  | -0.02 | 0.55  | 0.03 | 2.99  | 1.04 | 4.56  | 1.09 | A+ | Α- | A-  |
| 8 71   | 14646 | 9  | D.1.1.3 | 2 | 4129 | 0.25 | 0.18 | 0.25 | 0.51 | 0.05 | 0.00 | 0.14  | -0.17 | 0.14  | 0.08  | -0.14 | 1.17  | 0.04 | 3.20  | 1.06 | 5.78  | 1.18 | A+ | A+ | A+  |
| 8 95   | 55074 | 9  | D.1.1.2 | 2 | 4129 | 0.56 | 0.13 | 0.05 | 0.26 | 0.56 | 0.01 | 0.38  | -0.22 | -0.19 | -0.15 | 0.38  | -0.35 | 0.03 | -9.90 | 0.89 | -8.78 | 0.86 | A- | Α- | B-  |
| 8 71   | 16666 | 9  | D.1.2.1 | 2 | 4129 | 0.51 | 0.18 | 0.27 | 0.04 | 0.51 | 0.00 | 0.29  | -0.20 | -0.13 | -0.05 | 0.29  | -0.11 | 0.03 | -3.05 | 0.97 | -1.33 | 0.98 | A+ | B- | A-  |
| 8 563  | 62051 | 9  | D.1.2.2 | 2 | 4129 | 0.06 | 0.28 | 0.08 | 0.06 | 0.58 | 0.00 | -0.02 | -0.08 | -0.14 | -0.02 | 0.17  | 3.00  | 0.07 | 1.09  | 1.06 | 9.01  | 1.99 | A+ | A+ | A+  |
| 8 90-  | 04354 | 9  | D.1.1.5 | 2 | 4129 | 0.72 | 0.10 | 0.09 | 0.72 | 0.10 | 0.00 | 0.32  | -0.18 | -0.17 | 0.32  | -0.13 | -1.17 | 0.04 | -3.90 | 0.93 | -4.85 | 0.88 | Α- | Α- | В-  |
| 8 569  | 69686 | 9  | D.1.1.1 | 2 | 4129 | 0.29 | 0.20 | 0.29 | 0.25 | 0.25 | 0.00 | 0.14  | -0.10 | 0.14  | -0.03 | -0.02 | 0.93  | 0.04 | 3.60  | 1.06 | 6.34  | 1.17 | A- | A+ | A-  |
| 8 869  | 68223 | 9  | D.2.1.1 | 2 | 4129 | 0.55 | 0.55 | 0.10 | 0.22 | 0.13 | 0.00 | 0.32  | 0.32  | -0.19 | -0.10 | -0.16 | -0.31 | 0.03 | -4.56 | 0.95 | -4.55 | 0.93 | A- | Α- | B-  |
|        | 71386 | 9  | D.2.1.5 | 2 | 4129 | 0.55 | 0.13 | 0.55 | 0.05 | 0.27 | 0.00 | 0.26  | -0.10 | 0.26  | -0.18 | -0.12 | -0.29 | 0.03 | -0.68 | 0.99 | -0.94 | 0.99 | A- | A+ | A-  |
|        | 86680 | 10 | D.1.1.9 | 2 | 4129 | 0.80 | 0.07 | 0.09 | 0.04 | 0.80 | 0.00 | 0.36  | -0.21 | -0.20 | -0.15 | 0.36  | -1.68 | 0.04 | -6.27 | 0.86 | -8.27 | 0.74 | A+ | B- | A-  |
|        | 66352 | 10 | D.2.1.3 | 2 | 4129 | 0.63 | 0.11 | 0.63 | 0.19 | 0.07 | 0.00 | 0.24  | -0.14 | 0.24  | -0.10 | -0.09 | -0.73 | 0.03 | -2.05 | 0.97 | -1.54 | 0.97 | A+ | A- | B-  |

| 8 | 121336 | 10 | D.1.1.3      | 3 | 4129 | 0.44 | 0.44 | 0.20 | 0.26 | 0.10 | 0.00 | 0.34 | 0.34  | -0.16 | -0.13 | -0.14 | 0.15  | 0.03 | -8.80 | 0.91 | -6.26 | 0.91 A- | B- | A- |
|---|--------|----|--------------|---|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|-------|------|-------|---------|----|----|
| 8 | 362946 | 10 | D.1.1.2      | 2 | 4129 | 0.30 | 0.30 | 0.22 | 0.31 | 0.17 | 0.00 | 0.12 | 0.12  | -0.04 | -0.10 | 0.02  | 0.84  | 0.04 | 3.78  | 1.06 | 4.59  | 1.11 A- | B+ |    |
| 8 | 671277 | 10 | D.1.2.1      | 2 | 4129 | 0.14 | 0.76 | 0.14 | 0.01 | 0.09 | 0.00 | 0.22 | -0.16 | 0.22  | -0.06 | -0.01 | 1.86  | 0.05 | -1.23 | 0.96 | -0.23 | 0.99 B+ | A+ |    |
| 8 | 616939 | 10 | D.1.2.4      | 2 | 4129 | 0.32 | 0.12 | 0.32 | 0.12 | 0.43 | 0.01 | 0.10 | -0.11 | 0.10  | -0.14 | 0.09  | 0.72  | 0.04 | 5.19  | 1.08 | 6.33  | 1.14 A- | A+ |    |
| 8 | 533706 | 10 | D.1.2.2      | 2 | 4129 | 0.25 | 0.29 | 0.34 | 0.25 | 0.11 | 0.01 | 0.25 | 0.03  | -0.14 | 0.25  | -0.14 | 1.13  | 0.04 | -2.93 | 0.94 | -0.04 | 1.00 A- | A- | A+ |
| 8 | 755889 | 10 | D.1.1.5      | 2 | 4129 | 0.36 | 0.10 | 0.36 | 0.15 | 0.39 | 0.00 | 0.16 | -0.05 | 0.16  | -0.07 | -0.07 | 0.51  | 0.03 | 2.44  | 1.03 | 3.69  | 1.07 A- | A+ |    |
| 8 | 798558 | 10 | D.1.1.1      | 2 | 4129 | 0.21 | 0.21 | 0.19 | 0.26 | 0.33 | 0.00 | 0.13 | 0.13  | -0.05 | -0.05 | -0.02 | 1.34  | 0.04 | 1.76  | 1.04 | 4.24  | 1.15 A- | A+ |    |
| 8 | 150897 | 10 | D.2.1.1      | 2 | 4129 | 0.21 | 0.17 | 0.35 | 0.26 | 0.21 | 0.00 | 0.04 | -0.06 | -0.09 | 0.11  | 0.04  | 1.32  | 0.04 | 4.90  | 1.11 | 6.99  | 1.25 A- | A- | A- |
| 8 | 769398 | 10 | D.2.1.5      | 2 | 4129 | 0.62 | 0.06 | 0.06 | 0.62 | 0.26 | 0.00 | 0.33 | -0.15 | -0.19 | 0.33  | -0.17 | -0.68 | 0.03 | -7.25 | 0.91 | -7.00 | 0.88 A+ | A- | A+ |
| 8 | 122968 | 11 | D.1.2.5      | 1 | 3337 | 0.83 | 0.05 | 0.07 | 0.83 | 0.04 | 0.00 | 0.43 | -0.25 | -0.21 | 0.43  | -0.23 | -1.98 | 0.05 | -5.80 | 0.83 | -8.24 | 0.65 A+ | A- | A+ |
| 8 | 364105 | 11 | D.1.1.6      | 2 | 3337 | 0.68 | 0.68 | 0.06 | 0.18 | 0.08 | 0.00 | 0.39 | 0.39  | -0.21 | -0.22 | -0.15 | -1.00 | 0.04 | -6.35 | 0.89 | -6.31 | 0.84 A+ | A- | B- |
| 8 | 371907 | 11 | D.2.1.3      | 2 | 3337 | 0.59 | 0.16 | 0.59 | 0.16 | 0.09 | 0.00 | 0.26 | -0.04 | 0.26  | -0.11 | -0.23 | -0.53 | 0.04 | 0.41  | 1.01 | 1.14  | 1.02 A+ | A- | A+ |
| 8 | 919329 | 11 | D.1.1.1<br>0 | 2 | 3337 | 0.81 | 0.05 | 0.09 | 0.81 | 0.06 | 0.00 | 0.36 | -0.23 | -0.21 | 0.36  | -0.14 | -1.78 | 0.05 | -4.31 | 0.89 | -4.63 | 0.81 A- | A+ | A- |
| 8 | 420686 | 11 | D.1.1.2      | 2 | 3337 | 0.60 | 0.17 | 0.10 | 0.60 | 0.13 | 0.00 | 0.34 | -0.19 | -0.17 | 0.34  | -0.14 | -0.61 | 0.04 | -4.12 | 0.94 | -4.71 | 0.90 C- | A- | A- |
| 8 | 867802 | 11 | D.1.2.1      | 2 | 3337 | 0.51 | 0.06 | 0.51 | 0.37 | 0.05 | 0.00 | 0.34 | -0.22 | 0.34  | -0.15 | -0.19 | -0.19 | 0.04 | -5.23 | 0.94 | -4.40 | 0.92 A- | B- | B- |
| 8 | 904687 | 11 | D.1.1.4      | 2 | 3337 | 0.48 | 0.17 | 0.18 | 0.17 | 0.48 | 0.00 | 0.24 | -0.07 | -0.12 | -0.12 | 0.24  | -0.03 | 0.04 | 1.43  | 1.02 | 1.84  | 1.03 A+ | A- | A- |
| 8 | 628141 | 11 | D.1.1.1      | 2 | 3337 | 0.32 | 0.40 | 0.13 | 0.15 | 0.32 | 0.01 | 0.05 | 0.13  | -0.12 | -0.11 | 0.05  | 0.77  | 0.04 | 9.18  | 1.16 | 9.90  | 1.32 A- | A+ | A+ |
| 8 | 818706 | 11 | D.1.2.3      | 2 | 3337 | 0.43 | 0.42 | 0.11 | 0.04 | 0.43 | 0.00 | 0.26 | -0.17 | -0.08 | -0.10 | 0.26  | 0.22  | 0.04 | -0.93 | 0.99 | 1.99  | 1.04 A+ | A- | A- |
| 8 | 171447 | 11 | D.2.1.1      | 2 | 3337 | 0.93 | 0.05 | 0.93 | 0.01 | 0.02 | 0.00 | 0.16 | -0.10 | 0.16  | -0.04 | -0.12 | -2.99 | 0.07 | -0.03 | 1.00 | 1.23  | 1.11 A+ | A+ | B- |
| 8 | 884117 | 11 | D.2.1.5      | 2 | 3337 | 0.73 | 0.06 | 0.08 | 0.12 | 0.73 | 0.00 | 0.35 | -0.17 | -0.21 | -0.17 | 0.35  | -1.27 | 0.04 | -3.99 | 0.92 | -5.05 | 0.85 A+ | A- | A- |
| 8 | 910921 | 12 | D.1.2.5      | 2 | 3311 | 0.67 | 0.04 | 0.05 | 0.67 | 0.24 | 0.00 | 0.32 | -0.20 | -0.18 | 0.32  | -0.16 | -0.88 | 0.04 | -3.48 | 0.94 | -3.43 | 0.92 A+ | B- | B- |
| 8 | 440912 | 12 | D.1.1.6      | 2 | 3311 | 0.84 | 0.04 | 0.84 | 0.06 | 0.05 | 0.00 | 0.32 | -0.22 | 0.32  | -0.12 | -0.20 | -2.01 | 0.05 | -2.76 | 0.91 | -3.55 | 0.83 A+ | A+ | A+ |
| 8 | 897453 | 12 | D.2.1.3      | 2 | 3311 | 0.65 | 0.10 | 0.17 | 0.08 | 0.65 | 0.01 | 0.34 | -0.19 | -0.14 | -0.16 | 0.34  | -0.80 | 0.04 | -5.04 | 0.92 | -4.64 | 0.90 A+ | A- | A- |
| 8 | 691457 | 12 | D.1.1.1<br>0 | 2 | 3311 | 0.80 | 0.09 | 0.06 | 0.05 | 0.80 | 0.00 | 0.32 | -0.17 | -0.19 | -0.16 | 0.32  | -1.72 | 0.05 | -2.84 | 0.92 | -3.31 | 0.87 A- | A- | A- |
| 8 | 568095 | 12 | D.1.1.2      | 2 | 3311 | 0.54 | 0.20 | 0.12 | 0.54 | 0.14 | 0.01 | 0.26 | -0.07 | -0.17 | 0.26  | -0.10 | -0.27 | 0.04 | -0.69 | 0.99 | -0.40 | 0.99 A+ | A+ | A- |
| 8 | 833941 | 12 | D.1.2.1      | 2 | 3311 | 0.71 | 0.71 | 0.07 | 0.20 | 0.03 | 0.00 | 0.36 | 0.36  | -0.18 | -0.22 | -0.17 | -1.14 | 0.04 | -4.54 | 0.92 | -5.54 | 0.85 A+ | В- | A- |
| 8 | 274833 | 12 | D.1.1.4      | 1 | 3311 | 0.23 | 0.22 | 0.28 | 0.27 | 0.23 | 0.00 | 0.16 | -0.10 | -0.07 | 0.02  | 0.16  | 1.31  | 0.04 | 1.42  | 1.03 | 2.88  | 1.11 A- | A- | A- |
| 8 | 404805 | 12 | D.1.1.1      | 2 | 3311 | 0.27 | 0.26 | 0.30 | 0.16 | 0.27 | 0.01 | 0.06 | 0.02  | -0.03 | -0.04 | 0.06  | 1.04  | 0.04 | 5.76  | 1.12 | 8.26  | 1.29 A+ | A+ | A+ |
| 8 | 524743 | 12 | D.1.2.3      | 2 | 3311 | 0.62 | 0.17 | 0.62 | 0.12 | 0.09 | 0.00 | 0.19 | -0.16 | 0.19  | -0.02 | -0.09 | -0.68 | 0.04 | 3.33  | 1.05 | 2.53  | 1.06 A+ | B+ | A- |
| 8 | 727988 | 12 | D.2.1.1      | 2 | 3311 | 0.86 | 0.08 | 0.05 | 0.86 | 0.01 | 0.00 | 0.34 | -0.19 | -0.20 | 0.34  | -0.16 | -2.14 | 0.05 | -3.10 | 0.90 | -4.99 | 0.75 A+ | A- | A- |
| 8 | 648369 | 12 | D.2.1.5      | 2 | 3311 | 0.36 | 0.36 | 0.46 | 0.12 | 0.06 | 0.00 | 0.18 | 0.18  | -0.04 | -0.09 | -0.15 | 0.57  | 0.04 | 2.89  | 1.04 | 3.11  | 1.07 A- | A- | A- |
| 8 | 613898 | 13 | D.1.2.5      | 2 | 3311 | 0.67 | 0.07 | 0.10 | 0.67 | 0.16 | 0.00 | 0.37 | -0.19 | -0.19 | 0.37  | -0.18 | -0.89 | 0.04 | -8.51 | 0.87 | -9.16 | 0.81 A+ | A- | A- |

|   | 455050 |     | 2116               | _ | 2211             | 0.52 | 0.15 | 0.20 | 0.52 | 0.11 | 0.01 | 0.26  | 0.07  | 0.10  | 0.25  | 0.15  | 0.10  | 0.04 | 2.00  | 0.05 | 2.40  | 0.05 |              |    |    |
|---|--------|-----|--------------------|---|------------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|--------------|----|----|
| 8 | 466873 | 13  | D.1.1.6            | 2 | 3311             | 0.52 | 0.16 | 0.20 | 0.52 | 0.11 | 0.01 | 0.26  | -0.07 | -0.12 | 0.26  | -0.16 | -0.19 | 0.04 | -3.99 | 0.96 | -3.48 |      | A-           | A- | A+ |
| 8 | 900252 | 13  | D.2.1.3<br>D.1.1.1 | 3 | 3311             | 0.63 | 0.10 | 0.12 | 0.14 | 0.63 | 0.00 | 0.21  | -0.15 | -0.09 | -0.07 | 0.21  | -0.68 | 0.04 | -0.79 | 0.99 | -0.21 | 1.00 | A+           | A- | A- |
| 8 | 167814 | 13  | 0                  | 2 | 3311             | 0.80 | 0.80 | 0.03 | 0.10 | 0.07 | 0.00 | 0.31  | 0.31  | -0.18 | -0.16 | -0.16 | -1.66 | 0.05 | -3.49 | 0.91 | -5.21 | 0.82 | A+           | A+ | A- |
| 8 | 932704 | 13  | D.1.1.2            | 2 | 3311             | 0.50 | 0.26 | 0.11 | 0.50 | 0.13 | 0.00 | 0.26  | -0.08 | -0.15 | 0.26  | -0.14 | -0.08 | 0.04 | -4.71 | 0.95 | -3.86 | 0.94 | A-           | A- | A- |
| 8 | 565822 | 13  | D.1.2.1            | 2 | 3311             | 0.27 | 0.36 | 0.27 | 0.24 | 0.13 | 0.01 | 0.06  | 0.17  | 0.06  | -0.14 | -0.12 | 1.02  | 0.04 | 4.03  | 1.08 | 4.60  | 1.14 | A-           | A- | A- |
| 8 | 176681 | 13  | D.1.1.4            | 2 | 3311             | 0.31 | 0.18 | 0.31 | 0.28 | 0.23 | 0.00 | -0.03 | 0.02  | -0.03 | 0.00  | 0.03  | 0.80  | 0.04 | 8.67  | 1.15 | 9.17  | 1.25 | A+           | A+ | A+ |
| 8 | 688860 | 13  | D.1.1.1            | 2 | 3311             | 0.16 | 0.49 | 0.21 | 0.14 | 0.16 | 0.00 | 0.11  | -0.04 | -0.01 | -0.05 | 0.11  | 1.77  | 0.05 | 0.31  | 1.01 | 2.62  | 1.13 | A+           | A- | A+ |
| 8 | 273110 | 13  | D.1.2.3            | 2 | 3311             | 0.19 | 0.25 | 0.35 | 0.21 | 0.19 | 0.00 | 0.04  | -0.07 | -0.03 | 0.08  | 0.04  | 1.54  | 0.05 | 2.47  | 1.07 | 4.75  | 1.21 | A-           | A+ | A+ |
| 8 | 641019 | 13  | D.2.1.1            | 2 | 3311             | 0.96 | 0.01 | 0.96 | 0.01 | 0.01 | 0.00 | 0.17  | -0.11 | 0.17  | -0.07 | -0.11 | -3.70 | 0.10 | -0.45 | 0.96 | -2.34 | 0.74 | A+           | C- | B- |
| 8 | 543356 | 13  | D.2.1.5            | 2 | 3311             | 0.32 | 0.26 | 0.34 | 0.32 | 0.08 | 0.00 | -0.02 | -0.08 | 0.15  | -0.02 | -0.09 | 0.73  | 0.04 | 8.59  | 1.14 | 9.90  | 1.27 | A-           | A+ | A+ |
| 8 | 509376 | 14  | D.1.2.5            | 2 | 3283             | 0.43 | 0.19 | 0.20 | 0.18 | 0.43 | 0.00 | 0.29  | -0.13 | -0.11 | -0.12 | 0.29  | 0.15  | 0.04 | -5.31 | 0.94 | -4.47 | 0.93 | A+           | A- | A- |
| 8 | 525440 | 14  | D.1.1.6            | 2 | 3283             | 0.69 | 0.69 | 0.07 | 0.07 | 0.15 | 0.00 | 0.31  | 0.31  | -0.18 | -0.18 | -0.14 | -1.09 | 0.04 | -5.29 | 0.91 | -6.03 | 0.86 | A+           | A- | A+ |
| 8 | 115861 | 14  | D.2.1.3            | 3 | 3283             | 0.64 | 0.16 | 0.64 | 0.07 | 0.13 | 0.00 | 0.29  | -0.12 | 0.29  | -0.18 | -0.14 | -0.79 | 0.04 | -4.42 | 0.94 | -4.68 | 0.91 | A+           | A- | A- |
| 8 | 830156 | 14  | D.1.1.1<br>0       | 2 | 3283             | 0.19 | 0.19 | 0.41 | 0.19 | 0.21 | 0.00 | 0.09  | -0.07 | -0.09 | 0.09  | 0.09  | 1.43  | 0.05 | 2.20  | 1.06 | 3.14  | 1.13 | A-           | A+ | A+ |
| 8 | 950843 | 14  | D.1.1.2            | 1 | 3283             | 0.40 | 0.36 | 0.13 | 0.40 | 0.10 | 0.00 | 0.07  | 0.06  | -0.12 | 0.07  | -0.07 | 0.28  | 0.04 | 7.82  | 1.10 | 8.13  | 1.15 | A+           | A+ | A- |
| 8 | 453278 | 14  | D.1.2.1            | 2 | 3283             | 0.41 | 0.04 | 0.41 | 0.45 | 0.09 | 0.00 | 0.27  | -0.15 | 0.27  | -0.20 | -0.01 | 0.23  | 0.04 | -3.64 | 0.95 | -3.48 | 0.94 | A-           | A- | A+ |
| 8 | 850867 | 14  | D.1.1.4            | 2 | 3283             | 0.26 | 0.26 | 0.26 | 0.23 | 0.25 | 0.00 | 0.03  | 0.04  | 0.03  | -0.10 | 0.02  | 1.00  | 0.04 | 5.42  | 1.11 | 7.24  | 1.23 | A+           | B+ | A+ |
| 8 | 778853 | 14  | D.1.1.1            | 2 | 3283             | 0.17 | 0.17 | 0.40 | 0.19 | 0.24 | 0.01 | -0.04 | -0.04 | 0.15  | -0.02 | -0.11 | 1.64  | 0.05 | 4.15  | 1.13 | 7.42  | 1.37 | A+           | A+ | A- |
| 8 | 283415 | 14  | D.1.2.3            | 2 | 3283             | 0.27 | 0.50 | 0.18 | 0.05 | 0.27 | 0.01 | 0.05  | 0.07  | -0.08 | -0.11 | 0.05  | 0.96  | 0.04 | 4.71  | 1.10 | 6.51  | 1.20 | A-           | A- | A+ |
| 8 | 561854 | 14  | D.2.1.1            | 2 | 3283             | 0.48 | 0.20 | 0.20 | 0.48 | 0.11 | 0.00 | 0.34  | -0.14 | -0.17 | 0.34  | -0.14 | -0.08 | 0.04 | -8.56 | 0.90 | -7.58 | 0.89 | A-           | A- | A- |
| 8 | 797426 | 14  | D.2.1.5            | 2 | 3283             | 0.54 | 0.14 | 0.23 | 0.09 | 0.54 | 0.00 | 0.19  | -0.12 | -0.06 | -0.10 | 0.19  | -0.34 | 0.04 | 1.16  | 1.01 | 1.14  | 1.02 | A-           | A- | A- |
| 8 | 241367 | 15  | D.1.2.5            | 2 | 3304             | 0.61 | 0.12 | 0.13 | 0.13 | 0.61 | 0.00 | 0.36  | -0.16 | -0.17 | -0.17 | 0.36  | -0.68 | 0.04 | -5.83 | 0.92 | -5.17 | 0.90 | A+           | A- | A+ |
| 8 | 359921 | 15  | D.1.1.6            | 2 | 3304             | 0.51 | 0.16 | 0.16 | 0.51 | 0.16 | 0.00 | 0.27  | -0.08 | -0.12 | 0.27  | -0.17 | -0.20 | 0.04 | -0.83 | 0.99 | -0.93 | 0.98 | A+           | A+ | A- |
| 8 | 298758 | 15  | D.2.1.3            | 2 | 3304             | 0.59 | 0.14 | 0.08 | 0.19 | 0.59 | 0.00 | 0.37  | -0.17 | -0.21 | -0.16 | 0.37  | -0.56 | 0.04 | -6.36 | 0.91 | -6.18 | 0.88 | A-           | A+ | A+ |
| 8 | 168163 | 15  | D.1.1.1<br>0       | 2 | 3304             | 0.36 | 0.08 | 0.18 | 0.39 | 0.36 | 0.00 | 0.18  | -0.19 | -0.08 | -0.01 | 0.18  | 0.54  | 0.04 | 3.96  | 1.06 | 4.47  | 1.11 | A+           | A+ | A+ |
| 8 | 741749 | 15  | D.1.1.2            | 2 | 3304             | 0.37 | 0.41 | 0.07 | 0.37 | 0.16 | 0.00 | 0.17  | 0.01  | -0.20 | 0.17  | -0.09 | 0.49  | 0.04 | 4.51  | 1.07 | 5.20  |      | A-           | A- | A- |
| 8 | 659986 | 15  | D.1.2.1            | 2 | 3304             | 0.40 | 0.09 | 0.40 | 0.14 | 0.36 | 0.00 | 0.43  | -0.08 | 0.43  | -0.22 | -0.23 | 0.32  | 0.04 | -9.90 | 0.86 | -9.16 |      | A+           | A- | A- |
| 8 | 778678 | 15  | D.1.1.4            | 2 | 3304             | 0.80 | 0.80 | 0.07 | 0.05 | 0.08 | 0.00 | 0.37  | 0.37  | -0.23 | -0.21 | -0.15 | -1.70 | 0.05 | -5.20 | 0.87 | -6.12 |      | B+           | A- | A- |
| 8 | 723960 | 15  | D.1.1.1            | 2 | 3304             | 0.23 | 0.30 | 0.23 | 0.23 | 0.23 | 0.00 | 0.09  | 0.00  | -0.07 | -0.03 | 0.09  | 1.27  | 0.04 | 4.32  | 1.10 | 7.04  |      | A-           | A- | A+ |
| 8 | 911396 | 15  | D.1.2.3            | 2 | 3304             | 0.35 | 0.53 | 0.35 | 0.04 | 0.08 | 0.00 | 0.32  | -0.24 | 0.32  | -0.09 | -0.05 | 0.59  | 0.04 | -3.98 | 0.94 | -2.33 |      | A-           | A+ | A- |
| 8 | 202915 | 15  | D.2.1.1            | 2 | 3304             | 0.46 | 0.18 | 0.27 | 0.46 | 0.09 | 0.00 | 0.18  | 0.04  | -0.17 | 0.18  | -0.10 | 0.05  | 0.04 | 5.36  | 1.07 | 4.93  |      | A-           | A- | A- |
| 8 | 391622 | 15  | D.2.1.6            | 2 | 3304             | 0.62 | 0.62 | 0.07 | 0.05 | 0.26 | 0.00 | 0.41  | 0.41  | -0.20 | -0.21 | -0.22 | -0.69 | 0.04 | -8.64 | 0.88 | -8.01 |      | A+           | В- | В- |
| U | 371022 | 1.3 | 17.2.1.0           | - | JJ0 <del>1</del> | 0.02 | 0.02 | 0.07 | 0.05 | 0.20 | 0.00 | 0.71  | 0.71  | -0.20 | -0.21 | -0.22 | -0.03 | 0.04 | -0.07 | 0.00 | -0.01 | 0.07 | 4 <b>k</b> i | D- |    |

| 0 | 640022 | 16 | D105               | 2 | 220.4 | 0.42 | 0.20 | 0.14 | 0.42 | 0.12 | 0.00 | 0.22  | 0.00  | 0.17  | 0.22  | 0.05  | 0.17  | 0.04 | 2.62  | 0.06 | 1.52  | 0.00 | <b>A</b> . |    |    |
|---|--------|----|--------------------|---|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|------------|----|----|
| 8 | 649832 | 16 | D.1.2.5            | 2 | 3294  | 0.43 | 0.30 | 0.14 | 0.43 | 0.12 | 0.00 | 0.23  | -0.08 | -0.17 | 0.23  | -0.05 | 0.17  | 0.04 | -3.62 | 0.96 | -1.52 | 0.98 | A+         | A- | A+ |
| 8 | 746943 | 16 | D.2.1.3<br>D.1.1.1 | 2 | 3294  | 0.64 | 0.64 | 0.04 | 0.06 | 0.26 | 0.00 | 0.22  | 0.22  | -0.13 | -0.20 | -0.08 | -0.79 | 0.04 | -2.06 | 0.97 | -1.24 | 0.98 | A+         | A- | A- |
| 8 | 252789 | 16 | 1                  | 2 | 3294  | 0.19 | 0.17 | 0.29 | 0.35 | 0.19 | 0.00 | -0.04 | -0.04 | 0.07  | -0.01 | -0.04 | 1.47  | 0.05 | 3.66  | 1.10 | 7.77  | 1.34 | A-         | A- | A- |
| 8 | 433028 | 16 | D.1.1.7            | 2 | 3294  | 0.24 | 0.18 | 0.26 | 0.31 | 0.24 | 0.01 | -0.06 | -0.03 | 0.03  | 0.07  | -0.06 | 1.17  | 0.04 | 5.95  | 1.13 | 7.34  | 1.26 | A+         | A+ | A+ |
| 8 | 524383 | 16 | D.1.1.2            | 1 | 3294  | 0.35 | 0.22 | 0.35 | 0.15 | 0.27 | 0.01 | 0.10  | -0.08 | 0.10  | -0.05 | 0.03  | 0.55  | 0.04 | 3.00  | 1.04 | 3.20  | 1.07 | A+         | A+ | A- |
| 8 | 368273 | 16 | D.1.2.1            | 2 | 3294  | 0.29 | 0.06 | 0.29 | 0.28 | 0.37 | 0.00 | 0.10  | -0.16 | 0.10  | -0.15 | 0.12  | 0.86  | 0.04 | 1.81  | 1.03 | 4.06  | 1.11 | A-         | B- | A- |
| 8 | 694794 | 16 | D.1.1.4            | 2 | 3294  | 0.84 | 0.84 | 0.04 | 0.06 | 0.06 | 0.00 | 0.33  | 0.33  | -0.20 | -0.16 | -0.17 | -1.99 | 0.05 | -3.93 | 0.88 | -6.22 | 0.75 | B+         | B- | B- |
| 8 | 119709 | 16 | D.1.1.1            | 2 | 3294  | 0.20 | 0.18 | 0.40 | 0.22 | 0.20 | 0.00 | 0.04  | 0.00  | 0.04  | -0.07 | 0.04  | 1.41  | 0.05 | 1.97  | 1.05 | 4.58  | 1.19 | A-         | A+ | A+ |
| 8 | 118707 | 16 | D.1.2.3            | 2 | 3294  | 0.48 | 0.03 | 0.39 | 0.48 | 0.11 | 0.00 | 0.23  | -0.20 | -0.04 | 0.23  | -0.21 | -0.02 | 0.04 | -3.82 | 0.96 | -3.05 | 0.96 | A-         | A+ | A- |
| 8 | 776952 | 16 | D.2.1.1            | 2 | 3294  | 0.23 | 0.27 | 0.33 | 0.17 | 0.23 | 0.00 | 0.01  | 0.00  | 0.04  | -0.06 | 0.01  | 1.23  | 0.04 | 3.76  | 1.09 | 5.02  | 1.18 | A-         | A+ | A+ |
| 8 | 641268 | 16 | D.2.1.6            | 2 | 3294  | 0.66 | 0.10 | 0.10 | 0.66 | 0.14 | 0.00 | 0.27  | -0.15 | -0.21 | 0.27  | -0.06 | -0.85 | 0.04 | -4.30 | 0.94 | -4.62 | 0.91 | A+         | A- | A- |
| 8 | 751536 | 17 | D.2.1.3            | 2 | 3297  | 0.60 | 0.14 | 0.12 | 0.14 | 0.60 | 0.00 | 0.21  | -0.12 | -0.11 | -0.06 | 0.21  | -0.55 | 0.04 | -0.99 | 0.99 | -0.24 | 1.00 | A+         | A- | A- |
| 8 | 316569 | 17 | D.1.1.1<br>1       | 3 | 3297  | 0.83 | 0.83 | 0.08 | 0.03 | 0.06 | 0.00 | 0.25  | 0.25  | -0.07 | -0.15 | -0.21 | -1.89 | 0.05 | -1.89 | 0.94 | -3.21 | 0.87 | <b>A</b> + | C- | B- |
| 8 | 157101 | 17 | D.1.1.7            | 2 | 3297  | 0.79 | 0.04 | 0.15 | 0.02 | 0.79 | 0.00 | 0.30  | -0.15 | -0.22 | -0.09 | 0.30  | -1.61 | 0.05 | -3.56 | 0.91 | -5.25 | 0.82 | B+         | A- | B- |
| 8 | 967139 | 17 | D.1.1.2            | 1 | 3297  | 0.42 | 0.15 | 0.14 | 0.42 | 0.28 | 0.00 | 0.02  | -0.08 | 0.02  | 0.02  | 0.04  | 0.23  | 0.04 | 9.90  | 1.12 | 9.15  | 1.16 | A-         | A+ | A+ |
| 8 | 704049 | 17 | D.1.2.1            | 2 | 3297  | 0.23 | 0.49 | 0.25 | 0.23 | 0.03 | 0.00 | 0.13  | 0.00  | -0.06 | 0.13  | -0.11 | 1.24  | 0.04 | 0.59  | 1.01 | 2.10  | 1.07 | A+         | A- | A- |
| 8 | 721855 | 17 | D.1.1.4            | 2 | 3297  | 0.37 | 0.28 | 0.17 | 0.37 | 0.17 | 0.00 | 0.15  | -0.07 | -0.08 | 0.15  | -0.01 | 0.46  | 0.04 | 1.22  | 1.02 | 2.48  | 1.05 | A+         | A- | A- |
| 8 | 743473 | 17 | D.1.1.1            | 2 | 3297  | 0.18 | 0.21 | 0.18 | 0.32 | 0.28 | 0.01 | 0.03  | -0.13 | 0.03  | 0.05  | 0.06  | 1.58  | 0.05 | 1.99  | 1.06 | 6.49  | 1.30 | A+         | A- | A+ |
| 8 | 743064 | 17 | D.1.2.3            | 2 | 3297  | 0.27 | 0.23 | 0.27 | 0.43 | 0.07 | 0.00 | 0.04  | -0.01 | 0.04  | 0.01  | -0.07 | 0.98  | 0.04 | 4.11  | 1.08 | 6.40  | 1.19 | A-         | A+ | A+ |
| 8 | 776071 | 17 | D.2.1.1            | 2 | 3297  | 0.33 | 0.18 | 0.33 | 0.08 | 0.40 | 0.01 | 0.09  | -0.07 | 0.09  | -0.17 | 0.09  | 0.68  | 0.04 | 3.59  | 1.06 | 4.64  | 1.11 | A-         | A+ | A+ |
| 8 | 470835 | 17 | D.2.1.6            | 2 | 3297  | 0.53 | 0.26 | 0.53 | 0.09 | 0.11 | 0.01 | 0.20  | -0.01 | 0.20  | -0.16 | -0.12 | -0.25 | 0.04 | -0.98 | 0.99 | -0.83 | 0.99 | A+         | A- | A- |
| 8 | 669336 | 17 | D.1.2.5            | 2 | 3297  | 0.61 | 0.08 | 0.61 | 0.23 | 0.08 | 0.00 | 0.26  | -0.20 | 0.26  | -0.06 | -0.16 | -0.62 | 0.04 | -3.69 | 0.95 | -4.09 | 0.93 | A+         | A- | A- |
| 8 | 101331 | 18 | D.1.2.5            | 2 | 3312  | 0.68 | 0.04 | 0.13 | 0.68 | 0.15 | 0.00 | 0.28  | -0.19 | -0.18 | 0.28  | -0.09 | -0.99 | 0.04 | -3.44 | 0.94 | -3.75 | 0.92 | A+         | A+ | A- |
| 8 | 340252 | 18 | D.2.1.3            | 2 | 3312  | 0.27 | 0.26 | 0.27 | 0.37 | 0.09 | 0.00 | 0.00  | -0.01 | 0.00  | 0.11  | -0.16 | 0.96  | 0.04 | 6.77  | 1.13 | 8.64  | 1.27 | A-         | A+ | A+ |
| 8 | 457659 |    | D.1.1.1            | 2 | 3312  | 0.44 | 0.14 | 0.44 | 0.28 | 0.14 | 0.00 | 0.18  | -0.16 | 0.18  | -0.02 | -0.06 | 0.14  | 0.04 | 1.97  | 1.02 | 3.53  | 1.06 |            |    |    |
|   |        | 18 |                    |   |       |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      | A+         | A- | A- |
| 8 | 466367 | 18 | D.1.1.7            | 2 | 3312  | 0.25 | 0.14 | 0.24 | 0.37 | 0.25 | 0.00 | 0.22  | -0.15 | -0.01 | -0.08 | 0.22  | 1.09  | 0.04 | -1.43 | 0.97 | -0.78 | 0.97 | A-         | A+ | A- |
| 8 | 470141 | 18 | D.1.1.2            | 1 | 3312  | 0.28 | 0.28 | 0.28 | 0.24 | 0.20 | 0.00 | -0.01 | -0.01 | 0.08  | 0.03  | -0.09 | 0.93  | 0.04 | 7.56  | 1.15 | 8.95  | 1.28 | A+         | A+ | A+ |
| 8 | 409224 | 18 | D.1.2.1            | 2 | 3312  | 0.39 | 0.43 | 0.06 | 0.39 | 0.13 | 0.00 | 0.29  | -0.18 | -0.19 | 0.29  | -0.01 | 0.37  | 0.04 | -4.43 | 0.94 | -3.83 | 0.93 | A-         | A+ | A- |
| 8 | 265971 | 18 | D.1.1.4            | 2 | 3312  | 0.34 | 0.36 | 0.14 | 0.16 | 0.34 | 0.00 | 0.11  | 0.07  | -0.06 | -0.16 | 0.11  | 0.61  | 0.04 | 4.50  | 1.07 | 5.32  | 1.13 | A-         | A- | A+ |
| 8 | 224518 | 18 | D.1.1.1            | 2 | 3312  | 0.34 | 0.32 | 0.34 | 0.16 | 0.18 | 0.00 | 0.10  | 0.09  | 0.10  | -0.14 | -0.08 | 0.60  | 0.04 | 4.99  | 1.08 | 6.05  | 1.14 | A-         | A- | A+ |
| 8 | 419567 | 18 | D.1.2.3            | 2 | 3312  | 0.83 | 0.04 | 0.09 | 0.03 | 0.83 | 0.01 | 0.34  | -0.17 | -0.19 | -0.18 | 0.34  | -1.90 | 0.05 | -4.01 | 0.89 | -6.17 | 0.76 | B+         | A+ | A+ |
| 8 | 854523 | 18 | D.2.1.1            | 2 | 3312  | 0.69 | 0.13 | 0.10 | 0.09 | 0.69 | 0.00 | 0.30  | -0.12 | -0.17 | -0.17 | 0.30  | -1.02 | 0.04 | -3.92 | 0.93 | -4.54 | 0.90 | A+         | A- | A- |

| 0 | 577204 | 10 | D 2 1 6            | 2 | 2212 | 0.60 | 0.21 | 0.05 | 0.60 | 0.05 | 0.00 | 0.21  | 0.07  | 0.17  | 0.21  | 0.14  | 1.02  | 0.04 | 0.25  | 1.00 | 0.26  | 1.01 |    |    |    |
|---|--------|----|--------------------|---|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|----|----|----|
| 8 | 577394 | 18 |                    | 2 | 3312 | 0.68 | 0.21 | 0.05 | 0.68 | 0.05 | 0.00 | 0.21  | -0.07 | -0.17 | 0.21  | -0.14 | -1.02 | 0.04 | -0.25 | 1.00 | 0.26  | 1.01 | A+ | A- | A- |
| 8 | 984354 | 19 | D.1.2.5<br>D.1.1.1 | 2 | 3314 | 0.56 | 0.56 | 0.21 | 0.13 | 0.10 | 0.00 | 0.33  | 0.33  | -0.18 | -0.14 | -0.13 | -0.38 | 0.04 | -4.15 | 0.95 | -3.67 | 0.93 | A- | A+ | A- |
| 8 | 965197 | 19 | 1                  | 2 | 3314 | 0.75 | 0.08 | 0.05 | 0.11 | 0.75 | 0.00 | 0.41  | -0.22 | -0.24 | -0.19 | 0.41  | -1.42 | 0.04 | -6.34 | 0.86 | -6.82 | 0.78 | A+ | A- | A- |
| 8 | 635893 | 19 | D.1.1.7            | 2 | 3314 | 0.84 | 0.84 | 0.04 | 0.09 | 0.03 | 0.00 | 0.36  | 0.36  | -0.20 | -0.24 | -0.15 | -2.05 | 0.05 | -3.62 | 0.89 | -5.35 | 0.75 | A- | A- | A- |
| 8 | 300802 | 19 | D.1.1.2            | 1 | 3314 | 0.49 | 0.16 | 0.15 | 0.49 | 0.20 | 0.00 | 0.32  | -0.16 | -0.12 | 0.32  | -0.12 | -0.09 | 0.04 | -3.82 | 0.95 | -2.10 | 0.96 | A- | A- | A- |
| 8 | 902719 | 19 | D.1.2.1            | 2 | 3314 | 0.62 | 0.12 | 0.20 | 0.62 | 0.06 | 0.00 | 0.33  | -0.15 | -0.16 | 0.33  | -0.18 | -0.68 | 0.04 | -3.18 | 0.95 | -3.69 | 0.92 | A+ | A- | B- |
|   |        |    |                    |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
| 8 | 520599 | 19 | D.1.1.4            | 2 | 3314 | 0.59 | 0.10 | 0.14 | 0.18 | 0.59 | 0.00 | 0.30  | -0.19 | -0.16 | -0.09 | 0.30  | -0.53 | 0.04 | -1.48 | 0.98 | -1.98 | 0.96 | A+ | A+ | A+ |
| 8 | 683546 | 19 | D.1.1.1            | 2 | 3314 | 0.78 | 0.06 | 0.78 | 0.11 | 0.05 | 0.00 | 0.43  | -0.20 | 0.43  | -0.25 | -0.22 | -1.56 | 0.04 | -6.82 | 0.84 | -7.54 | 0.74 | A+ | A- | A- |
| 8 | 378090 | 19 | D.1.2.3            | 2 | 3314 | 0.39 | 0.32 | 0.13 | 0.16 | 0.39 | 0.01 | 0.29  | -0.14 | -0.06 | -0.11 | 0.29  | 0.43  | 0.04 | -2.56 | 0.96 | 1.12  | 1.02 | B- | A- | A- |
| 8 | 714933 | 19 | D.2.1.1            | 2 | 3314 | 0.78 | 0.10 | 0.78 | 0.08 | 0.04 | 0.00 | 0.36  | -0.15 | 0.36  | -0.25 | -0.17 | -1.58 | 0.04 | -3.81 | 0.91 | -4.62 | 0.83 | A- | A- | A- |
| 8 | 630480 | 19 | D.2.1.4            | 2 | 3314 | 0.18 | 0.10 | 0.18 | 0.30 | 0.42 | 0.00 | -0.15 | -0.16 | -0.15 | -0.03 | 0.24  | 1.60  | 0.05 | 8.33  | 1.25 | 9.90  | 2.11 | A+ | A+ | B+ |
| 8 | 440060 | 19 | D.2.1.6            | 2 | 3314 | 0.43 | 0.24 | 0.18 | 0.43 | 0.14 | 0.00 | 0.26  | -0.06 | -0.16 | 0.26  | -0.10 | 0.21  | 0.04 | -0.20 | 1.00 | 0.64  | 1.01 | A+ | A- | A- |
|   |        |    | D.1.1.1            |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
| 8 | 859736 | 20 | 1                  | 1 | 3331 | 0.56 | 0.56 | 0.21 | 0.14 | 0.09 | 0.00 | 0.30  | 0.30  | -0.17 | -0.16 | -0.08 | -0.34 | 0.04 | -2.89 | 0.96 | -3.43 | 0.94 | A- | A- | A+ |
| 8 | 739171 | 20 | D.1.1.7            | 2 | 3331 | 0.43 | 0.17 | 0.19 | 0.20 | 0.43 | 0.00 | 0.27  | -0.07 | -0.17 | -0.10 | 0.27  | 0.24  | 0.04 | -1.45 | 0.98 | -0.96 | 0.98 | A+ | A+ | A+ |
| 8 | 524275 | 20 | D.1.1.2            | 1 | 3331 | 0.26 | 0.29 | 0.26 | 0.27 | 0.18 | 0.00 | 0.08  | 0.10  | 0.08  | -0.09 | -0.11 | 1.12  | 0.04 | 5.15  | 1.11 | 7.32  | 1.25 | A+ | A+ | A+ |
| 8 | 327116 | 20 | D.1.2.1            | 2 | 3331 | 0.43 | 0.43 | 0.07 | 0.33 | 0.16 | 0.00 | 0.35  | 0.35  | -0.20 | -0.12 | -0.17 | 0.26  | 0.04 | -6.82 | 0.91 | -5.44 | 0.90 | A- | A- | A- |
| 8 | 898978 | 20 | D.1.1.4            | 2 | 3331 | 0.67 | 0.12 | 0.10 | 0.11 | 0.67 | 0.00 | 0.31  | -0.15 | -0.11 | -0.19 | 0.31  | -0.90 | 0.04 | -3.79 | 0.94 | -3.48 | 0.92 | A- | A- | A+ |
| 8 | 423128 | 20 | D.1.1.1            | 2 | 3331 | 0.25 | 0.29 | 0.25 | 0.20 | 0.26 | 0.00 | 0.08  | -0.05 | 0.08  | -0.05 | 0.03  | 1.20  | 0.04 | 4.81  | 1.11 | 7.51  | 1.27 | A- | A- | A+ |
|   |        |    |                    |   |      |      |      |      |      |      |      |       |       |       |       |       |       |      |       |      |       |      |    |    |    |
| 8 |        | 20 | D.1.2.3            | 2 | 3331 | 0.77 | 0.77 | 0.08 | 0.09 | 0.07 | 0.00 | 0.31  | 0.31  | -0.18 | -0.17 | -0.13 | -1.44 | 0.04 | -3.15 | 0.93 | -4.28 | 0.86 | Α- | A+ | A+ |
| 8 | 741340 | 20 | D.2.1.1            | 2 | 3331 | 0.62 | 0.03 | 0.23 | 0.62 | 0.12 | 0.00 | 0.32  | -0.16 | -0.20 | 0.32  | -0.11 | -0.62 | 0.04 | -4.15 | 0.94 | -4.11 | 0.92 | A- | A- | A- |
| 8 | 183748 | 20 | D.2.1.4            | 2 | 3331 | 0.23 | 0.16 | 0.23 | 0.27 | 0.35 | 0.00 | -0.03 | -0.07 | -0.03 | -0.03 | 0.11  | 1.34  | 0.04 | 7.26  | 1.18 | 9.90  | 1.50 | A- | A+ | A+ |
| 8 | 312750 | 20 | D.2.1.5            | 2 | 3331 | 0.44 | 0.25 | 0.21 | 0.44 | 0.10 | 0.00 | 0.28  | -0.19 | -0.06 | 0.28  | -0.10 | 0.21  | 0.04 | -2.31 | 0.97 | -1.07 | 0.98 | A+ | A- | A- |
| 8 | 159506 | 20 | D.1.2.5            | 2 | 3331 | 0.73 | 0.10 | 0.73 | 0.04 | 0.13 | 0.00 | 0.38  | -0.22 | 0.38  | -0.18 | -0.20 | -1.21 | 0.04 | -6.19 | 0.88 | -7.51 | 0.79 | A+ | A- | B- |

# **Table 28. OE Item Statistics**

|    | Ite    | em Inforr | nation  |     |      |         |      |      | Cla  | ssical   |       |       |       |       | Ra    | isch            | Inf   | it   | Outf  | ït   |    | DIF |     |
|----|--------|-----------|---------|-----|------|---------|------|------|------|----------|-------|-------|-------|-------|-------|-----------------|-------|------|-------|------|----|-----|-----|
| Gr | PubID  | Form      | Std     | DOK | N    | P.Value | P(0) | P(1) | P(2) | P(blank) | PtBis | PT(0) | PT(1) | PT(2) | В     | Final.B.<br>Err | t     | MS   | t     | MS   | MW | BW  | WH. |
| 3  | 559605 | 0         | C.1.2.1 | 3   | 1499 | 0.58    | 0.57 | 0.28 | 0.15 | 0.03     | 0.26  | -0.25 | 0.12  | 0.20  | 0.88  | 0.04            | -2.62 | 0.92 | -3.31 | 0.86 | A- | A-  | A-  |
| 3  | 746367 | 0         | C.1.1.2 | 3   | 1499 | 1.26    | 0.14 | 0.46 | 0.40 | 0.01     | 0.29  | -0.20 | -0.12 | 0.27  | -0.67 | 0.04            | -2.55 | 0.92 | -2.32 | 0.93 | A+ | B-  | B-  |
| 3  | 252077 | 1         | C.1.3.1 | 3   | 1499 | 0.92    | 0.29 | 0.49 | 0.21 | 0.02     | 0.37  | -0.33 | 0.09  | 0.26  | 0.23  | 0.04            | -2.66 | 0.92 | -3.03 | 0.91 | A- | C-  | C-  |
| 3  | 395751 | 1         | C.1.2.2 | 3   | 1499 | 1.04    | 0.22 | 0.53 | 0.26 | 0.01     | 0.31  | -0.24 | -0.04 | 0.27  | -0.10 | 0.04            | -0.45 | 0.99 | -0.43 | 0.99 | A- | A-  | A-  |
| 3  | 707715 | 2         | C.1.3.4 | 3   | 1499 | 0.70    | 0.38 | 0.53 | 0.08 | 0.02     | 0.34  | -0.30 | 0.17  | 0.23  | 0.94  | 0.05            | -2.72 | 0.91 | -2.83 | 0.91 | A+ | A-  | A-  |
| 3  | 344070 | 2         | C.1.1.1 | 3   | 1499 | 0.56    | 0.58 | 0.28 | 0.14 | 0.01     | 0.26  | -0.22 | 0.07  | 0.23  | 0.94  | 0.04            | 0.03  | 1.00 | -0.69 | 0.97 | A+ | A-  | A-  |
| 3  | 757794 | 3         | C.1.2.2 | 3   | 1500 | 0.93    | 0.17 | 0.74 | 0.09 | 0.01     | 0.33  | -0.38 | 0.26  | 0.10  | 0.27  | 0.06            | -2.04 | 0.92 | -2.18 | 0.91 | A+ | B-  | A-  |
| 3  | 529156 | 3         | C.1.3.3 | 3   | 1500 | 1.22    | 0.26 | 0.25 | 0.48 | 0.01     | 0.41  | -0.37 | -0.03 | 0.35  | -0.48 | 0.04            | -3.65 | 0.89 | -2.45 | 0.90 | A+ | B-  | B-  |
| 3  | 152497 | 4         | C.1.3.4 | 3   | 1499 | 0.68    | 0.41 | 0.50 | 0.09 | 0.02     | 0.35  | -0.31 | 0.17  | 0.24  | 0.97  | 0.05            | -1.90 | 0.94 | -2.35 | 0.92 | A+ | A-  | A-  |
| 3  | 156601 | 4         |         | 3   | 1499 | 0.48    | 0.62 | 0.27 | 0.11 | 0.02     | 0.26  | -0.23 | 0.11  | 0.20  | 1.18  | 0.04            | 1.46  | 1.05 | 1.55  | 1.08 | A+ | B-  | A+  |
| 3  | 685240 | 5         | C.1.2.4 | 3   | 1498 | 0.36    | 0.73 | 0.17 | 0.09 | 0.02     | 0.30  | -0.27 | 0.12  | 0.25  | 1.38  | 0.05            | -0.51 | 0.98 | -0.08 | 0.99 | A- | B-  | B-  |
| 3  | 685164 | 5         | C.1.3.3 | 3   | 1498 | 0.75    | 0.46 | 0.33 | 0.21 | 0.02     | 0.32  | -0.30 | 0.11  | 0.24  | 0.48  | 0.04            | 1.38  | 1.04 | 1.08  | 1.04 | A+ | A+  | A+  |
| 3  | 599589 | 6         | C.1.3.3 | 3   | 1500 | 1.54    | 0.11 | 0.25 | 0.65 | 0.02     | 0.29  | -0.28 | -0.06 | 0.24  | -1.29 | 0.04            | -1.73 | 0.94 | -1.58 | 0.92 | A+ | B-  | A-  |
| 3  | 906203 | 6         | C.1.2.4 | 3   | 1500 | 0.40    | 0.70 | 0.19 | 0.10 | 0.02     | 0.29  | -0.26 | 0.11  | 0.25  | 1.21  | 0.04            | -0.12 | 0.99 | -0.26 | 0.98 | A+ | A-  | A-  |
| 3  | 471515 | 7         | C.1.1.4 | 3   | 1499 | 0.38    | 0.72 | 0.17 | 0.10 | 0.02     | 0.33  | -0.31 | 0.15  | 0.27  | 1.41  | 0.05            | 0.28  | 1.01 | 0.71  | 1.05 | A+ | A-  | A-  |
| 3  | 407749 | 7         | C.1.2.3 | 2   | 1499 | 1.45    | 0.22 | 0.11 | 0.67 | 0.01     | 0.54  | -0.47 | -0.19 | 0.54  | -0.87 | 0.04            | -6.26 | 0.78 | -5.31 | 0.64 | A+ | B-  | B-  |
| 3  | 806319 | 8         | C.1.1.2 | 3   | 1500 | 0.74    | 0.34 | 0.58 | 0.08 | 0.02     | 0.29  | -0.26 | 0.16  | 0.17  | 0.88  | 0.05            | -0.66 | 0.98 | -0.76 | 0.97 | A+ | A+  | A+  |
| 3  | 485649 | 8         | C.1.3.4 | 3   | 1500 | 0.24    | 0.78 | 0.20 | 0.02 | 0.02     | 0.21  | -0.19 | 0.15  | 0.15  | 2.26  | 0.06            | 0.28  | 1.01 | -0.29 | 0.98 | A+ | A-  | A-  |
| 3  | 682271 | 9         | C.1.1.2 | 3   | 1500 | 1.05    | 0.26 | 0.44 | 0.31 | 0.02     | 0.37  | -0.34 | 0.04  | 0.28  | -0.17 | 0.04            | -4.00 | 0.89 | -4.21 | 0.88 | A- | C-  | A+  |
| 3  | 283507 | 9         | C.1.3.4 | 3   | 1500 | 0.57    | 0.52 | 0.38 | 0.10 | 0.02     | 0.30  | -0.27 | 0.16  | 0.21  | 1.01  | 0.04            | -1.53 | 0.95 | -1.99 | 0.93 | A+ | A-  | A-  |
| 3  | 609434 | 10        | C.1.3.1 | 3   | 1500 | 1.43    | 0.27 | 0.04 | 0.70 | 0.01     | 0.35  | -0.33 | -0.08 | 0.35  | -0.74 | 0.03            | -3.14 | 0.90 | -1.77 | 0.86 | A- | B-  | A-  |
| 3  | 573940 | 10        | C.1.1.4 | 3   | 1500 | 0.41    | 0.71 | 0.17 | 0.12 | 0.02     | 0.29  | -0.27 | 0.11  | 0.24  | 1.14  | 0.04            | 0.14  | 1.01 | -1.02 | 0.93 | A+ | B-  | A-  |
| 3  | 348700 | 11        | C.1.1.2 | 3   | 1500 | 0.80    | 0.35 | 0.49 | 0.16 | 0.01     | 0.34  | -0.30 | 0.11  | 0.24  | 0.52  | 0.04            | -2.32 | 0.93 | -2.59 | 0.92 | A+ | A-  | A+  |
| 3  | 506168 | 11        | C.1.1.3 | 2   | 1500 | 1.80    | 0.02 | 0.17 | 0.82 | 0.01     | 0.26  | -0.09 | -0.25 | 0.27  | -2.53 | 0.06            | -1.05 | 0.94 | -1.31 | 0.90 | A- | B-  | A-  |
| 3  | 979543 | 12        | C.1.2.1 | 2   | 1500 | 1.34    | 0.24 | 0.18 | 0.58 | 0.01     | 0.34  | -0.27 | -0.13 | 0.34  | -0.72 | 0.04            | -3.06 | 0.91 | -3.71 | 0.83 | A+ | B-  | A-  |
| 3  | 779437 | 12        | C.1.3.2 | 3   | 1500 | 0.86    | 0.32 | 0.50 | 0.18 | 0.01     | 0.36  | -0.29 | 0.05  | 0.30  | 0.25  | 0.04            | -4.17 | 0.88 | -4.37 | 0.87 | A- | A-  | A-  |
| 3  | 227678 | 13        | C.1.2.1 | 3   | 1500 | 0.67    | 0.56 | 0.22 | 0.23 | 0.01     | 0.33  | -0.30 | 0.08  | 0.28  | 0.63  | 0.04            | -0.82 | 0.97 | -0.85 | 0.96 | A+ | A-  | A-  |
| 3  | 799197 | 13        | C.1.2.3 | 2   | 1500 | 1.50    | 0.16 | 0.18 | 0.66 | 0.01     | 0.38  | -0.32 | -0.14 | 0.36  | -0.99 | 0.04            | -4.20 | 0.85 | -3.17 | 0.81 | A+ | B-  | A-  |
| 3  | 956314 | 14        | C.1.2.4 | 3   | 1500 | 0.52    | 0.62 | 0.24 | 0.14 | 0.02     | 0.29  | -0.27 | 0.11  | 0.23  | 0.95  | 0.04            | -1.46 | 0.95 | -0.45 | 0.98 | A+ | A-  | A-  |

| 3 | 561888 | 14 | C.1.2.3 | 3 | 1500 | 1.00 | 0.35 | 0.29 | 0.35 | 0.01 | 0.39 | -0.34 | 0.00  | 0.34 | -0.03 | 0.04 | -4.57 | 0.88 | -3.97 | 0.87 | A- | A- | A- |
|---|--------|----|---------|---|------|------|------|------|------|------|------|-------|-------|------|-------|------|-------|------|-------|------|----|----|----|
| 3 | 747506 | 15 | C.1.2.2 | 3 | 1500 | 1.21 | 0.14 | 0.51 | 0.35 | 0.01 | 0.36 | -0.26 | -0.11 | 0.31 | -0.57 | 0.04 | -2.82 | 0.91 | -2.71 | 0.91 | A+ | A- | A- |
| 3 | 992945 | 15 | C.1.3.3 | 3 | 1500 | 1.73 | 0.07 | 0.13 | 0.80 | 0.01 | 0.23 | -0.18 | -0.13 | 0.22 | -1.63 | 0.05 | 0.41  | 1.02 | 0.08  | 1.00 | A+ | A+ | A+ |
| 3 | 903562 | 16 | C.1.1.3 | 3 | 1500 | 1.30 | 0.23 | 0.25 | 0.52 | 0.01 | 0.41 | -0.33 | -0.13 | 0.39 | -0.65 | 0.04 | -5.53 | 0.84 | -5.22 | 0.79 | A- | В- | A- |
| 3 | 504085 | 16 | C.1.1.4 | 3 | 1500 | 0.49 | 0.63 | 0.25 | 0.12 | 0.02 | 0.27 | -0.22 | 0.06  | 0.25 | 1.02  | 0.04 | -0.45 | 0.98 | -0.96 | 0.95 | A+ | A- | A+ |
| 3 | 931284 | 17 | C.1.2.4 | 3 | 1499 | 0.41 | 0.70 | 0.20 | 0.10 | 0.02 | 0.28 | -0.26 | 0.13  | 0.22 | 1.20  | 0.04 | 0.24  | 1.01 | 0.77  | 1.05 | A+ | A- | A- |
| 3 | 809704 | 17 | C.1.2.3 | 2 | 1499 | 1.48 | 0.16 | 0.20 | 0.64 | 0.00 | 0.41 | -0.34 | -0.16 | 0.39 | -1.03 | 0.04 | -5.57 | 0.81 | -4.53 | 0.76 | A+ | A- | C- |
| 3 | 878500 | 18 | C.1.3.1 | 3 | 1500 | 0.53 | 0.59 | 0.28 | 0.12 | 0.02 | 0.39 | -0.36 | 0.18  | 0.30 | 1.00  | 0.04 | -2.29 | 0.92 | -2.49 | 0.89 | A+ | В- | A- |
| 3 | 291236 | 18 | C.1.1.3 | 2 | 1500 | 0.90 | 0.30 | 0.51 | 0.19 | 0.02 | 0.45 | -0.34 | 0.00  | 0.39 | 0.21  | 0.04 | -5.64 | 0.84 | -5.87 | 0.83 | A- | В- | A+ |
| 3 | 499822 | 19 | C.1.1.4 | 3 | 1500 | 0.51 | 0.58 | 0.32 | 0.10 | 0.02 | 0.31 | -0.30 | 0.19  | 0.20 | 1.20  | 0.04 | 0.04  | 1.00 | -0.52 | 0.98 | A- | В- | A- |
| 3 | 430376 | 19 | C.1.2.3 | 2 | 1500 | 1.56 | 0.14 | 0.16 | 0.70 | 0.01 | 0.44 | -0.35 | -0.20 | 0.43 | -1.16 | 0.04 | -5.19 | 0.81 | -5.24 | 0.67 | A+ | A- | В- |
| 3 | 750218 | 20 | C.1.3.4 | 3 | 1499 | 0.38 | 0.72 | 0.18 | 0.10 | 0.02 | 0.28 | -0.26 | 0.12  | 0.23 | 1.34  | 0.04 | -1.97 | 0.92 | -1.21 | 0.92 | A+ | A- | B- |
| 3 | 148160 | 20 | C.1.1.1 | 3 | 1499 | 0.73 | 0.47 | 0.33 | 0.20 | 0.01 | 0.28 | -0.24 | 0.06  | 0.23 | 0.60  | 0.04 | -1.00 | 0.97 | -0.99 | 0.96 | A- | B- | A- |

**Table 29. WP Item Statistics** 

|    | Ite    | m Informa | ntion |     | Classical |         |      |      |      |      |      |          |       |       |       |       |       | Rasch |       |                 | Infit |      | Outfit |      |     | DIF |    |
|----|--------|-----------|-------|-----|-----------|---------|------|------|------|------|------|----------|-------|-------|-------|-------|-------|-------|-------|-----------------|-------|------|--------|------|-----|-----|----|
| Gr | PubID  | Form      | Std   | DOK | N         | P.Value | P(0) | P(1) | P(2) | P(3) | P(4) | P(Blank) | PtBis | PT(0) | PT(1) | PT(2) | PT(3) | PT(4) | В     | Final.B.<br>Err | t     | MS   | t      | MS   | MW. | BW  | WH |
| 3  | 411765 | 1         | C.1.1 | 3   | 1499      | 1.45    | 0.09 | 0.46 | 0.37 | 0.07 | 0.00 | 0.04     | 0.40  | -0.19 | -0.27 | 0.26  | 0.23  | 0.05  | 1.12  | 0.04            | -2.80 | 0.90 | -3.03  | 0.89 | B+  | A-  | A- |
| 3  | 652513 | 2         | C.1.1 | 3   | 1499      | 1.55    | 0.08 | 0.38 | 0.45 | 0.08 | 0.00 | 0.03     | 0.44  | -0.13 | -0.37 | 0.26  | 0.26  | 0.14  | 0.97  | 0.04            | -4.59 | 0.84 | -4.59  | 0.84 | B+  | B-  | A- |
| 3  | 363000 | 3         | C.1.1 | 3   | 1500      | 1.62    | 0.07 | 0.34 | 0.52 | 0.07 | 0.01 | 0.02     | 0.41  | -0.15 | -0.33 | 0.24  | 0.23  | 0.11  | 0.79  | 0.04            | -3.12 | 0.89 | -2.96  | 0.89 | B+  | B-  | B- |
| 3  | 698639 | 4         | C.1.3 | 3   | 1499      | 2.06    | 0.07 | 0.16 | 0.45 | 0.24 | 0.07 | 0.03     | 0.46  | -0.19 | -0.29 | -0.03 | 0.24  | 0.29  | 0.01  | 0.03            | -3.79 | 0.87 | -3.57  | 0.88 | B+  | A-  | A- |
| 3  | 520884 | 5         | C.1.3 | 3   | 1498      | 2.09    | 0.05 | 0.17 | 0.49 | 0.25 | 0.05 | 0.02     | 0.46  | -0.13 | -0.32 | -0.07 | 0.29  | 0.27  | -0.12 | 0.03            | -3.81 | 0.86 | -3.66  | 0.87 | A+  | A-  | A- |
| 3  | 947271 | 6         | C.1.3 | 3   | 1500      | 2.02    | 0.06 | 0.19 | 0.48 | 0.24 | 0.04 | 0.02     | 0.46  | -0.15 | -0.34 | 0.00  | 0.28  | 0.23  | 0.00  | 0.03            | -4.88 | 0.83 | -4.79  | 0.83 | C+  | C-  | A- |
| 3  | 256548 | 7         | C.1.3 | 3   | 1499      | 1.95    | 0.10 | 0.17 | 0.46 | 0.25 | 0.03 | 0.03     | 0.49  | -0.20 | -0.37 | 0.03  | 0.35  | 0.19  | 0.29  | 0.03            | -2.40 | 0.92 | -2.03  | 0.93 | A+  | B-  | A- |
| 3  | 263061 | 8         | C.1.2 | 3   | 1500      | 1.56    | 0.09 | 0.40 | 0.39 | 0.11 | 0.01 | 0.03     | 0.41  | -0.14 | -0.32 | 0.20  | 0.27  | 0.13  | 0.71  | 0.04            | -2.74 | 0.90 | -2.86  | 0.90 | C+  | A-  | A+ |
| 3  | 561635 | 9         | C.1.2 | 3   | 1500      | 1.65    | 0.08 | 0.32 | 0.46 | 0.13 | 0.01 | 0.03     | 0.38  | -0.14 | -0.30 | 0.18  | 0.24  | 0.11  | 0.77  | 0.04            | -2.79 | 0.90 | -2.74  | 0.91 | B+  | A-  | A- |
| 3  | 177297 | 10        | C.1.2 | 3   | 1500      | 1.70    | 0.09 | 0.29 | 0.47 | 0.14 | 0.02 | 0.03     | 0.41  | -0.22 | -0.27 | 0.17  | 0.23  | 0.14  | 0.52  | 0.03            | -3.77 | 0.87 | -3.78  | 0.87 | B+  | B-  | C- |
| 3  | 829081 | 11        | C.1.2 | 3   | 1500      | 1.79    | 0.08 | 0.25 | 0.46 | 0.19 | 0.01 | 0.03     | 0.44  | -0.22 | -0.28 | 0.10  | 0.32  | 0.08  | 0.64  | 0.03            | -4.12 | 0.86 | -4.03  | 0.86 | B+  | C-  | A- |
| 3  | 595682 | 12        | C.1.2 | 3   | 1500      | 1.60    | 0.06 | 0.42 | 0.40 | 0.11 | 0.01 | 0.02     | 0.39  | -0.13 | -0.32 | 0.20  | 0.25  | 0.09  | 0.51  | 0.04            | -4.07 | 0.86 | -4.23  | 0.85 | C+  | A-  | A- |
| 3  | 776170 | 13        | C.1.1 | 3   | 1500      | 1.58    | 0.07 | 0.39 | 0.45 | 0.09 | 0.01 | 0.03     | 0.43  | -0.12 | -0.34 | 0.22  | 0.28  | 0.14  | 0.89  | 0.04            | -4.31 | 0.85 | -4.34  | 0.85 | B+  | B-  | A- |
| 3  | 660312 | 14        | C.1.3 | 3   | 1500      | 1.81    | 0.08 | 0.22 | 0.51 | 0.16 | 0.02 | 0.03     | 0.36  | -0.15 | -0.25 | 0.08  | 0.24  | 0.12  | 0.40  | 0.03            | -1.98 | 0.93 | -1.73  | 0.94 | A+  | B-  | B- |
| 3  | 474171 | 15        | C.1.2 | 3   | 1500      | 1.63    | 0.06 | 0.35 | 0.48 | 0.10 | 0.01 | 0.03     | 0.38  | -0.15 | -0.30 | 0.21  | 0.22  | 0.09  | 0.81  | 0.04            | -2.64 | 0.91 | -2.62  | 0.91 | A+  | B-  | B- |
| 3  | 615493 | 16        | C.1.1 | 3   | 1500      | 1.56    | 0.06 | 0.38 | 0.49 | 0.06 | 0.00 | 0.02     | 0.41  | -0.19 | -0.30 | 0.28  | 0.21  | 0.06  | 0.95  | 0.04            | -4.24 | 0.85 | -4.14  | 0.85 | A+  | B-  | A- |
| 3  | 165339 | 17        | C.1.3 | 3   | 1499      | 1.86    | 0.07 | 0.26 | 0.44 | 0.20 | 0.03 | 0.02     | 0.39  | -0.09 | -0.33 | 0.05  | 0.27  | 0.19  | 0.20  | 0.03            | -2.44 | 0.92 | -2.45  | 0.92 | B+  | A-  | A- |
| 3  | 276636 | 18        | C.1.1 | 3   | 1500      | 1.46    | 0.09 | 0.47 | 0.32 | 0.11 | 0.01 | 0.03     | 0.40  | -0.17 | -0.26 | 0.18  | 0.28  | 0.11  | 0.97  | 0.04            | -2.35 | 0.92 | -2.72  | 0.91 | B+  | B-  | A- |
| 3  | 385107 | 19        | C.1.1 | 3   | 1500      | 1.50    | 0.07 | 0.42 | 0.45 | 0.06 | 0.00 | 0.03     | 0.45  | -0.19 | -0.33 | 0.31  | 0.23  | 0.08  | 1.06  | 0.04            | -4.03 | 0.86 | -4.03  | 0.86 | B+  | B-  | B- |
| 3  | 958527 | 20        | C.1.1 | 3   | 1499      | 1.62    | 0.06 | 0.35 | 0.51 | 0.08 | 0.00 | 0.03     | 0.38  | -0.12 | -0.30 | 0.22  | 0.22  | 0.11  | 0.89  | 0.04            | -3.09 | 0.89 | -3.07  | 0.89 | B+  | A-  | B- |
| 4  | 100529 | 1         | C.1.1 | 3   | 1500      | 1.69    | 0.04 | 0.34 | 0.52 | 0.09 | 0.01 | 0.01     | 0.43  | -0.14 | -0.35 | 0.23  | 0.23  | 0.11  | 0.89  | 0.04            | -2.77 | 0.90 | -2.78  | 0.90 | B+  | A-  | A- |
| 4  | 164800 | 2         | C.1.2 | 3   | 1500      | 1.69    | 0.04 | 0.37 | 0.47 | 0.12 | 0.01 | 0.01     | 0.39  | -0.08 | -0.33 | 0.17  | 0.26  | 0.11  | 0.94  | 0.04            | -1.07 | 0.96 | -1.22  | 0.96 | C+  | A+  | A+ |
| 4  | 260857 | 3         | C.1.2 | 3   | 1499      | 1.93    | 0.03 | 0.22 | 0.56 | 0.18 | 0.02 | 0.01     | 0.43  | -0.10 | -0.37 | 0.09  | 0.29  | 0.13  | 0.51  | 0.04            | -3.12 | 0.88 | -3.06  | 0.89 | B+  | A-  | B- |
| 4  | 215463 | 4         | C.1.2 | 3   | 1500      | 1.81    | 0.03 | 0.34 | 0.44 | 0.17 | 0.02 | 0.01     | 0.34  | -0.11 | -0.26 | 0.09  | 0.23  | 0.12  | 0.56  | 0.04            | -0.76 | 0.97 | -0.85  | 0.97 | C+  | A-  | A- |
| 4  | 972389 | 5         | C.1.1 | 3   | 1500      | 1.61    | 0.04 | 0.42 | 0.43 | 0.10 | 0.00 | 0.01     | 0.44  | -0.13 | -0.37 | 0.24  | 0.27  | 0.11  | 1.10  | 0.04            | -3.09 | 0.89 | -3.45  | 0.88 | C+  | C-  | A- |
| 4  | 622347 | 6         | C.1.3 | 3   | 1500      | 2.13    | 0.03 | 0.16 | 0.52 | 0.24 | 0.06 | 0.01     | 0.46  | -0.13 | -0.33 | -0.06 | 0.28  | 0.24  | 0.12  | 0.04            | -2.29 | 0.92 | -2.19  | 0.92 | C+  | B-  | A- |
| 4  | 112762 | 7         | C.1.3 | 3   | 1499      | 2.14    | 0.04 | 0.13 | 0.53 | 0.26 | 0.04 | 0.01     | 0.43  | -0.14 | -0.30 | -0.07 | 0.27  | 0.22  | 0.24  | 0.04            | -3.05 | 0.89 | -2.90  | 0.89 | A+  | A-  | A- |
| 4  | 293533 | 8         | C.1.3 | 3   | 1500      | 2.19    | 0.04 | 0.14 | 0.47 | 0.29 | 0.06 | 0.01     | 0.47  | -0.13 | -0.38 | -0.07 | 0.31  | 0.19  | 0.18  | 0.04            | -1.47 | 0.95 | -1.26  | 0.95 | A+  | A-  | B- |
| 4  | 253848 | 9         | C.1.1 | 3   | 1500      | 1.76    | 0.03 | 0.30 | 0.55 | 0.11 | 0.01 | 0.01     | 0.49  | -0.14 | -0.44 | 0.28  | 0.25  | 0.10  | 0.96  | 0.04            | -3.78 | 0.86 | -3.79  | 0.86 | B+  | A-  | A- |

|   |        |    |       | 1 |      | 1    |      |      |      |      | -    |      |      |       |       |       |      |      |       |      |       |      |       |      |    |    |    |
|---|--------|----|-------|---|------|------|------|------|------|------|------|------|------|-------|-------|-------|------|------|-------|------|-------|------|-------|------|----|----|----|
| 4 | 176110 | 10 | C.1.1 | 3 | 1500 | 1.77 | 0.05 | 0.24 | 0.59 | 0.10 | 0.01 | 0.01 | 0.46 | -0.17 | -0.37 | 0.21  | 0.28 | 0.11 | 0.89  | 0.04 | -2.50 | 0.90 | -2.13 | 0.91 | B+ | B- | В- |
| 4 | 435041 | 11 | C.1.2 | 3 | 1500 | 1.97 | 0.05 | 0.25 | 0.45 | 0.21 | 0.05 | 0.01 | 0.41 | -0.16 | -0.31 | 0.05  | 0.24 | 0.19 | 0.32  | 0.03 | -2.44 | 0.91 | -2.52 | 0.91 | C+ | A- | A- |
| 4 | 349232 | 12 | C.1.3 | 3 | 1500 | 2.44 | 0.03 | 0.10 | 0.38 | 0.35 | 0.13 | 0.01 | 0.52 | -0.17 | -0.33 | -0.20 | 0.27 | 0.31 | -0.18 | 0.03 | -5.24 | 0.82 | -5.29 | 0.82 | C+ | B- | A- |
| 4 | 990909 | 13 | C.1.1 | 3 | 1500 | 1.77 | 0.03 | 0.31 | 0.54 | 0.11 | 0.01 | 0.01 | 0.43 | -0.09 | -0.38 | 0.20  | 0.27 | 0.09 | 0.76  | 0.04 | -1.72 | 0.94 | -1.70 | 0.94 | C+ | A- | A- |
| 4 | 180225 | 14 | C.1.3 | 3 | 1499 | 2.23 | 0.05 | 0.13 | 0.44 | 0.31 | 0.07 | 0.01 | 0.42 | -0.12 | -0.30 | -0.11 | 0.25 | 0.24 | 0.12  | 0.03 | -1.84 | 0.93 | -1.70 | 0.94 | B+ | A- | A- |
| 4 | 373671 | 15 | C.1.2 | 3 | 1500 | 1.85 | 0.04 | 0.28 | 0.49 | 0.18 | 0.01 | 0.01 | 0.41 | -0.18 | -0.30 | 0.11  | 0.26 | 0.11 | 0.73  | 0.04 | -2.34 | 0.92 | -2.37 | 0.92 | C+ | B- | A- |
| 4 | 319660 | 16 | C.1.2 | 3 | 1500 | 1.88 | 0.03 | 0.26 | 0.53 | 0.18 | 0.01 | 0.01 | 0.45 | -0.14 | -0.35 | 0.10  | 0.30 | 0.11 | 0.74  | 0.04 | -2.04 | 0.93 | -2.03 | 0.93 | C+ | A- | A- |
| 4 | 878289 | 17 | C.1.1 | 3 | 1500 | 1.75 | 0.03 | 0.32 | 0.52 | 0.12 | 0.01 | 0.01 | 0.39 | -0.12 | -0.31 | 0.16  | 0.24 | 0.11 | 0.84  | 0.04 | -1.54 | 0.94 | -1.61 | 0.94 | C+ | A- | B- |
| 4 | 553554 | 18 | C.1.1 | 3 | 1500 | 1.76 | 0.03 | 0.31 | 0.53 | 0.12 | 0.00 | 0.01 | 0.42 | -0.10 | -0.34 | 0.14  | 0.30 | 0.08 | 1.16  | 0.04 | -1.22 | 0.96 | -1.15 | 0.96 | B+ | A- | A- |
| 4 | 423216 | 19 | C.1.1 | 3 | 1500 | 1.79 | 0.02 | 0.28 | 0.58 | 0.11 | 0.00 | 0.01 | 0.42 | -0.10 | -0.36 | 0.19  | 0.25 | 0.09 | 0.84  | 0.04 | -3.34 | 0.88 | -3.33 | 0.88 | C+ | A- | A- |
| 4 | 391973 | 20 | C.1.3 | 3 | 1499 | 2.08 | 0.05 | 0.17 | 0.47 | 0.26 | 0.04 | 0.01 | 0.46 | -0.16 | -0.34 | -0.02 | 0.31 | 0.19 | 0.25  | 0.03 | -3.20 | 0.89 | -3.10 | 0.89 | B+ | A- | A+ |
| 5 | 840905 | 1  | C.1.3 | 3 | 1500 | 2.05 | 0.03 | 0.15 | 0.56 | 0.22 | 0.03 | 0.01 | 0.38 | -0.08 | -0.33 | 0.00  | 0.28 | 0.11 | 0.20  | 0.04 | 0.16  | 1.01 | 0.54  | 1.02 | B+ | B- | A- |
| 5 | 368050 | 2  | C.1.3 | 3 | 1499 | 2.41 | 0.03 | 0.11 | 0.39 | 0.37 | 0.11 | 0.01 | 0.52 | -0.14 | -0.37 | -0.19 | 0.29 | 0.29 | -0.42 | 0.03 | -3.00 | 0.89 | -2.84 | 0.90 | A+ | B- | A- |
| 5 | 253444 | 3  | C.1.2 | 3 | 1499 | 2.13 | 0.02 | 0.16 | 0.52 | 0.27 | 0.03 | 0.01 | 0.44 | -0.11 | -0.33 | -0.06 | 0.30 | 0.18 | -0.07 | 0.04 | -1.50 | 0.94 | -1.42 | 0.95 | B+ | A- | A- |
| 5 | 926846 | 4  | C.1.3 | 3 | 1500 | 2.22 | 0.03 | 0.20 | 0.38 | 0.28 | 0.10 | 0.01 | 0.52 | -0.09 | -0.40 | -0.09 | 0.28 | 0.31 | -0.21 | 0.03 | -4.35 | 0.86 | -4.47 | 0.85 | B+ | A- | A- |
| 5 | 764002 | 5  | C.1.2 | 3 | 1500 | 1.99 | 0.05 | 0.16 | 0.55 | 0.22 | 0.01 | 0.01 | 0.47 | -0.20 | -0.31 | 0.00  | 0.34 | 0.15 | 0.52  | 0.04 | -2.60 | 0.90 | -2.44 | 0.91 | C+ | A- | A+ |
| 5 | 471465 | 6  | C.1.2 | 3 | 1500 | 2.03 | 0.04 | 0.14 | 0.58 | 0.22 | 0.01 | 0.01 | 0.39 | -0.10 | -0.32 | 0.00  | 0.28 | 0.10 | 0.38  | 0.04 | -1.04 | 0.96 | -0.80 | 0.97 | B+ | A- | A+ |
| 5 | 831316 | 7  | C.1.3 | 3 | 1500 | 2.34 | 0.02 | 0.12 | 0.44 | 0.35 | 0.07 | 0.01 | 0.47 | -0.06 | -0.36 | -0.16 | 0.28 | 0.26 | -0.30 | 0.04 | -2.73 | 0.90 | -2.62 | 0.91 | A+ | A- | A- |
| 5 | 365742 | 8  | C.1.2 | 3 | 1500 | 2.11 | 0.03 | 0.14 | 0.53 | 0.28 | 0.01 | 0.01 | 0.41 | -0.13 | -0.26 | -0.09 | 0.31 | 0.15 | 0.32  | 0.04 | -1.47 | 0.94 | -1.09 | 0.96 | C+ | A- | A+ |
| 5 | 522912 | 9  | C.1.2 | 3 | 1500 | 1.94 | 0.04 | 0.17 | 0.63 | 0.16 | 0.01 | 0.01 | 0.46 | -0.13 | -0.37 | 0.07  | 0.32 | 0.11 | 0.51  | 0.04 | -2.63 | 0.89 | -2.27 | 0.91 | B+ | A- | A- |
| 5 | 713886 | 10 | C.1.1 | 3 | 1500 | 2.02 | 0.02 | 0.19 | 0.58 | 0.20 | 0.02 | 0.00 | 0.49 | -0.10 | -0.38 | 0.00  | 0.34 | 0.19 | 0.21  | 0.04 | -3.97 | 0.85 | -3.91 | 0.86 | C+ | A- | A+ |
| 5 | 559099 | 11 | C.1.1 | 3 | 1500 | 2.12 | 0.02 | 0.16 | 0.52 | 0.27 | 0.03 | 0.00 | 0.51 | -0.09 | -0.38 | -0.09 | 0.37 | 0.22 | 0.10  | 0.04 | -3.21 | 0.88 | -3.05 | 0.89 | B+ | B- | A+ |
| 5 | 156028 | 12 | C.1.1 | 3 | 1500 | 1.97 | 0.02 | 0.18 | 0.60 | 0.19 | 0.01 | 0.01 | 0.47 | -0.06 | -0.45 | 0.12  | 0.30 | 0.11 | 0.51  | 0.04 | -2.79 | 0.90 | -2.51 | 0.90 | C+ | A- | A- |
| 5 | 627456 | 13 | C.1.1 | 3 | 1500 | 1.97 | 0.03 | 0.17 | 0.60 | 0.19 | 0.01 | 0.01 | 0.49 | -0.19 | -0.34 | 0.04  | 0.33 | 0.15 | 0.48  | 0.04 | -3.59 | 0.86 | -3.46 | 0.86 | C+ | A- | A- |
| 5 | 883279 | 14 | C.1.2 | 3 | 1500 | 2.00 | 0.03 | 0.14 | 0.65 | 0.17 | 0.01 | 0.01 | 0.44 | -0.10 | -0.31 | -0.06 | 0.36 | 0.14 | 0.38  | 0.04 | -2.57 | 0.89 | -2.12 | 0.91 | B+ | B- | A- |
| 5 | 962053 | 15 | C.1.3 | 3 | 1500 | 2.24 | 0.03 | 0.15 | 0.44 | 0.33 | 0.06 | 0.01 | 0.49 | -0.07 | -0.38 | -0.12 | 0.30 | 0.28 | -0.16 | 0.04 | -3.41 | 0.88 | -3.29 | 0.89 | B+ | B- | A- |
| 5 | 791854 | 16 | C.1.1 | 3 | 1500 | 2.05 | 0.02 | 0.14 | 0.61 | 0.21 | 0.01 | 0.00 | 0.41 | -0.12 | -0.28 | -0.06 | 0.32 | 0.11 | 0.26  | 0.04 | -1.40 | 0.94 | -1.11 | 0.95 | C+ | A- | A- |
| 5 | 390324 | 17 | C.1.3 | 3 | 1500 | 2.24 | 0.03 | 0.14 | 0.44 | 0.33 | 0.06 | 0.01 | 0.50 | -0.12 | -0.39 | -0.11 | 0.32 | 0.25 | -0.21 | 0.04 | -2.72 | 0.90 | -2.67 | 0.90 | B+ | A- | A- |
| 5 | 633396 | 18 | C.1.1 | 3 | 1500 | 2.04 | 0.02 | 0.14 | 0.62 | 0.20 | 0.01 | 0.01 | 0.41 | -0.06 | -0.30 | -0.06 | 0.33 | 0.14 | 0.30  | 0.04 | -1.89 | 0.92 | -1.52 | 0.94 | B+ | A- | A- |
| 5 | 382010 | 19 | C.1.1 | 3 | 1499 | 2.03 | 0.02 | 0.17 | 0.58 | 0.23 | 0.01 | 0.01 | 0.46 | -0.07 | -0.37 | -0.03 | 0.36 | 0.12 | 0.39  | 0.04 | -2.42 | 0.91 | -2.05 | 0.92 | C+ | B- | C- |
| 5 | 469749 | 20 | C.1.2 | 3 | 1499 | 2.10 | 0.01 | 0.13 | 0.62 | 0.22 | 0.01 | 0.01 | 0.47 | -0.10 | -0.34 | -0.08 | 0.35 | 0.13 | 0.04  | 0.04 | -2.97 | 0.88 | -2.97 | 0.88 | B+ | B- | A- |
| 6 | 684243 | 1  | C.1.2 | 3 | 1499 | 2.08 | 0.03 | 0.14 | 0.56 | 0.25 | 0.02 | 0.01 | 0.45 | -0.16 | -0.29 | -0.06 | 0.32 | 0.16 | 0.23  | 0.04 | -1.93 | 0.93 | -1.81 | 0.93 | C+ | A- | В- |

|          |       | -     |       |     | 1    | 1    |      |      |      |      |      |      | -    | 1     |       |       |      |      | -     | -    |       |      |       |      |    |    |    |
|----------|-------|-------|-------|-----|------|------|------|------|------|------|------|------|------|-------|-------|-------|------|------|-------|------|-------|------|-------|------|----|----|----|
| 6        | 63521 | 0 2   | C.1.2 | 3   | 1499 | 2.11 | 0.02 | 0.13 | 0.58 | 0.24 | 0.02 | 0.01 | 0.39 | -0.09 | -0.26 | -0.09 | 0.29 | 0.16 | 0.22  | 0.04 | -1.46 | 0.94 | -1.33 | 0.95 | C+ | A- | A- |
| 6        | 60643 | 33 3  | C.1.2 | 3   | 1498 | 2.17 | 0.02 | 0.12 | 0.55 | 0.28 | 0.03 | 0.01 | 0.42 | -0.13 | -0.29 | -0.07 | 0.25 | 0.21 | -0.05 | 0.04 | -2.05 | 0.92 | -1.95 | 0.93 | C+ | A- | A- |
| 6        | 94108 | 89 4  | C.1.2 | 3   | 1500 | 2.17 | 0.02 | 0.14 | 0.51 | 0.28 | 0.04 | 0.01 | 0.43 | -0.17 | -0.30 | -0.03 | 0.22 | 0.23 | -0.03 | 0.04 | -1.55 | 0.94 | -1.63 | 0.94 | C+ | A- | A- |
| 6        | 68030 | )1 5  | C.1.2 | 3   | 1499 | 2.18 | 0.02 | 0.13 | 0.53 | 0.30 | 0.02 | 0.01 | 0.43 | -0.11 | -0.32 | -0.06 | 0.28 | 0.17 | -0.07 | 0.04 | -2.46 | 0.91 | -2.38 | 0.91 | C+ | A- | A- |
| 6        | 40370 | 00 6  | C.1.2 | 3   | 1500 | 2.09 | 0.03 | 0.14 | 0.56 | 0.25 | 0.02 | 0.01 | 0.41 | -0.18 | -0.27 | -0.03 | 0.27 | 0.13 | 0.21  | 0.04 | -1.41 | 0.95 | -1.25 | 0.95 | C+ | A- | A- |
| 6        | 18882 | 22 7  | C.1.2 | 3   | 1500 | 2.14 | 0.02 | 0.14 | 0.55 | 0.26 | 0.03 | 0.01 | 0.45 | -0.13 | -0.32 | -0.07 | 0.28 | 0.22 | 0.00  | 0.04 | -2.69 | 0.90 | -2.73 | 0.90 | B+ | A- | A- |
| 6        | 35019 | 92 8  | C.1.1 | 3   | 1499 | 1.95 | 0.04 | 0.23 | 0.49 | 0.22 | 0.02 | 0.01 | 0.49 | -0.18 | -0.36 | 0.05  | 0.33 | 0.16 | 0.38  | 0.04 | -4.00 | 0.86 | -4.03 | 0.86 | C+ | C- | A- |
| 6        | 95019 | 96 9  | C.1.1 | 3   | 1500 | 2.04 | 0.03 | 0.20 | 0.49 | 0.25 | 0.02 | 0.01 | 0.48 | -0.12 | -0.37 | -0.02 | 0.35 | 0.18 | 0.20  | 0.04 | -3.97 | 0.86 | -3.90 | 0.86 | C+ | B- | B- |
| 6        | 32871 | 15 10 | C.1.1 | 3   | 1499 | 2.16 | 0.02 | 0.16 | 0.49 | 0.28 | 0.04 | 0.01 | 0.47 | -0.12 | -0.34 | -0.08 | 0.30 | 0.23 | 0.05  | 0.04 | -3.26 | 0.88 | -3.23 | 0.89 | C+ | A+ | A- |
| 6        | 95287 | 77 11 | C.1.1 | 3   | 1500 | 1.99 | 0.03 | 0.20 | 0.55 | 0.21 | 0.02 | 0.01 | 0.46 | -0.12 | -0.37 | 0.04  | 0.30 | 0.18 | 0.34  | 0.04 | -3.21 | 0.88 | -3.16 | 0.88 | C+ | A- | A- |
| 6        | 98829 | 02 12 | C.1.1 | 3   | 1499 | 2.14 | 0.03 | 0.15 | 0.49 | 0.30 | 0.03 | 0.01 | 0.53 | -0.23 | -0.35 | -0.03 | 0.31 | 0.25 | 0.10  | 0.04 | -5.00 | 0.83 | -4.98 | 0.83 | C+ | A- | A- |
| 6        | 94721 | 1 13  | C.1.1 | 3   | 1500 | 1.87 | 0.03 | 0.28 | 0.51 | 0.17 | 0.02 | 0.01 | 0.48 | -0.15 | -0.36 | 0.11  | 0.28 | 0.23 | 0.43  | 0.04 | -3.73 | 0.87 | -3.79 | 0.87 | B+ | A- | A- |
| 6        | 85046 | 59 14 | C.1.1 | 3   | 1499 | 2.13 | 0.03 | 0.17 | 0.46 | 0.31 | 0.03 | 0.02 | 0.51 | -0.17 | -0.35 | -0.08 | 0.36 | 0.21 | 0.15  | 0.04 | -4.78 | 0.84 | -4.70 | 0.84 | B+ | A- | A- |
| 6        | 28217 | 77 15 | C.1.3 | 3   | 1499 | 2.27 | 0.03 | 0.14 | 0.41 | 0.33 | 0.07 | 0.02 | 0.48 | -0.13 | -0.35 | -0.11 | 0.27 | 0.27 | -0.20 | 0.03 | -2.98 | 0.90 | -2.86 | 0.90 | C+ | A+ | A- |
| 6        | 61764 | 19 16 | C.1.3 | 3   | 1499 | 2.40 | 0.02 | 0.12 | 0.38 | 0.41 | 0.08 | 0.01 | 0.50 | -0.11 | -0.36 | -0.18 | 0.31 | 0.24 | -0.37 | 0.04 | -3.73 | 0.87 | -3.66 | 0.87 | C+ | A- | A- |
| 6        | 78456 | 50 17 | C.1.3 | 3   | 1499 | 2.35 | 0.02 | 0.13 | 0.41 | 0.37 | 0.07 | 0.01 | 0.51 | -0.12 | -0.35 | -0.14 | 0.27 | 0.30 | -0.36 | 0.04 | -4.58 | 0.84 | -4.52 | 0.85 | C+ | B- | C- |
| 6        | 52973 | 31 18 | C.1.3 | 3   | 1499 | 2.23 | 0.02 | 0.16 | 0.45 | 0.30 | 0.07 | 0.01 | 0.48 | -0.11 | -0.34 | -0.11 | 0.29 | 0.26 | -0.11 | 0.04 | -3.35 | 0.88 | -3.33 | 0.88 | C+ | A- | C- |
| 6        | 11128 | 30 19 | C.1.3 | 3   | 1496 | 2.48 | 0.03 | 0.07 | 0.37 | 0.43 | 0.09 | 0.01 | 0.45 | -0.10 | -0.29 | -0.22 | 0.22 | 0.30 | -0.32 | 0.04 | -2.25 | 0.91 | -1.81 | 0.93 | C+ | A- | A- |
| 6        | 87592 | 22 20 | C.1.3 | 3   | 1500 | 2.30 | 0.04 | 0.12 | 0.41 | 0.37 | 0.07 | 0.01 | 0.50 | -0.12 | -0.35 | -0.17 | 0.31 | 0.29 | -0.05 | 0.03 | -3.88 | 0.86 | -3.31 | 0.88 | C+ | A- | A- |
| 7        | 25213 | 33 1  | C.1.1 | 3   | 1500 | 2.02 | 0.03 | 0.22 | 0.47 | 0.25 | 0.03 | 0.02 | 0.50 | -0.17 | -0.37 | 0.00  | 0.35 | 0.18 | 0.11  | 0.04 | -3.83 | 0.87 | -3.81 | 0.87 | B+ | B- | A- |
| 7        | 65181 | 2     | C.1.1 | 3   | 1498 | 2.09 | 0.02 | 0.18 | 0.51 | 0.26 | 0.03 | 0.01 | 0.44 | -0.12 | -0.35 | 0.00  | 0.27 | 0.20 | -0.03 | 0.04 | -2.39 | 0.91 | -2.31 | 0.92 | C+ | B- | B- |
| 7        | 42212 | 27 3  | C.1.1 | 3   | 1498 | 2.08 | 0.02 | 0.20 | 0.49 | 0.25 | 0.03 | 0.01 | 0.50 | -0.12 | -0.36 | -0.03 | 0.31 | 0.24 | -0.08 | 0.04 | -3.96 | 0.86 | -3.94 | 0.86 | B+ | A- | A- |
| 7        | 23405 | 55 4  | C.1.1 | 3   | 1499 | 2.10 | 0.03 | 0.16 | 0.52 | 0.27 | 0.02 | 0.01 | 0.52 | -0.15 | -0.37 | -0.06 | 0.36 | 0.21 | 0.05  | 0.04 | -4.84 | 0.83 | -4.79 | 0.83 | C+ | B- | A- |
| 7        | 48863 | 35 5  | C.1.2 | 3   | 1497 | 2.17 | 0.02 | 0.12 | 0.55 | 0.29 | 0.02 | 0.01 | 0.46 | -0.13 | -0.36 | -0.07 | 0.32 | 0.15 | -0.08 | 0.04 | -2.07 | 0.92 | -2.04 | 0.92 | C+ | A- | A- |
| 7        | 58153 | 89 6  | C.1.2 | 3   | 1497 | 2.22 | 0.03 | 0.14 | 0.46 | 0.35 | 0.03 | 0.02 | 0.51 | -0.14 | -0.37 | -0.10 | 0.35 | 0.21 | -0.19 | 0.04 | -3.91 | 0.86 | -3.90 | 0.86 | C+ | B- | B- |
| 7        | 20650 | )4 7  | C.1.2 | 3   | 1499 | 2.09 | 0.03 | 0.16 | 0.54 | 0.26 | 0.02 | 0.01 | 0.44 | -0.15 | -0.31 | -0.03 | 0.29 | 0.19 | 0.06  | 0.04 | -1.88 | 0.93 | -1.74 | 0.93 | C+ | A- | B- |
| 7        | 57273 | 80 8  | C.1.2 | 3   | 1497 | 2.13 | 0.03 | 0.13 | 0.54 | 0.27 | 0.03 | 0.01 | 0.42 | -0.16 | -0.29 | -0.04 | 0.26 | 0.19 | 0.04  | 0.04 | -1.53 | 0.94 | -1.54 | 0.94 | C+ | A- | A- |
| 7        | 53957 | 78 9  | C.1.2 | 3   | 1500 | 2.21 | 0.02 | 0.14 | 0.47 | 0.33 | 0.03 | 0.01 | 0.50 | -0.13 | -0.35 | -0.14 | 0.36 | 0.21 | -0.12 | 0.04 | -4.12 | 0.85 | -4.01 | 0.86 | A+ | B- | C- |
| 7        |       |       |       | 3   | 1499 | 2.34 | 0.04 | 0.11 | 0.40 | 0.39 | 0.07 | 0.01 | 0.48 | -0.12 | -0.31 | -0.19 | 0.28 | 0.29 | -0.28 | 0.03 | -3.26 | 0.88 | -2.98 | 0.89 | B+ | A- | B- |
| 7        | 41152 | 23 11 | C.1.2 | 3   | 1499 | 2.19 | 0.03 | 0.14 | 0.48 | 0.33 | 0.03 | 0.02 | 0.45 | -0.11 | -0.32 | -0.11 | 0.33 | 0.18 | -0.11 | 0.04 | -1.72 | 0.94 | -1.52 | 0.94 | B+ | A- | A- |
| 7        | 26728 |       |       | 3   | 1497 | 2.35 | 0.03 | 0.13 | 0.40 | 0.34 | 0.10 | 0.01 | 0.56 | -0.15 | -0.37 | -0.18 | 0.27 | 0.37 | -0.53 | 0.03 | -5.25 | 0.82 | -5.30 | 0.82 | C+ | A- | A- |
| 7        | 45980 |       |       | 3   | 1497 | 2.40 | 0.02 | 0.11 | 0.40 | 0.37 | 0.09 | 0.01 | 0.51 | -0.11 | -0.35 | -0.19 | 0.27 | 0.30 | -0.63 | 0.04 | -3.12 | 0.89 | -3.04 | 0.89 | B+ | B- | A- |
| <u> </u> |       | 1 10  | 2.2.0 | 1 - | /    |      |      |      |      |      |      |      |      |       | 0.00  |       |      |      | 0.00  | ,    |       | 0.07 | ,     | 0.07 |    |    |    |

|   |        |    |       |   |      |      |      |      |      |      |      |      | -    |       |       |       |      | -    |       |      |       | -    |       |      |    |    |    |
|---|--------|----|-------|---|------|------|------|------|------|------|------|------|------|-------|-------|-------|------|------|-------|------|-------|------|-------|------|----|----|----|
| 7 | 428948 | 14 | C.1.3 | 3 | 1500 | 2.42 | 0.02 | 0.09 | 0.43 | 0.39 | 0.08 | 0.01 | 0.48 | -0.14 | -0.29 | -0.20 | 0.26 | 0.27 | -0.48 | 0.04 | -3.83 | 0.86 | -3.77 | 0.87 | C+ | A- | A+ |
| 7 | 700615 | 15 | C.1.3 | 3 | 1498 | 2.42 | 0.02 | 0.11 | 0.40 | 0.38 | 0.10 | 0.01 | 0.53 | -0.13 | -0.35 | -0.20 | 0.28 | 0.32 | -0.60 | 0.04 | -4.73 | 0.84 | -4.75 | 0.84 | C+ | A- | B- |
| 7 | 717876 | 16 | C.1.3 | 3 | 1498 | 2.30 | 0.03 | 0.14 | 0.42 | 0.33 | 0.08 | 0.02 | 0.50 | -0.14 | -0.30 | -0.18 | 0.27 | 0.33 | -0.36 | 0.03 | -4.02 | 0.86 | -3.93 | 0.86 | B+ | C- | A- |
| 7 | 705846 | 17 | C.1.3 | 3 | 1498 | 2.30 | 0.03 | 0.13 | 0.41 | 0.37 | 0.06 | 0.01 | 0.49 | -0.13 | -0.33 | -0.16 | 0.30 | 0.28 | -0.26 | 0.04 | -3.64 | 0.87 | -3.52 | 0.88 | B+ | B- | A- |
| 7 | 319716 | 18 | C.1.1 | 3 | 1500 | 2.14 | 0.03 | 0.15 | 0.47 | 0.32 | 0.02 | 0.02 | 0.52 | -0.22 | -0.35 | -0.06 | 0.36 | 0.19 | 0.03  | 0.04 | -4.25 | 0.85 | -4.27 | 0.85 | C+ | C- | A- |
| 7 | 127907 | 19 | C.1.1 | 3 | 1498 | 2.07 | 0.03 | 0.17 | 0.51 | 0.26 | 0.03 | 0.02 | 0.52 | -0.21 | -0.36 | 0.00  | 0.33 | 0.20 | 0.02  | 0.04 | -4.01 | 0.86 | -4.05 | 0.86 | C+ | A- | A- |
| 7 | 770105 | 20 | C.1.1 | 3 | 1499 | 2.12 | 0.04 | 0.14 | 0.51 | 0.29 | 0.02 | 0.02 | 0.53 | -0.22 | -0.37 | -0.04 | 0.36 | 0.18 | 0.04  | 0.04 | -3.86 | 0.86 | -3.91 | 0.86 | C+ | C- | C- |
| 8 | 298200 | 1  | C.1.3 | 3 | 1500 | 2.31 | 0.02 | 0.14 | 0.41 | 0.36 | 0.07 | 0.01 | 0.47 | -0.17 | -0.30 | -0.14 | 0.29 | 0.24 | -0.61 | 0.03 | -4.51 | 0.85 | -4.38 | 0.85 | C+ | B- | A- |
| 8 | 723525 | 2  | C.1.1 | 3 | 1499 | 2.22 | 0.02 | 0.17 | 0.47 | 0.27 | 0.07 | 0.01 | 0.43 | -0.13 | -0.29 | -0.08 | 0.21 | 0.27 | -0.55 | 0.03 | -3.20 | 0.89 | -3.26 | 0.89 | B+ | B- | B- |
| 8 | 967885 | 3  | C.1.2 | 3 | 1500 | 2.32 | 0.02 | 0.09 | 0.48 | 0.37 | 0.03 | 0.01 | 0.45 | -0.14 | -0.27 | -0.19 | 0.32 | 0.19 | -0.54 | 0.04 | -3.20 | 0.88 | -3.12 | 0.88 | B+ | B- | В- |
| 8 | 161668 | 4  | C.1.3 | 3 | 1499 | 2.26 | 0.02 | 0.12 | 0.48 | 0.33 | 0.05 | 0.01 | 0.37 | -0.12 | -0.19 | -0.16 | 0.23 | 0.24 | -0.35 | 0.04 | -1.95 | 0.93 | -1.96 | 0.93 | C+ | B- | A- |
| 8 | 980717 | 5  | C.1.1 | 3 | 1499 | 2.25 | 0.02 | 0.18 | 0.40 | 0.32 | 0.07 | 0.01 | 0.43 | -0.14 | -0.28 | -0.09 | 0.20 | 0.28 | -0.48 | 0.03 | -3.86 | 0.87 | -3.79 | 0.87 | C+ | B- | В- |
| 8 | 329973 | 6  | C.1.2 | 3 | 1500 | 2.37 | 0.01 | 0.09 | 0.45 | 0.40 | 0.04 | 0.01 | 0.42 | -0.09 | -0.27 | -0.18 | 0.28 | 0.22 | -0.52 | 0.04 | -3.73 | 0.87 | -3.72 | 0.87 | B+ | B- | A- |
| 8 | 441597 | 7  | C.1.3 | 3 | 1500 | 2.31 | 0.02 | 0.13 | 0.44 | 0.35 | 0.06 | 0.01 | 0.47 | -0.12 | -0.29 | -0.19 | 0.32 | 0.23 | -0.47 | 0.04 | -4.20 | 0.85 | -4.19 | 0.85 | C+ | B- | B- |
| 8 | 385793 | 8  | C.1.1 | 3 | 1496 | 2.26 | 0.02 | 0.15 | 0.46 | 0.30 | 0.07 | 0.01 | 0.43 | -0.09 | -0.31 | -0.09 | 0.20 | 0.28 | -0.53 | 0.03 | -2.94 | 0.90 | -2.92 | 0.90 | C+ | B- | A- |
| 8 | 597285 | 9  | C.1.3 | 3 | 1499 | 2.25 | 0.02 | 0.16 | 0.43 | 0.34 | 0.05 | 0.01 | 0.49 | -0.14 | -0.32 | -0.15 | 0.31 | 0.25 | -0.53 | 0.04 | -4.98 | 0.83 | -5.02 | 0.83 | C+ | B- | B- |
| 8 | 302853 | 10 | C.1.3 | 3 | 1499 | 2.34 | 0.02 | 0.12 | 0.43 | 0.36 | 0.07 | 0.02 | 0.47 | -0.12 | -0.30 | -0.17 | 0.27 | 0.27 | -0.58 | 0.04 | -4.03 | 0.86 | -4.03 | 0.86 | B+ | C- | C- |
| 8 | 324937 | 11 | C.1.1 | 3 | 1499 | 2.15 | 0.02 | 0.19 | 0.45 | 0.29 | 0.04 | 0.01 | 0.47 | -0.18 | -0.34 | -0.03 | 0.29 | 0.21 | -0.51 | 0.04 | -3.65 | 0.88 | -3.58 | 0.88 | C+ | A- | C- |
| 8 | 809594 | 12 | C.1.2 | 3 | 1499 | 2.29 | 0.03 | 0.11 | 0.43 | 0.38 | 0.04 | 0.02 | 0.46 | -0.18 | -0.29 | -0.14 | 0.32 | 0.19 | -0.38 | 0.04 | -3.51 | 0.87 | -3.49 | 0.87 | B+ | C- | C- |
| 8 | 260495 | 13 | C.1.3 | 3 | 1500 | 2.40 | 0.03 | 0.09 | 0.41 | 0.41 | 0.07 | 0.02 | 0.49 | -0.19 | -0.30 | -0.18 | 0.29 | 0.26 | -0.60 | 0.04 | -5.19 | 0.81 | -5.25 | 0.81 | B+ | C- | C- |
| 8 | 422996 | 14 | C.1.1 | 3 | 1498 | 2.20 | 0.02 | 0.14 | 0.50 | 0.31 | 0.03 | 0.01 | 0.44 | -0.10 | -0.31 | -0.11 | 0.30 | 0.21 | -0.38 | 0.04 | -3.84 | 0.86 | -3.88 | 0.86 | B+ | C- | C- |
| 8 | 607495 | 15 | C.1.3 | 3 | 1499 | 2.25 | 0.02 | 0.13 | 0.47 | 0.33 | 0.05 | 0.01 | 0.50 | -0.14 | -0.34 | -0.13 | 0.31 | 0.24 | -0.48 | 0.04 | -4.88 | 0.83 | -4.86 | 0.83 | B+ | A- | C- |
| 8 | 393459 | 16 | C.1.1 | 3 | 1498 | 2.19 | 0.02 | 0.18 | 0.44 | 0.30 | 0.06 | 0.01 | 0.40 | -0.12 | -0.27 | -0.08 | 0.25 | 0.20 | -0.47 | 0.03 | -3.28 | 0.89 | -3.34 | 0.89 | A+ | C- | C- |
| 8 | 132779 | 17 | C.1.2 | 3 | 1498 | 2.21 | 0.02 | 0.15 | 0.45 | 0.34 | 0.03 | 0.02 | 0.43 | -0.20 | -0.28 | -0.07 | 0.29 | 0.15 | -0.35 | 0.04 | -3.84 | 0.87 | -3.84 | 0.87 | B+ | A- | A- |
| 8 | 571082 | 18 | C.1.2 | 3 | 1499 | 2.25 | 0.02 | 0.14 | 0.46 | 0.34 | 0.04 | 0.01 | 0.46 | -0.10 | -0.36 | -0.08 | 0.28 | 0.21 | -0.55 | 0.04 | -4.18 | 0.86 | -4.16 | 0.86 | C+ | C- | C- |
| 8 | 134986 | 19 | C.1.2 | 3 | 1500 | 2.21 | 0.02 | 0.16 | 0.45 | 0.34 | 0.03 | 0.01 | 0.46 | -0.13 | -0.33 | -0.10 | 0.32 | 0.18 | -0.50 | 0.04 | -2.82 | 0.90 | -2.76 | 0.90 | C+ | A- | A- |
| 8 | 463268 | 20 | C.1.1 | 3 | 1498 | 2.06 | 0.02 | 0.23 | 0.45 | 0.27 | 0.03 | 0.01 | 0.54 | -0.16 | -0.39 | -0.02 | 0.35 | 0.26 | -0.28 | 0.04 | -6.61 | 0.79 | -6.58 | 0.79 | B+ | B- | B- |