Appendices for
CMAS Mathematics & ELA
(including CSLA) Technical Report

Spring 2018

APPENDIX A: ELA AND CSLA SCORING RUBRICS

GRADE 3 (July 2015) **v3.01**

CMAS (PARCC) SCORING RUBRIC FOR PROSE CONSTRUCTED RESPONSE ITEM

Research Simulation Task (RST) and Literary Analysis Task (LAT)

Construct Measured	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Reading Comprehension and Written Expression	The student response • demonstrates **full comprehension** by providing an **accurate** explanation/description/ comparison; • addresses the prompt and provides **effective** development of the topic that is **consistently appropriate** to task, purpose, and audience; • uses **clear** reasoning supported by **relevant**, text-based evidence in the development of the topic; • is **effectively** organized with **clear and coherent** writing; • uses language **effectively** to clarify ideas.	The student response • demonstrates **comprehension** by providing a **mostly accurate** explanation/ description/comparison; • addresses the prompt and provides **some** development of the topic that is **generally** appropriate to task, purpose, and audience; • uses reasoning and **relevant**, text-based evidence in the development of the topic; • is organized with **mostly clear and coherent** writing; • uses language in a way that is **mostly effective** to clarify ideas.	The student response • demonstrates **limited comprehension**; • addresses the prompt and provides **minimal** development of the topic that is **limited in its appropriateness** to task, purpose, and audience; • uses **limited** reasoning and text-based evidence; • demonstrates **limited** organization and coherence; • uses language to express ideas with **limited** clarity.	The student response • does not demonstrate comprehension; • is **undeveloped and/or inappropriate** to the task, purpose, and audience; • includes ***little to no*** text-based evidence; • **lacks** organization and coherence; • **does not** use language to express ideas with clarity.
Knowledge of Language and Conventions	The student response to the prompt demonstrates **full command** of the conventions of standard English at an appropriate level of complexity. There **may** be a **few minor errors** in mechanics, grammar, and usage, but **meaning is clear**.	The student response to the prompt demonstrates **some command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **occasionally impede understanding**, but the **meaning is generally clear**.	The student response to the prompt demonstrates **limited command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **often impede understanding**.	The student response to the prompt **does not demonstrate command** of the conventions of standard English at the appropriate level of complexity. **Frequent and varied errors** in mechanics, grammar, and usage **impede understanding**.

CMAS (PARCC) SCORING RUBRIC FOR PROSE CONSTRUCTED RESPONSE ITEM

Narrative Task (NT)

Construct Measured	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Written Expression	The student response • is **effectively** developed with narrative elements and is **consistently appropriate** to the task; • is **effectively** organized with **clear and coherent** writing • uses language **effectively** to clarify ideas.	The student response • is developed with **some** narrative elements and is **generally appropriate** to the task; • is organized with **mostly coherent** writing; • uses language in a way that is **mostly effective** to clarify ideas.	The student response • is **minimally** developed with **few** narrative elements and is **limited in its appropriateness** to the task; • demonstrates **limited** organization and coherence; • uses language to express ideas with **limited** clarity.	The student response • is **undeveloped** and/or **inappropriate** to the task; • **lacks** organization and coherence; • **does not** use language to express ideas with clarity.
Knowledge of Language and Conventions	The student response to the prompt demonstrates **full command** of the conventions of standard English at an appropriate level of complexity. There may be a **few minor errors** in mechanics, grammar, and usage, but **meaning is clear**.	The student response to the prompt demonstrates **some command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **occasionally impede understanding**, but the **meaning is generally clear**.	The student response to the prompt demonstrates **limited command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **often impede understanding**.	The student response to the prompt **does not demonstrate command** of the conventions of standard English at the appropriate level of complexity. **Frequent and varied errors** in mechanics, grammar, and usage **impede understanding**.

NOTE:

- The reading dimension is not scored for elicited narrative stories.
- Per the CCSS, narrative elements in grades 3-5 may include: establishing a situation, organizing a logical event sequence, describing scenes, objects or people, developing characters' personalities, and using dialogue as appropriate.
- The elements of organization to be assessed are expressed in the grade-level standards W1-W3.

A response is considered unscoreable if it cannot be assigned a score based on the rubric criteria. For unscoreable student responses, one of the following condition codes will be applied.

Coded Responses:

A=No response
B=Response is unintelligible or undecipherable
C=Response is not written in English
D=Off-topic
E=Refusal to respond
F=Don't understand/know

CMAS (PARCC) SCORING RUBRIC FOR PROSE CONSTRUCTED RESPONSE ITEM

Research Simulation Task (RST) and Literary Analysis Task (LAT)

Construct	Score Point 4	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Reading Comprehension and Written Expression	The student response • demonstrates full comprehension of ideas stated explicitly and/or inferentially by providing an accurate analysis; • addresses the prompt and provides effective development of the topic that is consistently appropriate to task, purpose, and audience; • uses clear reasoning supported by relevant, text-based evidence in the development of the topic; • is effectively organized with clear and coherent writing; • uses language effectively to clarify ideas.	The student response • demonstrates comprehension of ideas stated explicitly and/or inferentially by providing a mostly accurate analysis; • addresses the prompt and provides mostly effective development of the topic that is appropriate to task, purpose, and audience; • uses mostly clear reasoning supported by relevant text-based evidence in the development of the topic; • is organized with mostly clear and coherent writing • uses language that is mostly effective to clarify ideas.	The student response • demonstrates basic comprehension of ideas stated explicitly and/or inferentially by providing a generally accurate analysis; • addresses the prompt and provides some development of the topic that is somewhat appropriate to task, purpose, and audience; • uses some reasoning and text-based evidence in the development of the topic; • demonstrates some organization with somewhat coherent writing; • uses language to express ideas with some clarity.	The student response • demonstrates limited comprehension of ideas by providing a minimally accurate analysis; • addresses the prompt and provides minimal development of the topic that is limited in its appropriateness to task, purpose, and audience; • uses limited reasoning and text-based evidence; • demonstrates limited organization and coherence; • uses language to express ideas with limited clarity.	The student response • demonstrates no comprehension of ideas by providing an inaccurate or no analysis. • is undeveloped and/or inappropriate to the task, purpose, and audience; • includes little to no text- based evidence; • lacks organization and coherence; • does not use language to express ideas with clarity.
Knowledge of Language and Conventions		The student response to the prompt demonstrates full command of the conventions of standard English at an appropriate level of complexity. There may be a few minor errors in mechanics, grammar, and usage, but meaning is clear.	The student response to the prompt demonstrates some command of the conventions of standard English at an appropriate level of complexity. There may be errors in mechanics, grammar, and usage that occasionally impede understanding, but the meaning is generally clear.	The student response to the prompt demonstrates limited command of the conventions of standard English at an appropriate level of complexity. There may be errors in mechanics, grammar, and usage that often impede understanding.	The student response to the prompt does not demonstrate command of the conventions of standard English at the appropriate level of complexity. Frequent and varied errors in mechanics, grammar, and usage impede understanding.

CMAS (PARCC) SCORING RUBRIC FOR PROSE CONSTRUCTED RESPONSE ITEM

Narrative Task (NT)

Construct Measured	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Written Expression	The student response • is *effectively* developed with narrative elements and is *consistently appropriate* to the task; • is *effectively* organized with *clear and coherent* writing • uses language effectively to clarify ideas.	The student response • is developed with *some* narrative elements and is *generally appropriate* to the task; • is organized with *mostly coherent* writing; • uses language that is *mostly effective* to clarify ideas.	The student response • is *minimally* developed with *few* narrative elements and is *limited in its appropriateness* to the task; • demonstrates *limited* organization and coherence; • uses language to express ideas with *limited* clarity.	The student response • is *undeveloped* and/or *inappropriate* to the task; • lacks organization and coherence; • *does not* use language to express ideas with clarity.
Knowledge of Language and Conventions	The student response to the prompt demonstrates full command of the conventions of standard English at an appropriate level of complexity. There may be a few minor errors in mechanics, grammar, and usage, but meaning is clear.	The student response to the prompt demonstrates some command of the conventions of standard English at an appropriate level of complexity. There may be errors in mechanics, grammar, and usage that occasionally impede understanding, but the meaning is generally clear.	The student response to the prompt demonstrates limited command of the conventions of standard English at an appropriate level of complexity. There may be errors in mechanics, grammar, and usage that often impede understanding.	The student response to the prompt does not demonstrate command of the conventions of standard English at the appropriate level of complexity. Frequent and varied errors in mechanics, grammar, and usage impede understanding.

NOTE:

- The reading dimension is not scored for elicited narrative stories.
- Per the CCSS, narrative elements in grades 3-5 may include: establishing a situation, organizing a logical event sequence, describing scenes, objects or people, developing characters' personalities, and using dialogue as appropriate.
- The elements of organization to be assessed are expressed in the grade-level standards W1-W3.

A response is considered unscoreable if it cannot be assigned a score based on the rubric criteria. For unscoreable student responses, one of the following condition codes will be applied.

Coded Responses:

A=No response
B=Response is unintelligible or undecipherable
C=Response is not written in English
D=Off-topic
E=Refusal to respond
F=Don't understand/know

GRADES 6-11 (July 2015)
CMAS (PARCC) SCORING RUBRIC FOR PROSECONSTRUCTED RESPONSE ITEM

Research Simulation Task and Literary Analysis Task

Construct Measured	Score Point 4	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Reading Comprehension and Written Expression	The student response • demonstrates **full** comprehension of ideas stated explicitly and inferentially by providing an **accurate** analysis; • addresses the prompt and provides **effective and comprehensive** development of the claim or topic that is **consistently appropriate** to task, purpose, and audience; • uses **clear** reasoning supported by **relevant** text-based evidence in the development of the claim or topic; • is **effectively** organized with **clear and coherent** writing; • establishes and maintains an **effective** style.	The student response • demonstrates comprehension of ideas stated explicitly and/or inferentially by providing a **mostly accurate** analysis; • addresses the prompt and provides **mostly effective** development of claim or topic that is **mostly appropriate** to task, purpose, and audience; • uses **mostly clear** reasoning supported by **relevant** text-based evidence in the development of the claim or topic; • is organized with **mostly clear and coherent** writing; • establishes and maintains a **mostly effective** style.	The student response • demonstrates **basic** comprehension of ideas stated explicitly and/or inferentially by providing a **generally accurate** analysis; • addresses the prompt and provides **some** development of claim or topic that is **somewhat appropriate** to task, purpose, and audience; • uses **some** reasoning and text-based evidence in the development of the claim or topic; • demonstrates **some** organization with **somewhat** coherent writing; • has a style that is **somewhat** effective.	The student response • demonstrates **limited** comprehension of ideas stated explicitly and/or inferentially by providing a **minimally** accurate analysis; • addresses the prompt and provides **minimal** development of claim or topic that is **limited in its appropriateness** to task, purpose, and audience; • uses **limited** reasoning and text-based evidence; • demonstrates **limited** organization and coherence; • has a style that is **minimally** effective.	The student response • demonstrates **no** comprehension of ideas by providing an **inaccurate** or **no** analysis; • **is undeveloped and/or inappropriate** to task, purpose, and audience; • includes little to no text-based evidence; • **lacks** organization and coherence; • has an **inappropriate** style.
Knowledge of Language and Conventions		The student response to the prompt demonstrates **full command** of the conventions of standard English at an appropriate level of complexity. There may be a **few minor errors** in mechanics, grammar, and usage, but **meaning is clear**.	The student response to the prompt demonstrates **some command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **occasionally impede understanding**, but the **meaning is generally clear**.	The student response to the prompt demonstrates **limited command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **often impede understanding**.	The student response to the prompt **does not demonstrate command** of the conventions of standard English at the appropriate level of complexity. **Frequent and varied errors** in mechanics, grammar, and usage **impede understanding**.

GRADES 6-11 (July 2015)
CMAS (PARCC) SCORING RUBRIC FOR PROSECONSTRUCTED RESPONSE ITEM

Narrative Task (NT)

Construct Measured	Score Point 4	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Written Expression	The student response • is effectively developed with narrative elements and is consistently appropriate to the task; • is effectively organized with clear and coherent writing; • establishes and maintains an effective style.	The student response • is mostly effectively developed with narrative elements and is mostly appropriate to the task; • is organized with mostly clear and coherent writing; • establishes and maintains a mostly effective style.	The student response • is developed with some narrative elements and is generally appropriate to the task; • demonstrates some organization with somewhat coherent writing; • has a style that is somewhat effective.	The student response • is minimally developed with few narrative elements and is limited in its appropriateness to the task; • demonstrates limited organization and coherence; • has a style that has limited effectiveness.	The student response • is undeveloped and/or inappropriate to the task; • lacks organization and coherence; • has an inappropriate style.
Knowledge of Language and Conventions		The student response to the prompt demonstrates full command of the conventions of standard English at an appropriate level of complexity. There may be a few minor errors in mechanics, grammar, and usage, but meaning is clear.	The student response to the prompt demonstrates some command of the conventions of standard English at an appropriate level of complexity. There may be errors in mechanics, grammar, and usage that occasionally impede understanding, but the meaning is generally clear.	The student response to the prompt demonstrates limited command of the conventions of standard English at an appropriate level of complexity. There may be errors in mechanics, grammar, and usage that often impede understanding.	The student response to the prompt does not demonstrate command of the conventions of standard English at the appropriate level of complexity. Frequent and varied errors in mechanics, grammar, and usage impede understanding.

NOTE:
- The reading dimension is not scored for elicited narrative stories.
- The elements of coherence, clarity, and cohesion to be assessed are expressed in the grade-level standards 1-4 for writing.
- Tone is not assessed in grade 6.
- Per the CCSS, narrative elements in grades 3-5 may include: establishing a situation, organizing a logical event sequence, describing scenes, objects or people, developing characters' personalities, and using dialogue as appropriate. In grades 6-8, narrative elements may include, in addition to the grades 3-5 elements, establishing a context, situating events in a time and place, developing a point of view, developing characters' motives. In grades 9-11, narrative elements may include, in addition to the grades 3-8 elements, outlining step-by-step procedures, creating one or more points of view, and constructing event models of what happened. The elements to be assessed are expressed in grade-level standards 3 for writing.

A response is considered unscoreable if it cannot be assigned a score based on the rubric criteria. For unscoreable student responses, one of the following condition codes will be applied.

Coded Responses:

A=No response
B=Response is unintelligible or undecipherable
C=Response is not written in English
D=Off-topic
E=Refusal to respond
F=Don't understand/know

APPENDIX B: SAMPLE SCORE REPORTS

Confidential Student Performance Report

Colorado Measures of Academic Success

Student: **FIRSTNAME LASTNAME104**

SASID: **2018060140** Birthdate: **01/28/2005**
School: **SAMPLE SCHOOL1 (0115)**
District: **SAMPLE DISTRICT (0100)**

Spring 2018

Mathematics — Grade 6

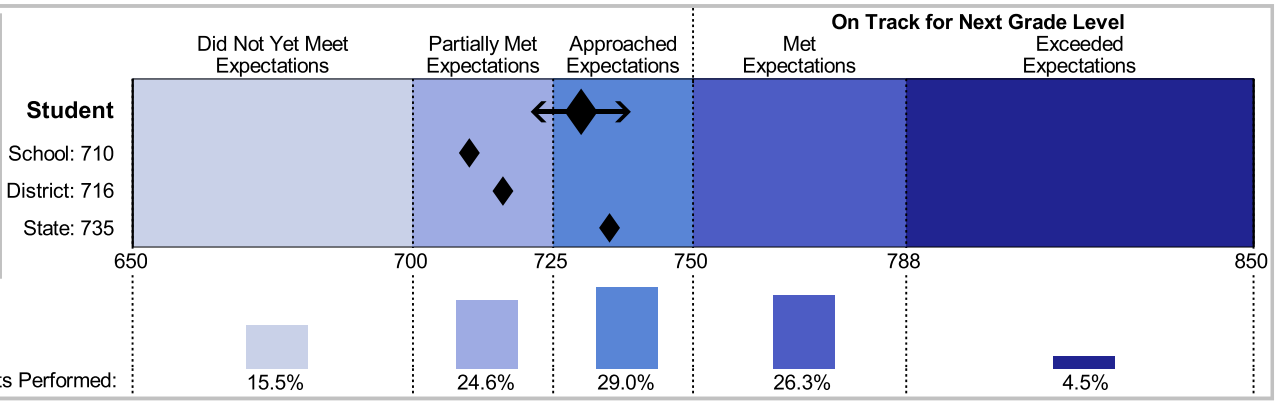
This score report provides information about your student's performance on the Colorado Measures of Academic Success (CMAS) Mathematics test.

- Your student's performance is represented by a scale score, a performance level, and a percentile rank. Scores are placed on a scale so that student performance can be compared across years.
- On the graph, scale scores are represented by diamonds. The arrows around your student's diamond show the range of scores your student would likely receive if the assessment was taken multiple times.
- School, district, and state information is provided so that you can compare your student's performance to the performance of others. The percentage of students in each performance level across the state is reported below the graph.
- Dotted lines show where the range of scores is divided into performance levels.
- You are encouraged to discuss this report with your student's teacher.

Your Student's Score

730

Approached Expectations
59th Percentile



Performance Level Descriptor* - Approached Expectations

Students who **Approached Expectations** may benefit from additional support to meet expectations at the next grade level and they typically demonstrate the following:

Subclaims A and B – Major, additional, and supporting content

- Use ratio and rate reasoning to solve mathematical problems involving ratio and rate.
- Perform all four operations on multi-digit numbers and decimals. Divide fractions with common denominators and apply this skill in solving scaffolded word problems. Plot ordered pairs on a coordinate plane to solve mathematical problems.
- Read numerical and algebraic expressions. Relate tables and graphs to equations. Graph inequalities to represent a constraint in a mathematical problem.
- Solve mathematical problems involving area of polygons by decomposing. Use nets of 3-D figures to find surface area. Find volume of right rectangular prisms with fractional edge lengths.
- Recognize a statistical question. Display numerical data in dot plots and histograms, and summarize in context by reporting the number of observations, describing the attribute under investigation, giving a measure of center, and using the interquartile range as a measure of variability.

Subclaim C – Reasoning

- Use some grade-appropriate communication with minor calculation errors. When a conclusion is required, provide a complete response with a partial justification, and evaluate the validity of other's responses, approaches, and conclusions.

Subclaim D – Modeling

- Apply mathematics by illustrating relationships between important quantities to draw conclusions, modifying the model or interpreting mathematical results in a simplified context.

Performance level descriptors (PLDs) are organized in a manner that assumes students demonstrating higher levels of command have mastered the concepts and skills within lower levels. To view the full version of the PLDs, visit:
http://www.cde.state.co.us/assessment/grade_6_math_plds.

*Adapted from ilClassroom in Action's Performance Level Summaries

Purpose

This report describes your student's mastery of the Colorado Academic Standards in Mathematics.

For more information on the CMAS assessment program, visit:
www.cde.state.co.us/assessment

06062018-Z9999999-0100-0115 - 0000000

How Did Your Student Perform in Mathematics?

Grade 6

Subclaim Performance

- The percent of points your student earned for each of the four mathematics assessment subclaims is represented by the top bar in each of the figures below.
- District and state averages are provided for comparison.
- The dark vertical line indicates the average percent of points earned by students who just crossed into the Met Expectations performance level on the overall math test.

Student's performance
District average
State average
Average of students who just crossed into the Met Expectations performance level

	Points Possible	Percent of Points Earned* 0% 25% 50% 75% 100%
Mathematics		
Major Content Students solve problems involving ratios, rates, percentages, an understanding of negative numbers, graphing points and simple linear functions, linear expressions, and linear equations.	20	20%
Additional & Supporting Content Students solve problems involving area, volume, and statistics.	11	18%
Expressing Mathematical Reasoning Students create and justify logical mathematical solutions and analyze and correct the reasoning of others.	11	18%
Modeling & Application Students solve real-world problems, represent and solve problems with symbols, reason quantitatively, and strategically use appropriate tools.	9	100%

*The percent of points earned cannot be compared across years because individual items change from year to year. They also cannot be compared across subclaims because the number of items and the difficulty of items may not be the same.

For more information about the standards included in this assessment, please visit the Colorado Department of Education's website at **www.cde.state.co.us/standardsandinstruction**

Confidential Student Performance Report

Colorado Measures of Academic Success

Student: **FIRSTNAME LASTNAME005**

SASID: **5433030819** Birthdate: **03/19/2007**
School: **SAMPLE SCHOOL1 (0115)**
District: **SAMPLE DISTRICT (0100)**

Spring 2018

English Language Arts / Literacy — Grade 3

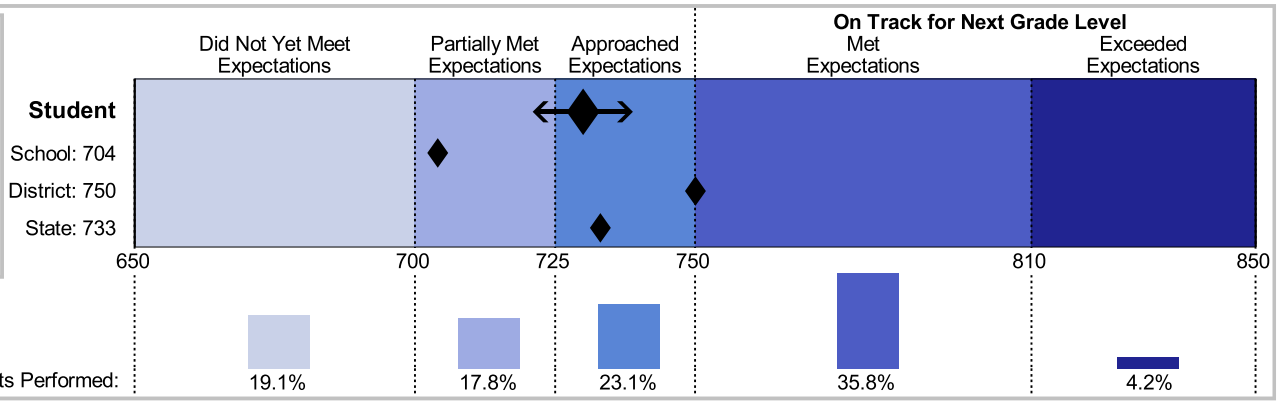
This score report provides information about your student's performance on the Colorado Measures of Academic Success (CMAS) English Language Arts / Literacy test.

- Your student's performance is represented by a scale score, a performance level, and a percentile rank. Scores are placed on a scale so that student performance can be compared across years.
- On the graph, scale scores are represented by diamonds. The arrows around your student's diamond show the range of scores your student would likely receive if the assessment was taken multiple times.
- School, district, and state information is provided so that you can compare your student's performance to the performance of others. The percentage of students in each performance level across the state is reported below the graph.
- Dotted lines show where the range of scores is divided into performance levels.
- You are encouraged to discuss this report with your student's teacher.

Your Student's Score

730

Approached Expectations
37th Percentile



Performance Level Descriptor - Approached Expectations

3

Students who **Approached Expectations** may benefit from additional support to meet expectations at the next grade level and they typically demonstrate the following:

In **Reading**, the pattern exhibited by student responses indicates:

- With very complex text: the ability to be minimally accurate when asking and/or answering questions, showing minimal understanding of the text when referring to explicit details and examples in the text.
- With moderately complex text: the ability to be generally accurate when asking and/or answering questions, showing basic understanding of the text when referring to explicit details and examples in the text.
- With readily accessible text: the ability to be mostly accurate when asking and/or answering questions, showing understanding of the text when referring to explicit details and examples in the text.

In **Written Expression**, students address the prompts and provide basic development of ideas, including when drawing evidence from multiple sources, while in the majority of instances demonstrating organization that sometimes is controlled. Students:

- Develop the topic and/or narrative elements using some reasoning, details, text-based evidence, and/or description.
- Demonstrate some organization.
- Include some linking words and phrases, descriptive words, and/or temporal words, limiting the clarity with which ideas are expressed.

In **Knowledge and use of Language Conventions**, students demonstrate basic command of the conventions of Standard English consistent with edited writing. There are few patterns of errors in grammar and usage that impede understanding, demonstrating partial control over language.

To view the full version of the PLDs, visit:
http://www.cde.state.co.us/assessment/grade_3_english_language_arts_plds.

Purpose

This report describes your student's mastery of the Colorado Academic Standards in Reading and Writing.

For more information on the CMAS assessment program, visit:
www.cde.state.co.us/assessment

How Did Your Student Perform in Reading and Writing? Grade 3

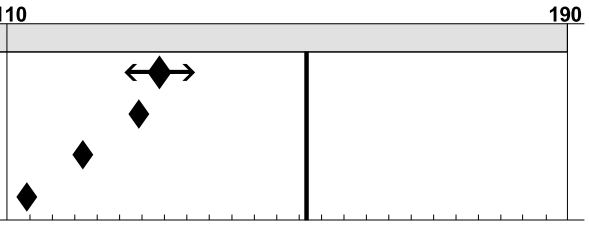
Subclaim Performance

- Your student's overall performance in Reading is represented by the top diamond in the figure below.
- The percent of points your student earned for overall Writing and for each of the Reading and Writing subclaims is represented by the top bar in each of the other figures.
- District and state averages are provided for comparison.
- The dark vertical line indicates the average percent of points earned by students who just crossed into the Met Expectations performance level on the overall English Language Arts/Literacy test.

Student's performance
District average
State average
Average of students who just crossed into the Met Expectations performance level

Reading

This figure below shows your student's scale score in relation to school, district, and state averages.



	Points Possible	Percent of Points Earned* 0% 25% 50% 75% 100%
Literary Text Students read and analyze fiction, drama, and poetry.	17	24%
Informational Text Students read and analyze nonfiction, history, science, and the arts.	14	29%
Vocabulary Students use context to determine what words and phrases mean.	10	60%

	Points Possible	Percent of Points Earned* 0% 25% 50% 75% 100%
Writing		
Overall	12	50%
Written Expression Students compose well-developed writing, using details from what they have read.	6	50%
Knowledge and Use of Language Conventions Students demonstrate knowledge of conventions and other important elements of language.	6	50%

*The percent of points earned cannot be compared across years because individual items change from year to year. They also cannot be compared across subclaims because the number of items and the difficulty of items may not be the same.

For more information about the standards included in this assessment, please visit the Colorado Department of Education's website at **www.cde.state.co.us/standardsandinstruction**

APPENDIX C: TEST CHARACTERISTIC CURVES, TEST INFORMATION CURVES, & CONDITIONAL STANDARD ERROR OF MEASUREMENT (CSEM) CURVES

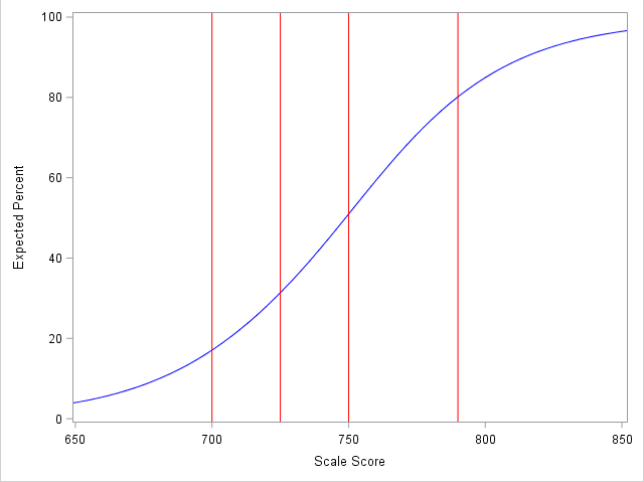


Figure 1. Mathematics Grade 3 TCC

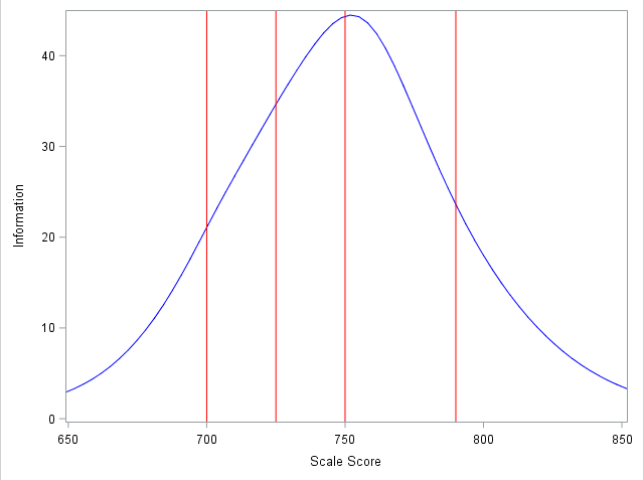


Figure 2. Mathematics Grade 3 TIC

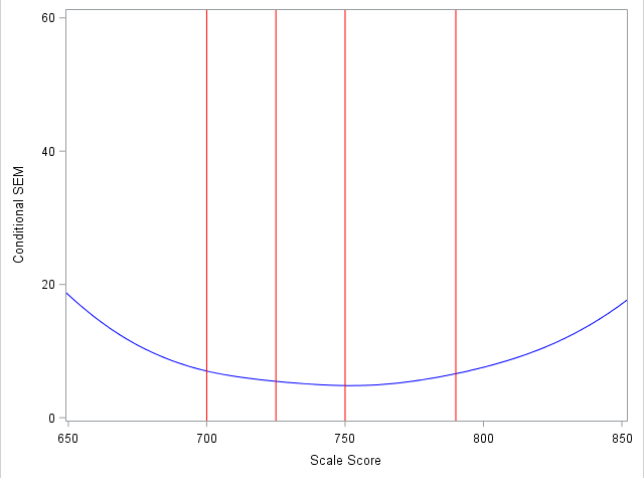


Figure 3. Mathematics Grade 3 CSEM

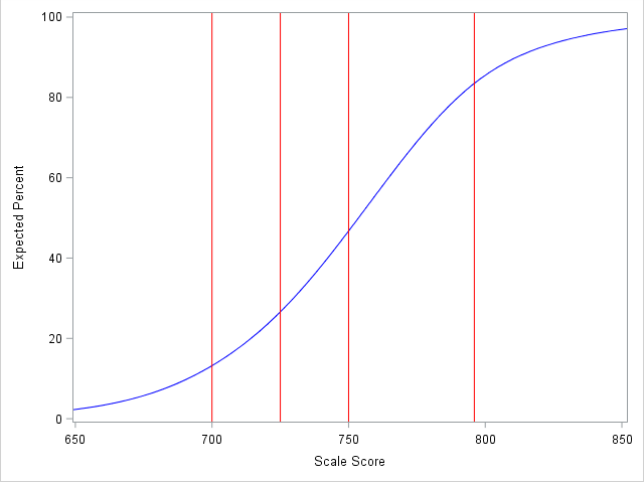


Figure 4. Mathematics Grade 4 TCC

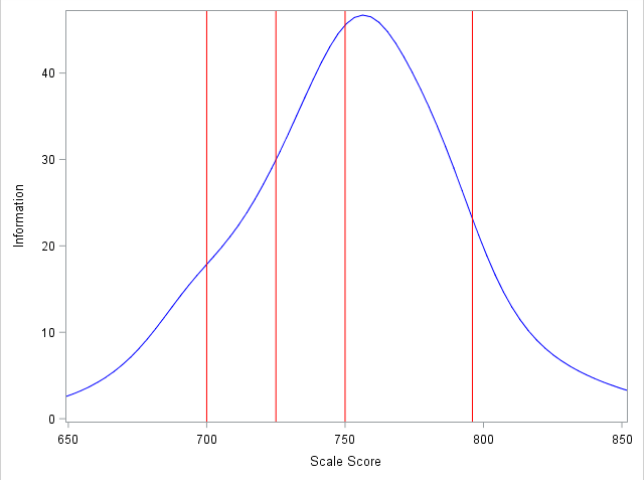


Figure 5. Mathematics Grade 4 TIC

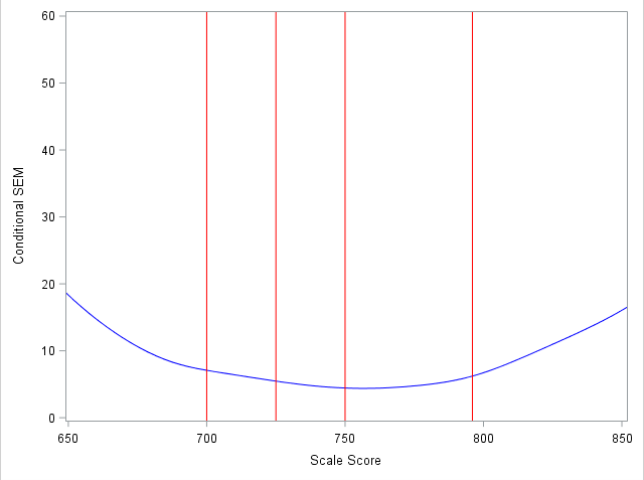


Figure 6. Mathematics Grade 4 CSEM

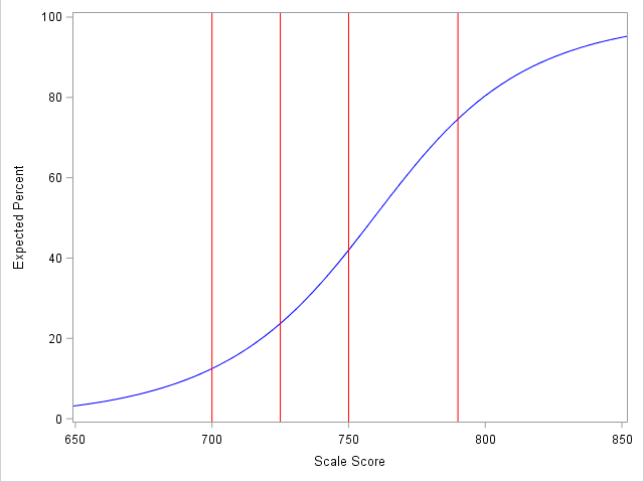


Figure 7. Mathematics Grade 5 TCC

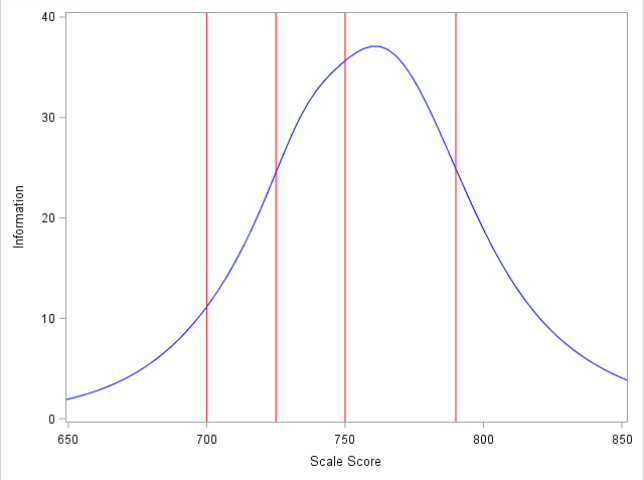


Figure 8. Mathematics Grade 5 TIC

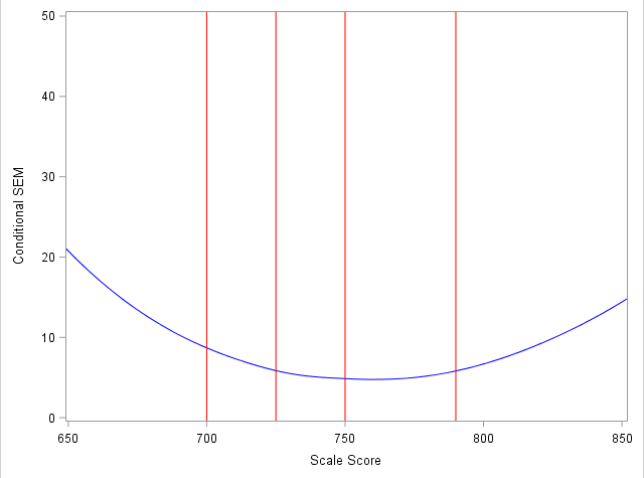


Figure 9. Mathematics Grade 5 CSEM

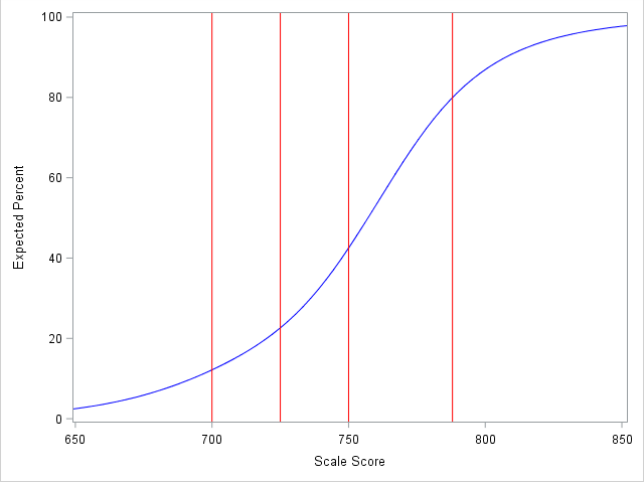


Figure 10. Mathematics Grade 6 TCC

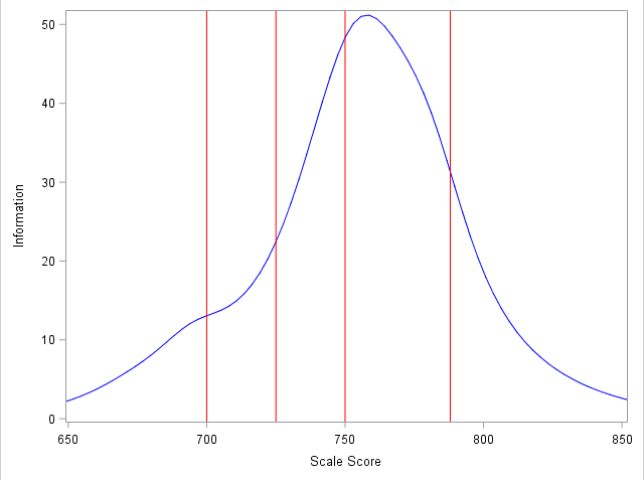


Figure 11. Mathematics Grade 6 TIC

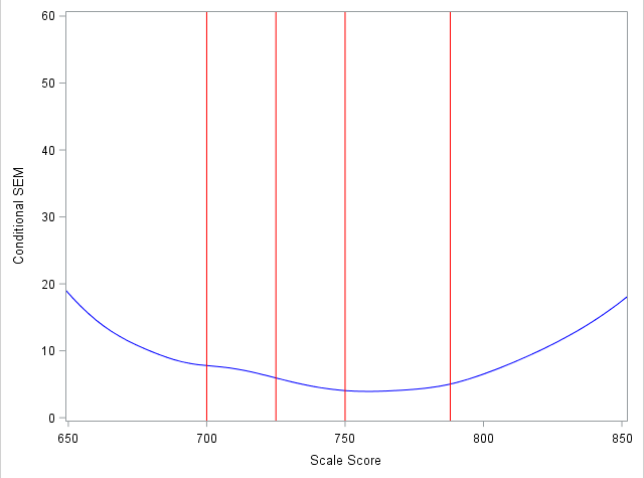


Figure 12. Mathematics Grade 6 CSEM

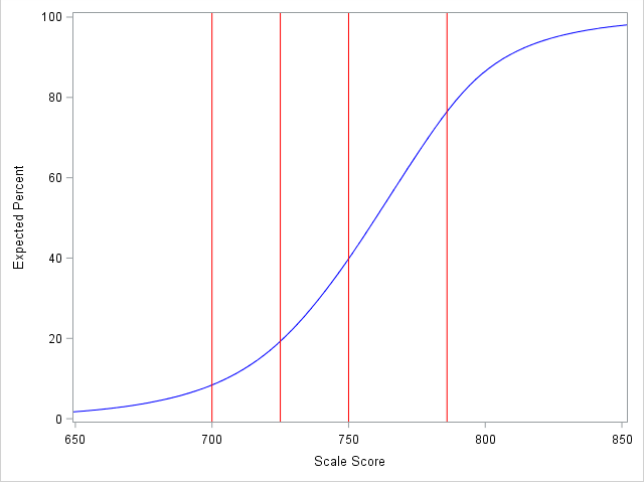


Figure 13. Mathematics Grade 7 TCC

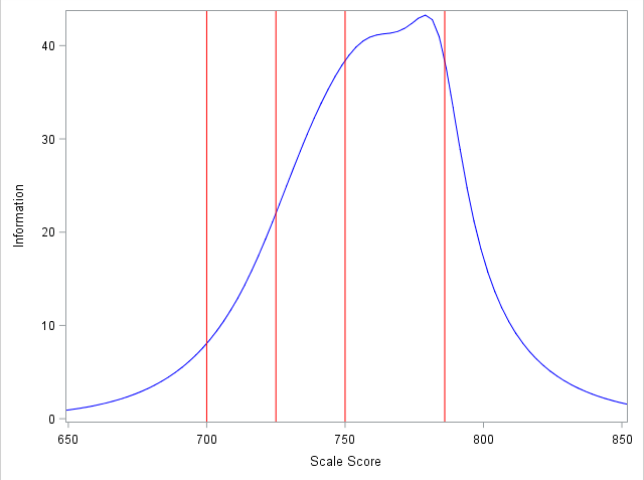


Figure 14. Mathematics Grade 7 TIC

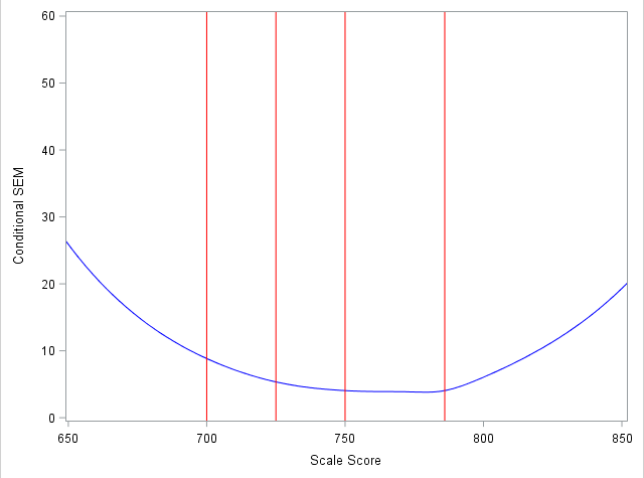


Figure 15. Mathematics Grade 7 CSEM

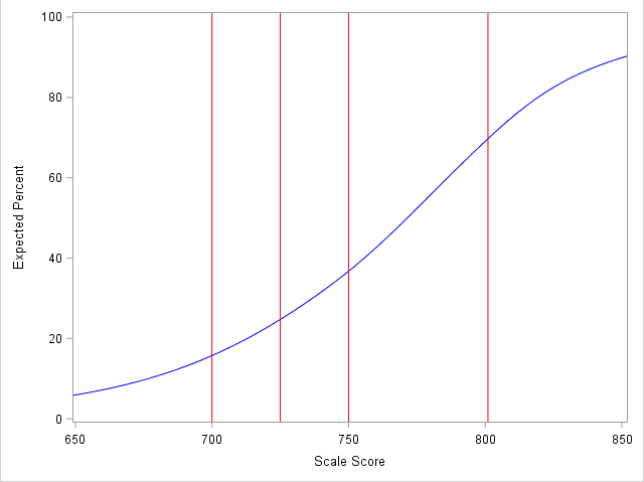


Figure 16. Mathematics Grade 8 TCC

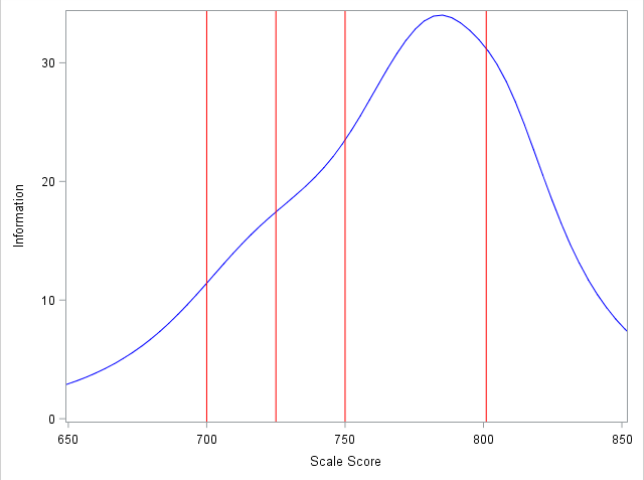


Figure 17. Mathematics Grade 8 TIC

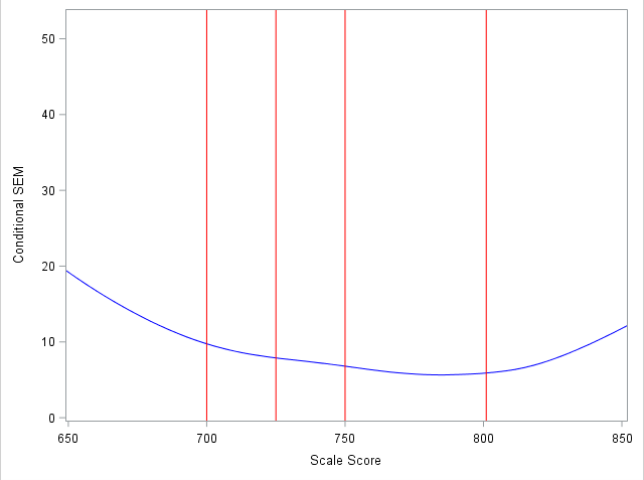


Figure 18. Mathematics Grade 8 CSEM

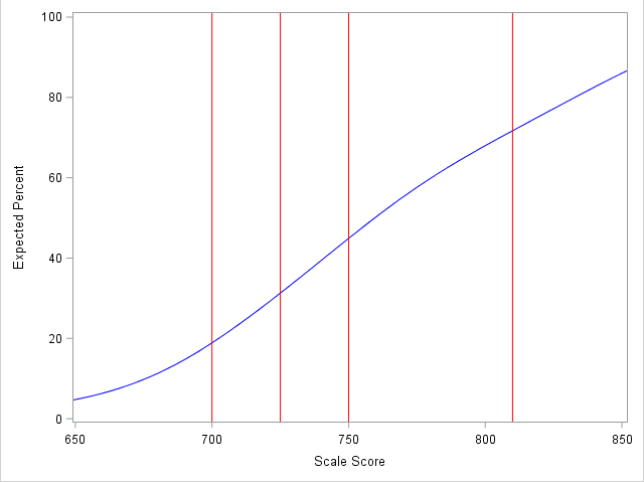
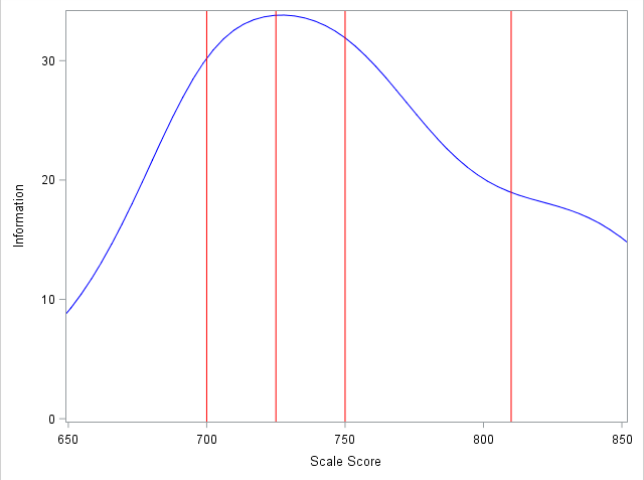


Figure 19. ELA Grade 3 TCC



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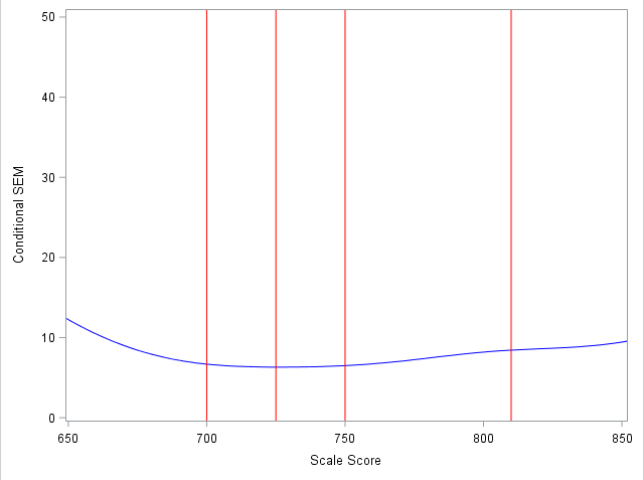
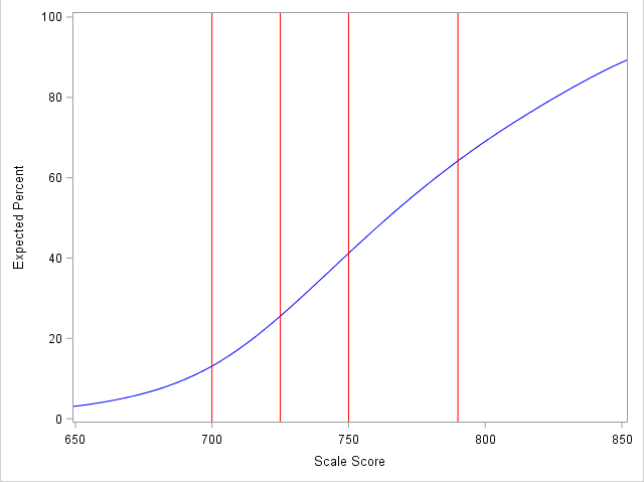


Figure 21. ELA Grade 3 CSEM



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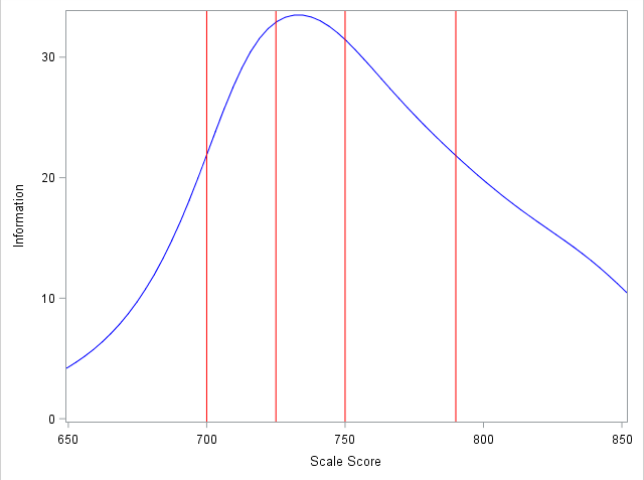

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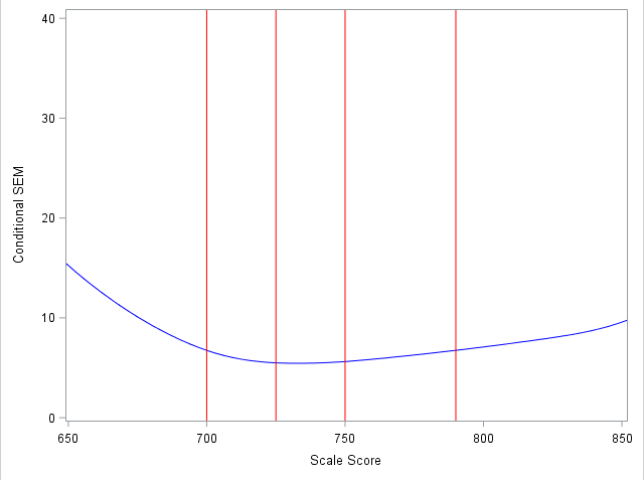


Figure 24. ELA Grade 4 TIC

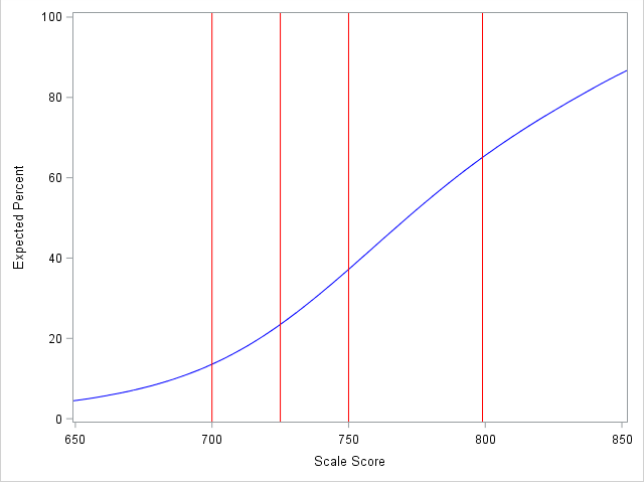
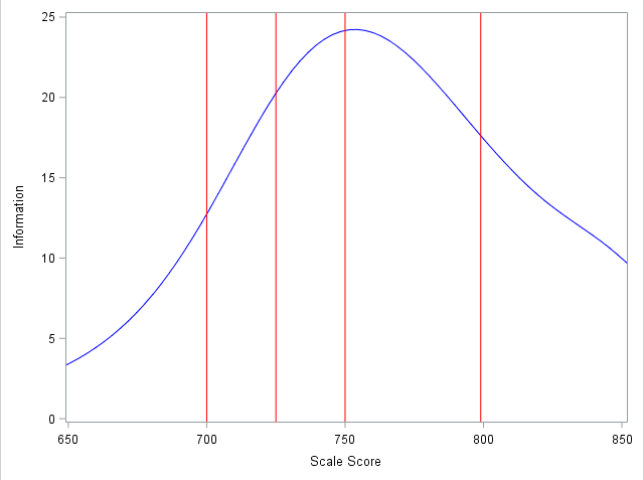


Figure 25. ELA Grade 5 TCC



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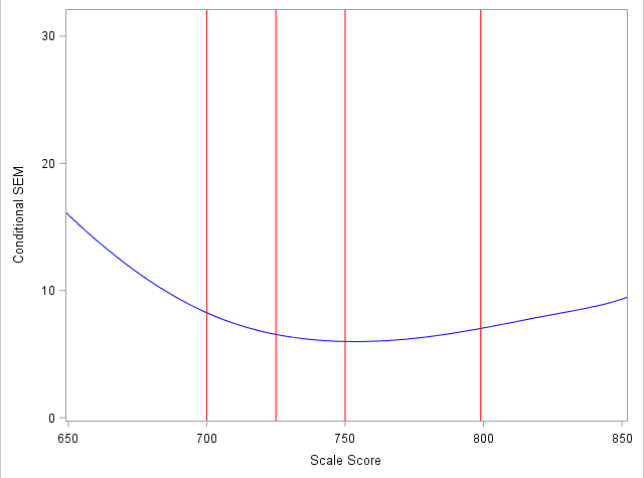


Figure 27. ELA Grade 5 CSEM

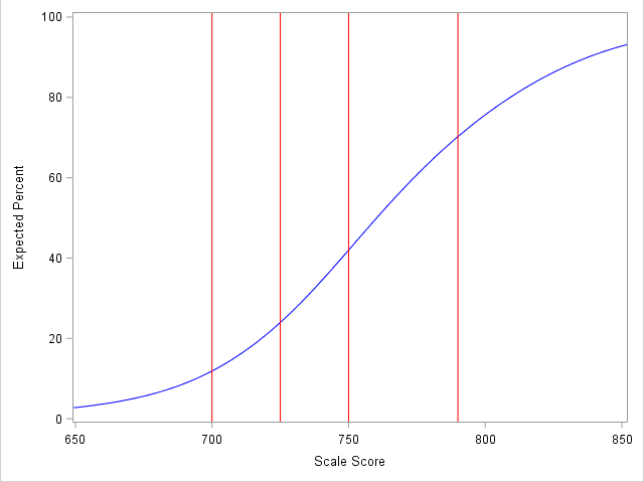
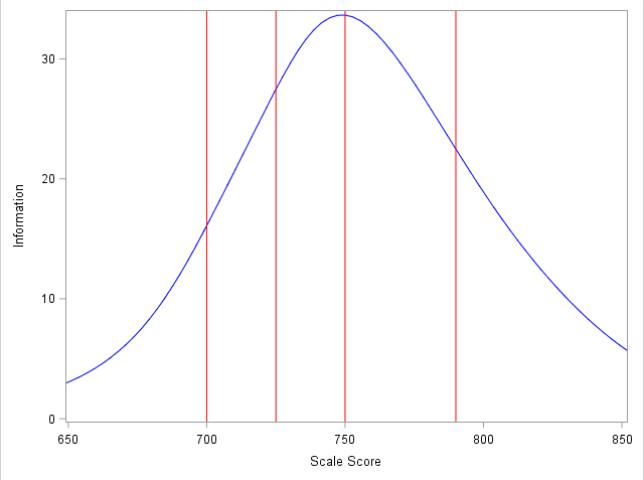


Figure 28. ELA Grade 6 TCC



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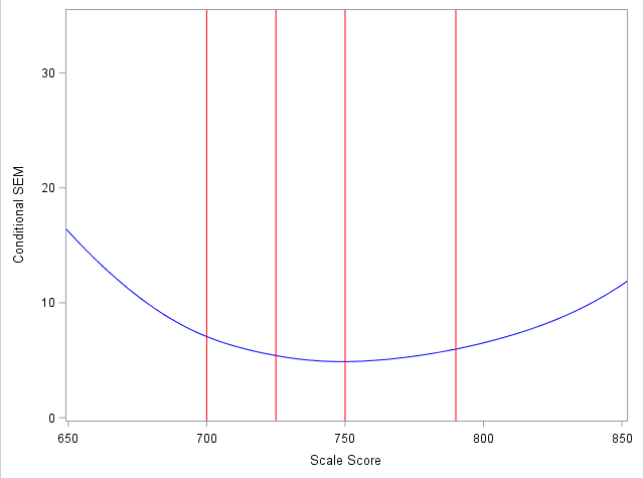

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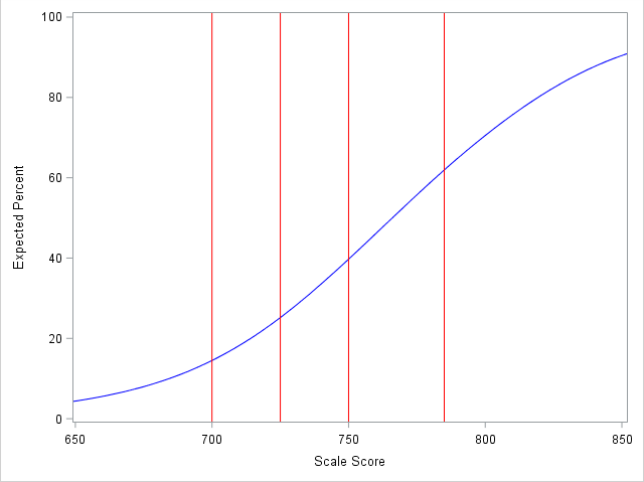


Figure 31. ELA Grade 7 TCC

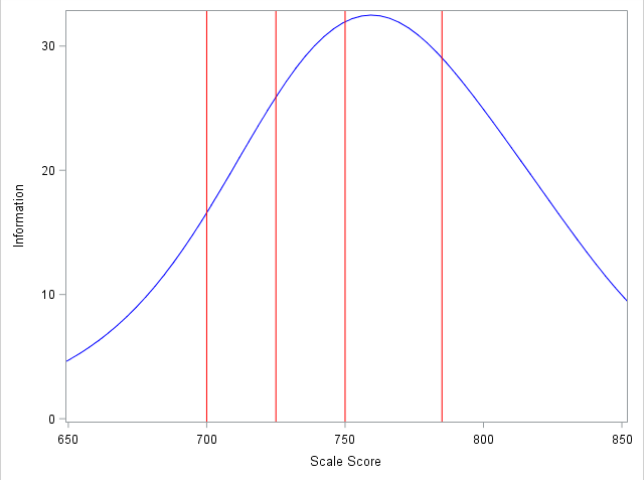
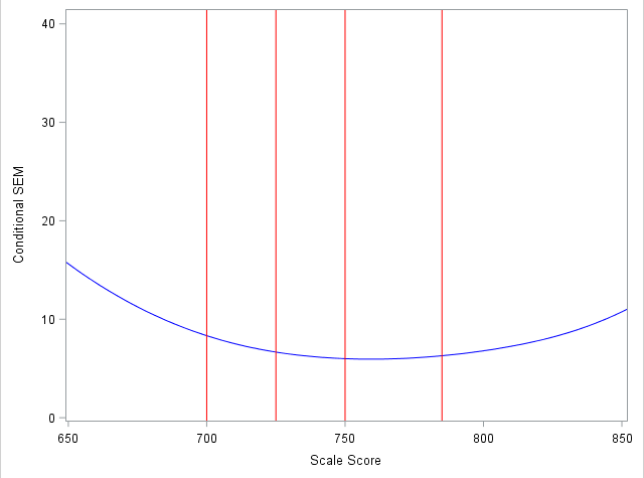


Figure 32. ELA Grade 7 TIC



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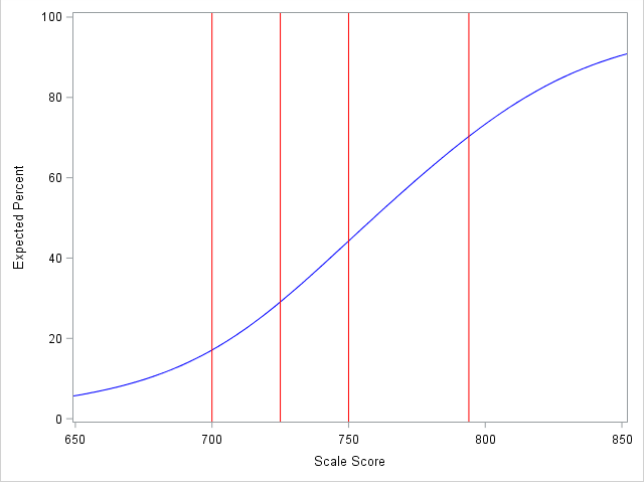
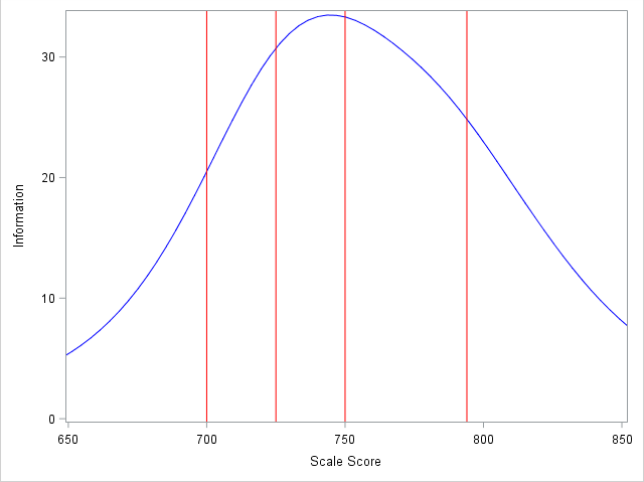


Figure 34. ELA Grade 8 TCC



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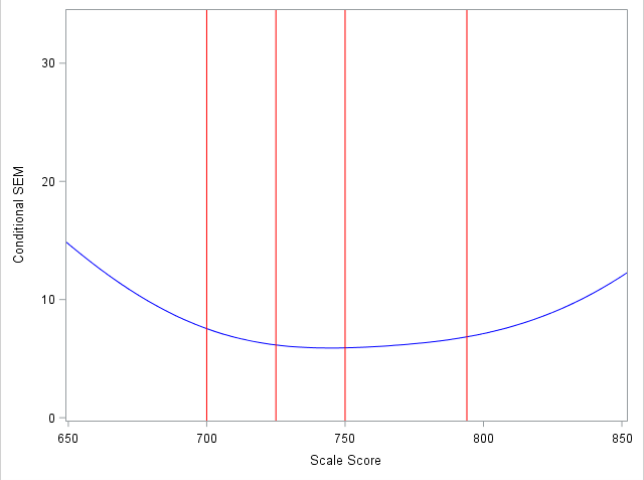


Figure 36. ELA Grade 8 CSEM

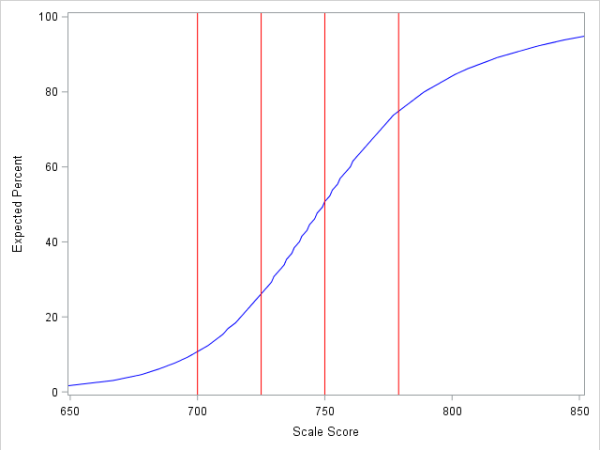
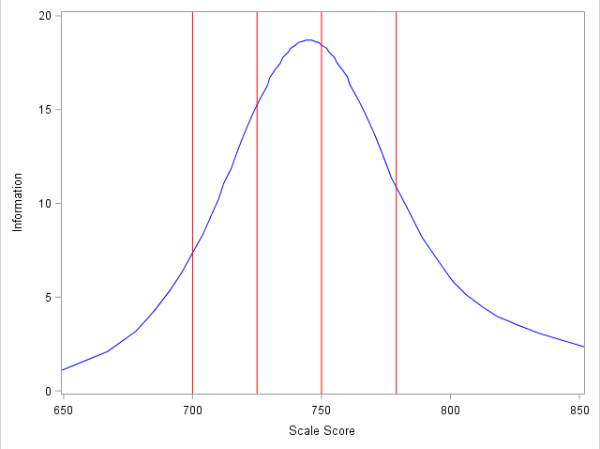


Figure 37. CSLA Grade 3 TCC



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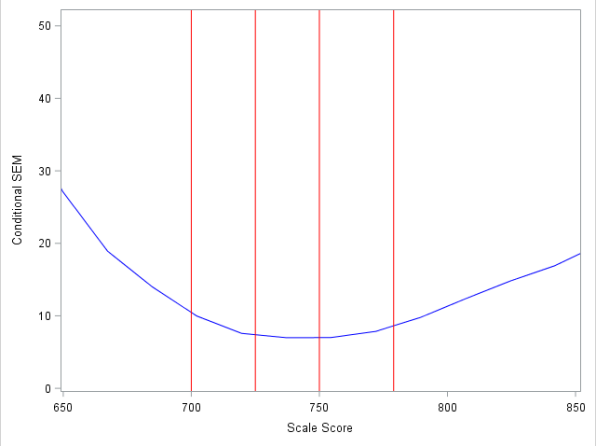
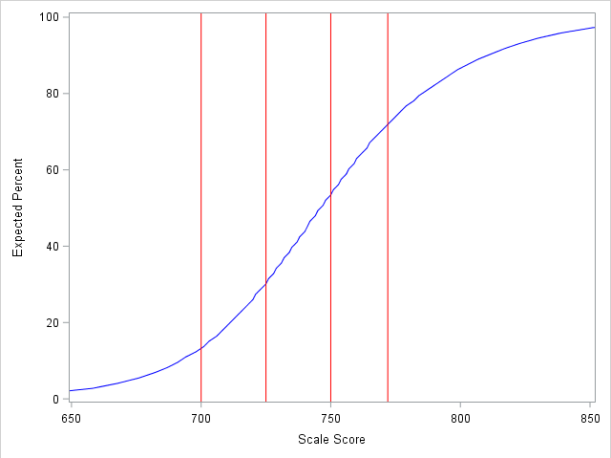


Figure 39. CSLA Grade 3 CSEM



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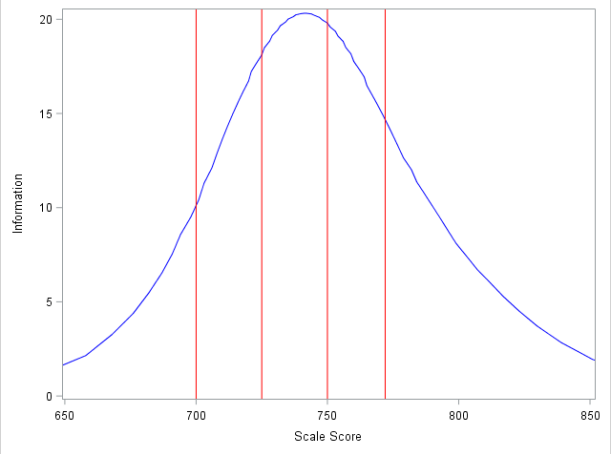


Figure 41. CSLA Grade 4 TIC

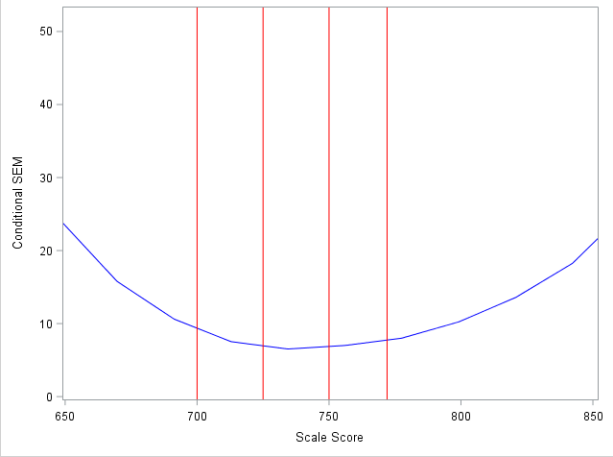


Figure 42. CSLA Grade 4 CSEM

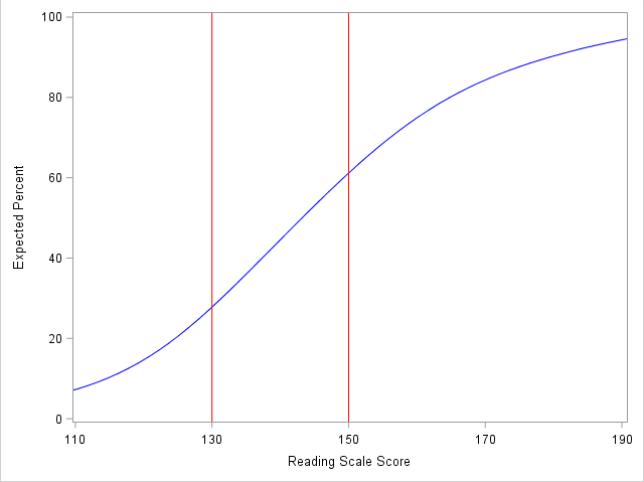
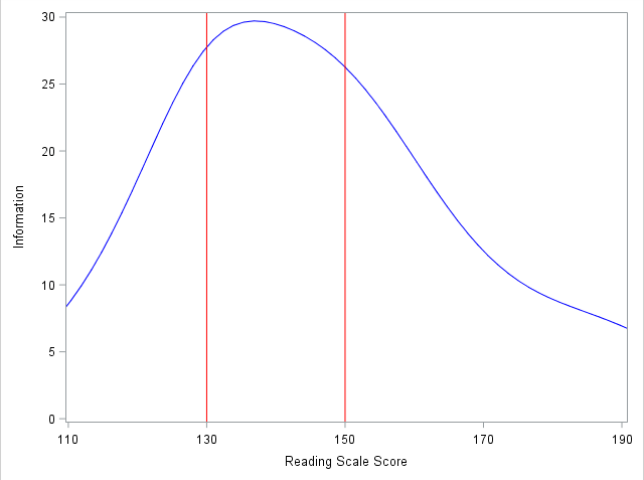


Figure 43. ELA Grade 3 Reading Claim TCC



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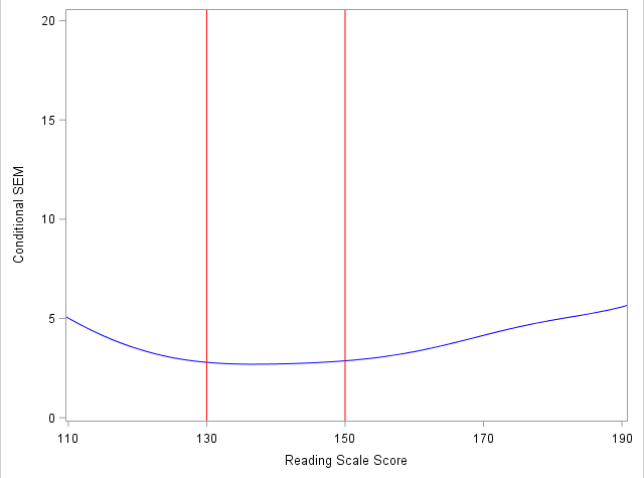

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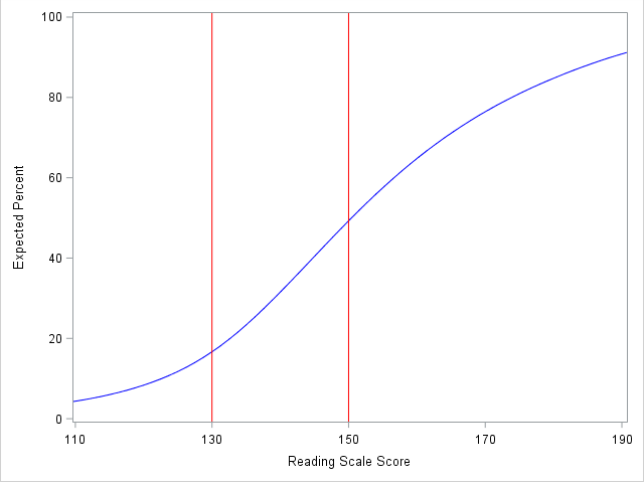

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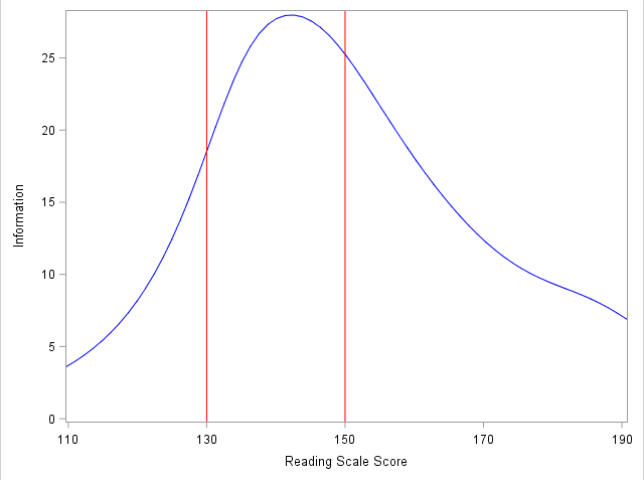

Figure 47. ELA Grade 4 Reading Claim TIC

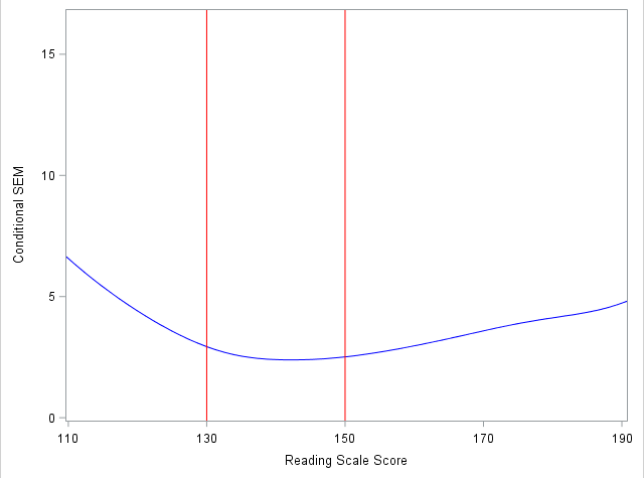

Figure 48. ELA Grade 4 Reading Claim CSEM

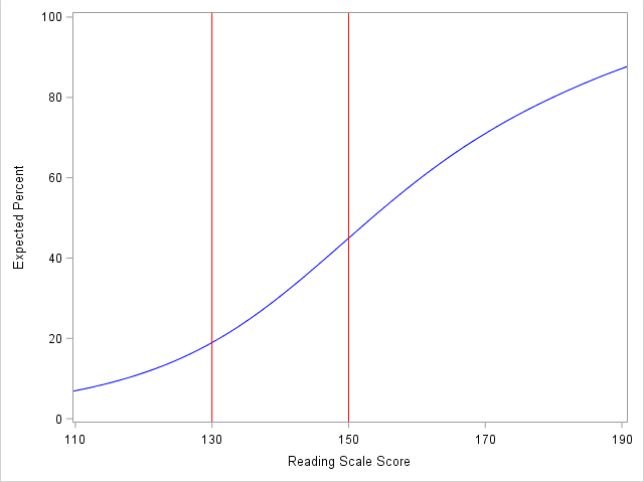

Figure 49. ELA Grade 5 Reading Claim TCC

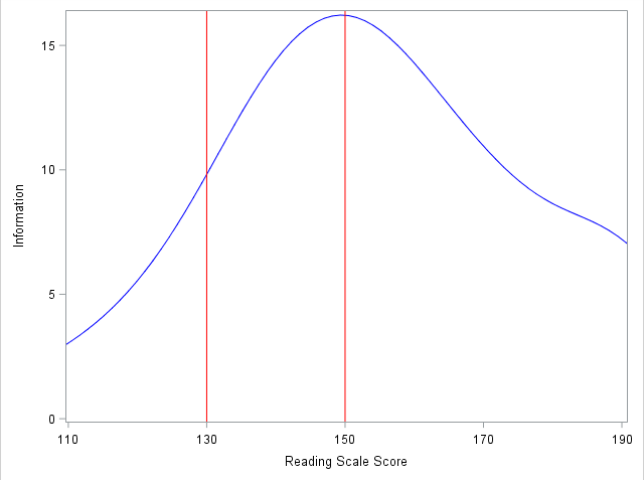

Figure 50. ELA Grade 5 Reading Claim TIC

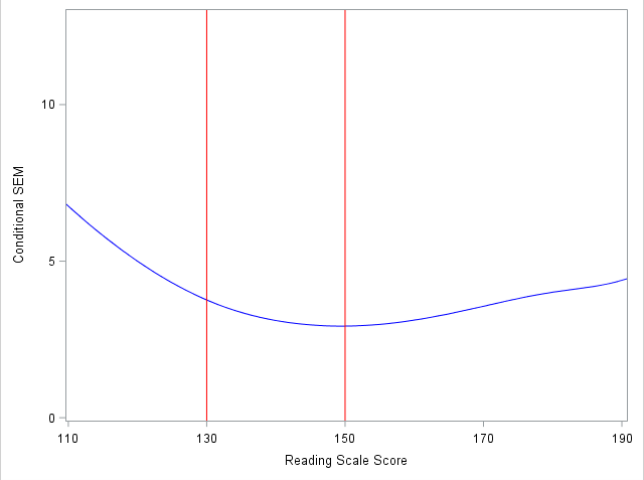

Figure 51. ELA Grade 5 Reading Claim CSEM

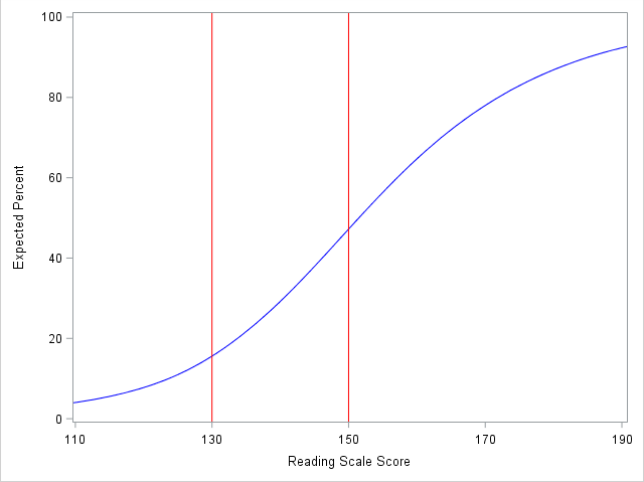

Figure 52. ELA Grade 6 Reading Claim TCC

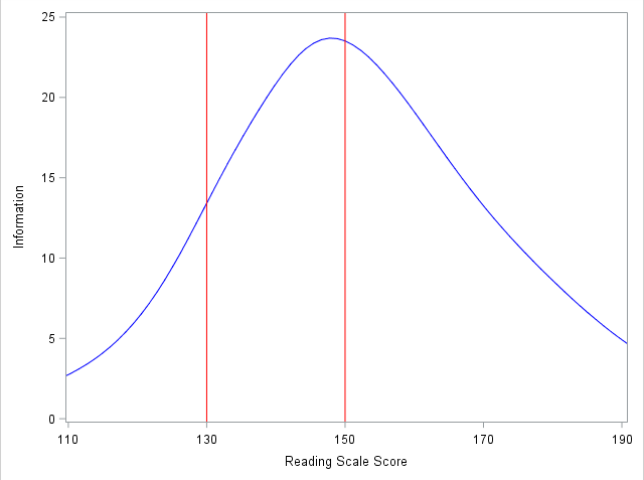

Figure 53. ELA Grade 6 Reading Claim TIC

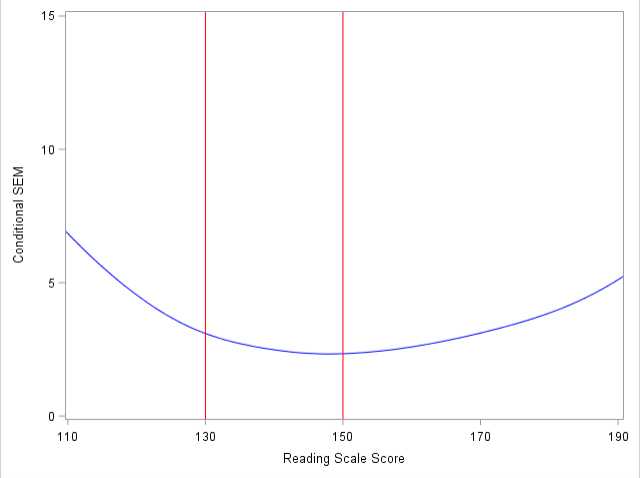

Figure 54. ELA Grade 6 Reading Claim CSEM

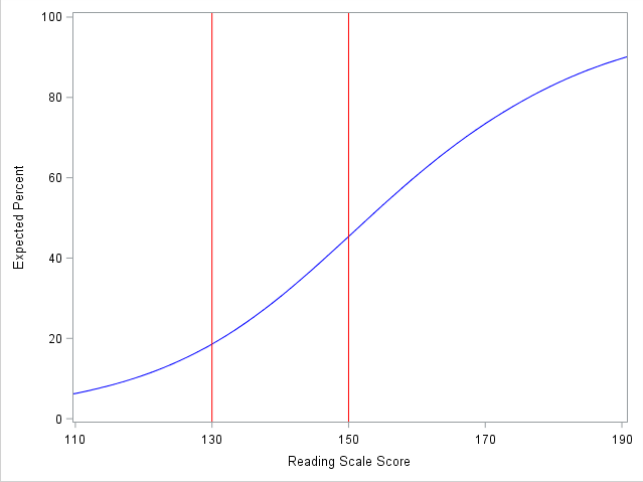

Figure 55. ELA Grade 7 Reading Claim TCC

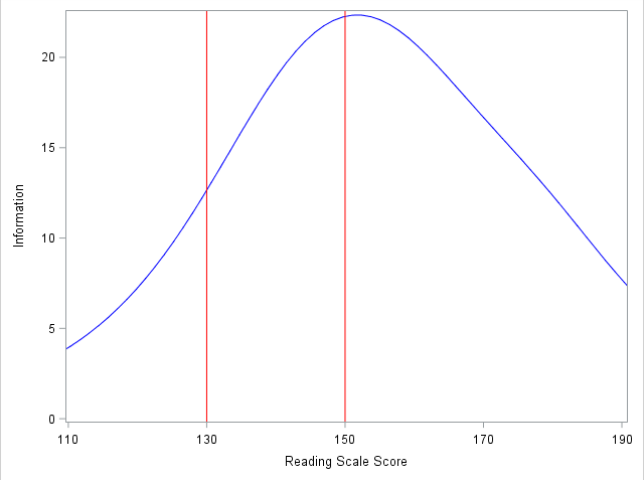

Figure 56. ELA Grade 7 Reading Claim TIC

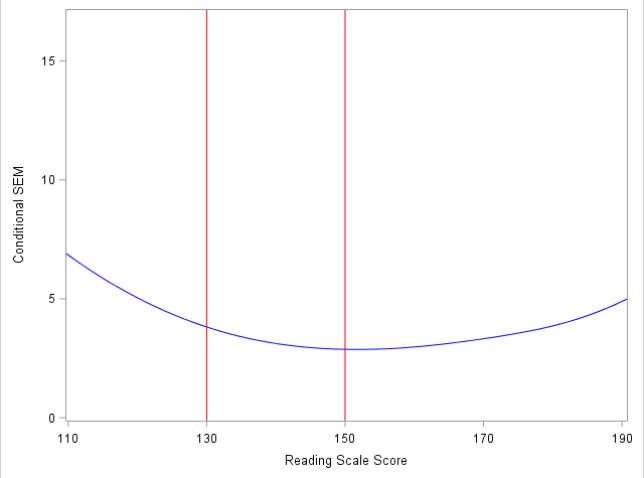

Figure 57. ELA Grade 7 Reading Claim CSEM

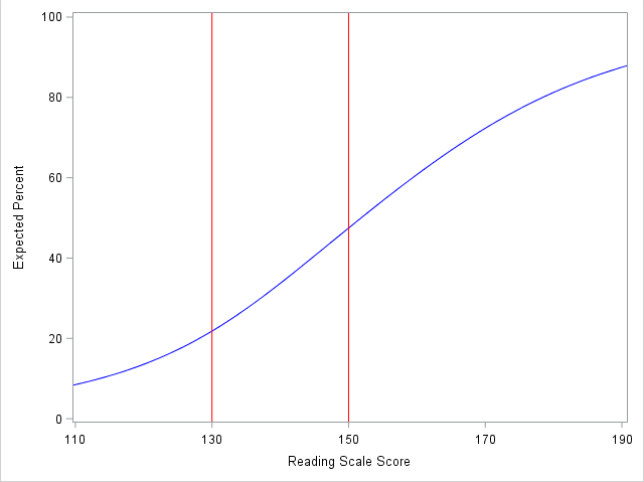

Figure 58. ELA Grade 8 Reading Claim TCC

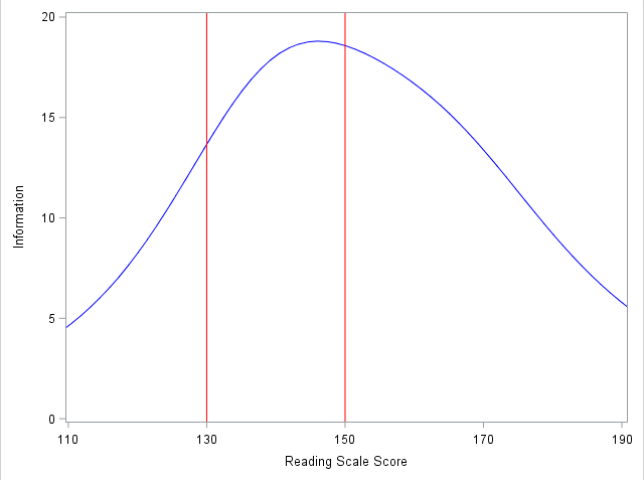

Figure 59. ELA Grade 8 Reading Claim TIC

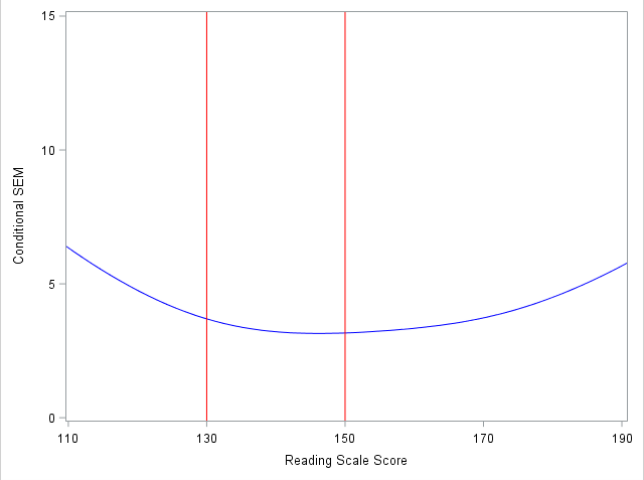

Figure 60. ELA Grade 8 Reading Claim CSEM

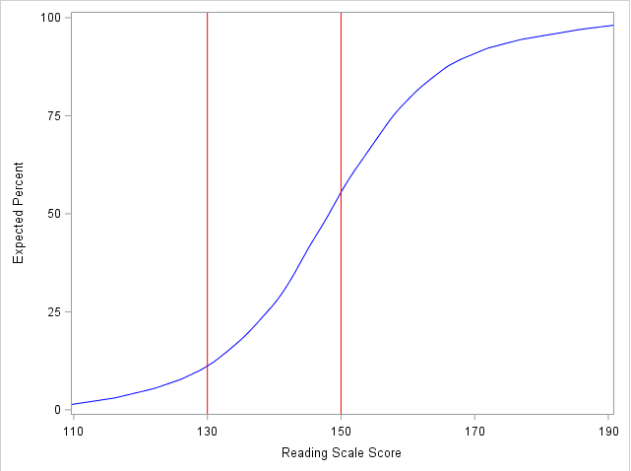

Figure 61. CLSA Grade 3 Reading Claim TCC

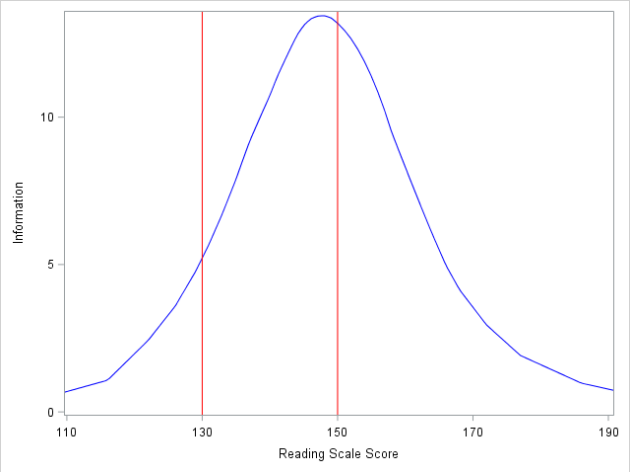

Figure 62. CSLA Grade 3 Reading Claim TIC

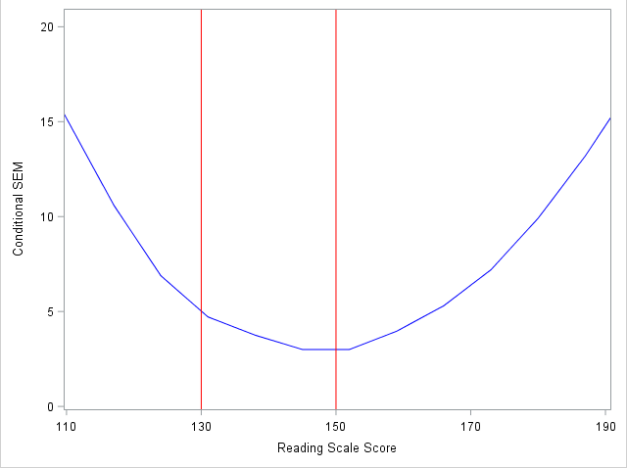

Figure 63. CSLA Grade 3 Reading Claim CSEM

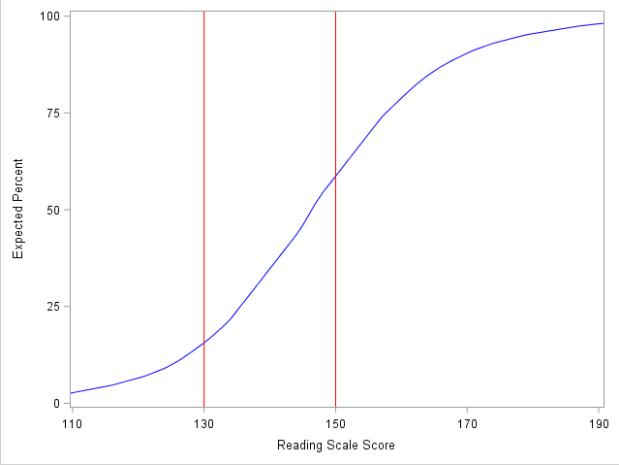

Figure 64. CSLA Grade 4 Reading Claim TCC

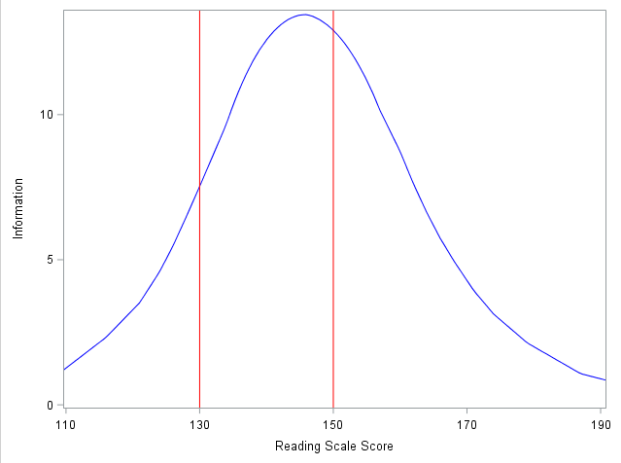

Figure 65. CSLA Grade 4 Reading Claim TIC

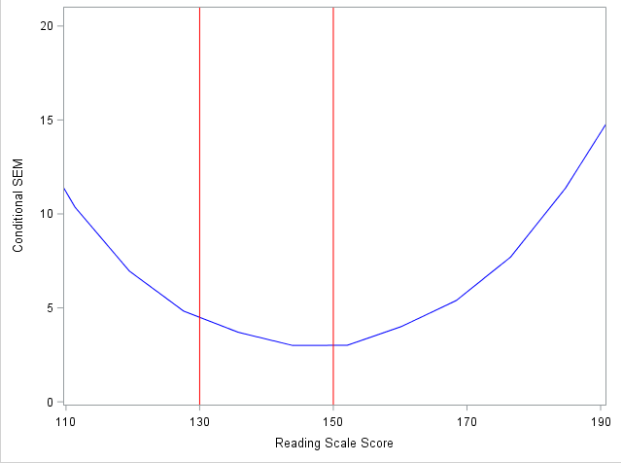

Figure 66. CSLA Grade 4 Reading Claim CSEM

APPENDIX D: SPECIAL STUDIES TO SUPPORT THE TRANSITION

APPENDIX D1: CMAS MATHEMATICS ABBREVIATION STUDY

CMAS Mathematics Abbreviation Research Report

Pearson

September 27, 2017

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Section 1. Introduction

The Colorado Department of Education is exploring shortening the Colorado Measures of Academic Success (CMAS) 2017 Mathematics assessments. The purpose of this research report is to summarize analyses after abbreviating the Mathematics assessments in grades 3 – 8 for the spring 2017 administration.

A subset of operational items on the spring 2017 assessments were treated as omits or not administered items. Scoring tables or conversion tables were generated based on the reduced number of operational items. Raw scores were computed based on student response strings and omitting the selected items. The scoring tables based on the abbreviated forms were applied to the student raw scores. Analyses compared the students' spring 2017 scale scores and performance levels based on the full Mathematics assessments to the scale scores and performance levels based on the abbreviated Mathematics assessments.

Section 2. Methods

This section discusses the data used for the analyses, the abbreviation of the Mathematics test forms, raw scores, the item response theory model, generating the scoring tables, and the reported scales and performance levels.

Student Data

The data for this report were spring 2017 CMAS Mathematics assessment results in grades 3 – 8 for Colorado students. This administration consisted of three computer-based (CBT) operational forms and two paper-based (PBT) operational forms in addition to several accommodated forms. This study included only the three CBT operational forms in each grade.

Student records were removed prior to running the analyses if the records met any of the following criteria: (1) had an invalid form number; (2) was flagged as "not valid"; (3) was a duplicate (if a student had duplicate valid records, only the record with the higher raw score was included); (4) indicated that the student attempted less than 25% of all operational items for Mathematics. Table 2.1 lists the total number of students for the spring 2017 Mathematics assessments in CBT by grade level.

Table 2.1. *Spring 2017 N Counts by Grade*

Grade	N
3	47,199
4	48,808
5	49,007
6	36,330[a]
7	47,471
8	23,298[a]

[a] One core form in each of these grades was excluded for technical reasons. Students taking these forms have been omitted from the analyses.

Mathematics Assessment Abbreviation

For each operational form, passages were selected for exclusion based timing targets and the number of resulting points across subclaims and item types. Tables 2.2 – 2.7 provide the number of score points by subclaims for the full spring 2017 Mathematics assessment and the abbreviated Mathematics assessment. The abbreviated test forms were reduced by 15 points (from 66 points to 51 points).

Table 2.2. *Grade 3 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Points	Percentage
Subclaim A	28	22	79%
Subclaim B	12	9	75%
Subclaim C	14	11	79%
Subclaim D	12	9	75%
Total	66	51	77%

Table 2.3. *Grade 4 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Points	Percentage
Subclaim A	31	24	77%
Subclaim B	9	7	78%
Subclaim C	14	11	79%
Subclaim D	12	9	75%
Total	66	51	77%

Table 2.4. *Grade 5 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Points	Percentage
Subclaim A	30	23	77%
Subclaim B	10	8	80%
Subclaim C	14	11	79%
Subclaim D	12	9	75%
Total	66	51	77%

Table 2.5. *Grade 6 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Points	Percentage
Subclaim A	26	20	77%
Subclaim B	14	11	79%
Subclaim C	14	11	79%
Subclaim D	12	9	75%
Total	66	51	77%

Table 2.6. Grade 7 Blueprint and Abbreviated *Points*

Item Types	Blueprint Points	Abbreviated Points	Percentage
Subclaim A	29	23	79%
Subclaim B	11	8	73%
Subclaim C	14	11	79%
Subclaim D	12	9	75%
Total	66	51	77%

Table 2.7. *Grade 8 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Points	Percentage
Subclaim A	27	21	78%
Subclaim B	13	10	77%
Subclaim C	14	11	79%
Subclaim D	12	9	75%
Total	66	51	77%

Item Response Theory Model

The spring 2017 Mathematics assessments were pre-equated. The item parameter estimates from the pre-equating analyses were used for both the full Mathematics assessment and the abbreviated Mathematics assessments when creating the scoring tables. The operational IRT analyses were conducted by both Pearson and HumRRO. The operational items in the incomplete data matrix (IDM) were concurrently calibrated with the two-parameter logistic/generalized partial credit model (2PL/GPC: Muraki, 1992). The 2PL/GPC is denoted

$$p_{im}(\theta_j) = \frac{\exp\left[\sum_{k=0}^{m} Da_i(\theta_j - b_i + d_{ik})\right]}{\sum_{v=0}^{M_i-1} \exp\left[\sum_{k=0}^{v} Da_i(\theta_j - b_i + d_{iv})\right]},$$

where $a_i(\theta_j - b_i + d_{i0}) \equiv 0$; $p_{im}(\theta_j)$ is the probability of a test taker with θ_j getting score m on item i; M_i is the number of score categories of item i with possible item scores as consecutive integers from 0 to $M_i - 1$; D is the IRT scale constant (1.7). IRT calibrations may also use a guessing parameter in special cases, if needed.

Scoring Tables

A CMAS 2017 scoring/conversion table relates the number of points earned by a student on the Mathematics summative score to the corresponding scale score for the test form administered to that student. An IRT inverse test characteristic curve (TCC) approach is used to develop the relationship between point scores and IRT ability estimates (θs). In carrying out the calculations, estimates of item parameters and thetas are substituted for parameters in the formulas in the generalized partial credit model for both dichotomous and polytomous items. The estimated conditional standard error of measurement (CSEM) for each scale score is computed. Once the raw score to theta table is generated, then the scaling constants transform the theta value to the reported scale score.

All operational procedures for generating the conversion files were followed to generate the abbreviated form conversion tables including additional equating adjustments required.

Reporting Scales and Performance Levels

CMAS reporting scales designate student performance into one of five Performance Levels that delineate the knowledge, skills, and practices students are able to demonstrate. Level 1 indicates the lowest level of performance and Level 5 indicates the highest level of performance:

- Level 1: Did not yet meet expectations
- Level 2: Partially met expectations
- Level 3: Approached expectations
- Level 4: Met expectations
- Level 5: Exceeded expectations

Summative scale scores, which reflect performance across all items on the assessment, range from 650 to 850 and categorize students into one of five summative performance levels with a 700 representing the threshold of Level 2, 725 representing the threshold of Level 3, and 750 representing the threshold of Level 4 which represents college and career readiness (CCR). The threshold score for Level 5 varies slightly by test and is approximately 800.

Mathematics has a subset of skills, or subclaims, in which additional information regarding student performance is provided. The subclaim performance levels categorize students into one of three levels based on the average performance of students at the summative Performance Level 3 and Level 4: *Below Expectations*, *Nearly Meets Expectations* or *Meets or Exceeds Expectations*. The sub-claim performance levels provide information regarding targeted instructional needs.

Section 3. Results

This section presents the results for the Mathematics abbreviated assessments in comparison to the full spring 2017 administration. The results include scale score summary statistics, overall performance level agreement, subclaim performance level agreement, correlations, and overall test characteristic curves.

Scale Score Summary Statistics

The overall abbreviated form scale score and abbreviated form scale score conditional standard error of measurement (CSEM) were calculated based on all operational items (except for those removed to create the abbreviated forms). Tables 3.1 – 3.6 report summary statistics (count, mean, standard deviation, minimum, and maximum) for the full and abbreviated scale scores and CSEM by grade level.

The average scale scores were similar for the abbreviated and full test forms. The average scale score difference was less than .20 for all grades and as expected, the average conditional standard errors were slightly lower for the longer test forms.

Table 3.1. *Summary Statistics for Full and Abbreviated Form Scores for Mathematics Grade 3 CBT*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	16,717	746.13	34.61	650	850
	Abbreviated Scale Score	16,717	746.75	34.57	650	850
	Full Scale Score CSEM	16,717	8.28	1.92	7	17
	Abbreviated Scale Score CSEM	16,717	9.28	2.29	8	20
Core 2	Full Scale Score	13,466	747.62	35.33	650	850
	Abbreviated Scale Score	13,466	748.33	35.72	650	850
	Full Scale Score CSEM	13,466	8.42	1.90	7	18
	Abbreviated Scale Score CSEM	13,466	9.66	2.19	8	20
Core 3	Full Scale Score	17,016	747.49	33.75	650	850
	Abbreviated Scale Score	17,016	748.51	34.51	650	850
	Full Scale Score CSEM	17,016	8.24	1.79	7	19
	Abbreviated Scale Score CSEM	17,016	9.44	1.93	8	19
Overall	**Full Scale Score**	**47,199**	**747.04**	**34.52**	**650**	**850**
	Abbreviated Scale Score	**47,199**	**747.83**	**34.89**	**650**	**850**
	Full Scale Score CSEM	**47,199**	**8.30**	**1.87**	**7**	**19**
	Abbreviated Scale Score CSEM	**47,199**	**9.44**	**2.14**	**8**	**20**

Table 3.2. *Summary Statistics for Full and Abbreviated Form Scores for Mathematics Grade 4 CBT*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	17,134	741.26	30.80	650	850
	Abbreviated Scale Score	17,134	741.99	31.87	650	850
	Full Scale Score CSEM	17,134	7.72	1.36	7	19
	Abbreviated Scale Score CSEM	17,134	9.00	1.65	8	19
Core 2	Full Scale Score	17,240	742.24	30.75	650	850
	Abbreviated Scale Score	17,240	743.63	31.02	650	850
	Full Scale Score CSEM	17,240	7.64	1.47	7	19
	Abbreviated Scale Score CSEM	17,240	8.88	1.78	8	20
Core 3	Full Scale Score	14,434	742.68	30.89	650	850
	Abbreviated Scale Score	14,434	743.37	31.53	650	850
	Full Scale Score CSEM	14,434	7.62	1.65	7	19
	Abbreviated Scale Score CSEM	14,434	8.82	1.91	8	20
Overall	**Full Scale Score**	**48,808**	**742.02**	**30.82**	**650**	**850**
	Abbreviated Scale Score	**48,808**	**742.98**	**31.48**	**650**	**850**
	Full Scale Score CSEM	**48,808**	**7.66**	**1.49**	**7**	**19**
	Abbreviated Scale Score CSEM	**48,808**	**8.91**	**1.78**	**8**	**20**

Table 3.3. *Summary Statistics for Full and Abbreviated Form Scores for Mathematics Grade 5 CBT*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	11,584	740.82	31.54	650	850
	Abbreviated Scale Score	11,584	740.95	32.45	650	850
	Full Scale Score CSEM	11,584	8.17	1.92	7	20
	Abbreviated Scale Score CSEM	11,584	9.48	2.12	8	20
Core 2	Full Scale Score	22,851	741.71	30.73	650	850
	Abbreviated Scale Score	22,851	742.34	31.51	650	850
	Full Scale Score CSEM	22,851	8.01	1.76	7	20
	Abbreviated Scale Score CSEM	22,851	9.29	1.88	8	20
Core 3	Full Scale Score	14,572	741.67	30.38	650	850
	Abbreviated Scale Score	14,572	741.73	31.23	650	850
	Full Scale Score CSEM	14,572	8.19	1.44	7	18
	Abbreviated Scale Score CSEM	14,572	9.42	1.75	8	19
Overall	**Full Scale Score**	**49,007**	**741.49**	**30.82**	**650**	**850**
	Abbreviated Scale Score	**49,007**	**741.83**	**31.66**	**650**	**850**
	Full Scale Score CSEM	**49,007**	**8.10**	**1.71**	**7**	**20**
	Abbreviated Scale Score CSEM	**49,007**	**9.37**	**1.90**	**8**	**20**

Table 3.4. *Summary Statistics for Full and Abbreviated Form Scores for Mathematics Grade 6 CBT*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score Abbreviated Scale Score Full Scale Score CSEM Abbreviated Scale Score CSEM			N/A		
Core 2	Full Scale Score	18,063	736.91	31.86	650	850
	Abbreviated Scale Score	18,063	737.18	32.02	650	850
	Full Scale Score CSEM	18,063	8.06	2.33	6	19
	Abbreviated Scale Score CSEM	18,063	9.36	2.38	7	20
Core 3	Full Scale Score	18,267	735.89	31.79	650	850
	Abbreviated Scale Score	18,267	736.65	32.27	650	850
	Full Scale Score CSEM	18,267	8.09	2.58	6	20
	Abbreviated Scale Score CSEM	18,267	9.48	2.84	7	20
Overall	**Full Scale Score**	**36,330**	**736.39**	**31.83**	**650**	**850**
	Abbreviated Scale Score	**36,330**	**736.91**	**32.15**	**650**	**850**
	Full Scale Score CSEM	**36,330**	**8.07**	**2.46**	**6**	**20**
	Abbreviated Scale Score CSEM	**36,330**	**9.42**	**2.62**	**7**	**20**

Note. Core 1 has been omitted from this analysis for technical reasons.

Table 3.5. *Summary Statistics for Full and Abbreviated Form Scores for Mathematics Grade 7 CBT*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	17,039	735.02	26.04	650	850
	Abbreviated Scale Score	17,039	734.14	26.69	650	850
	Full Scale Score CSEM	17,039	7.77	2.58	6	20
	Abbreviated Scale Score CSEM	17,039	8.78	2.82	6	20
Core 2	Full Scale Score	16,944	734.14	27.27	650	850
	Abbreviated Scale Score	16,944	733.74	27.74	650	850
	Full Scale Score CSEM	16,944	8.04	3.07	5	20
	Abbreviated Scale Score CSEM	16,944	8.90	3.28	6	20
Core 3	Full Scale Score	13,488	733.86	26.84	650	850
	Abbreviated Scale Score	13,488	733.31	27.61	650	850
	Full Scale Score CSEM	13,488	7.92	2.67	6	20
	Abbreviated Scale Score CSEM	13,488	9.24	3.15	7	20
Overall	**Full Scale Score**	**47,471**	**734.38**	**26.72**	**650**	**850**
	Abbreviated Scale Score	**47,471**	**733.76**	**27.33**	**650**	**850**
	Full Scale Score CSEM	**47,471**	**7.91**	**2.79**	**5**	**20**
	Abbreviated Scale Score CSEM	**47,471**	**8.96**	**3.09**	**6**	**20**

Table 3.6. *Summary Statistics for Full and Abbreviated Form Scores for Mathematics Grade 8 CBT*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	10,223	723.85	34.80	650	850
	Abbreviated Scale Score	10,223	722.64	35.76	650	850
	Full Scale Score CSEM	10,223	11.73	3.25	8	20
	Abbreviated Scale Score CSEM	10,223	13.21	3.25	10	20
Core 2	Full Scale Score Abbreviated Scale Score Full Scale Score CSEM Abbreviated Scale Score CSEM			N/A		
Core 3	Full Scale Score	13,075	724.54	33.66	650	850
	Abbreviated Scale Score	13,075	723.94	34.92	650	850
	Full Scale Score CSEM	13,075	11.77	3.17	8	20
	Abbreviated Scale Score CSEM	13,075	13.08	3.40	9	20
Overall	**Full Scale Score**	**23,298**	**724.24**	**34.17**	**650**	**850**
	Abbreviated Scale Score	**23,298**	**723.37**	**35.30**	**650**	**850**
	Full Scale Score CSEM	**23,298**	**11.75**	**3.21**	**8**	**20**
	Abbreviated Scale Score CSEM	**23,298**	**13.14**	**3.34**	**9**	**20**

Note. Core 2 has been omitted from this analysis for technical reasons.

Overall Performance Level Agreement

Tables 3.7 – 3.12 list the percent of students assigned the exact same performance level for both the full and the abbreviated Mathematics assessments by core form for each grade level. In addition, Tables 3.7 – 3.12 list the percent of students assigned to different performance levels between the full and abbreviated Mathematics assessments for each grade level and across cores. If the abbreviated form performance levels were a higher ability level compared to the full performance level the number and percent of students are listed as "Higher Level for Abbreviated". If the abbreviated form performance levels were a lower ability level compared to the full performance level the number and percent of students are listed as "Lower Level for Abbreviated".

The percent of exact agreement in the overall performance level designation between the full assessment and the abbreviated assessment for any core form ranged from 83.1% – 90.2% across the grade levels. The percent of students in the Higher Level or the Lower Level for Abbreviated for any of the core forms ranged from 3.3% – 11.1%.

Table 3.7. *Grade 3 Overall Performance Level Percent Agreement by Core Form*

Form	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	88.6%	6.2%	5.2%
Core 2	88.9%	5.1%	6.0%
Core 3	87.9%	7.2%	5.0%
Overall	**88.4%**	**6.2%**	**5.3%**

Table 3.8. *Grade 4 Overall Performance Level Percent Agreement by Core Form*

Form	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	88.4%	7.3%	4.3%
Core 2	88.5%	8.2%	3.3%
Core 3	88.7%	6.8%	4.5%
Overall	**88.5%**	**7.5%**	**4.0%**

Table 3.9. *Grade 5 Overall Performance Level Percent Agreement by Core Form*

Form	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	88.6%	4.8%	6.6%
Core 2	89.0%	6.9%	4.1%
Core 3	89.0%	6.6%	4.4%
Overall	**88.9%**	**6.3%**	**4.8%**

Table 3.10. *Grade 6 Overall Performance Level Percent Agreement by Core Form*

Form	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1		N/A	
Core 2	87.4%	8.7%	3.9%
Core 3	88.9%	6.6%	4.5%
Overall	**88.1%**	**7.7%**	**4.2%**

Note. Core 1 has been omitted from this analysis for technical reasons.

Table 3.11. *Grade 7 Overall Performance Level Percent Agreement by Core Form*

Form	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	90.2%	4.1%	5.7%
Core 2	90.2%	4.2%	5.5%
Core 3	88.9%	6.9%	4.2%
Overall	**89.8%**	**5.0%**	**5.2%**

Table 3.12. *Grade 8 Overall Performance Level Percent Agreement by Core Form*

Form	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	83.1%	5.8%	11.1%
Core 2		N/A	
Core 3	85.4%	8.2%	6.4%
Overall	**84.4%**	**7.1%**	**8.4%**

Note. Core 2 has been omitted from this analysis for technical reasons.

Tables 3.13 – 3.18 show the number and percent of students by the full performance level designation and the abbreviated performance level designation for each grade level. The values bolded in the tables represent exact agreement. For all the Mathematics assessments, if the performance level designation was not exact, the difference was always within an adjacent performance level.

Table 3.13. *Grade 3 Overall Performance Level Percent Agreement*

Grade 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,490 (7.4%)**	419 (0.9%)				3,909 (8.3%)
	2	433 (0.9%)	**6,833 (14.5%)**	779 (1.7%)			8,045 (17.0%)
	3		765 (1.6%)	**10,833 (23.0%)**	1,307 (2.8%)		12,905 (27.3%)
	4			660 (1.4%)	**16,065 (34.0%)**	436 (0.9%)	17,161 (36.4%)
	5				659 (1.4%)	**4,520 (9.6%)**	5,179 (11.0%)
	Total	3,923 (8.3%)	8,017 (17.0%)	12,272 (26.0%)	18,031 (38.2%)	4,956 (10.5%)	47,199 (100%)

Table 3.14. Grade 3 Core 1 Performance Level Percent Agreement

Grade 3 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,325 (7.9%)**	98 (0.6%)				1,423 (8.5%)
	2	235 (1.4%)	**2,358 (14.1%)**	451 (2.7%)			3,044 (18.2%)
	3		139 (0.8%)	**4,048 (24.2%)**	351 (2.1%)		4,538 (27.1%)
	4			256 (1.5%)	**5,512 (33.0%)**	139 (0.8%)	5,907 (35.3%)
	5				236 (1.4%)	**1,569 (9.4%)**	1,805 (10.8%)
	Total	1,560 (9.3%)	2,595 (15.5%)	4,755 (28.4%)	6,099 (36.5%)	1,708 (10.2%)	16,717 (100%)

Table 3.15. Grade 3 Core 2 Performance Level Percent Agreement

Grade 3 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,026 (7.6%)**	170 (1.3%)				1,196 (8.9%)
	2	86 (0.6%)	**1,960 (14.6%)**	130 (1.0%)			2,176 (16.2%)
	3		279 (2.1%)	**2,848 (21.1%)**	272 (2.0%)		3,399 (25.2%)
	4			230 (1.7%)	**4,804 (35.7%)**	109 (0.8%)	5,143 (38.2%)
	5				214 (1.6%)	**1,338 (9.9%)**	1,552 (11.5%)
	Total	1,112 (8.3%)	2,409 (17.9%)	3,208 (23.8%)	5,290 (39.3%)	1,447 (10.7%)	13,466 (100%)

Table 3.16. Grade 3 Core 3 Performance Level Percent Agreement

Grade 3 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,139 (6.7%)**	151 (0.9%)				1,290 (7.6%)
	2	112 (0.7%)	**2,515 (14.8%)**	198 (1.2%)			2,825 (16.6%)
	3		347 (2.0%)	**3,937 (23.1%)**	684 (4.0%)		4,968 (29.2%)
	4			174 (1.0%)	**5,749 (33.8%)**	188 (1.1%)	6,111 (35.9%)
	5				209 (1.2%)	**1,613 (9.5%)**	1,822 (10.7%)
	Total	1,251 (7.4%)	3,013 (17.7%)	4,309 (25.3%)	6,642 (39.0%)	1,801 (10.6%)	17,016 (100%)

Table 3.17. *Grade 4 Overall Performance Level Percent Agreement*

Grade 4		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,442 (7.1%)**	684 (1.4%)				4,126 (8.5%)
	2	652 (1.3%)	**8,403 (17.2%)**	1,059 (2.2%)			10,114 (20.7%)
	3		714 (1.5%)	**12,522 (25.7%)**	1,533 (3.1%)		14,769 (30.3%)
	4			439 (0.9%)	**16,980 (34.8%)**	372 (0.8%)	17,791 (36.5%)
	5				141 (0.3%)	**1,867 (3.8%)**	2,008 (4.1%)
	Total	4,094 (8.4%)	9,801 (20.1%)	14,020 (28.7%)	18,654 (38.2%)	2,239 (4.6%)	48,808 (100%)

Table 3.18. Grade 4 Core 1 Performance Level Percent Agreement

Grade 4 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,263 (7.4%)**	138 (0.8%)				1,401 (8.2%)
	2	296 (1.7%)	**3,220 (18.8%)**	356 (2.1%)			3,872 (22.6%)
	3		303 (1.8%)	**4,293 (25.1%)**	625 (3.6%)		5,221 (30.5%)
	4			85 (0.5%)	**5,723 (33.4%)**	135 (0.8%)	5,943 (34.7%)
	5				46 (0.3%)	**651 (3.8%)**	697 (4.1%)
	Total	1,559 (9.1%)	3,661 (21.4%)	4,734 (27.6%)	6,394 (37.3%)	786 (4.6%)	17,134 (100%)

Table 3.19. Grade 4 Core 2 Performance Level Percent Agreement

Grade 4 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,150 (6.7%)**	501 (2.9%)				1,651 (9.6%)
	2	56 (0.3%)	**2,774 (16.1%)**	435 (2.5%)			3,265 (18.9%)
	3		234 (1.4%)	**4,453 (25.8%)**	367 (2.1%)		5,054 (29.3%)
	4			227 (1.3%)	**6,238 (36.2%)**	114 (0.7%)	6,579 (38.2%)
	5				49 (0.3%)	**642 (3.7%)**	691 (4.0%)
	Total	1,206 (7.0%)	3,509 (20.4%)	5,115 (29.7%)	6,654 (38.6%)	756 (4.4%)	17,240 (100%)

Table 3.20. Grade 4 Core 3 Performance Level Percent Agreement

Grade 4 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,029 (7.1%)**	45 (0.3%)				1,074 (7.4%)
	2	300 (2.1%)	**2,409 (16.7%)**	268 (1.9%)			2,977 (20.6%)
	3		177 (1.2%)	**3,776 (26.2%)**	541 (3.7%)		4,494 (31.1%)
	4			127 (0.9%)	**5,019 (34.8%)**	123 (0.9%)	5,269 (36.5%)
	5				46 (0.3%)	**574 (4.0%)**	620 (4.3%)
	Total	1,329 (9.2%)	2,631 (18.2%)	4,171 (28.9%)	5,606 (38.8%)	697 (4.8%)	14,434 (100%)

Table 3.21. *Grade 5 Overall Performance Level Percent Agreement*

Grade 5		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,743 (7.6%)**	408 (0.8%)				4,151 (8.5%)
	2	614 (1.3%)	**8,496 (17.3%)**	977 (2.0%)			10,087 (20.6%)
	3		764 (1.6%)	**13,428 (27.4%)**	1,097 (2.2%)		15,289 (31.2%)
	4			764 (1.6%)	**15,287 (31.2%)**	613 (1.3%)	16,664 (34.0%)
	5				195 (0.4%)	**2,621 (5.4%)**	2,816 (5.8%)
	Total	4,357 (8.9%)	9,668 (19.7%)	15,169 (31.0%)	16,579 (33.8%)	3,234 (6.6%)	49,007 (100%)

Table 3.22. Grade 5 Core 1 Performance Level Percent Agreement

Grade 5 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,005 (8.7%)**	25 (0.2%)				1,030 (8.9%)
	2	263 (2.3%)	**2,038 (17.6%)**	140 (1.2%)			2,441 (21.1%)
	3		281 (2.4%)	**3,168 (27.3%)**	228 (2.0%)		3,677 (31.7%)
	4			189 (1.6%)	**3,395 (29.3%)**	162 (1.4%)	3,746 (32.3%)
	5				30 (0.3%)	**660 (5.7%)**	690 (6.0%)
	Total	1,268 (10.9%)	2,344 (20.2%)	3,497 (30.2%)	3,653 (31.5%)	822 (7.1%)	11,584 (100%)

Table 3.23. Grade 5 Core 2 Performance Level Percent Agreement

Grade 5 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,618 (7.1%)**	132 (0.6%)				1,750 (7.7%)
	2	281 (1.2%)	**4,014 (17.6%)**	521 (2.3%)			4,816 (21.1%)
	3		275 (1.2%)	**6,266 (27.4%)**	614 (2.7%)		7,155 (31.3%)
	4			290 (1.3%)	**7,215 (31.6%)**	314 (1.4%)	7,819 (34.2%)
	5				87 (0.4%)	**1,224 (5.4%)**	1,311 (5.7%)
	Total	1,899 (8.3%)	4,421 (19.3%)	7,077 (31.0%)	7,916 (34.6%)	1,538 (6.7%)	22,851 (100%)

Table 3.24. Grade 5 Core 3 Performance Level Percent Agreement

Grade 5 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,120 (7.7%)**	251 (1.7%)				1,371 (9.4%)
	2	70 (0.5%)	**2,444 (16.8%)**	316 (2.2%)			2,830 (19.4%)
	3		208 (1.4%)	**3,994 (27.4%)**	255 (1.7%)		4,457 (30.6%)
	4			285 (2.0%)	**4,677 (32.1%)**	137 (0.9%)	5,099 (35.0%)
	5				78 (0.5%)	**737 (5.1%)**	815 (5.6%)
	Total	1,190 (8.2%)	2,903 (19.9%)	4,595 (31.5%)	5,010 (34.4%)	874 (6.0%)	14,572 (100%)

Table 3.25. *Grade 6 Overall Performance Level Percent Agreement*

Grade 6		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,643 (10.0%)**	848 (2.3%)				4,491 (12.4%)
	2	255 (0.7%)	**7,426 (20.4%)**	916 (2.5%)			8,597 (23.7%)
	3		600 (1.7%)	**9,488 (26.1%)**	669 (1.8%)		10,757 (29.6%)
	4			555 (1.5%)	**9,617 (26.5%)**	352 (1.0%)	10,524 (29.0%)
	5				117 (0.3%)	**1,844 (5.1%)**	1,961 (5.4%)
	Total	3,898 (10.7%)	8,874 (24.4%)	10,959 (30.2%)	10,403 (28.6%)	2,196 (6.0%)	36,330 (100%)

Table 3.26. Grade 6 Core 2 Performance Level Percent Agreement

Grade 6 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,762 (9.8%)**	557 (3.1%)				2,319 (12.8%)
	2	62 (0.3%)	**3,584 (19.8%)**	495 (2.7%)			4,141 (22.9%)
	3		306 (1.7%)	**4,860 (26.9%)**	331 (1.8%)		5,497 (30.4%)
	4			275 (1.5%)	**4,599 (25.5%)**	191 (1.1%)	5,065 (28.0%)
	5				59 (0.3%)	**982 (5.4%)**	1,041 (5.8%)
	Total	1,824 (10.1%)	4,447 (24.6%)	5,630 (31.2%)	4,989 (27.6%)	1,173 (6.5%)	18,063 (100%)

Table 3.27. Grade 6 Core 3 Performance Level Percent Agreement

Grade 6 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,881 (10.3%)**	291 (1.6%)				2,172 (11.9%)
	2	193 (1.1%)	**3,842 (21.0%)**	421 (2.3%)			4,456 (24.4%)
	3		294 (1.6%)	**4,628 (25.3%)**	338 (1.9%)		5,260 (28.8%)
	4			280 (1.5%)	**5,018 (27.5%)**	161 (0.9%)	5,459 (29.9%)
	5				58 (0.3%)	**862 (4.7%)**	920 (5.0%)
	Total	2,074 (11.4%)	4,427 (24.2%)	5,329 (29.2%)	5,414 (29.6%)	1,023 (5.6%)	18,267 (100%)

Table 3.28. *Grade 7 Overall Performance Level Percent Agreement*

Grade 7		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**4,057 (8.6%)**	609 (1.3%)				4,666 (9.8%)
	2	588 (1.2%)	**10,669 (22.5%)**	766 (1.6%)			12,023 (25.3%)
	3		1,032 (2.2%)	**15,540 (32.7%)**	811 (1.7%)		17,383 (36.6%)
	4			658 (1.4%)	**11,385 (24.0%)**	164 (0.4%)	12,207 (25.7%)
	5				194 (0.4%)	**998 (2.1%)**	1,192 (2.5%)
	Total	4,645 (9.8%)	12,310 (25.9%)	16,964 (35.7%)	12,390 (26.1%)	1,162 (2.5%)	47,471 (100%)

Table 3.29. Grade 7 Core 1 Performance Level Percent Agreement

Grade 7 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,135 (6.7%)**	198 (1.2%)				1,333 (7.8%)
	2	193 (1.1%)	**3,921 (23.0%)**	261 (1.5%)			4,375 (25.7%)
	3		339 (2.0%)	**5,858 (34.4%)**	210 (1.2%)		6,407 (37.6%)
	4			349 (2.0%)	**4,107 (24.1%)**	37 (0.2%)	4,493 (26.4%)
	5				85 (0.5%)	**346 (2.0%)**	431 (2.5%)
	Total	1,328 (7.8%)	4,458 (26.2%)	6,468 (38.0%)	4,402 (25.8%)	383 (2.2%)	17,039 (100%)

Table 3.30. Grade 7 Core 2 Performance Level Percent Agreement

Grade 7 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,606 (9.5%)**	261 (1.5%)				1,867 (11.0%)
	2	166 (1.0%)	**3,792 (22.4%)**	97 (0.6%)			4,055 (23.9%)
	3		501 (3.0%)	**5,429 (32.0%)**	307 (1.8%)		6,237 (36.8%)
	4			178 (1.1%)	**4,117 (24.3%)**	54 (0.3%)	4,349 (25.7%)
	5				91 (0.5%)	**345 (2.0%)**	436 (2.6%)
	Total	1,772 (10.5%)	4,554 (26.9%)	5,704 (33.7%)	4,515 (26.6%)	399 (2.4%)	16,944 (100%)

Table 3.31. Grade 7 Core 3 Performance Level Percent Agreement

Grade 7 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,316 (9.8%)**	150 (1.1%)				1,466 (10.9%)
	2	229 (1.7%)	**2,956 (21.9%)**	408 (3.0%)			3,593 (26.6%)
	3		192 (1.4%)	**4,253 (31.5%)**	294 (2.2%)		4,739 (35.1%)
	4			131 (1.0%)	**3,161 (23.4%)**	73 (0.5%)	3,365 (24.9%)
	5				18 (0.1%)	**307 (2.3%)**	325 (2.4%)
	Total	1,545 (11.5%)	3,298 (24.5%)	4,792 (35.5%)	3,473 (25.7%)	380 (2.8%)	13,488 (100%)

Table 3.32. *Grade 8 Overall Performance Level Percent Agreement*

Grade 8		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**5,583 (24.0%)**	755 (3.2%)				6,338 (27.2%)
	2	574 (2.5%)	**4,265 (18.3%)**	495 (2.1%)			5,334 (22.9%)
	3		907 (3.9%)	**5,143 (22.1%)**	346 (1.5%)		6,396 (27.5%)
	4			442 (1.9%)	**4,339 (18.6%)**	68 (0.3%)	4,849 (20.8%)
	5				44 (0.2%)	**337 (1.5%)**	381 (1.6%)
	Total	6,157 (26.4%)	5,927 (25.4%)	6,080 (26.1%)	4,729 (20.3%)	405 (1.7%)	23,298 (100%)

Table 3.33. Grade 8 Core 1 Performance Level Percent Agreement

Grade 8 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,449 (24.0%)**	398 (3.9%)				2,847 (27.8%)
	2	233 (2.3%)	**1,931 (18.9%)**	83 (0.8%)			2,247 (22.0%)
	3		617 (6.0%)	**2,131 (20.8%)**	51 (0.5%)		2,799 (27.4%)
	4			281 (2.7%)	**1,821 (17.8%)**	57 (0.6%)	2,159 (21.1%)
	5				5 (0.0%)	**166 (1.6%)**	171 (1.7%)
	Total	2,682 (26.2%)	2,946 (28.8%)	2,495 (24.4%)	1,877 (18.4%)	223 (2.2%)	10,223 (100%)

Table 3.34. Grade 8 Core 3 Performance Level Percent Agreement

Grade 8 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,134 (24.0%)**	357 (2.7%)				3,491 (26.7%)
	2	341 (2.6%)	**2,334 (17.9%)**	412 (3.2%)			3,087 (23.6%)
	3		290 (2.2%)	**3,012 (23.0%)**	295 (2.3%)		3,597 (27.5%)
	4			161 (1.2%)	**2,518 (19.3%)**	11 (0.1%)	2,690 (20.6%)
	5				39 (0.3%)	**171 (1.3%)**	210 (1.6%)
	Total	3,475 (26.6%)	2,981 (22.8%)	3,585 (27.4%)	2,852 (21.8%)	182 (1.4%)	13,075 (100%)

Subclaim Performance Level Agreement

The performance levels for the various subclaims were determined for the full test and the abbreviated forms. Tables 3.35 – 3.40 list the percent of students assigned the exact same subclaim performance level for both the full and the abbreviated Mathematics assessments by core form for each grade level.

The percent of exact agreement in the subclaim performance level designations between the full assessment and the abbreviated assessment subclaims for any of the core forms ranged from 65.2% – 97.9% across the grade levels.

Table 3.35. *Subclaim Performance Level Percent Agreement for Grade 3*

	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	A	91.0%	6.4%	2.6%
	B	89.8%	9.5%	0.7%
	C	84.9%	8.0%	7.2%
	D	90.3%		9.7%
Core 2	A	91.4%	5.7%	2.9%
	B	86.0%	8.1%	6.0%
	C	79.3%	13.6%	7.2%
	D	87.9%	7.5%	4.6%
Core 3	A	91.3%	3.5%	5.1%
	B	84.3%	6.8%	8.9%
	C	84.4%	3.5%	12.1%
	D	92.7%		7.3%
Overall	**A**	**91.2%**	**5.2%**	**3.6%**
	B	**86.7%**	**8.1%**	**5.2%**
	C	**83.1%**	**8.0%**	**8.9%**
	D	**90.5%**	**2.1%**	**7.4%**

Table 3.36. *Subclaim Performance Level Percent Agreement for Grade 4*

	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	A	89.5%	2.1%	8.4%
	B	82.2%	9.9%	8.0%
	C	84.8%	4.8%	10.4%
	D	87.7%	7.6%	4.7%
Core 2	A	91.1%	6.0%	2.9%
	B	74.7%	2.8%	22.5%
	C	82.6%	15.5%	1.9%
	D	70.7%	6.5%	22.8%
Core 3	A	90.7%	4.9%	4.4%
	B	76.7%	21.1%	2.2%
	C	80.1%	16.3%	3.6%
	D	88.1%	2.8%	9.1%
Overall	**A**	**90.4%**	**4.3%**	**5.3%**
	B	**77.9%**	**10.7%**	**11.4%**
	C	**82.6%**	**12.0%**	**5.4%**
	D	**81.8%**	**5.8%**	**12.4%**

Table 3.37. *Subclaim Performance Level Percent Agreement for Grade 5*

	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	A	88.8%	5.0%	6.2%
	B	83.6%	9.6%	6.8%
	C	84.5%	3.4%	12.1%
	D	88.0%	6.3%	5.7%
Core 2	A	89.3%	5.3%	5.4%
	B	80.0%		20.0%
	C	87.3%	10.2%	2.5%
	D	87.0%	7.2%	5.8%
Core 3	A	90.0%	4.6%	5.4%
	B	65.2%	0.6%	34.3%
	C	89.8%	8.2%	2.0%
	D	85.6%	8.9%	5.5%
Overall	**A**	**89.4%**	**5.0%**	**5.6%**
	B	**76.5%**	**2.4%**	**21.1%**
	C	**87.4%**	**8.0%**	**4.6%**
	D	**86.8%**	**7.5%**	**5.7%**

Table 3.38. *Subclaim Performance Level Percent Agreement for Grade 6*

	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	A		N/A	
	B			
	C			
	D			
Core 2	A	88.7%	9.3%	1.9%
	B	84.8%	10.6%	4.6%
	C	91.5%		8.5%
	D	76.2%	15.0%	8.8%
Core 3	A	89.6%	4.8%	5.6%
	B	82.1%	4.7%	13.3%
	C	94.4%		5.6%
	D	70.9%	21.5%	7.6%
Overall	**A**	**89.2%**	**7.1%**	**3.8%**
	B	**83.4%**	**7.6%**	**9.0%**
	C	**92.9%**		**7.1%**
	D	**73.5%**	**18.3%**	**8.2%**

Table 3.39. *Subclaim Performance Level Percent Agreement for Grade 7*

	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	A	90.4%	6.2%	3.4%
	B	83.3%	7.2%	9.5%
	C	88.1%	5.6%	6.3%
	D	93.8%		6.2%
Core 2	A	90.9%	4.9%	4.2%
	B	83.5%	8.3%	8.2%
	C	74.6%	15.0%	10.4%
	D	97.7%		2.3%
Core 3	A	89.8%	8.3%	1.9%
	B	91.6%		8.4%
	C	89.6%	4.3%	6.1%
	D	81.7%	2.5%	15.8%
Overall	**A**	**90.4%**	**6.4%**	**3.3%**
	B	**85.7%**	**5.5%**	**8.7%**
	C	**83.7%**	**8.6%**	**7.7%**
	D	**91.8%**	**0.7%**	**7.5%**

Table 3.40. *Subclaim Performance Level Percent Agreement for Grade 8*

	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	A	92.7%	5.1%	2.2%
	B	87.1%	10.7%	2.3%
	C	81.5%	10.7%	7.8%
	D	68.5%	4.2%	27.1%
Core 2	A	N/A		
	B			
	C			
	D			
Core 3	A	85.8%	8.3%	5.9%
	B	82.6%	10.4%	7.0%
	C	97.9%		2.1%
	D	79.9%	12.3%	7.8%
Overall	**A**	**88.8%**	**6.9%**	**4.3%**
	B	**84.6%**	**10.6%**	**4.9%**
	C	**90.7%**	**4.7%**	**4.6%**
	D	**74.9%**	**8.7%**	**16.4%**

Tables 3.41 – 3.104 show the number and percent of students by the subclaim performance level designation and the abbreviated form subclaim performance level designation for each core form at each grade level. The values bolded in the tables represent exact agreement. For all the Mathematics assessments, if the performance level designation was not exact, the difference was most often within an adjacent performance level.

Table 3.41. Grade 3 Core 1 Subclaim A Performance Level Percent Agreement

Grade 3 Core 1		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**6,728 (40.2%)**	254 (1.5%)		6,982 (41.8%)
	2	449 (2.7%)	**4,388 (26.2%)**	179 (1.1%)	5,016 (30.0%)
	3		624 (3.7%)	**4,095 (24.5%)**	4,719 (28.2%)
	Total	7,177 (42.9%)	5,266 (31.5%)	4,274 (25.6%)	16,717 (100%)

Table 3.42. Grade 3 Core 1 Subclaim B Performance Level Percent Agreement

Grade 3 Core 1		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**7,208 (43.1%)**	93 (0.6%)		7,301 (43.7%)
	2	542 (3.2%)	**3,424 (20.5%)**	29 (0.2%)	3,995 (23.9%)
	3		1,049 (6.3%)	**4,372 (26.2%)**	5,421 (32.4%)
	Total	7,750 (46.4%)	4,566 (27.3%)	4,401 (26.3%)	16,717 (100%)

Table 3.43. Grade 3 Core 1 Subclaim C Performance Level Percent Agreement

Grade 3 Core 1		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**6,738 (40.3%)**	379 (2.3%)		7,117 (42.6%)
	2	908 (5.4%)	**2,859 (17.1%)**	820 (4.9%)	4,587 (27.4%)
	3		426 (2.5%)	**4,587 (27.4%)**	5,013 (30.0%)
	Total	7,646 (45.7%)	3,664 (21.9%)	5,407 (32.3%)	16,717 (100%)

Table 3.44. Grade 3 Core 1 Subclaim D Performance Level Percent Agreement

Grade 3 Core 1		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**7,901 (47.3%)**	773 (4.6%)	341 (2.0%)	9,015 (53.9%)
	2		**1,708 (10.2%)**	503 (3.0%)	2,211 (13.2%)
	3			**5,491 (32.8%)**	5,491 (32.8%)
	Total	7,901 (47.3%)	2,481 (14.8%)	6,335 (37.9%)	16,717 (100%)

Table 3.45. Grade 3 Core 2 Subclaim A Performance Level Percent Agreement

Grade 3 Core 2		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**6,133 (45.5%)**	239 (1.8%)		6,372 (47.3%)
	2	339 (2.5%)	**2,686 (19.9%)**	148 (1.1%)	3,173 (23.6%)
	3		428 (3.2%)	**3,493 (25.9%)**	3,921 (29.1%)
	Total	6,472 (48.1%)	3,353 (24.9%)	3,641 (27.0%)	13,466 (100%)

Table 3.46. Grade 3 Core 2 Subclaim B Performance Level Percent Agreement

Grade 3 Core 2		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**5,767 (42.8%)**	578 (4.3%)		6,345 (47.1%)
	2	402 (3.0%)	**2,593 (19.3%)**	225 (1.7%)	3,220 (23.9%)
	3		682 (5.1%)	**3,219 (23.9%)**	3,901 (29.0%)
	Total	6,169 (45.8%)	3,853 (28.6%)	3,444 (25.6%)	13,466 (100%)

Table 3.47. Grade 3 Core 2 Subclaim C Performance Level Percent Agreement

Grade 3 Core 2		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**6,524 (48.4%)**	282 (2.1%)		6,806 (50.5%)
	2	1,273 (9.5%)	**1,165 (8.7%)**	684 (5.1%)	3,122 (23.2%)
	3		554 (4.1%)	**2,984 (22.2%)**	3,538 (26.3%)
	Total	7,797 (57.9%)	2,001 (14.9%)	3,668 (27.2%)	13,466 (100%)

Table 3.48. Grade 3 Core 2 Subclaim D Performance Level Percent Agreement

Grade 3 Core 2		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**6,285 (46.7%)**	211 (1.6%)	54 (0.4%)	6,550 (48.6%)
	2	1,005 (7.5%)	**1,355 (10.1%)**	354 (2.6%)	2,714 (20.2%)
	3			**4,202 (31.2%)**	4,202 (31.2%)
	Total	7,290 (54.1%)	1,566 (11.6%)	4,610 (34.2%)	13,466 (100%)

Table 3.49. Grade 3 Core 3 Subclaim A Performance Level Percent Agreement

Grade 3 Core 3		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**6,897 (40.5%)**	500 (2.9%)		7,397 (43.5%)
	2	350 (2.1%)	**3,848 (22.6%)**	370 (2.2%)	4,568 (26.8%)
	3		253 (1.5%)	**4,798 (28.2%)**	5,051 (29.7%)
	Total	7,247 (42.6%)	4,601 (27.0%)	5,168 (30.4%)	17,016 (100%)

Table 3.50. Grade 3 Core 3 Subclaim B Performance Level Percent Agreement

Grade 3 Core 3		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**5,376 (31.6%)**	757 (4.4%)		6,133 (36.0%)
	2	615 (3.6%)	**4,916 (28.9%)**	757 (4.4%)	6,288 (37.0%)
	3		549 (3.2%)	**4,046 (23.8%)**	4,595 (27.0%)
	Total	5,991 (35.2%)	6,222 (36.6%)	4,803 (28.2%)	17,016 (100%)

Table 3.51. Grade 3 Core 3 Subclaim C Performance Level Percent Agreement

Grade 3 Core 3		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**8,057 (47.3%)**	1,263 (7.4%)		9,320 (54.8%)
	2	240 (1.4%)	**1,937 (11.4%)**	791 (4.6%)	2,968 (17.4%)
	3		356 (2.1%)	**4,372 (25.7%)**	4,728 (27.8%)
	Total	8,297 (48.8%)	3,556 (20.9%)	5,163 (30.3%)	17,016 (100%)

Table 3.52. Grade 3 Core 3 Subclaim D Performance Level Percent Agreement

Grade 3 Core 3		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**9,586 (56.3%)**	992 (5.8%)	114 (0.7%)	10,692 (62.8%)
	2		**3,625 (21.3%)**	141 (0.8%)	3,766 (22.1%)
	3			**2,558 (15.0%)**	2,558 (15.0%)
	Total	9,586 (56.3%)	4,617 (27.1%)	2,813 (16.5%)	17,016 (100%)

Table 3.53. Grade 4 Core 1 Subclaim A Performance Level Percent Agreement

Grade 4 Core 1		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**6,043 (35.3%)**	630 (3.7%)		6,673 (38.9%)
	2	213 (1.2%)	**4,007 (23.4%)**	804 (4.7%)	5,024 (29.3%)
	3		152 (0.9%)	**5,285 (30.8%)**	5,437 (31.7%)
	Total	6,256 (36.5%)	4,789 (28.0%)	6,089 (35.5%)	17,134 (100%)

Table 3.54. Grade 4 Core 1 Subclaim B Performance Level Percent Agreement

Grade 4 Core 1		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**5,454 (31.8%)**	1,084 (6.3%)		6,538 (38.2%)
	2	397 (2.3%)	**4,565 (26.6%)**	278 (1.6%)	5,240 (30.6%)
	3		1,299 (7.6%)	**4,057 (23.7%)**	5,356 (31.3%)
	Total	5,851 (34.1%)	6,948 (40.6%)	4,335 (25.3%)	17,134 (100%)

Table 3.55. Grade 4 Core 1 Subclaim C Performance Level Percent Agreement

Grade 4 Core 1		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**6,580 (38.4%)**	68 (0.4%)	3 (0.0%)	6,651 (38.8%)
	2	821 (4.8%)	**3,483 (20.3%)**	1,716 (10.0%)	6,020 (35.1%)
	3			**4,463 (26.0%)**	4,463 (26.0%)
	Total	7,401 (43.2%)	3,551 (20.7%)	6,182 (36.1%)	17,134 (100%)

Table 3.56. Grade 4 Core 1 Subclaim D Performance Level Percent Agreement

Grade 4 Core 1		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**8,130 (47.4%)**	54 (0.3%)		8,184 (47.8%)
	2	1,104 (6.4%)	**855 (5.0%)**	756 (4.4%)	2,715 (15.8%)
	3		196 (1.1%)	**6,039 (35.2%)**	6,235 (36.4%)
	Total	9,234 (53.9%)	1,105 (6.4%)	6,795 (39.7%)	17,134 (100%)

Table 3.57. Grade 4 Core 2 Subclaim A Performance Level Percent Agreement

Grade 4 Core 2		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**6,563 (38.1%)**	118 (0.7%)		6,681 (38.8%)
	2	614 (3.6%)	**4,169 (24.2%)**	386 (2.2%)	5,169 (30.0%)
	3		425 (2.5%)	**4,965 (28.8%)**	5,390 (31.3%)
	Total	7,177 (41.6%)	4,712 (27.3%)	5,351 (31.0%)	17,240 (100%)

Table 3.58. Grade 4 Core 2 Subclaim B Performance Level Percent Agreement

Grade 4 Core 2		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**5,847 (33.9%)**	991 (5.7%)		6,838 (39.7%)
	2	485 (2.8%)	**2,564 (14.9%)**	2,895 (16.8%)	5,944 (34.5%)
	3			**4,458 (25.9%)**	4,458 (25.9%)
	Total	6,332 (36.7%)	3,555 (20.6%)	7,353 (42.7%)	17,240 (100%)

Table 3.59. Grade 4 Core 2 Subclaim C Performance Level Percent Agreement

Grade 4 Core 2		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**7,409 (43.0%)**	276 (1.6%)		7,685 (44.6%)
	2	1,346 (7.8%)	**2,400 (13.9%)**	50 (0.3%)	3,796 (22.0%)
	3		1,332 (7.7%)	**4,427 (25.7%)**	5,759 (33.4%)
	Total	8,755 (50.8%)	4,008 (23.2%)	4,477 (26.0%)	17,240 (100%)

Table 3.60. Grade 4 Core 2 Subclaim D Performance Level Percent Agreement

Grade 4 Core 2		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**5,997 (34.8%)**	1,888 (11.0%)	213 (1.2%)	8,098 (47.0%)
	2	156 (0.9%)	**1,463 (8.5%)**	1,837 (10.7%)	3,456 (20.0%)
	3		962 (5.6%)	**4,724 (27.4%)**	5,686 (33.0%)
	Total	6,153 (35.7%)	4,313 (25.0%)	6,774 (39.3%)	17,240 (100%)

Table 3.61. Grade 4 Core 3 Subclaim A Performance Level Percent Agreement

Grade 4 Core 3		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**5,133 (35.6%)**	277 (1.9%)		5,410 (37.5%)
	2	479 (3.3%)	**3,516 (24.4%)**	356 (2.5%)	4,351 (30.1%)
	3		228 (1.6%)	**4,445 (30.8%)**	4,673 (32.4%)
	Total	5,612 (38.9%)	4,021 (27.9%)	4,801 (33.3%)	14,434 (100%)

Table 3.62. Grade 4 Core 3 Subclaim B Performance Level Percent Agreement

Grade 4 Core 3		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**4,993 (34.6%)**			4,993 (34.6%)
	2	2,047 (14.2%)	**1,739 (12.0%)**	318 (2.2%)	4,104 (28.4%)
	3		998 (6.9%)	**4,339 (30.1%)**	5,337 (37.0%)
	Total	7,040 (48.8%)	2,737 (19.0%)	4,657 (32.3%)	14,434 (100%)

Table 3.63. Grade 4 Core 3 Subclaim C Performance Level Percent Agreement

Grade 4 Core 3		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**5,868 (40.7%)**	436 (3.0%)		6,304 (43.7%)
	2	919 (6.4%)	**2,320 (16.1%)**	86 (0.6%)	3,325 (23.0%)
	3		1,436 (9.9%)	**3,369 (23.3%)**	4,805 (33.3%)
	Total	6,787 (47.0%)	4,192 (29.0%)	3,455 (23.9%)	14,434 (100%)

Table 3.64. Grade 4 Core 3 Subclaim D Performance Level Percent Agreement

Grade 4 Core 3		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**6,399 (44.3%)**	706 (4.9%)		7,105 (49.2%)
	2	215 (1.5%)	**1,412 (9.8%)**	603 (4.2%)	2,230 (15.4%)
	3		189 (1.3%)	**4,910 (34.0%)**	5,099 (35.3%)
	Total	6,614 (45.8%)	2,307 (16.0%)	5,513 (38.2%)	14,434 (100%)

Table 3.65. Grade 5 Core 1 Subclaim A Performance Level Percent Agreement

Grade 5 Core 1		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**3,877 (33.5%)**	237 (2.0%)		4,114 (35.5%)
	2	351 (3.0%)	**2,707 (23.4%)**	481 (4.2%)	3,539 (30.6%)
	3		229 (2.0%)	**3,702 (32.0%)**	3,931 (33.9%)
	Total	4,228 (36.5%)	3,173 (27.4%)	4,183 (36.1%)	11,584 (100%)

Table 3.66. Grade 5 Core 1 Subclaim B Performance Level Percent Agreement

Grade 5 Core 1		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**4,253 (36.7%)**	180 (1.6%)		4,433 (38.3%)
	2	1,110 (9.6%)	**2,218 (19.1%)**	612 (5.3%)	3,940 (34.0%)
	3			**3,211 (27.7%)**	3,211 (27.7%)
	Total	5,363 (46.3%)	2,398 (20.7%)	3,823 (33.0%)	11,584 (100%)

Table 3.67. Grade 5 Core 1 Subclaim C Performance Level Percent Agreement

Grade 5 Core 1		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**4,835 (41.7%)**	179 (1.5%)	10 (0.1%)	5,024 (43.4%)
	2	396 (3.4%)	**1,752 (15.1%)**	1,211 (10.5%)	3,359 (29.0%)
	3			**3,201 (27.6%)**	3,201 (27.6%)
	Total	5,231 (45.2%)	1,931 (16.7%)	4,422 (38.2%)	11,584 (100%)

Table 3.68. Grade 5 Core 1 Subclaim D Performance Level Percent Agreement

Grade 5 Core 1		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**4,153 (35.9%)**	226 (2.0%)		4,379 (37.8%)
	2	729 (6.3%)	**2,552 (22.0%)**	438 (3.8%)	3,719 (32.1%)
	3			**3,486 (30.1%)**	3,486 (30.1%)
	Total	4,882 (42.1%)	2,778 (24.0%)	3,924 (33.9%)	11,584 (100%)

Table 3.69. Grade 5 Core 2 Subclaim A Performance Level Percent Agreement

Grade 5 Core 2		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**7,938 (34.7%)**	800 (3.5%)		8,738 (38.2%)
	2	421 (1.8%)	**6,029 (26.4%)**	433 (1.9%)	6,883 (30.1%)
	3		790 (3.5%)	**6,440 (28.2%)**	7,230 (31.6%)
	Total	8,359 (36.6%)	7,619 (33.3%)	6,873 (30.1%)	22,851 (100%)

Table 3.70. Grade 5 Core 2 Subclaim B Performance Level Percent Agreement

Grade 5 Core 2		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**7,048 (30.8%)**	2,918 (12.8%)	287 (1.3%)	10,253 (44.9%)
	2		**3,273 (14.3%)**	1,362 (6.0%)	4,635 (20.3%)
	3			**7,963 (34.8%)**	7,963 (34.8%)
	Total	7,048 (30.8%)	6,191 (27.1%)	9,612 (42.1%)	22,851 (100%)

Table 3.71. Grade 5 Core 2 Subclaim C Performance Level Percent Agreement

Grade 5 Core 2		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**8,806 (38.5%)**	450 (2.0%)		9,256 (40.5%)
	2	818 (3.6%)	**5,183 (22.7%)**	127 (0.6%)	6,128 (26.8%)
	3		1,510 (6.6%)	**5,957 (26.1%)**	7,467 (32.7%)
	Total	9,624 (42.1%)	7,143 (31.3%)	6,084 (26.6%)	22,851 (100%)

Table 3.72. Grade 5 Core 2 Subclaim D Performance Level Percent Agreement

Grade 5 Core 2		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**10,227 (44.8%)**	356 (1.6%)	11 (0.0%)	10,594 (46.4%)
	2	1,641 (7.2%)	**2,315 (10.1%)**	955 (4.2%)	4,911 (21.5%)
	3			**7,346 (32.1%)**	7,346 (32.1%)
	Total	11,868 (51.9%)	2,671 (11.7%)	8,312 (36.4%)	22,851 (100%)

Table 3.73. Grade 5 Core 3 Subclaim A Performance Level Percent Agreement

Grade 5 Core 3		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**5,300 (36.4%)**	402 (2.8%)		5,702 (39.1%)
	2	310 (2.1%)	**3,115 (21.4%)**	384 (2.6%)	3,809 (26.1%)
	3		357 (2.4%)	**4,704 (32.3%)**	5,061 (34.7%)
	Total	5,610 (38.5%)	3,874 (26.6%)	5,088 (34.9%)	14,572 (100%)

Table 3.74. Grade 5 Core 3 Subclaim B Performance Level Percent Agreement

Grade 5 Core 3		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**4,514 (31.0%)**	1,530 (10.5%)		6,044 (41.5%)
	2	81 (0.6%)	**1,496 (10.3%)**	3,462 (23.8%)	5,039 (34.6%)
	3			**3,489 (23.9%)**	3,489 (23.9%)
	Total	4,595 (31.5%)	3,026 (20.8%)	6,951 (47.7%)	14,572 (100%)

Table 3.75. Grade 5 Core 3 Subclaim C Performance Level Percent Agreement

Grade 5 Core 3		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**6,351 (43.6%)**	223 (1.5%)		6,574 (45.1%)
	2	612 (4.2%)	**2,627 (18.0%)**	71 (0.5%)	3,310 (22.7%)
	3		584 (4.0%)	**4,104 (28.2%)**	4,688 (32.2%)
	Total	6,963 (47.8%)	3,434 (23.6%)	4,175 (28.7%)	14,572 (100%)

Table 3.76. Grade 5 Core 3 Subclaim D Performance Level Percent Agreement

Grade 5 Core 3		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**5,277 (36.2%)**	107 (0.7%)	15 (0.1%)	5,399 (37.1%)
	2	1,298 (8.9%)	**1,989 (13.6%)**	684 (4.7%)	3,971 (27.3%)
	3			**5,202 (35.7%)**	5,202 (35.7%)
	Total	6,575 (45.1%)	2,096 (14.4%)	5,901 (40.5%)	14,572 (100%)

Table 3.77. Grade 6 Core 2 Subclaim A Performance Level Percent Agreement

Grade 6 Core 2		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**5,514 (30.5%)**	102 (0.6%)		5,616 (31.1%)
	2	924 (5.1%)	**5,003 (27.7%)**	245 (1.4%)	6,172 (34.2%)
	3		763 (4.2%)	**5,512 (30.5%)**	6,275 (34.7%)
	Total	6,438 (35.6%)	5,868 (32.5%)	5,757 (31.9%)	18,063 (100%)

Table 3.78. Grade 6 Core 2 Subclaim B Performance Level Percent Agreement

Grade 6 Core 2		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**5,096 (28.2%)**	275 (1.5%)		5,371 (29.7%)
	2	1,190 (6.6%)	**4,489 (24.9%)**	554 (3.1%)	6,233 (34.5%)
	3		734 (4.1%)	**5,725 (31.7%)**	6,459 (35.8%)
	Total	6,286 (34.8%)	5,498 (30.4%)	6,279 (34.8%)	18,063 (100%)

Table 3.79. Grade 6 Core 2 Subclaim C Performance Level Percent Agreement

Grade 6 Core 2		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**5,590 (30.9%)**	854 (4.7%)	18 (0.1%)	6,462 (35.8%)
	2		**3,595 (19.9%)**	669 (3.7%)	4,264 (23.6%)
	3			**7,337 (40.6%)**	7,337 (40.6%)
	Total	5,590 (30.9%)	4,449 (24.6%)	8,024 (44.4%)	18,063 (100%)

Table 3.80. Grade 6 Core 2 Subclaim D Performance Level Percent Agreement

Grade 6 Core 2		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**5,433 (30.1%)**	367 (2.0%)		5,800 (32.1%)
	2	748 (4.1%)	**4,237 (23.5%)**	1,216 (6.7%)	6,201 (34.3%)
	3		1,964 (10.9%)	**4,098 (22.7%)**	6,062 (33.6%)
	Total	6,181 (34.2%)	6,568 (36.4%)	5,314 (29.4%)	18,063 (100%)

Table 3.81. Grade 6 Core 3 Subclaim A Performance Level Percent Agreement

Grade 6 Core 3		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**6,178 (33.8%)**	573 (3.1%)		6,751 (37.0%)
	2	274 (1.5%)	**3,953 (21.6%)**	454 (2.5%)	4,681 (25.6%)
	3		608 (3.3%)	**6,227 (34.1%)**	6,835 (37.4%)
	Total	6,452 (35.3%)	5,134 (28.1%)	6,681 (36.6%)	18,267 (100%)

Table 3.82. Grade 6 Core 3 Subclaim B Performance Level Percent Agreement

Grade 6 Core 3		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**6,606 (36.2%)**	437 (2.4%)		7,043 (38.6%)
	2	690 (3.8%)	**2,549 (14.0%)**	1,991 (10.9%)	5,230 (28.6%)
	3		160 (0.9%)	**5,834 (31.9%)**	5,994 (32.8%)
	Total	7,296 (39.9%)	3,146 (17.2%)	7,825 (42.8%)	18,267 (100%)

Table 3.83. Grade 6 Core 3 Subclaim C Performance Level Percent Agreement

Grade 6 Core 3		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**6,118 (33.5%)**	627 (3.4%)	13 (0.1%)	6,758 (37.0%)
	2		**3,161 (17.3%)**	389 (2.1%)	3,550 (19.4%)
	3			**7,959 (43.6%)**	7,959 (43.6%)
	Total	6,118 (33.5%)	3,788 (20.7%)	8,361 (45.8%)	18,267 (100%)

Table 3.84. Grade 6 Core 3 Subclaim D Performance Level Percent Agreement

Grade 6 Core 3		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**5,132 (28.1%)**	1,043 (5.7%)		6,175 (33.8%)
	2	786 (4.3%)	**2,598 (14.2%)**	350 (1.9%)	3,734 (20.4%)
	3		3,141 (17.2%)	**5,217 (28.6%)**	8,358 (45.8%)
	Total	5,918 (32.4%)	6,782 (37.1%)	5,567 (30.5%)	18,267 (100%)

Table 3.85. Grade 7 Core 1 Subclaim A Performance Level Percent Agreement

Grade 7 Core 1		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**4,774 (28.0%)**	214 (1.3%)		4,988 (29.3%)
	2	458 (2.7%)	**5,555 (32.6%)**	370 (2.2%)	6,383 (37.5%)
	3		602 (3.5%)	**5,066 (29.7%)**	5,668 (33.3%)
	Total	5,232 (30.7%)	6,371 (37.4%)	5,436 (31.9%)	17,039 (100%)

Table 3.86. Grade 7 Core 1 Subclaim B Performance Level Percent Agreement

Grade 7 Core 1		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**4,487 (26.3%)**	1,025 (6.0%)		5,512 (32.3%)
	2	281 (1.6%)	**3,986 (23.4%)**	591 (3.5%)	4,858 (28.5%)
	3		943 (5.5%)	**5,726 (33.6%)**	6,669 (39.1%)
	Total	4,768 (28.0%)	5,954 (34.9%)	6,317 (37.1%)	17,039 (100%)

Table 3.87. Grade 7 Core 1 Subclaim C Performance Level Percent Agreement

Grade 7 Core 1		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**4,062 (23.8%)**	536 (3.1%)		4,598 (27.0%)
	2	947 (5.6%)	**5,241 (30.8%)**	538 (3.2%)	6,726 (39.5%)
	3			**5,715 (33.5%)**	5,715 (33.5%)
	Total	5,009 (29.4%)	5,777 (33.9%)	6,253 (36.7%)	17,039 (100%)

Table 3.88. Grade 7 Core 1 Subclaim D Performance Level Percent Agreement

Grade 7 Core 1		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**4,421 (25.9%)**	676 (4.0%)		5,097 (29.9%)
	2		**3,535 (20.7%)**	382 (2.2%)	3,917 (23.0%)
	3			**8,025 (47.1%)**	8,025 (47.1%)
	Total	4,421 (25.9%)	4,211 (24.7%)	8,407 (49.3%)	17,039 (100%)

Table 3.89. Grade 7 Core 2 Subclaim A Performance Level Percent Agreement

Grade 7 Core 2		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**4,855 (28.7%)**	338 (2.0%)		5,193 (30.6%)
	2	350 (2.1%)	**5,327 (31.4%)**	367 (2.2%)	6,044 (35.7%)
	3		480 (2.8%)	**5,227 (30.8%)**	5,707 (33.7%)
	Total	5,205 (30.7%)	6,145 (36.3%)	5,594 (33.0%)	16,944 (100%)

Table 3.90. Grade 7 Core 2 Subclaim B Performance Level Percent Agreement

Grade 7 Core 2		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**5,409 (31.9%)**	155 (0.9%)	1 (0.0%)	5,565 (32.8%)
	2	1,408 (8.3%)	**3,524 (20.8%)**	1,240 (7.3%)	6,172 (36.4%)
	3			**5,207 (30.7%)**	5,207 (30.7%)
	Total	6,817 (40.2%)	3,679 (21.7%)	6,448 (38.1%)	16,944 (100%)

Table 3.91. Grade 7 Core 2 Subclaim C Performance Level Percent Agreement

Grade 7 Core 2		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**3,837 (22.6%)**	1,560 (9.2%)	79 (0.5%)	5,476 (32.3%)
	2		**2,127 (12.6%)**	127 (0.7%)	2,254 (13.3%)
	3		2,535 (15.0%)	**6,679 (39.4%)**	9,214 (54.4%)
	Total	3,837 (22.6%)	6,222 (36.7%)	6,885 (40.6%)	16,944 (100%)

Table 3.92. Grade 7 Core 2 Subclaim D Performance Level Percent Agreement

Grade 7 Core 2		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**4,303 (25.4%)**	315 (1.9%)		4,618 (27.3%)
	2		**5,127 (30.3%)**	68 (0.4%)	5,195 (30.7%)
	3			**7,131 (42.1%)**	7,131 (42.1%)
	Total	4,303 (25.4%)	5,442 (32.1%)	7,199 (42.5%)	16,944 (100%)

Table 3.93. Grade 7 Core 3 Subclaim A Performance Level Percent Agreement

Grade 7 Core 3		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**3,741 (27.7%)**	70 (0.5%)		3,811 (28.3%)
	2	507 (3.8%)	**3,749 (27.8%)**	183 (1.4%)	4,439 (32.9%)
	3		616 (4.6%)	**4,622 (34.3%)**	5,238 (38.8%)
	Total	4,248 (31.5%)	4,435 (32.9%)	4,805 (35.6%)	13,488 (100%)

Table 3.94. Grade 7 Core 3 Subclaim B Performance Level Percent Agreement

Grade 7 Core 3		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**3,633 (26.9%)**	651 (4.8%)		4,284 (31.8%)
	2		**4,077 (30.2%)**	477 (3.5%)	4,554 (33.8%)
	3			**4,650 (34.5%)**	4,650 (34.5%)
	Total	3,633 (26.9%)	4,728 (35.1%)	5,127 (38.0%)	13,488 (100%)

Table 3.95. Grade 7 Core 3 Subclaim C Performance Level Percent Agreement

Grade 7 Core 3		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**3,279 (24.3%)**	297 (2.2%)		3,576 (26.5%)
	2	585 (4.3%)	**3,717 (27.6%)**	520 (3.9%)	4,822 (35.8%)
	3			**5,090 (37.7%)**	5,090 (37.7%)
	Total	3,864 (28.6%)	4,014 (29.8%)	5,610 (41.6%)	13,488 (100%)

Table 3.96. Grade 7 Core 3 Subclaim D Performance Level Percent Agreement

Grade 7 Core 3		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**3,484 (25.8%)**	1,097 (8.1%)		4,581 (34.0%)
	2	337 (2.5%)	**2,299 (17.0%)**	1,038 (7.7%)	3,674 (27.2%)
	3			**5,233 (38.8%)**	5,233 (38.8%)
	Total	3,821 (28.3%)	3,396 (25.2%)	6,271 (46.5%)	13,488 (100%)

Table 3.97. Grade 8 Core 1 Subclaim A Performance Level Percent Agreement

Grade 8 Core 1		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**2,323 (22.7%)**	144 (1.4%)		2,467 (24.1%)
	2	151 (1.5%)	**1,752 (17.1%)**	77 (0.8%)	1,980 (19.4%)
	3		374 (3.7%)	**5,402 (52.8%)**	5,776 (56.5%)
	Total	2,474 (24.2%)	2,270 (22.2%)	5,479 (53.6%)	10,223 (100%)

Table 3.98. Grade 8 Core 1 Subclaim B Performance Level Percent Agreement

Grade 8 Core 1		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**2,957 (28.9%)**	125 (1.2%)	4 (0.0%)	3,086 (30.2%)
	2	413 (4.0%)	**909 (8.9%)**	103 (1.0%)	1,425 (13.9%)
	3		679 (6.6%)	**5,033 (49.2%)**	5,712 (55.9%)
	Total	3,370 (33.0%)	1,713 (16.8%)	5,140 (50.3%)	10,223 (100%)

Table 3.99. Grade 8 Core 1 Subclaim C Performance Level Percent Agreement

Grade 8 Core 1		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**2,118 (20.7%)**	684 (6.7%)	14 (0.1%)	2,816 (27.5%)
	2		**1,047 (10.2%)**	98 (1.0%)	1,145 (11.2%)
	3		1,093 (10.7%)	**5,169 (50.6%)**	6,262 (61.3%)
	Total	2,118 (20.7%)	2,824 (27.6%)	5,281 (51.7%)	10,223 (100%)

Table 3.100. Grade 8 Core 1 Subclaim D Performance Level Percent Agreement

Grade 8 Core 1		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**1,860 (18.2%)**	499 (4.9%)		2,359 (23.1%)
	2	220 (2.2%)	**602 (5.9%)**	2,293 (22.4%)	3,115 (30.5%)
	3		205 (2.0%)	**4,544 (44.4%)**	4,749 (46.5%)
	Total	2,080 (20.3%)	1,306 (12.8%)	6,837 (66.9%)	10,223 (100%)

Table 3.101. Grade 8 Core 3 Subclaim A Performance Level Percent Agreement

Grade 8 Core 3		Abbreviated Form Subclaim A Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim A Performance Levels	1	**2,535 (19.4%)**	73 (0.6%)		2,608 (19.9%)
	2	846 (6.5%)	**2,114 (16.2%)**	696 (5.3%)	3,656 (28.0%)
	3		238 (1.8%)	**6,573 (50.3%)**	6,811 (52.1%)
	Total	3,381 (25.9%)	2,425 (18.5%)	7,269 (55.6%)	13,075 (100%)

Table 3.102. Grade 8 Core 3 Subclaim B Performance Level Percent Agreement

Grade 8 Core 3		Abbreviated Form Subclaim B Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim B Performance Levels	1	**2,596 (19.9%)**	109 (0.8%)		2,705 (20.7%)
	2	1,000 (7.6%)	**1,476 (11.3%)**	802 (6.1%)	3,278 (25.1%)
	3		365 (2.8%)	**6,727 (51.4%)**	7,092 (54.2%)
	Total	3,596 (27.5%)	1,950 (14.9%)	7,529 (57.6%)	13,075 (100%)

Table 3.103. Grade 8 Core 3 Subclaim C Performance Level Percent Agreement

Grade 8 Core 3		Abbreviated Form Subclaim C Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim C Performance Levels	1	**3,196 (24.4%)**	125 (1.0%)	53 (0.4%)	3,374 (25.8%)
	2		**1,327 (10.1%)**	95 (0.7%)	1,422 (10.9%)
	3			**8,279 (63.3%)**	8,279 (63.3%)
	Total	3,196 (24.4%)	1,452 (11.1%)	8,427 (64.5%)	13,075 (100%)

Table 3.104. Grade 8 Core 3 Subclaim D Performance Level Percent Agreement

Grade 8 Core 3		Abbreviated Form Subclaim D Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim D Performance Levels	1	**3,314 (25.3%)**	373 (2.9%)	106 (0.8%)	3,793 (29.0%)
	2	1,609 (12.3%)	**1,477 (11.3%)**	545 (4.2%)	3,631 (27.8%)
	3			**5,651 (43.2%)**	5,651 (43.2%)
	Total	4,923 (37.7%)	1,850 (14.1%)	6,302 (48.2%)	13,075 (100%)

Correlations and Overall Scale Score Differences

The correlation between the overall scale scores and abbreviated form scale scores were calculated for each core form in all grades as shown in Table 3.105. Correlations for each core form ranged between .982 and .990 for the overall scale score.

Table 3.105. *Pearson Correlations between Full and Abbreviated Form Scale Scores*

Grade	Core 1 Scale Score	Core 2 Scale Score	Core 3 Scale Score	Combined Cores Scale Score
3	0.990	0.990	0.988	0.989
4	0.990	0.989	0.990	0.990
5	0.990	0.990	0.988	0.989
6	N/A	0.990	0.989	0.990
7	0.987	0.989	0.987	0.988
8	0.983	N/A	0.982	0.982

Figures 3.1 – 3.24 alternate between displaying the scatterplot of overall scale scores versus abbreviated form scale scores and the frequency distribution of the differences in scale scores between full and abbreviated forms, for the cores combined and then for each individual core form.

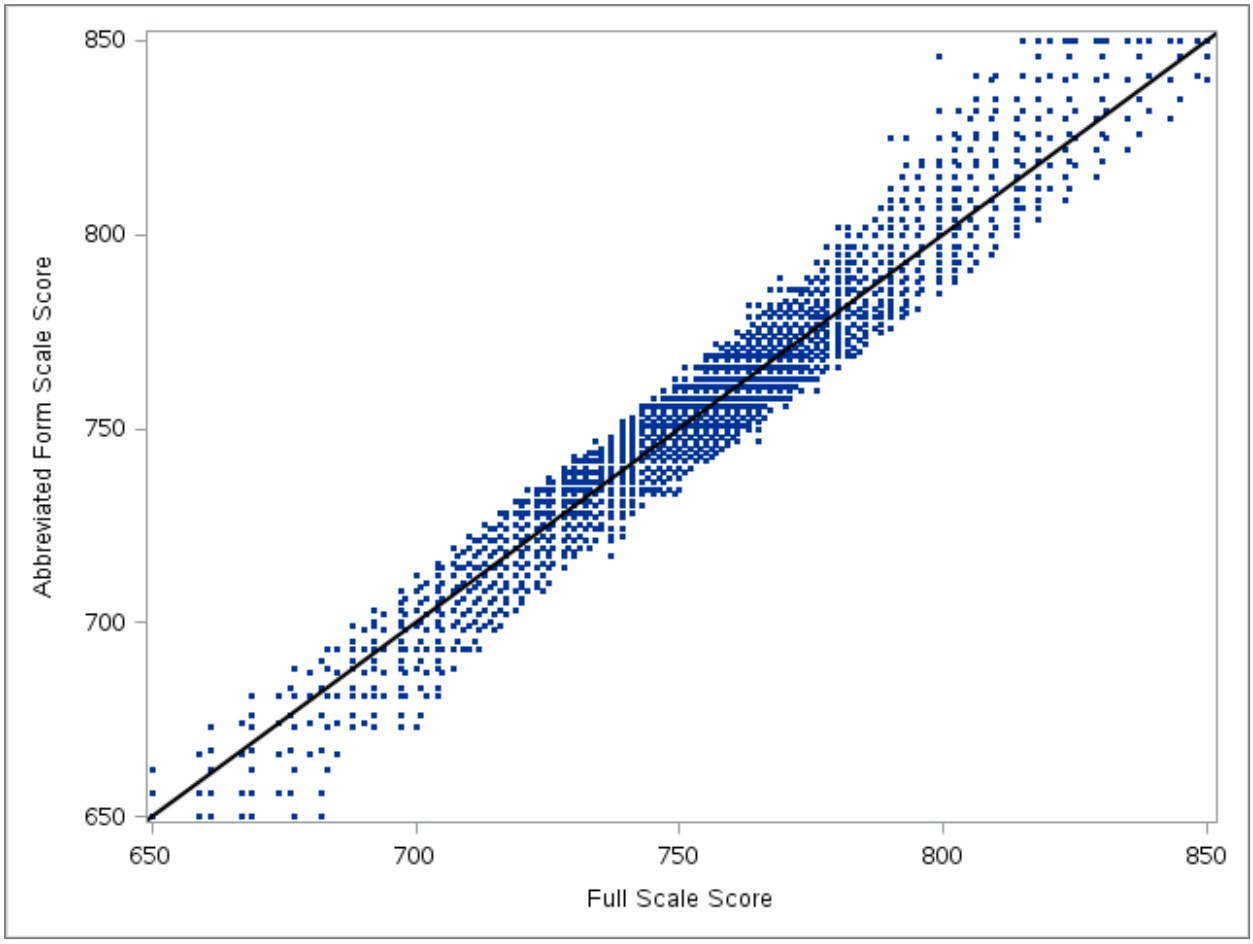

Figure 3.1. Grade 3 CBT Abbreviated vs. Full Scale Scores.

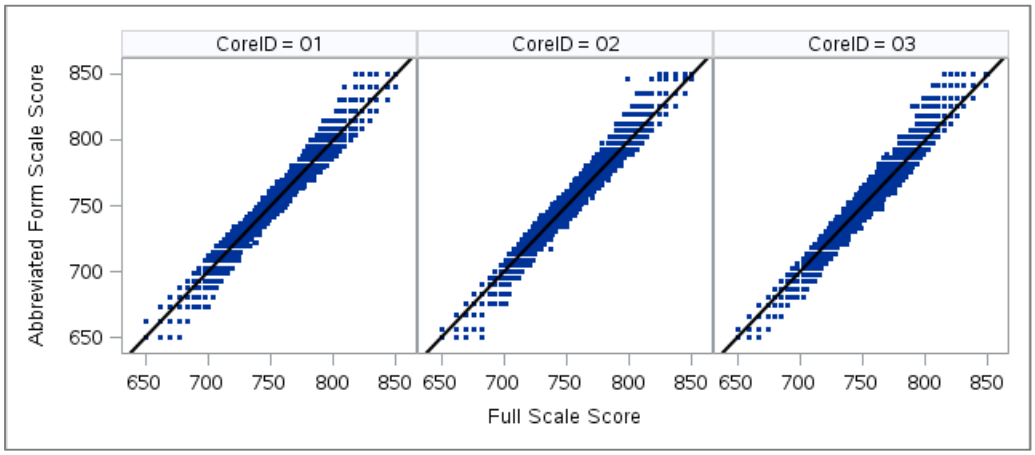

Figure 3.2. Grade 3 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

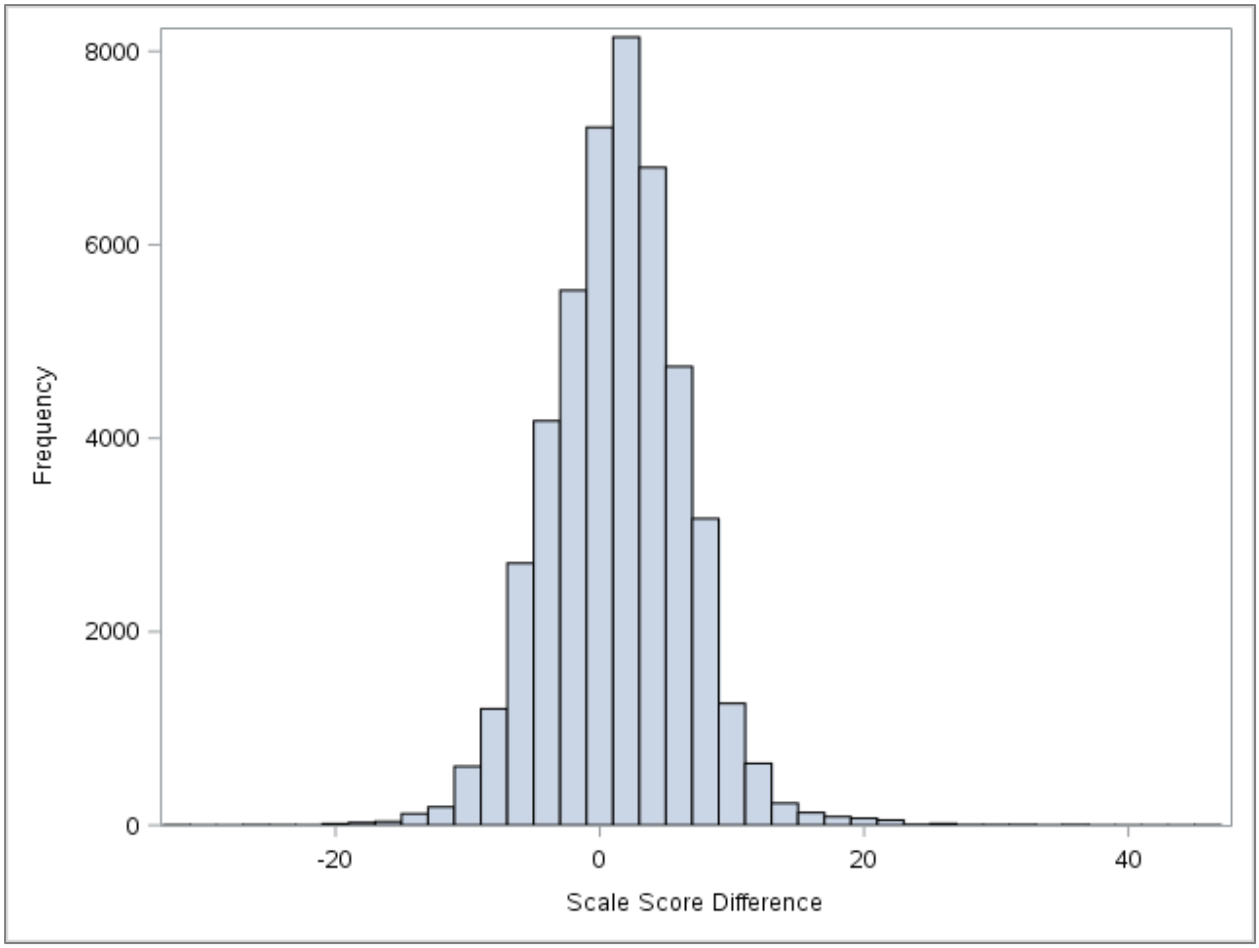

Figure 3.3. Grade 3 CBT Differences Between Abbreviated and Full Scale Scores.

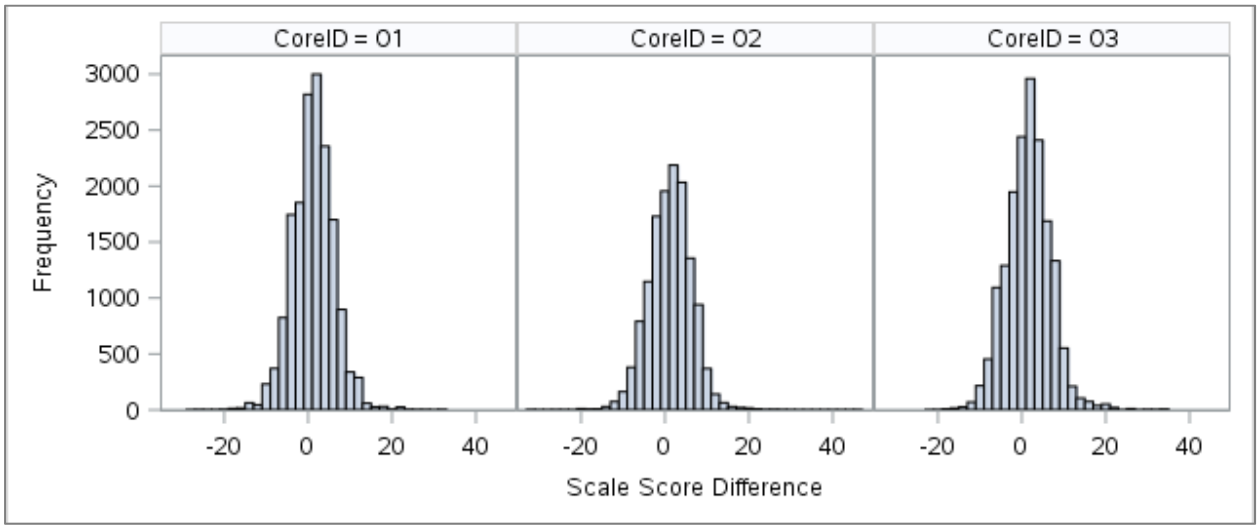

Figure 3.4. Grade 3 CBT Differences Between Abbreviated and Full Scale Scores by Core Form.

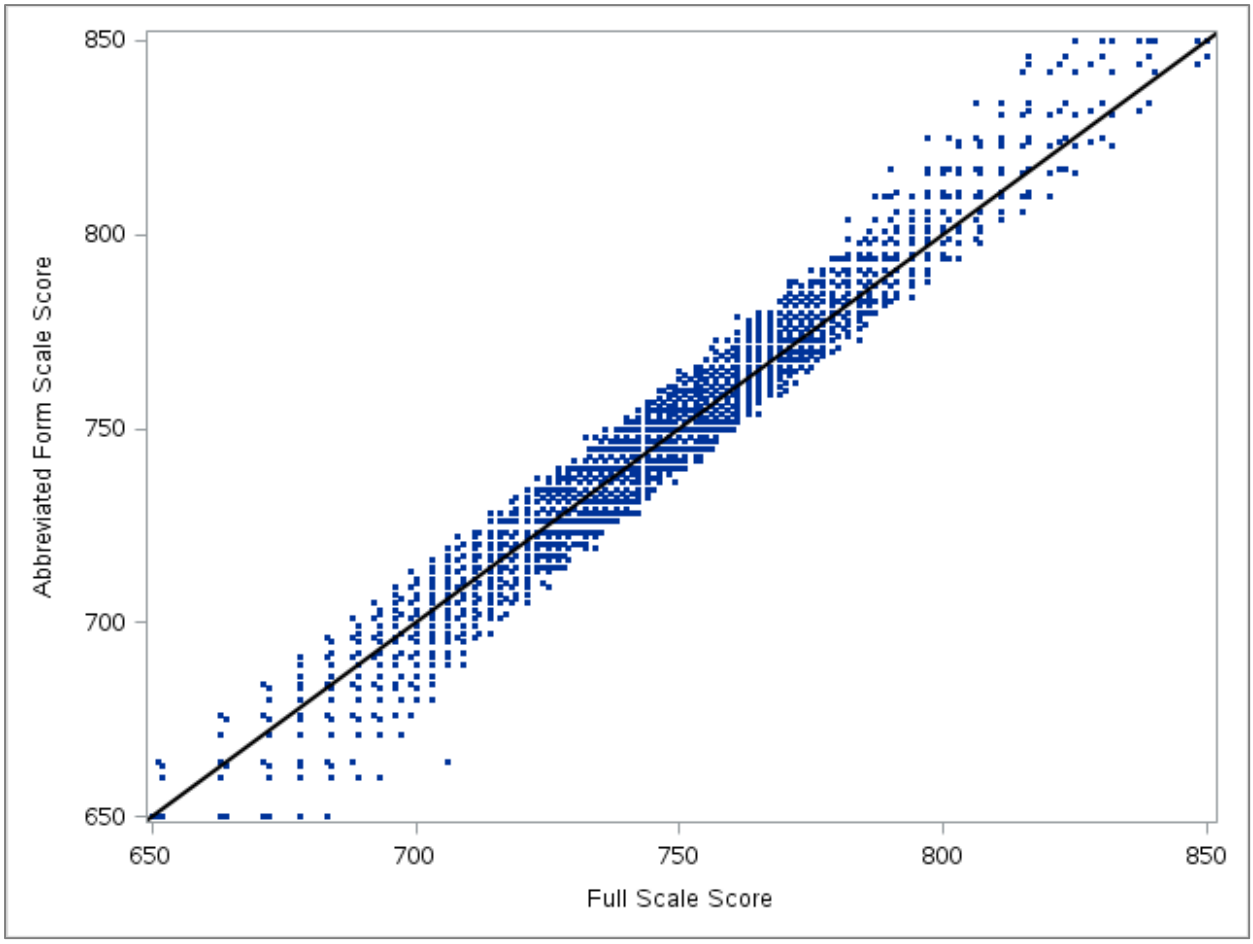

Figure 3.5. Grade 4 CBT Abbreviated vs. Full Scale Scores.

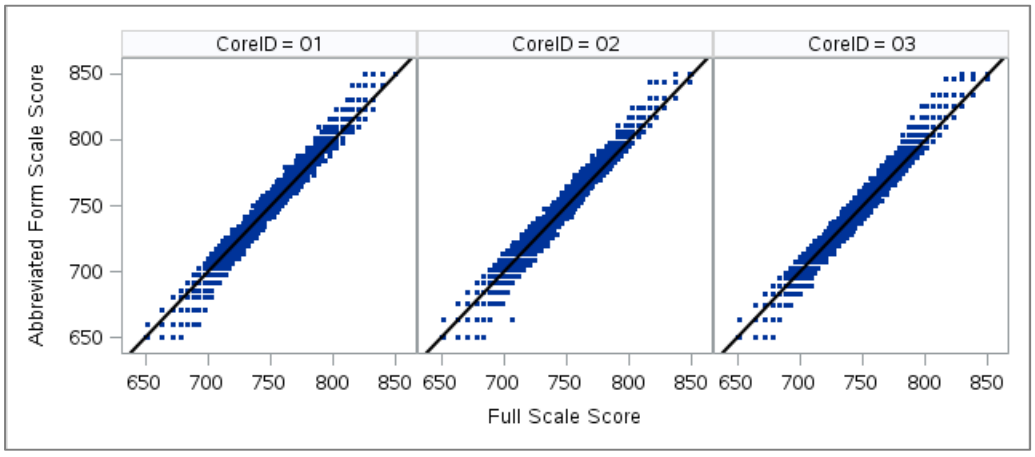

Figure 3.6. Grade 4 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

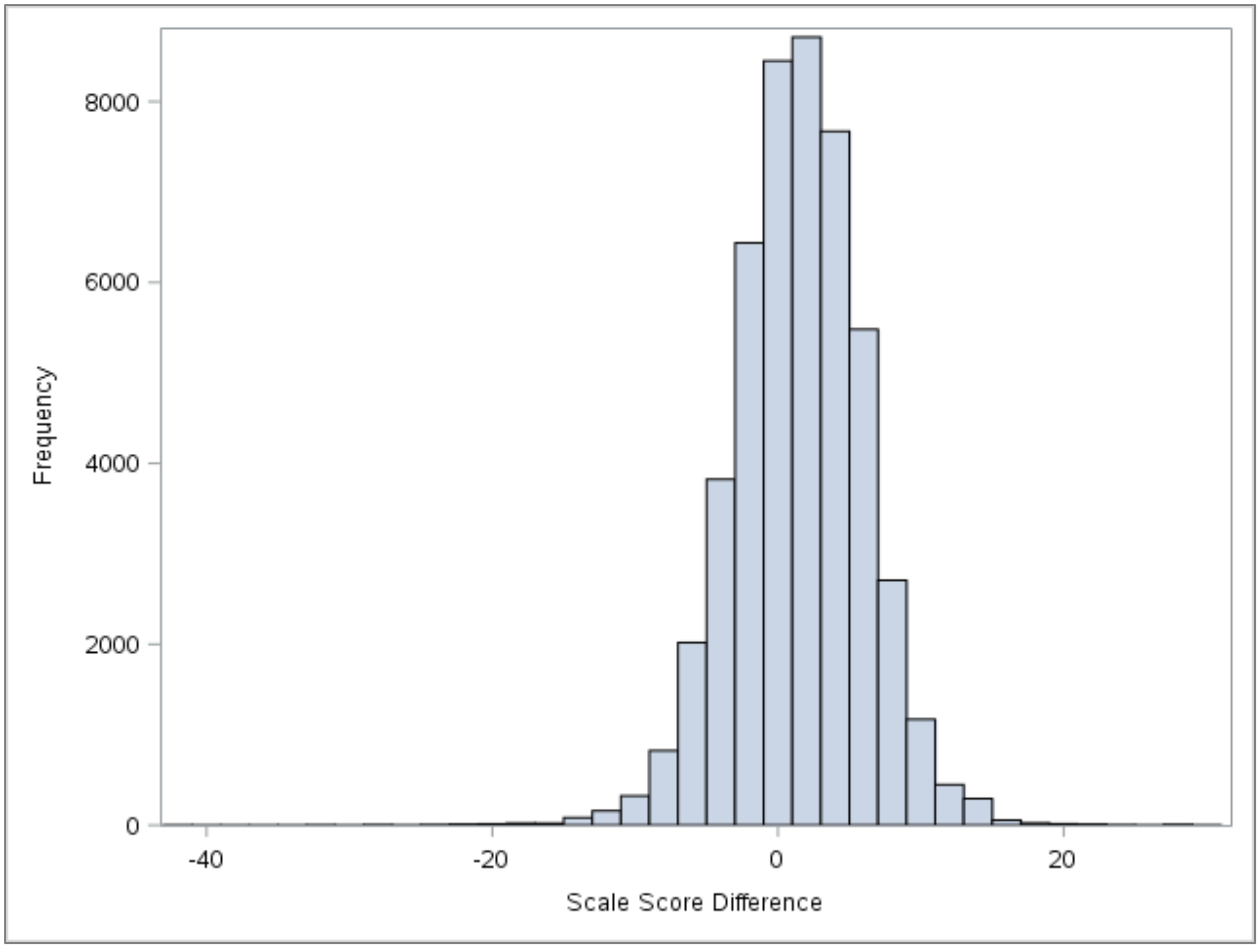

Figure 3.7. Grade 4 CBT Differences Between Abbreviated and Full Scale Scores.

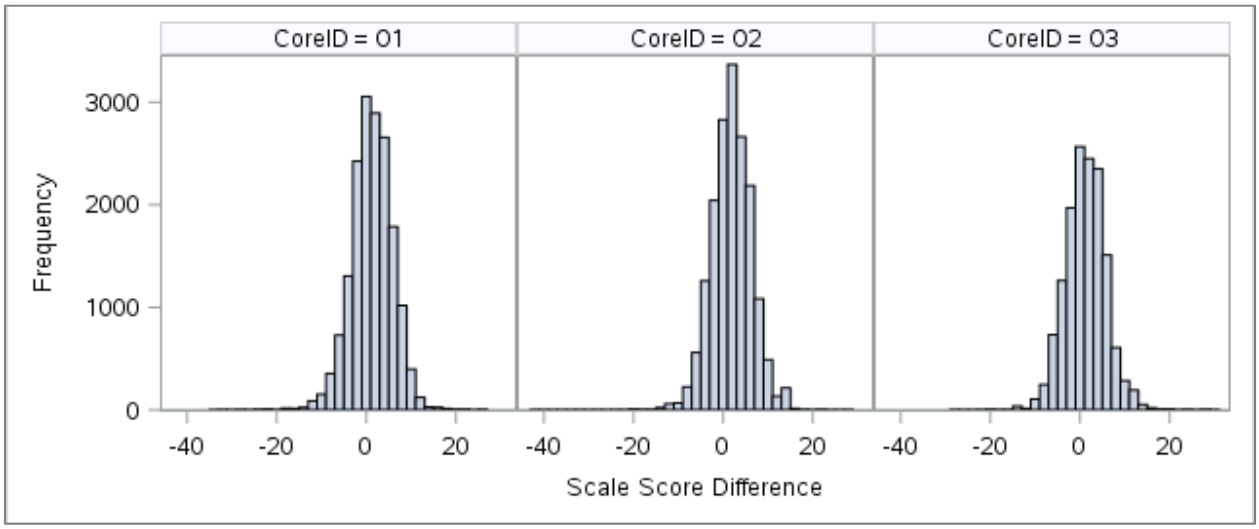

Figure 3.8. Grade 4 CBT Differences Between Abbreviated and Full Scale Scores by Core Form.

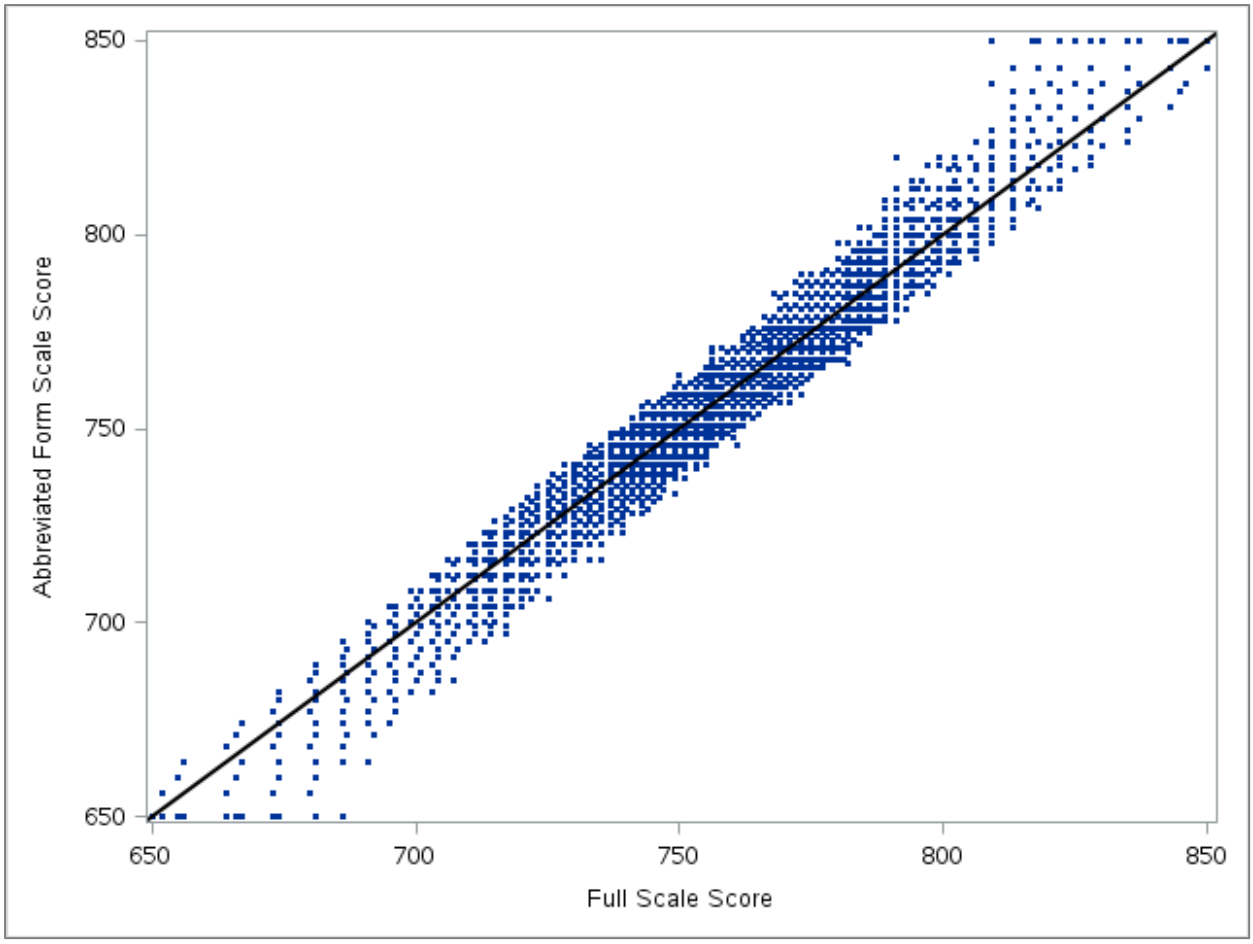

Figure 3.9. Grade 5 CBT Abbreviated vs. Full Scale Scores.

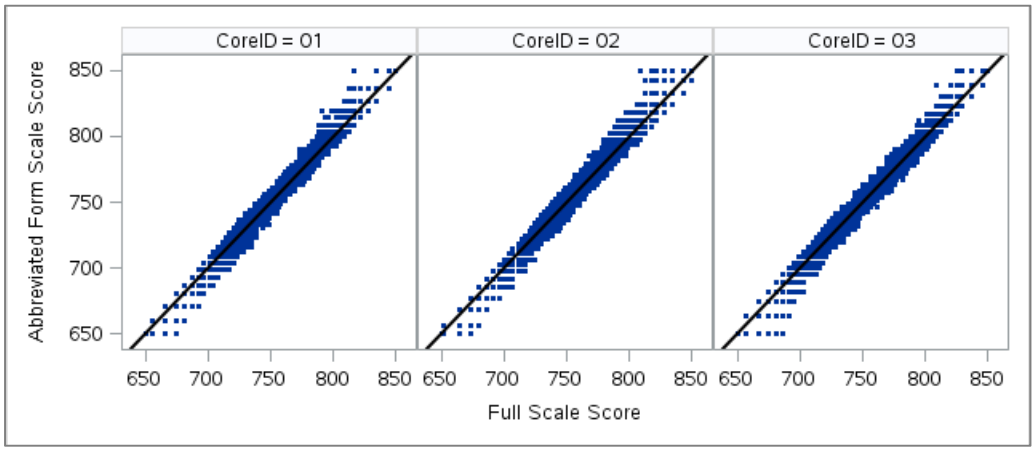

Figure 3.10. Grade 5 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

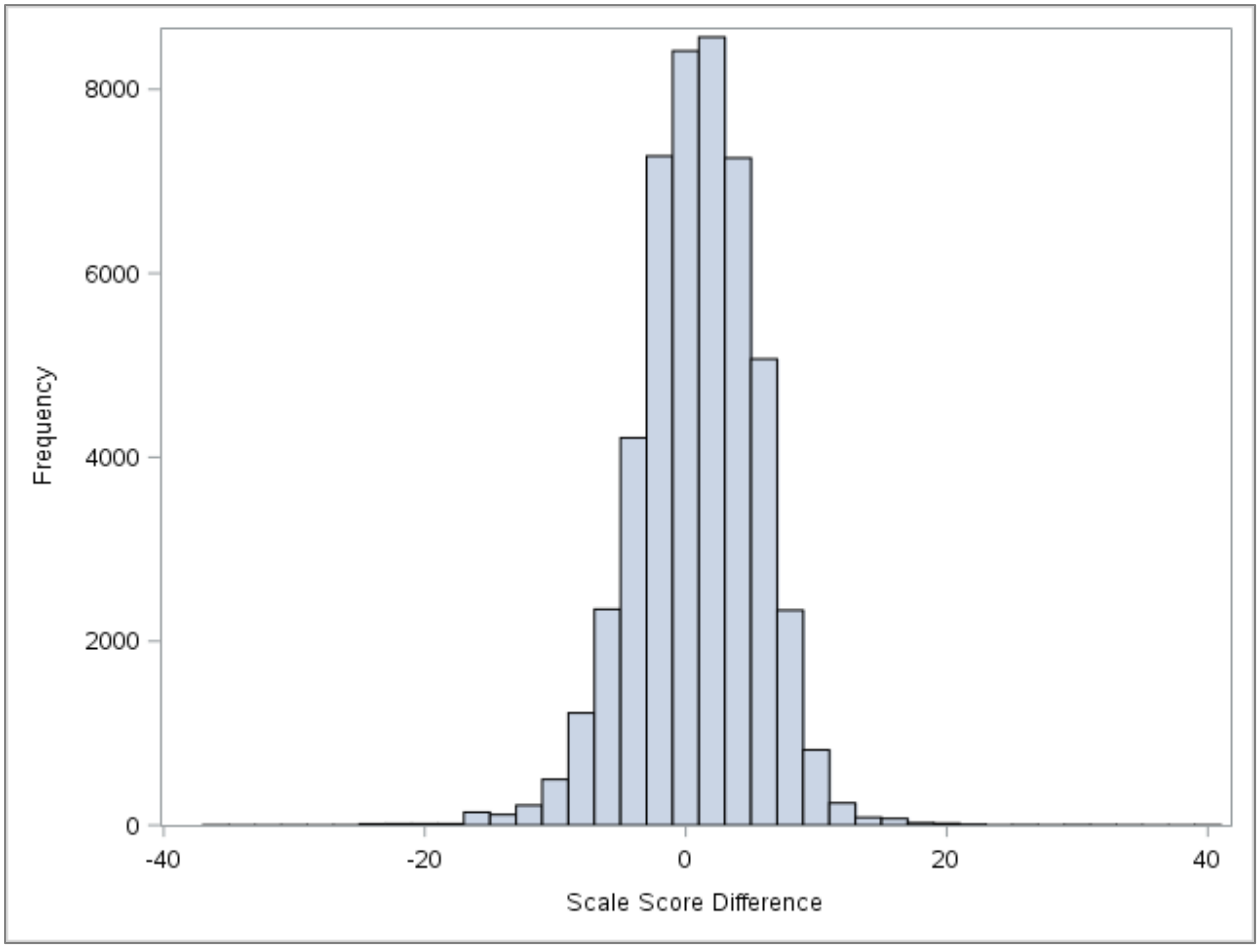

Figure 3.11. Grade 5 CBT Differences Between Abbreviated and Full Scale Scores.

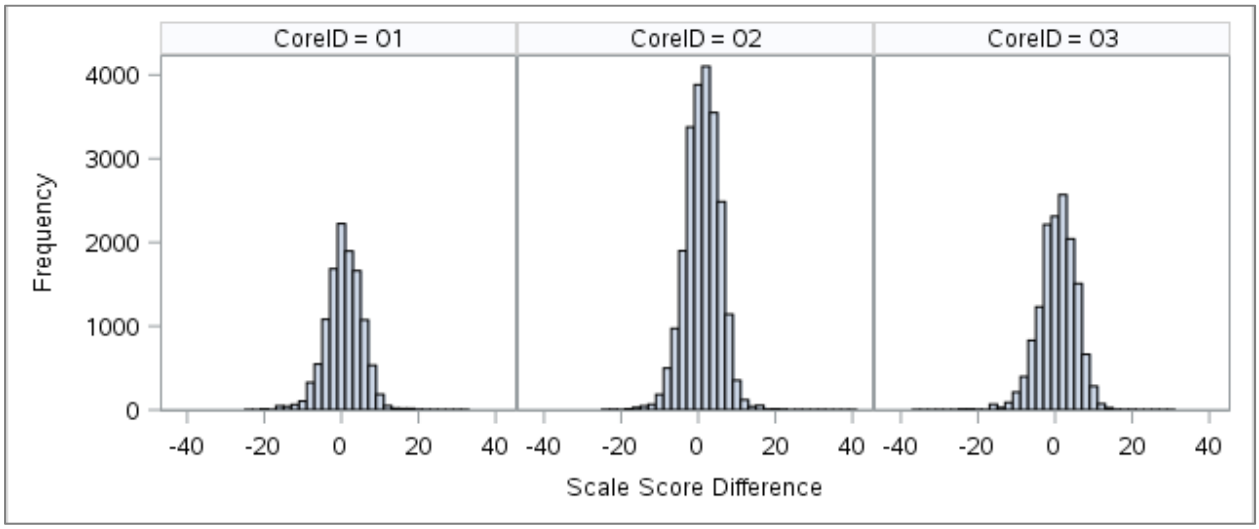

Figure 3.12. Grade 5 CBT Differences Between Abbreviated and Full Scale Scores by Core Form.

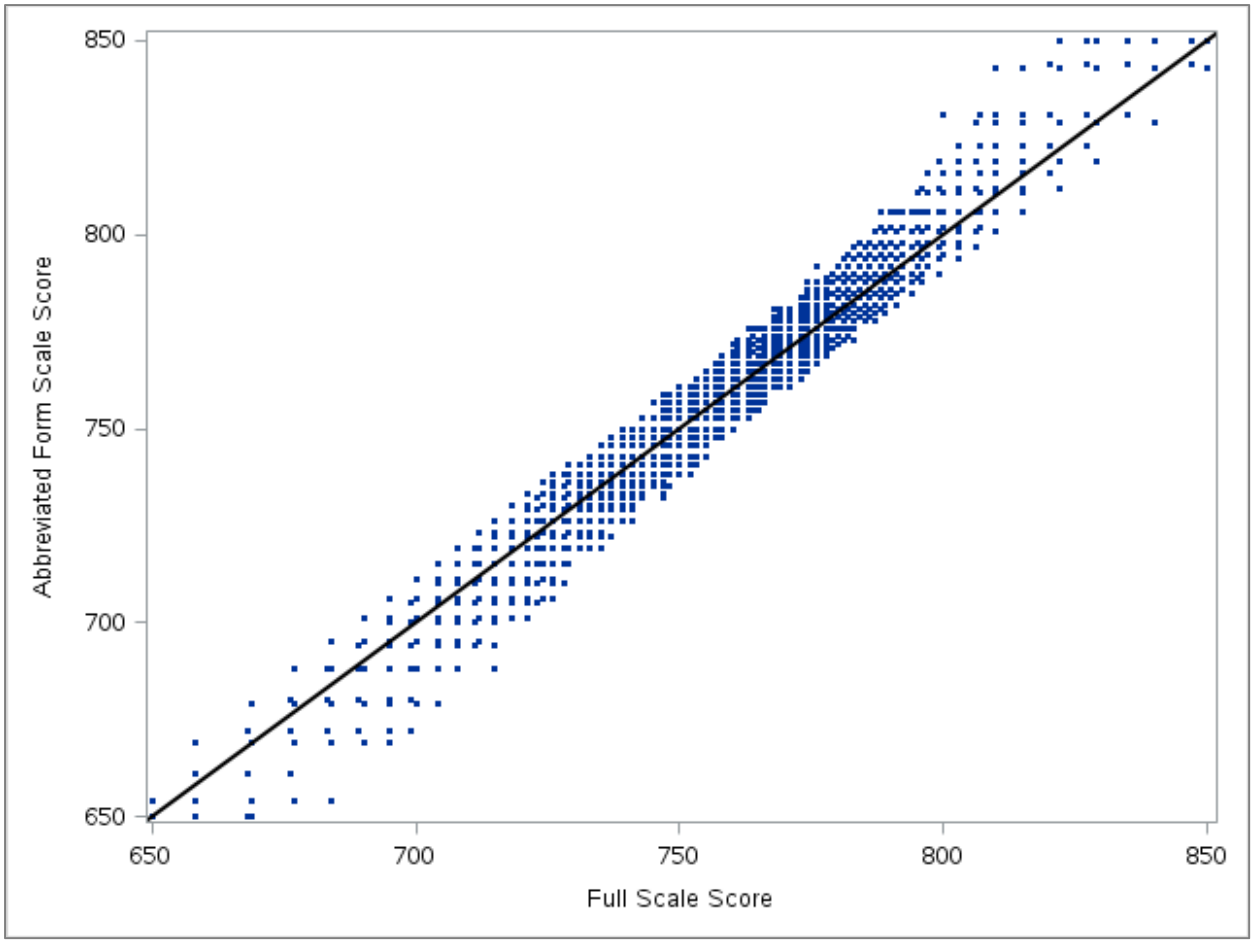

Figure 3.13. Grade 6 CBT Abbreviated vs. Full Scale Scores.

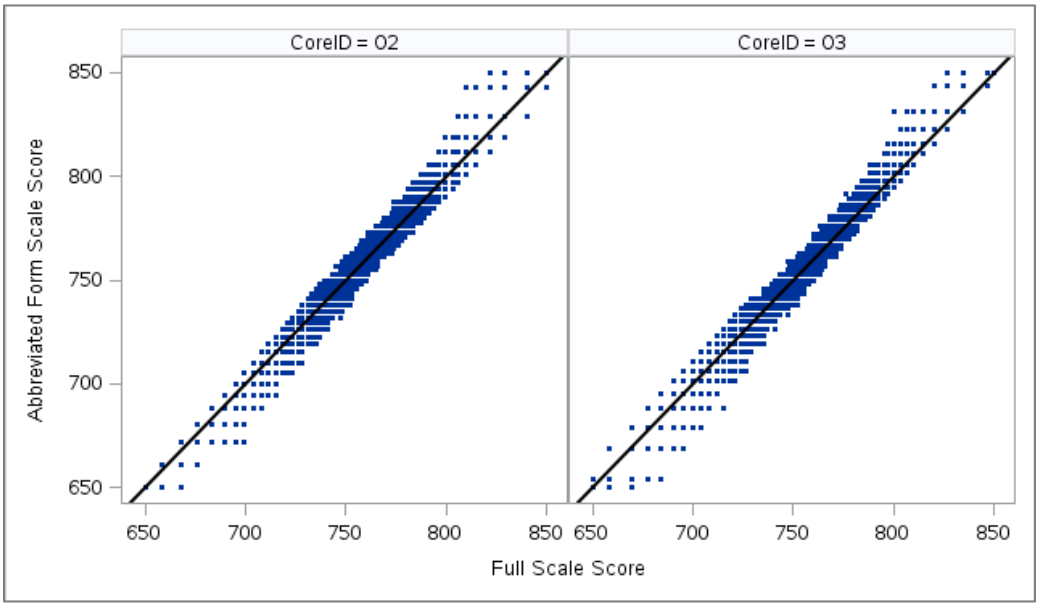

Figure 3.14. Grade 6 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

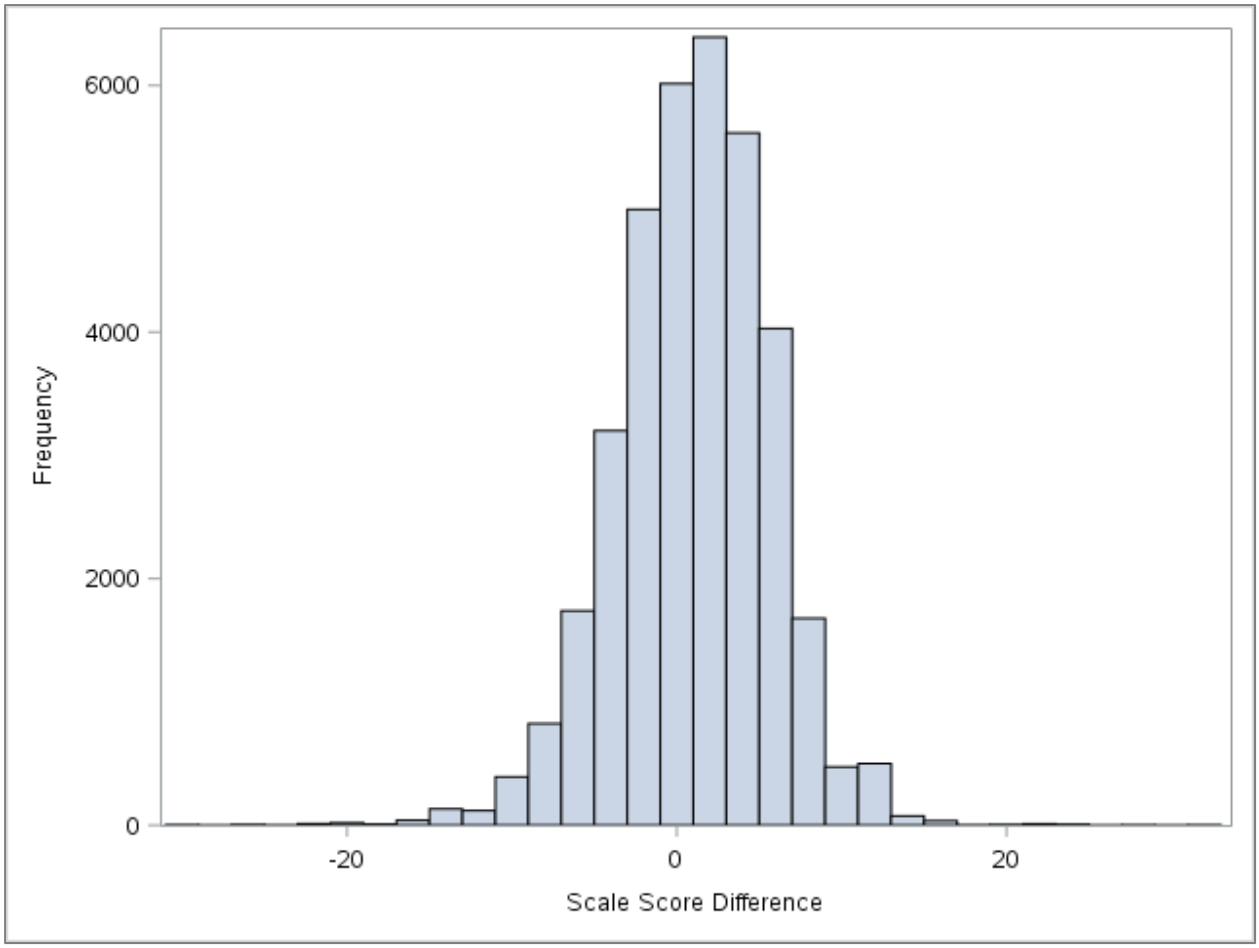

Figure 3.15. Grade 6 CBT Differences Between Abbreviated and Full Scale Scores.

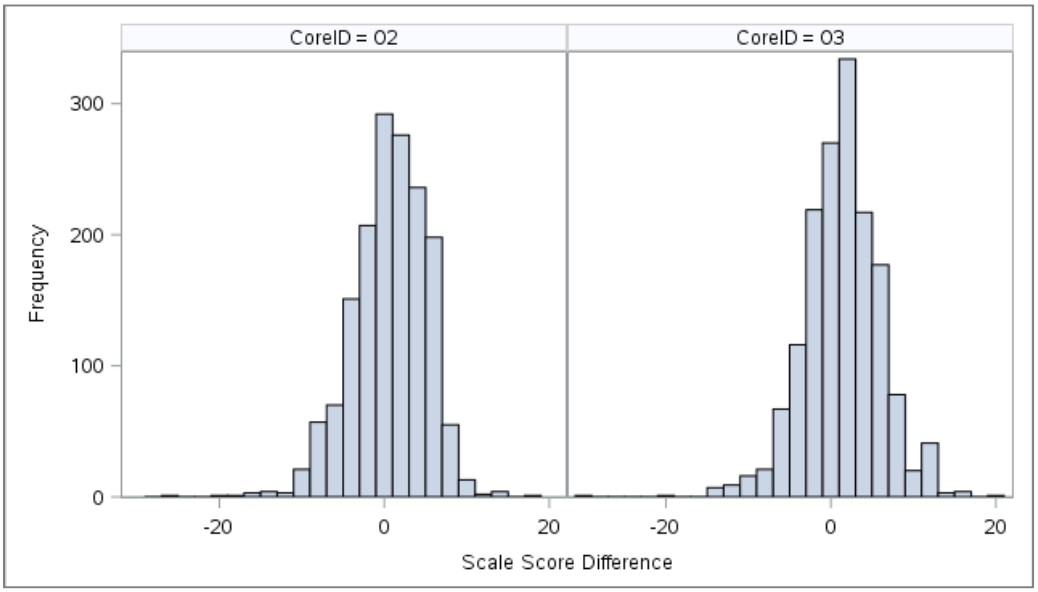

Figure 3.16. Grade 6 CBT Differences Between Abbreviated and Full Scale Scores by Core Form.

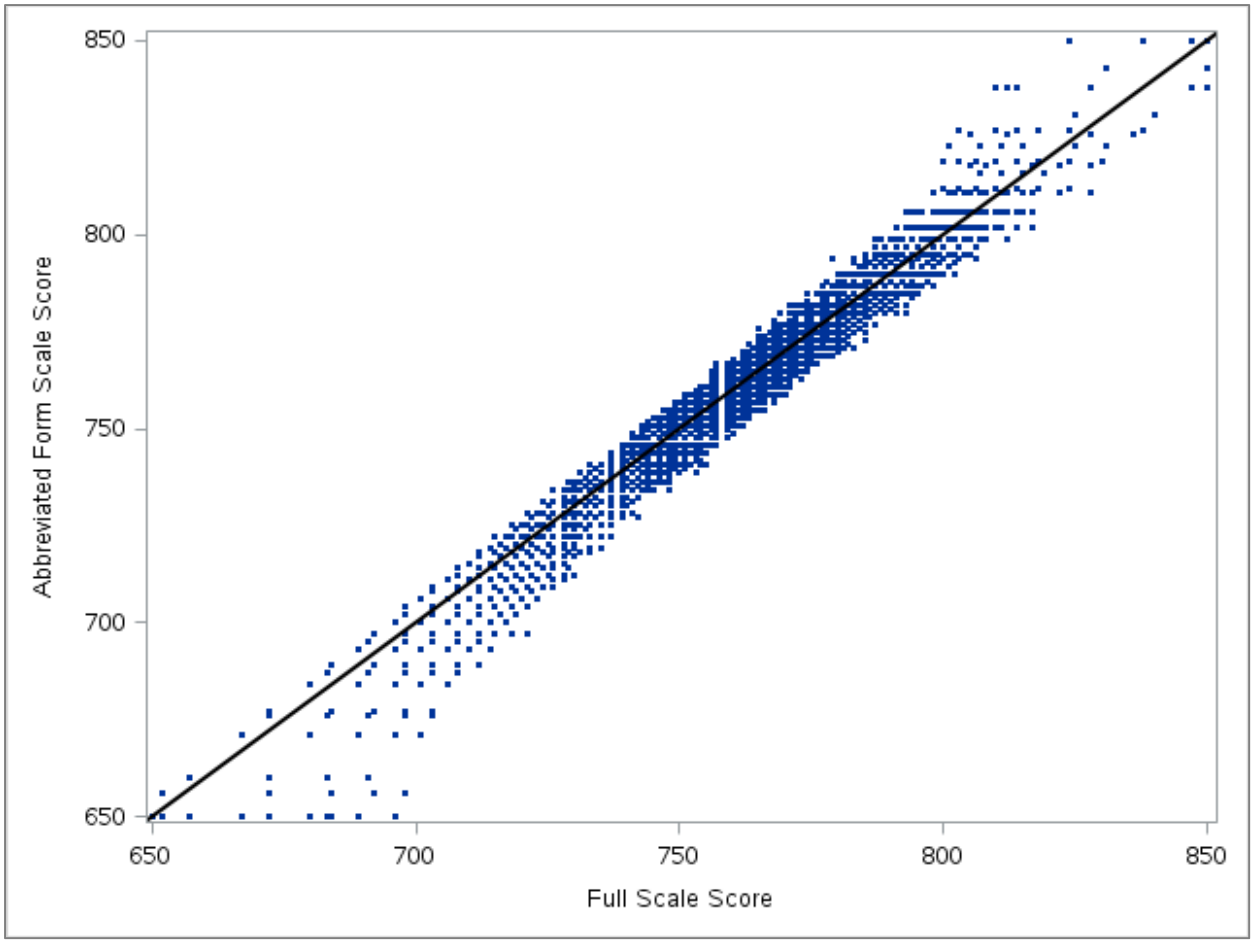

Figure 3.17. Grade 7 CBT Abbreviated vs. Full Scale Scores.

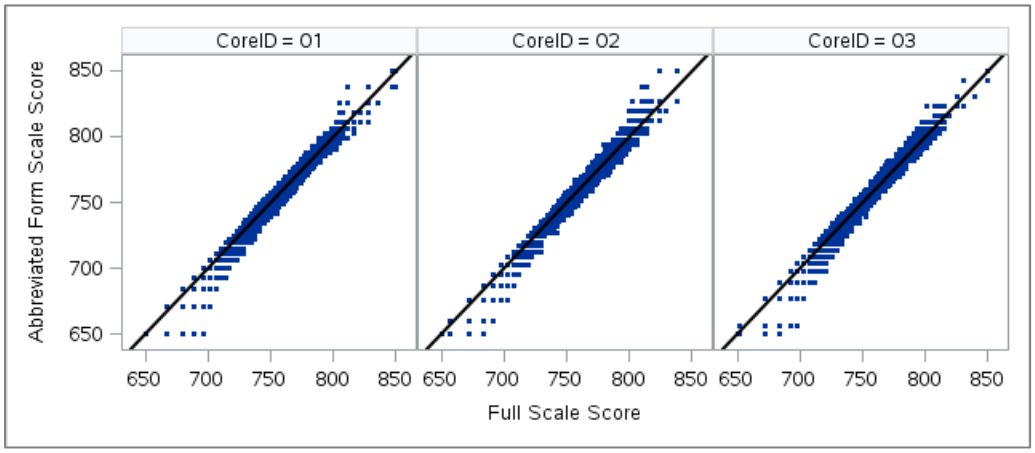

Figure 3.18. Grade 7 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

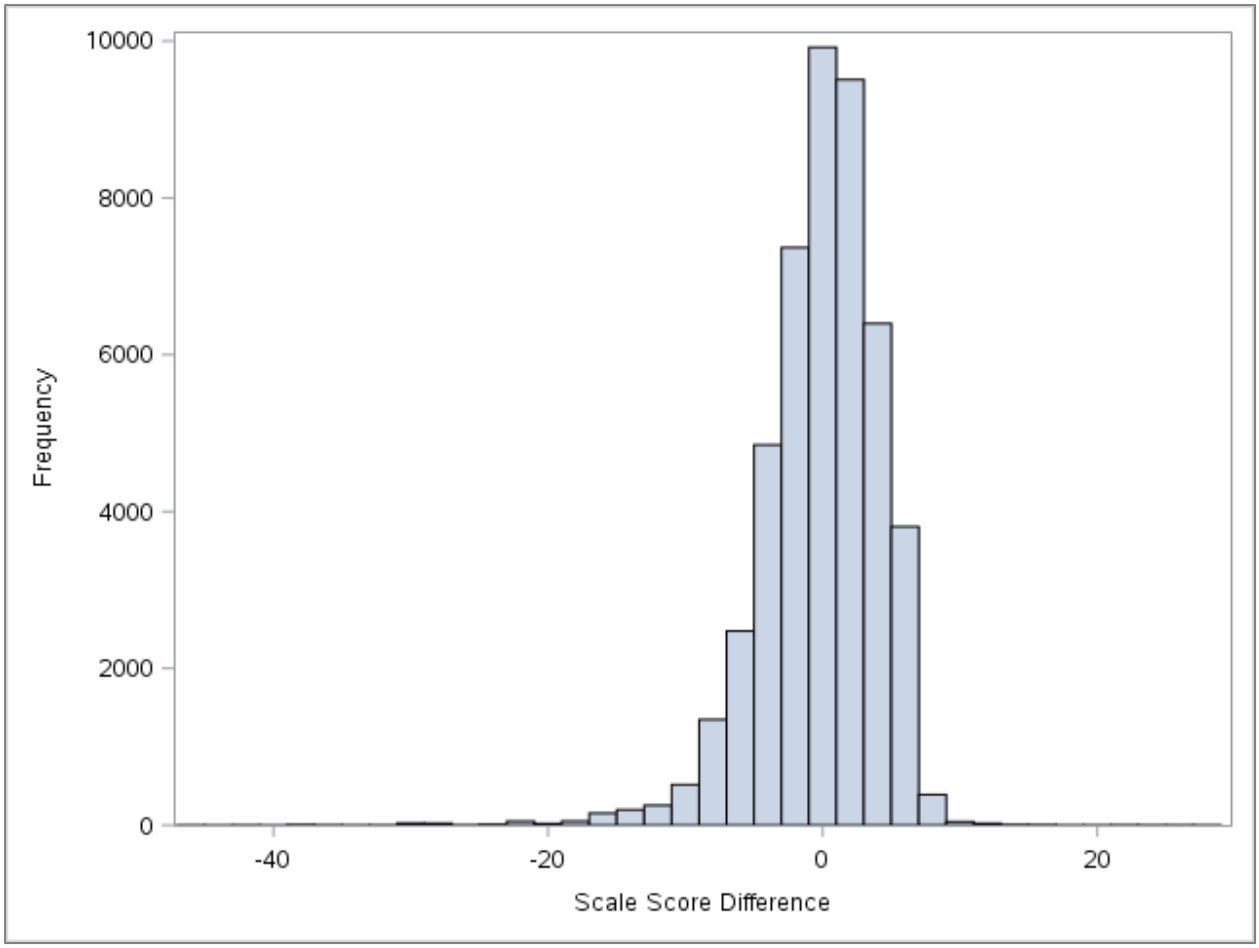

Figure 3.19. *Grade 7 CBT Differences Between Abbreviated and Full Scale Scores.*

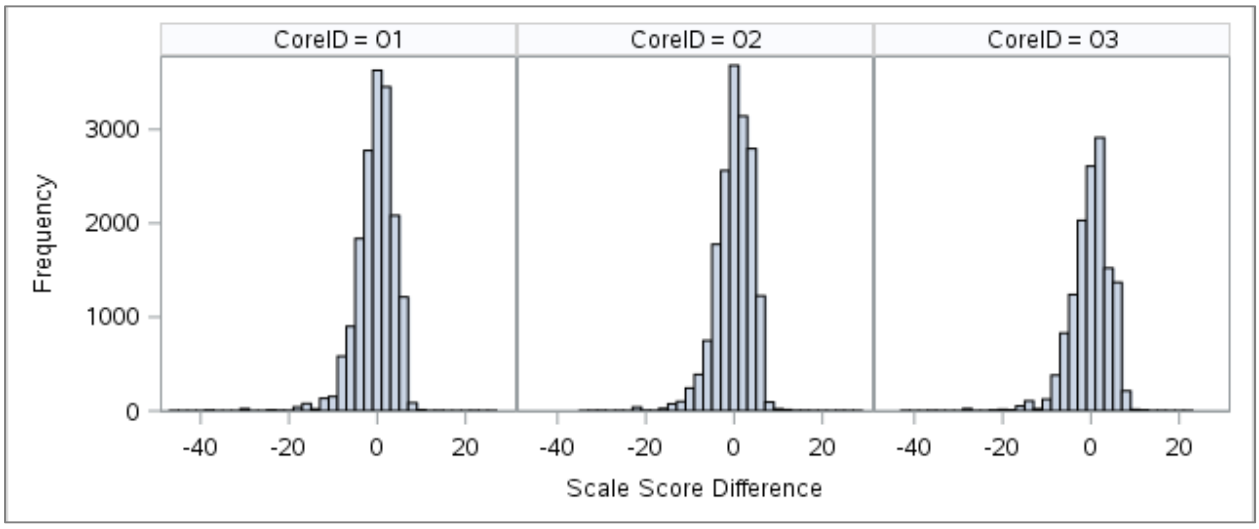

Figure 3.20. Grade 7 CBT Differences Between Abbreviated and Full Scale Scores by Core Form.

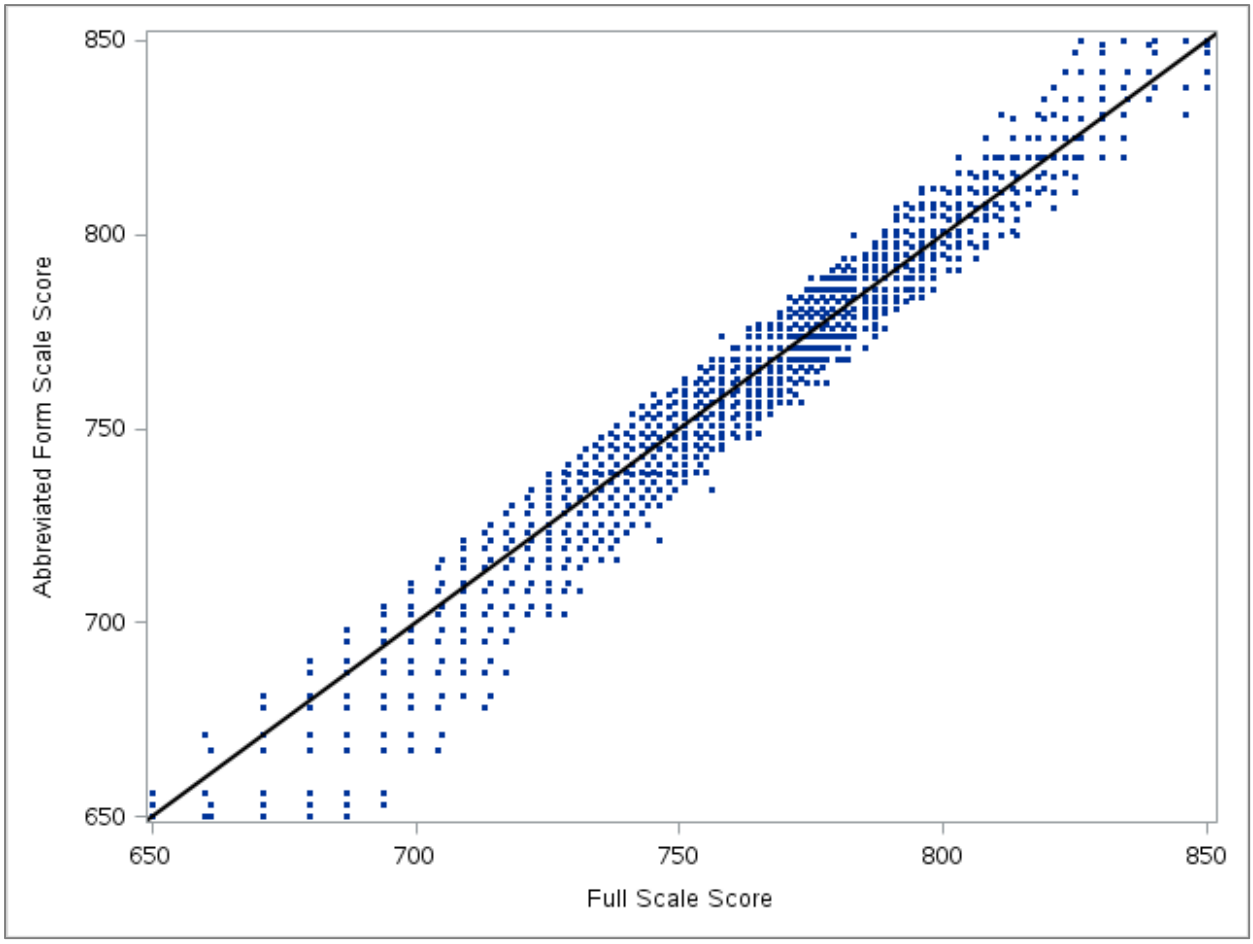

Figure 3.21. Grade 8 CBT Abbreviated vs. Full Scale Scores.

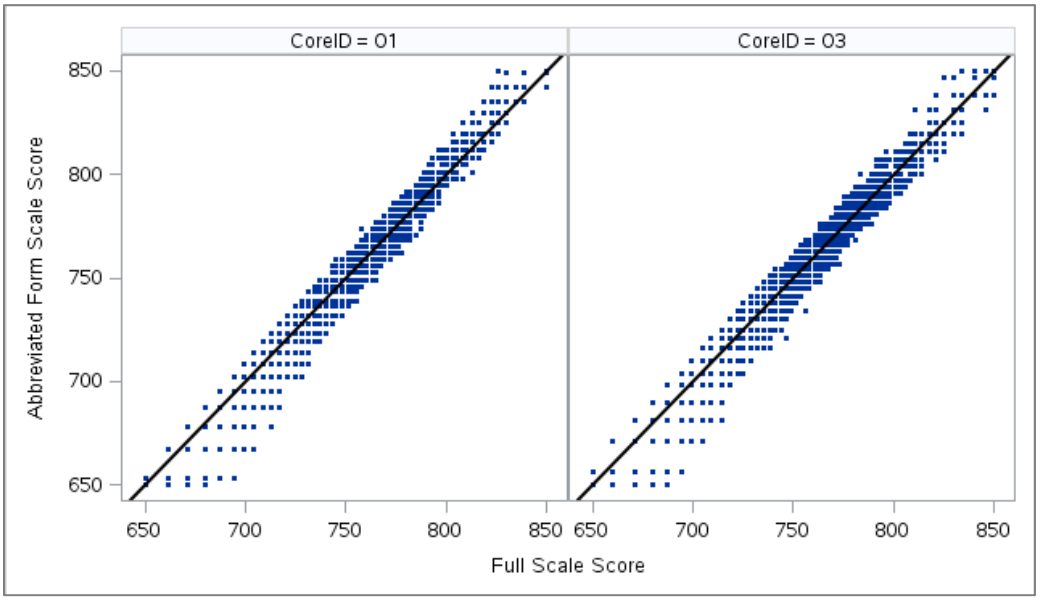

Figure 3.22. Grade 8 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

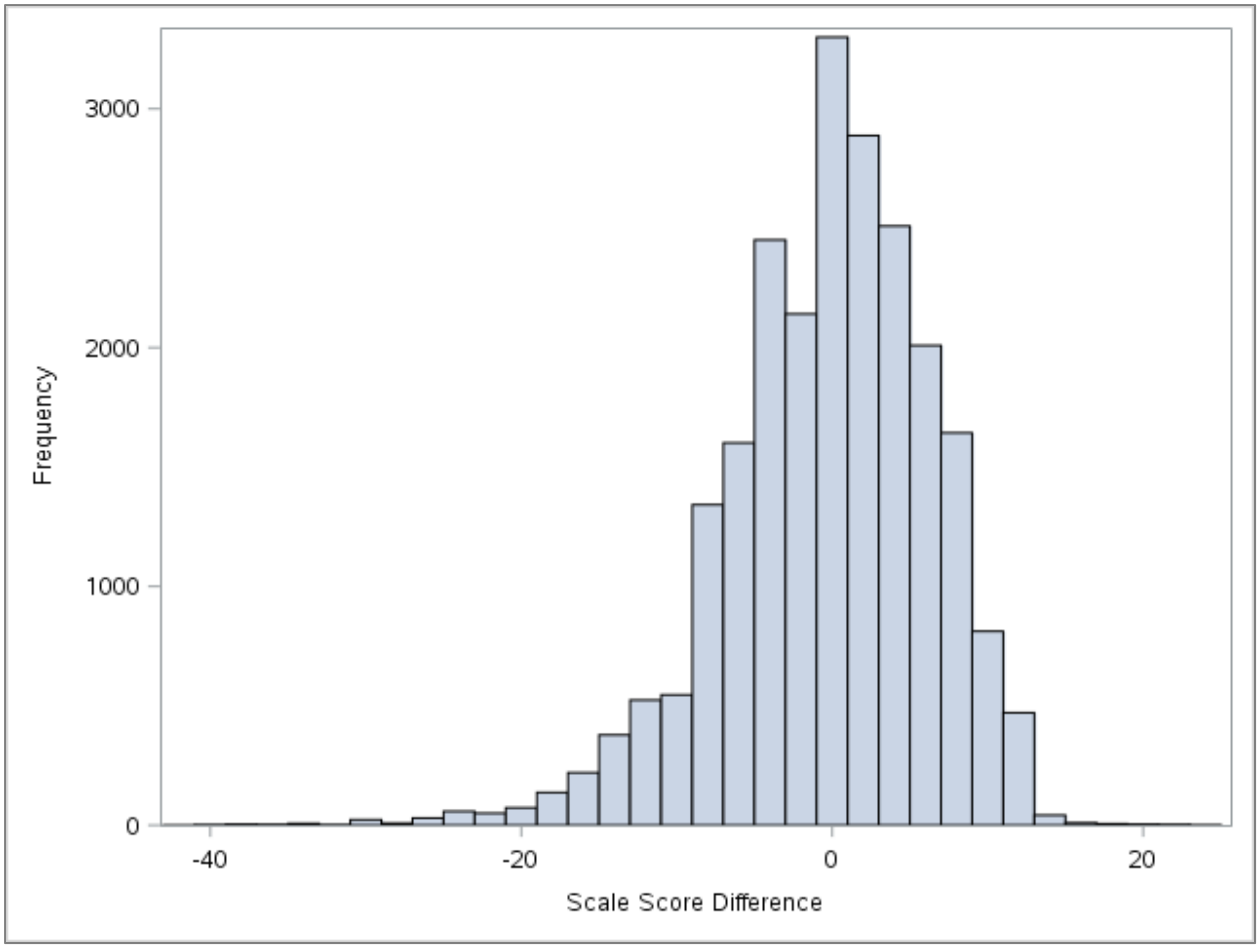

Figure 3.23. Grade 8 CBT Differences Between Abbreviated and Full Scale Scores.

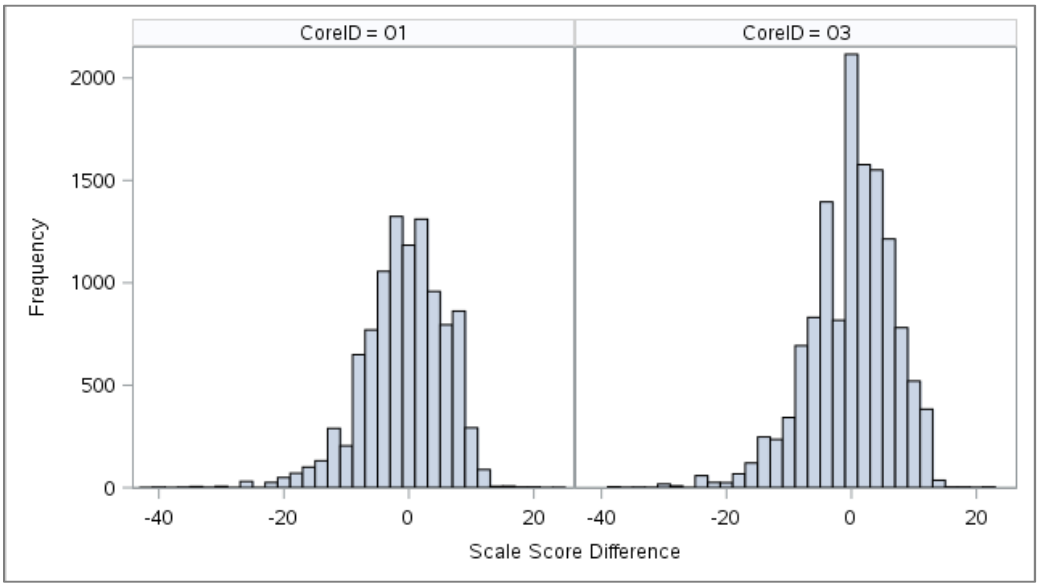

Figure 3.24. Grade 8 CBT Differences Between Abbreviated and Full Scale Scores by Core Form.

Summative Test Characteristic Curves

The test characteristic curves were generated for the raw score to theta scale for the overall theta scale. Due to the difference in raw score total and the number of operational items across the full and abbreviated forms, TCCs are provided based on the percent of the total maximum possible score points. Figures 3.25 – 3.27 present the test characteristic curves for the various grades. In general, the test characteristic curves for the abbreviated test forms are similar to the full test form test characteristic curves.

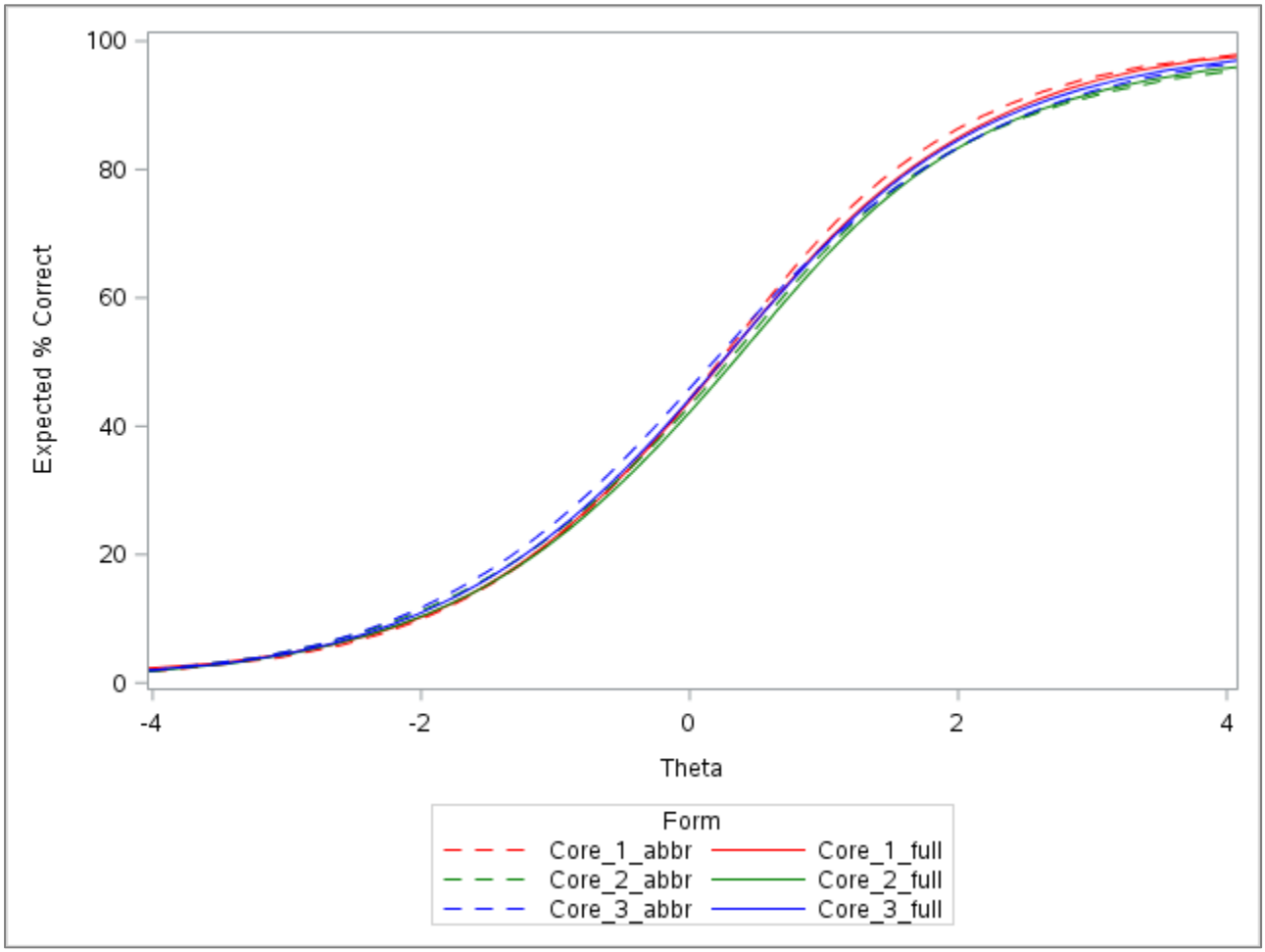

Figure 3.25. Grade 3 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

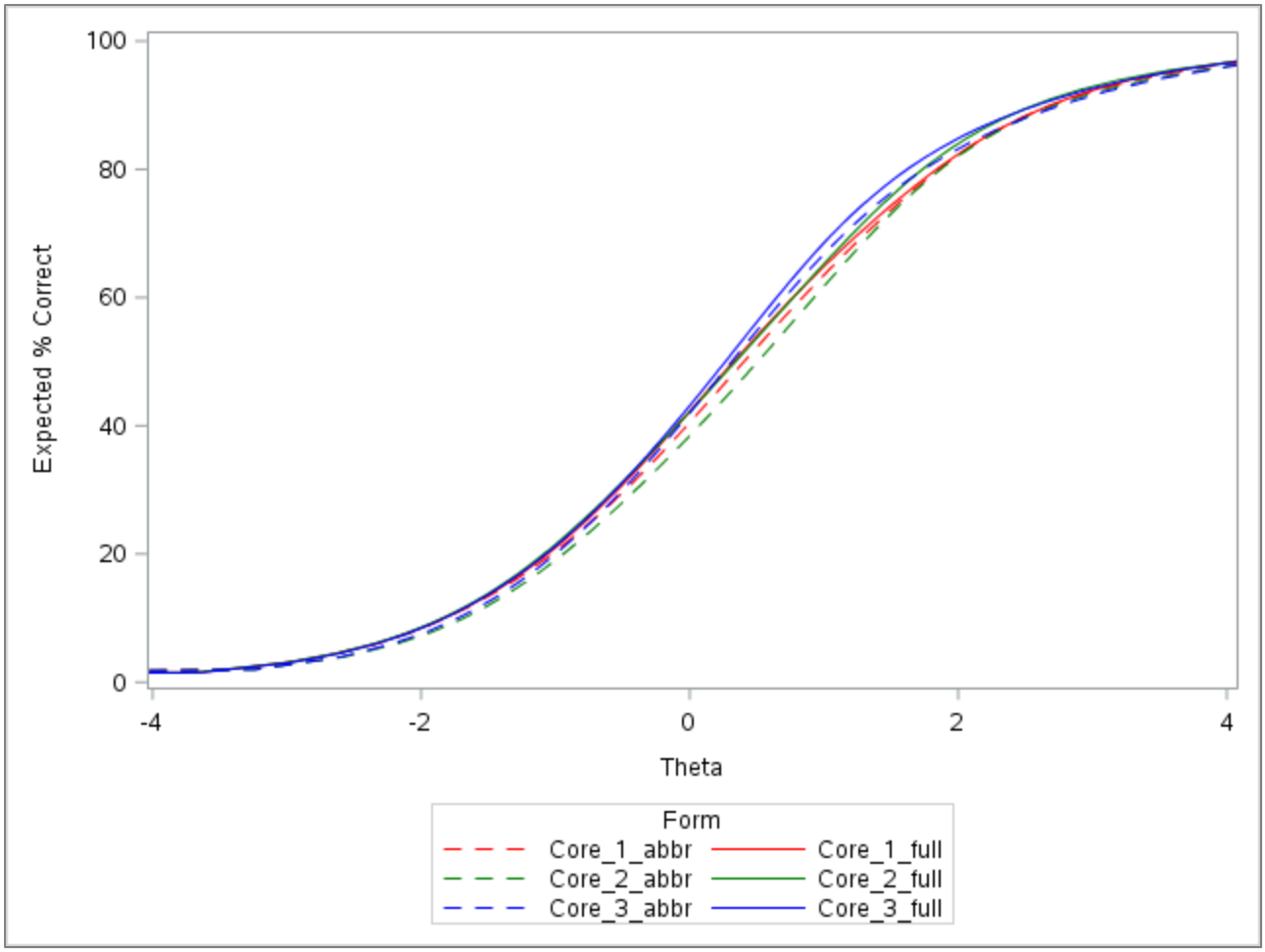

Figure 3.26. Grade 4 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

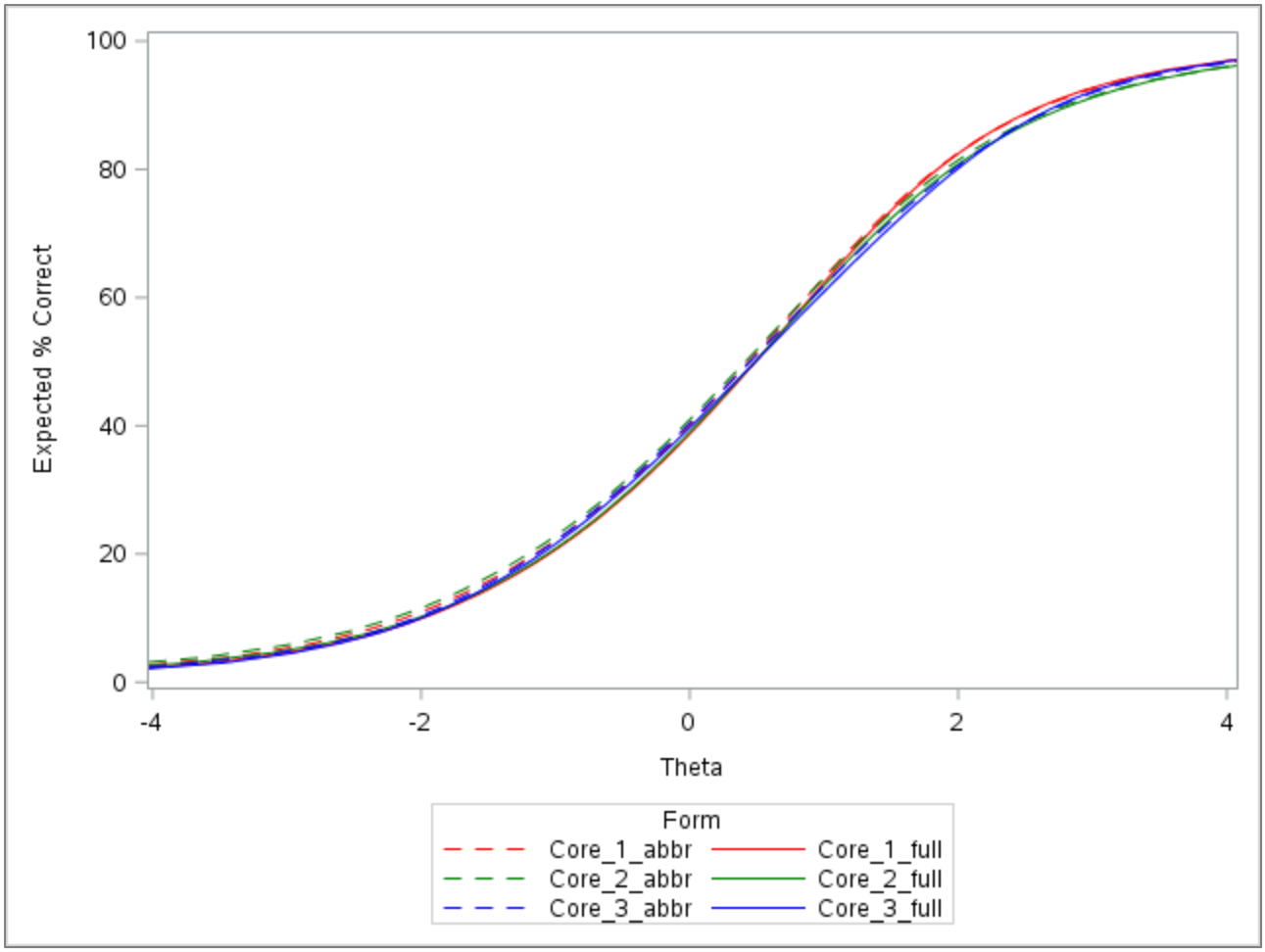

Figure 3.27. Grade 5 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

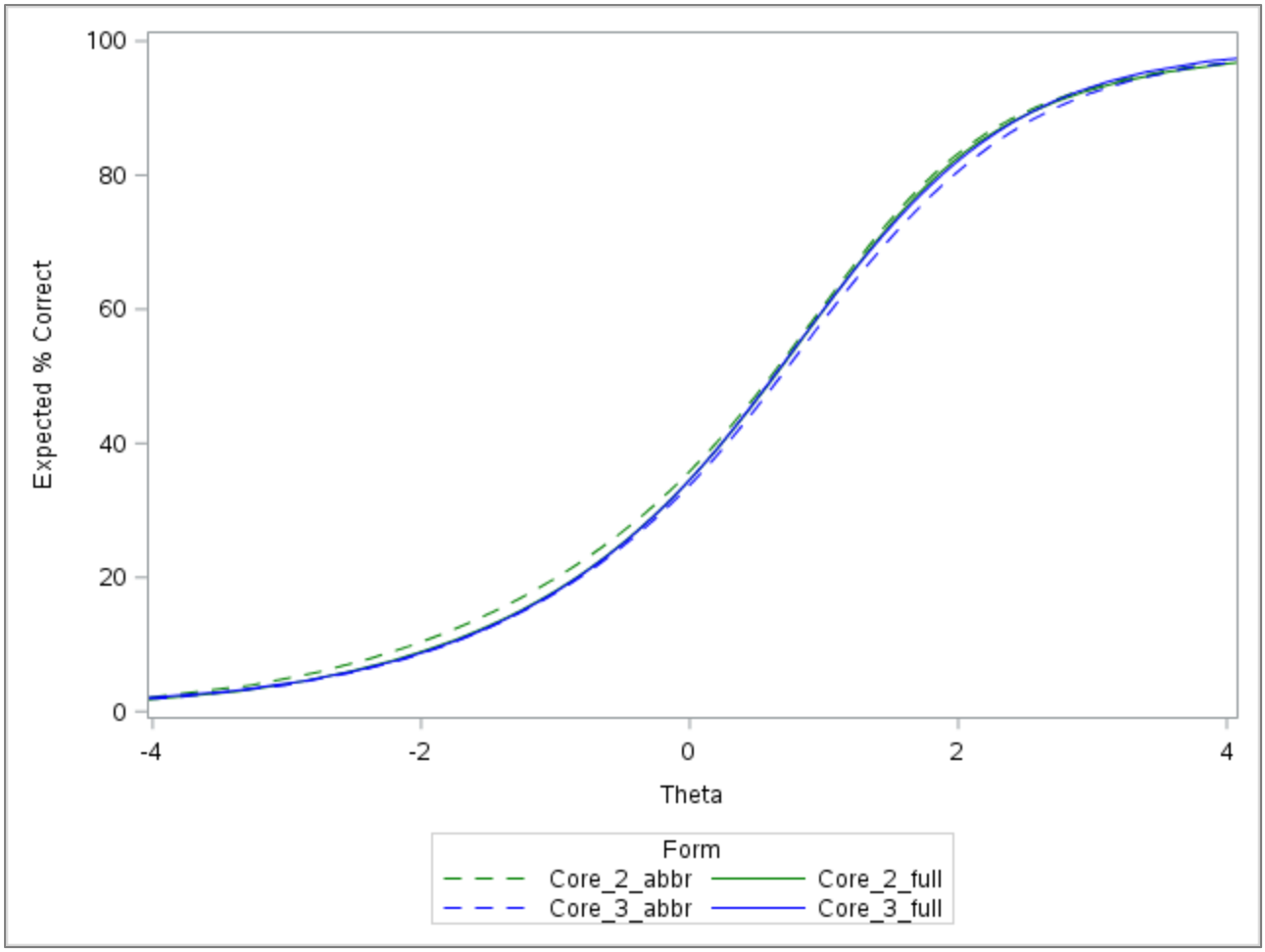

Figure 3.28. Grade 6 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

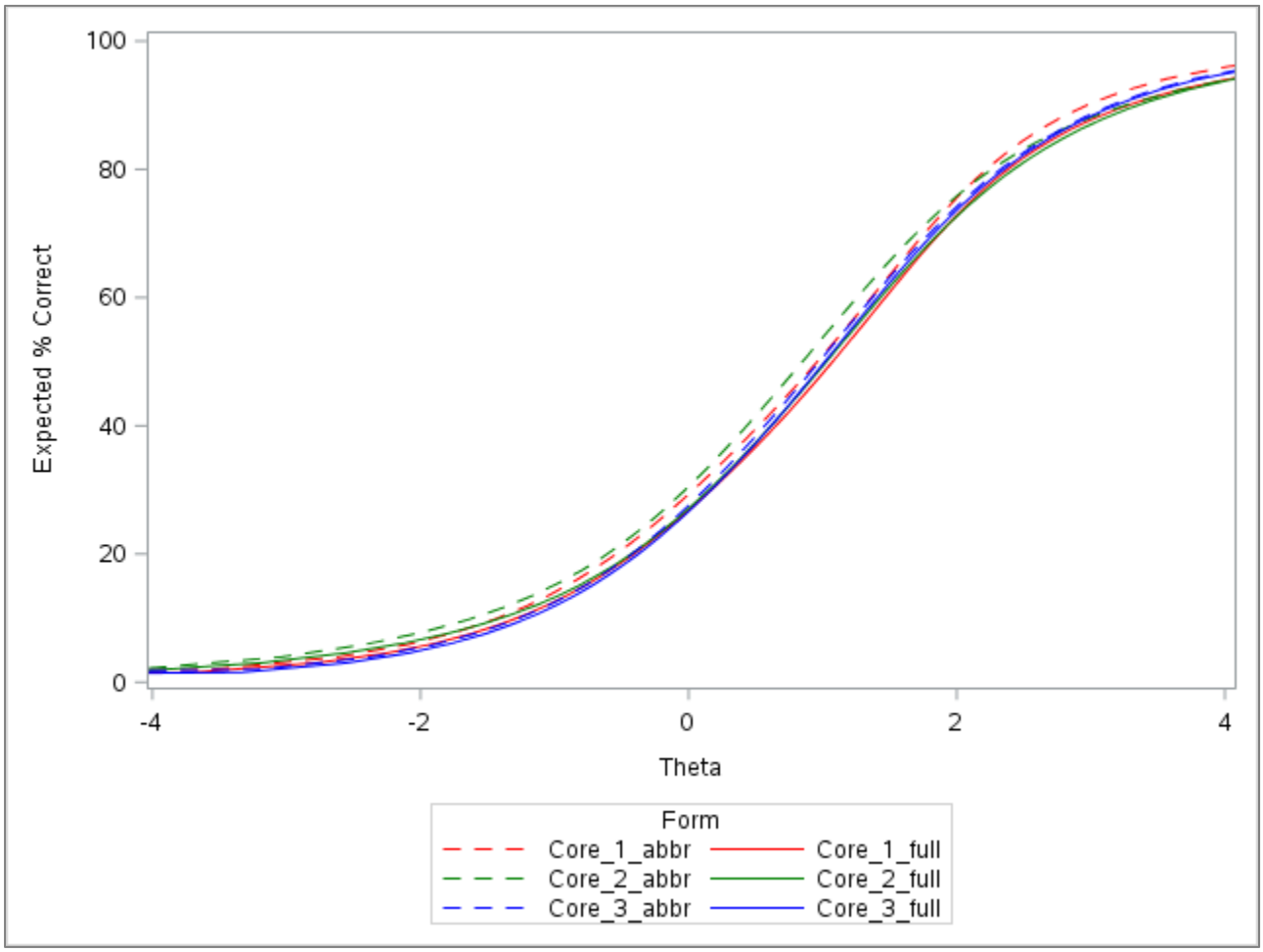

Figure 3.29. Grade 7 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

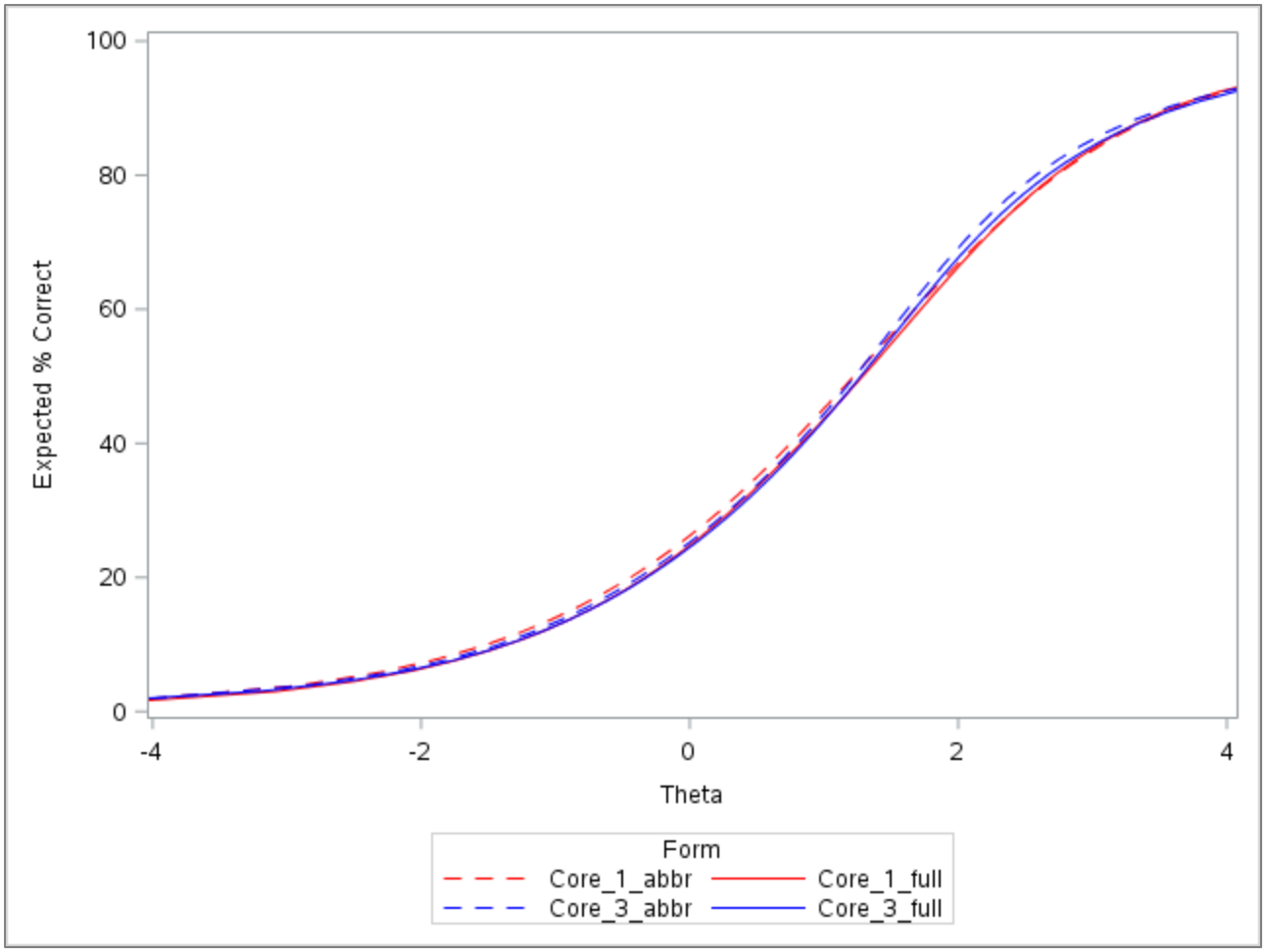

Figure 3.30. Grade 8 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

Section 4. Summary

This analysis used the spring 2017 administration of the grade 3–8 CMAS Mathematics assessments for Colorado students to study the potential impact of omitting some items in future administrations in order to reduce testing time. For each grade, 15 points were removed proportionally by subclaim and item type. Scoring tables were generated based on the abbreviated number of operational items. Abbreviated form raw scores were computed based on the student response strings and omitting the selected items. The abbreviated form scoring tables were applied to the student abbreviated form raw scores. Analyses compared the students' spring 2017 scale scores and performance levels based on the full Mathematics assessments to the abbreviated form scale scores and performance levels based on the abbreviated Mathematics assessments.

The average scale scores were similar for the abbreviated and full test forms. The percent of exact agreement in the overall performance level designation between the full assessment and the

abbreviated assessment ranged from 83.1% – 90.2% exact agreement across the grade levels. In addition, the correlations were all greater than .98.

A potential limitation to this study is that the items that could be omitted were constrained to those in the 2017 administration. In addition, having fewer score points may impact the precision of performance level classification.

References

Muraki, E. (1992). A generalized partial credit model: Application of an EM algorithm. *Applied Psychological Measurement, 16,* 159–176.

APPENDIX D2: CMAS ELA/L ABBREVIATION STUDY

CMAS ELA/L Abbreviation Research Report

Pearson

September 25, 2017

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Section 1. Introduction

The Colorado Department of Education is exploring shortening the Colorado Measures of Academic Success (CMAS) English Language Arts/Literacy (ELA/L) assessments. The purpose of this research report is to summarize analyses after abbreviating the ELA/L assessments in grades 3 – 8 for the spring 2017 administration.

A subset of operational items on the spring 2017 assessments were treated as omits or not administered items. Scoring tables or conversion tables were generated based on the reduced number of operational items. Raw scores were computed based on student response strings and omitting the selected items. The scoring tables based on the abbreviated forms were applied to the student raw scores. Analyses compared the students' spring 2017 scale scores and performance levels based on the full ELA/L assessments to the scale scores and performance levels based on the abbreviated ELA/L assessments.

Section 2. Methods

This section discusses the data used for the analyses, the abbreviation of the ELA/L test forms, raw scores, the item response theory model, generating the scoring tables, and the reported scales and performance levels.

Student Data

The data for this report were spring 2017 CMAS ELA/L assessment results in grades 3 – 8 for Colorado students. This administration consisted of three computer-based (CBT) operational forms and two paper-based (PBT) operational forms in addition to several accommodated forms. This study included only the three CBT operational forms in each grade.

Student records were removed prior to running the analyses if the records met any of the following criteria: (1) had an invalid form number; (2) was flagged as "not valid"; (3) was a duplicate (if a student had duplicate valid records, only the record with the higher raw score was included); (4) indicated that the student attempted less than 25% of all operational items for ELA/L. Table 2.1 lists the total number of students for the spring 2017 ELA/L assessments in CBT included in these analyses by grade level. Table 2.1 also lists the number of students who took each of the three core operational forms in 2017.

Table 2.1. *Spring 2017 N Counts by Grade and Core Form*

Grade	Core 1 N	Core 2 N	Core 3 N	Overall N
3	19,436	19,468	19,396	58,300
4	20,015	19,756	20,020	59,791
5	19,937	19,957	19,842	59,736
6	19,108	19,451	19,070	57,629
7	18,747	18,801	18,534	56,082
8	17,986	18,031	17,907	53,924

ELA/L Assessment Abbreviation

For each operational form, passages were selected for exclusion based on timing targets and the number of resulting points across reporting categories (e.g., the reading subclaim categories: Reading Informational Text (Reading – RI), Reading Literature (Reading – RL), Vocabulary, Interpretation and Use (Reading – RV)). Because these analyses were conducted using 2017 data, items were not added for grade levels in which the abbreviation specifies additional items (i.e., because 2017 students were not administered those extra items).

Tables 2.2 – 2.7 provide the number of score points by subclaims for the full spring 2017 ELA/L assessment and the abbreviated ELA/L assessment. The tables also list the actual number of points on each abbreviated form used for these analyses. The abbreviated test forms were reduced by between 29 and 43 points.

Table 2.2. *Grade 3 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Blueprint Points	Abbreviated 2017 Core 1 Actual Points	Abbreviated 2017 Core 2 Actual Points	Abbreviated 2017 Core 3 Actual Points
Reading - RI	21	14	14	12	12
Reading - RL	25	17	17	17	17
Reading - RV	12	10	10	12	12
Writing - WE [a]	27	18	18	18	18
Writing - WKL [a]	9	6	6	6	6
Total	94	65	65	65	65

[a]Points based on a weight of 3.

Table 2.3. *Grade 4 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Blueprint Points	Abbreviated 2017 Core 1 Actual Points	Abbreviated 2017 Core 2 Actual Points	Abbreviated 2017 Core 3 Actual Points
Reading - RI	16	18	10	10	10
Reading - RL	20	20	26	26	26
RI or RL	16	N/A			
Reading - RV	12	8	8	8	8
Writing - WE[a]	33	21	21	21	21
Writing - WKL[a]	9	6	6	6	6
Total	106	73	71[b]	71[b]	71[b]

[a]Points based on a weight of 3.
[b]Abbreviated blueprint includes addition of one RI item (2 points) not on the 2017 forms.

Table 2.4. *Grade 5 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Blueprint Points	Abbreviated 2017 Core 1 Actual Points	Abbreviated 2017 Core 2 Actual Points	Abbreviated 2017 Core 3 Actual Points
Reading - RI	26	18	24	24	24
Reading - RL	26	18	8	6	6
Reading - RV	12	8	8	8	8
Writing - WE[a]	33	21	21	21	21
Writing -WKL[a]	9	6	6	6	6
Total	106	71	67[b]	65[b,c]	65[b,c]

[a]Points based on a weight of 3.
[b]Abbreviated blueprint includes addition of 1 RI item and 1 RL item (2 points each) not on the 2017 forms.
[c]One item (2 points) on this form was removed prior to these analyses for technical reasons.

Table 2.5. *Grade 6 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Blueprint Points	Abbreviated 2017 Core 1 Actual Points	Abbreviated 2017 Core 2 Actual Points	Abbreviated 2017 Core 3 Actual Points
Reading - RI	16	22	26	22	22
Reading - RL	20	18	14	16	16
Reading - RV	14	8	8	10	10
Writing - WE[a]	36	24	24	24	24
Writing - WKL[a]	9	6	6	6	6
Total	121	78	78	78	78

[a]Points based on a weight of 3.

Table 2.6. *Grade 7 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Blueprint Points	Abbreviated 2017 Core 1 Actual Points	Abbreviated 2017 Core 2 Actual Points	Abbreviated 2017 Core 3 Actual Points
Reading - RI	16	22	20	20	22
Reading - RL	20	18	18	16	16
Reading - RV	14	10	12	14	12
Writing - WE[a]	36	24	24	24	24
Writing - WKL[a]	9	6	6	6	6
Total	121	80	80	80	80

[a]Points based on a weight of 3.

Table 2.7. *Grade 8 Blueprint and Abbreviated Points*

Item Types	Blueprint Points	Abbreviated Blueprint Points	Abbreviated 2017 Core 1 Actual Points	Abbreviated 2017 Core 2 Actual Points	Abbreviated 2017 Core 3 Actual Points
Reading - RI	16	22	32	32	22
Reading - RL	20	18	8	8	18
Reading - RV	14	10	10	10	10
Writing - WE[a]	36	24	24	24	24
Writing - WKL[a]	9	6	6	6	6
Total	121	80	80	80	80

[a]Points based on a weight of 3.

Item Response Theory Model

The spring 2017 ELA/L assessments were post-equated. The item parameter estimates from the post-equating analyses were used for both the full ELA/L assessment and the abbreviated ELA/L assessments when creating the scoring tables. The operational IRT analyses were conducted by both Pearson and HumRRO. The operational items in the incomplete data matrix (IDM) were concurrently calibrated with the two-parameter logistic/generalized partial credit model (2PL/GPC: Muraki, 1992). The 2PL/GPC is denoted

$$p_{im}(\theta_j) = \frac{\exp\left[\sum_{k=0}^{m} Da_i(\theta_j - b_i + d_{ik})\right]}{\sum_{v=0}^{M_i-1} \exp\left[\sum_{k=0}^{v} Da_i(\theta_j - b_i + d_{iv})\right]},$$

where $a_i(\theta_j - b_i + d_{i0}) \equiv 0$; $p_{im}(\theta_j)$ is the probability of a test taker with θ_j getting score m on item i; M_i is the number of score categories of item i with possible item scores as consecutive integers from 0 to $M_i - 1$; D is the IRT scale constant (1.7). IRT calibrations may also use a guessing parameter in special cases, if needed.

Scoring Tables

A CMAS 2017 scoring/conversion table relates the number of points earned by a student on the ELA/L summative score, the Reading claim score, or the Writing claim score to the corresponding scale score for the test form administered to that student. An IRT inverse test characteristic curve (TCC) approach is used to develop the relationship between point scores and IRT ability estimates (θs). In carrying out the calculations, estimates of item parameters and thetas are substituted for parameters in the formula in the generalized partial credit model. The estimated conditional standard error of measurement (CSEM)

for each scale score is computed. Once the raw score to theta table is generated, then the scaling constants transform the theta value to the reported scale score.

All operational procedures for generating the conversion files were followed to generate the abbreviated form conversion tables including additional equating adjustments required.

Reporting Scales and Performance Levels

CMAS reporting scales designate student performance into one of five Performance Levels that delineate the knowledge, skills, and practices students are able to demonstrate. Level 1 indicates the lowest level of performance and Level 5 indicates the highest level of performance:

- Level 1: Did not yet meet expectations
- Level 2: Partially met expectations
- Level 3: Approached expectations
- Level 4: Met expectations
- Level 5: Exceeded expectations

Summative scale scores, which reflect performance across all items on the assessment, range from 650 to 850 and categorize students into one of five summative performance levels with a 700 representing the threshold of Level 2, 725 representing the threshold of Level 3, and 750 representing the threshold of Level 4 which represents college and career readiness (CCR). The threshold score for Level 5 varies slightly by test and is approximately 800.

In addition, students' performance on claims and sub-claims are reported. Sub-claim outcomes describe student performance for content-specific subsets of the item scores. Claim outcomes represent student performance across multiple sub-claims. The reading and writing claim scores are reported for the ELA/L assessments only and reflect student performance on the reading and writing items, respectively. The reading claim score ranges from 10-90 and the writing claim score ranges from 10-60.

ELA/L has a subset of skills, or sub-claims, in which additional information regarding student performance is provided. The sub-claim performance levels categorize students into one of three levels based on the average performance of students at the summative Performance Level 3 and Level 4: *Below Expectations*, *Nearly Meets Expectations* or *Meets or Exceeds Expectations*. The sub-claim performance levels provide information regarding targeted instructional needs.

Section 3. Results

This section presents the results for the ELA/L abbreviated assessments in comparison to the full spring 2017 administration. The results include scale score summary statistics, overall performance level agreement, subclaim performance level agreement, correlations, and overall test characteristic curves.

Scale Score Summary Statistics

The overall abbreviated form scale score, abbreviated form scale score conditional standard error of measurement (CSEM), the abbreviated form reading claim scale score, the abbreviated reading claim scale score CSEM, the abbreviated writing claim scale score, and the abbreviated writing claim CSEM were calculated based on all operational items except for those associated with the passages omitted in this analysis. Tables 3.1 – 3.12 report summary statistics (count, mean, standard deviation, minimum, and maximum) for the full and abbreviated scale scores and CSEM, the full and abbreviated reading claim scale score and CSEM, and the full and abbreviated writing claim scale scores and CSEM by grade level. The tables alternate between summary statistics for the overall grade level and then broken down by each core form.

The average scale scores were similar for the abbreviated and full test forms. The average scale score difference across all core forms and grades was less than .29 and as expected, the average conditional standard errors were slightly lower for the longer test forms. In addition, the average reading claim score and the average writing claim score were similar although differences were slightly larger than those of the overall scale score.

Table 3.1. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 3 CBT*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	58,300	738.32	40.07	650	850
Abbreviated Scale Score	58,300	738.34	40.63	650	850
Full Scale Score CSEM	58,300	10.86	1.43	9	15
Abbreviated Scale Score CSEM	58,300	12.53	2.10	11	20
Full Reading Claim Score	58,300	45.86	16.20	10	90
Abbreviated Reading Claim Score	58,300	46.42	16.31	10	90
Full Reading Claim Score CSEM	58,300	4.89	0.79	4	8
Abbreviated Reading Claim Score CSEM	58,300	5.65	0.88	5	9
Full Writing Claim Score	58,300	29.69	12.54	10	60
Abbreviated Writing Claim Score	58,300	28.16	13.91	10	60
Full Writing Claim Score CSEM	58,300	4.85	1.85	3	8
Abbreviated Writing Claim Score CSEM	58,300	5.37	1.33	4	7

Table 3.2. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 3 CBT by Core Form*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	19,436	738.75	39.81	650	850
	Abbreviated Scale Score	19,436	738.75	40.76	650	850
	Full Scale Score CSEM	19,436	10.64	1.34	10	15
	Abbreviated Scale Score CSEM	19,436	12.67	2.26	11	20
	Full Reading Claim Score	19,436	46.04	16.07	10	90
	Abbreviated Reading Claim Score	19,436	45.02	15.71	10	90
	Full Reading Claim Score CSEM	19,436	4.84	0.68	4	8
	Abbreviated Reading Claim Score CSEM	19,436	5.63	0.88	5	9
	Full Writing Claim Score	19,436	29.67	12.61	10	60
	Abbreviated Writing Claim Score	19,436	28.03	14.04	10	60
	Full Writing Claim Score CSEM	19,436	4.59	1.74	3	8
	Abbreviated Writing Claim Score CSEM	19,436	5.28	1.33	4	7
Core 2	Full Scale Score	19,468	738.16	40.43	650	850
	Abbreviated Scale Score	19,468	738.40	40.86	650	850
	Full Scale Score CSEM	19,468	11.33	1.38	10	15
	Abbreviated Scale Score CSEM	19,468	12.66	1.79	11	20
	Full Reading Claim Score	19,468	45.73	16.39	10	90
	Abbreviated Reading Claim Score	19,468	47.86	17.10	10	90
	Full Reading Claim Score CSEM	19,468	5.12	0.82	4	8
	Abbreviated Reading Claim Score CSEM	19,468	5.89	0.78	5	9
	Full Writing Claim Score	19,468	29.37	12.88	10	60
	Abbreviated Writing Claim Score	19,468	28.20	14.00	10	60
	Full Writing Claim Score CSEM	19,468	5.17	2.07	3	8
	Abbreviated Writing Claim Score CSEM	19,468	5.41	1.37	4	7
Core 3	Full Scale Score	19,396	738.06	39.97	650	850
	Abbreviated Scale Score	19,396	737.86	40.26	650	850
	Full Scale Score CSEM	19,396	10.61	1.46	9	15
	Abbreviated Scale Score CSEM	19,396	12.28	2.19	11	20
	Full Reading Claim Score	19,396	45.81	16.14	10	90
	Abbreviated Reading Claim Score	19,396	46.39	15.98	10	90
	Full Reading Claim Score CSEM	19,396	4.73	0.80	4	7
	Abbreviated Reading Claim Score CSEM	19,396	5.41	0.91	5	9
	Full Writing Claim Score	19,396	30.03	12.11	10	60
	Abbreviated Writing Claim Score	19,396	28.25	13.68	10	60
	Full Writing Claim Score CSEM	19,396	4.78	1.66	3	8
	Abbreviated Writing Claim Score CSEM	19,396	5.42	1.28	4	7

Table 3.3. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 4 CBT*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	59,791	743.30	35.56	650	850
Abbreviated Scale Score	59,791	742.91	36.46	650	850
Full Scale Score CSEM	59,791	9.58	1.45	8	15
Abbreviated Scale Score CSEM	59,791	11.22	2.06	9	20
Full Reading Claim Score	59,791	47.23	14.21	10	90
Abbreviated Reading Claim Score	59,791	47.03	14.84	10	90
Full Reading Claim Score CSEM	59,791	4.45	0.73	4	9
Abbreviated Reading Claim Score CSEM	59,791	5.53	0.99	4	10
Full Writing Claim Score	59,791	32.46	10.28	10	60
Abbreviated Writing Claim Score	59,791	31.95	11.39	10	60
Full Writing Claim Score CSEM	59,791	3.36	1.15	2	6
Abbreviated Writing Claim Score CSEM	59,791	4.19	1.19	3	7

Table 3.4. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 4 CBT by Core Form*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	20,015	742.55	36.41	650	850
	Abbreviated Scale Score	20,015	742.09	37.60	650	850
	Full Scale Score CSEM	20,015	9.82	1.72	9	15
	Abbreviated Scale Score CSEM	20,015	11.62	2.33	10	20
	Full Reading Claim Score	20,015	46.99	14.56	10	90
	Abbreviated Reading Claim Score	20,015	46.77	15.30	10	90
	Full Reading Claim Score CSEM	20,015	4.64	0.91	4	9
	Abbreviated Reading Claim Score CSEM	20,015	5.77	1.04	5	10
	Full Writing Claim Score	20,015	32.26	10.38	10	60
	Abbreviated Writing Claim Score	20,015	31.47	11.87	10	60
	Full Writing Claim Score CSEM	20,015	3.39	1.23	2	6
	Abbreviated Writing Claim Score CSEM	20,015	4.31	1.38	3	7
Core 2	Full Scale Score	19,756	743.27	34.82	650	850
	Abbreviated Scale Score	19,756	742.93	35.18	650	850
	Full Scale Score CSEM	19,756	9.04	1.26	8	15
	Abbreviated Scale Score CSEM	19,756	10.27	1.58	9	20
	Full Reading Claim Score	19,756	47.42	13.91	10	90
	Abbreviated Reading Claim Score	19,756	47.35	14.34	10	90
	Full Reading Claim Score CSEM	19,756	4.13	0.60	4	8
	Abbreviated Reading Claim Score CSEM	19,756	4.95	0.86	4	8
	Full Writing Claim Score	19,756	32.48	9.84	10	60
	Abbreviated Writing Claim Score	19,756	31.83	10.89	10	60
	Full Writing Claim Score CSEM	19,756	3.26	1.09	2	6
	Abbreviated Writing Claim Score CSEM	19,756	4.09	1.12	3	6
Core 3	Full Scale Score	20,020	744.07	35.41	650	850
	Abbreviated Scale Score	20,020	743.71	36.52	650	850
	Full Scale Score CSEM	20,020	9.86	1.17	9	15
	Abbreviated Scale Score CSEM	20,020	11.76	1.85	11	20
	Full Reading Claim Score	20,020	47.29	14.16	10	90
	Abbreviated Reading Claim Score	20,020	46.97	14.84	10	90
	Full Reading Claim Score CSEM	20,020	4.59	0.50	4	8
	Abbreviated Reading Claim Score CSEM	20,020	5.86	0.80	5	10
	Full Writing Claim Score	20,020	32.64	10.61	10	60
	Abbreviated Writing Claim Score	20,020	32.54	11.35	10	60
	Full Writing Claim Score CSEM	20,020	3.41	1.12	3	6
	Abbreviated Writing Claim Score CSEM	20,020	4.15	1.04	3	6

Table 3.5. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 5 CBT*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	59,736	745.11	34.20	650	850
Abbreviated Scale Score	59,736	744.88	35.63	650	850
Full Scale Score CSEM	59,736	9.47	1.65	8	15
Abbreviated Scale Score CSEM	59,736	11.42	2.40	9	20
Full Reading Claim Score	59,736	47.88	13.77	10	90
Abbreviated Reading Claim Score	59,736	47.94	14.52	10	90
Full Reading Claim Score CSEM	59,736	4.57	0.77	4	10
Abbreviated Reading Claim Score CSEM	59,736	5.92	1.04	5	12
Full Writing Claim Score	59,736	32.11	11.15	10	60
Abbreviated Writing Claim Score	59,736	31.48	12.01	10	60
Full Writing Claim Score CSEM	59,736	3.25	1.28	2	6
Abbreviated Writing Claim Score CSEM	59,736	3.95	1.31	3	7

Table 3.6. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 5 CBT by Core Form*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	19,937	745.77	33.81	650	850
	Abbreviated Scale Score	19,937	745.78	34.88	650	850
	Full Scale Score CSEM	19,937	9.24	1.69	8	15
	Abbreviated Scale Score CSEM	19,937	10.94	2.29	9	20
	Full Reading Claim Score	19,937	48.05	13.6	10	90
	Abbreviated Reading Claim Score	19,937	48.09	14.24	10	90
	Full Reading Claim Score CSEM	19,937	4.43	0.74	4	8
	Abbreviated Reading Claim Score CSEM	19,937	5.58	0.93	5	10
	Full Writing Claim Score	19,937	32.41	11.15	10	60
	Abbreviated Writing Claim Score	19,937	31.82	11.99	10	60
	Full Writing Claim Score CSEM	19,937	3.16	1.24	2	6
	Abbreviated Writing Claim Score CSEM	19,937	3.85	1.29	3	7
Core 2	Full Scale Score	19,957	745.20	34.33	650	850
	Abbreviated Scale Score	19,957	744.97	36.03	650	850
	Full Scale Score CSEM	19,957	9.67	1.44	9	15
	Abbreviated Scale Score CSEM	19,957	11.76	2.29	10	20
	Full Reading Claim Score	19,957	47.90	13.88	10	90
	Abbreviated Reading Claim Score	19,957	48.08	14.76	10	90
	Full Reading Claim Score CSEM	19,957	4.70	0.62	4	9
	Abbreviated Reading Claim Score CSEM	19,957	6.12	0.89	6	11
	Full Writing Claim Score	19,957	32.23	10.96	10	60
	Abbreviated Writing Claim Score	19,957	31.31	12.13	10	60
	Full Writing Claim Score CSEM	19,957	3.28	1.25	3	6
	Abbreviated Writing Claim Score CSEM	19,957	4.03	1.29	3	6
Core 3	Full Scale Score	19,842	744.35	34.43	650	850
	Abbreviated Scale Score	19,842	743.90	35.95	650	850
	Full Scale Score CSEM	19,842	9.49	1.78	8	15
	Abbreviated Scale Score CSEM	19,842	11.54	2.52	10	20
	Full Reading Claim Score	19,842	47.69	13.81	10	90
	Abbreviated Reading Claim Score	19,842	47.66	14.56	10	90
	Full Reading Claim Score CSEM	19,842	4.56	0.91	4	10
	Abbreviated Reading Claim Score CSEM	19,842	6.05	1.19	5	12
	Full Writing Claim Score	19,842	31.67	11.33	10	60
	Abbreviated Writing Claim Score	19,842	31.32	11.91	10	60
	Full Writing Claim Score CSEM	19,842	3.31	1.36	2	6
	Abbreviated Writing Claim Score CSEM	19,842	3.97	1.35	3	7

Table 3.7. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 6 CBT*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	57,629	741.72	31.33	650	850
Abbreviated Scale Score	57,629	741.67	32.53	650	850
Full Scale Score CSEM	57,629	7.77	1.49	7	15
Abbreviated Scale Score CSEM	57,629	9.21	2.07	7	20
Full Reading Claim Score	57,629	46.44	12.25	10	90
Abbreviated Reading Claim Score	57,629	46.45	12.84	10	90
Full Reading Claim Score CSEM	57,629	3.57	0.57	3	8
Abbreviated Reading Claim Score CSEM	57,629	4.46	0.86	4	10
Full Writing Claim Score	57,629	31.25	11.15	10	60
Abbreviated Writing Claim Score	57,629	31.10	11.81	10	60
Full Writing Claim Score CSEM	57,629	3.08	1.42	2	7
Abbreviated Writing Claim Score CSEM	57,629	3.65	1.37	3	7

Table 3.8. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 6 CBT by Core Form*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	19,108	741.75	31.76	650	850
	Abbreviated Scale Score	19,108	741.63	32.86	650	850
	Full Scale Score CSEM	19,108	7.79	1.64	7	15
	Abbreviated Scale Score CSEM	19,108	9.09	2.35	7	20
	Full Reading Claim Score	19,108	46.22	12.29	10	90
	Abbreviated Reading Claim Score	19,108	46.16	12.74	10	90
	Full Reading Claim Score CSEM	19,108	3.55	0.59	3	8
	Abbreviated Reading Claim Score CSEM	19,108	4.35	0.92	4	10
	Full Writing Claim Score	19,108	31.04	11.62	10	60
	Abbreviated Writing Claim Score	19,108	30.70	12.49	10	60
	Full Writing Claim Score CSEM	19,108	3.08	1.45	2	7
	Abbreviated Writing Claim Score CSEM	19,108	3.68	1.47	3	7
Core 2	Full Scale Score	19,451	741.84	31.50	650	850
	Abbreviated Scale Score	19,451	741.70	32.58	650	850
	Full Scale Score CSEM	19,451	7.85	1.54	7	15
	Abbreviated Scale Score CSEM	19,451	9.25	2.16	8	20
	Full Reading Claim Score	19,451	46.42	12.34	10	90
	Abbreviated Reading Claim Score	19,451	46.47	12.93	10	90
	Full Reading Claim Score CSEM	19,451	3.64	0.60	3	8
	Abbreviated Reading Claim Score CSEM	19,451	4.53	0.89	4	9
	Full Writing Claim Score	19,451	31.72	10.78	10	60
	Abbreviated Writing Claim Score	19,451	31.62	11.36	10	60
	Full Writing Claim Score CSEM	19,451	3.00	1.37	2	7
	Abbreviated Writing Claim Score CSEM	19,451	3.56	1.30	3	7
Core 3	Full Scale Score	19,070	741.57	30.71	650	850
	Abbreviated Scale Score	19,070	741.66	32.14	650	850
	Full Scale Score CSEM	19,070	7.66	1.27	7	15
	Abbreviated Scale Score CSEM	19,070	9.28	1.62	8	20
	Full Reading Claim Score	19,070	46.69	12.13	10	90
	Abbreviated Reading Claim Score	19,070	46.73	12.85	10	90
	Full Reading Claim Score CSEM	19,070	3.51	0.51	3	8
	Abbreviated Reading Claim Score CSEM	19,070	4.52	0.74	4	9
	Full Writing Claim Score	19,070	30.99	11.04	10	60
	Abbreviated Writing Claim Score	19,070	30.96	11.52	10	60
	Full Writing Claim Score CSEM	19,070	3.16	1.43	2	6
	Abbreviated Writing Claim Score CSEM	19,070	3.73	1.33	3	6

Table 3.9. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 7 CBT*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	56,082	742.99	37.92	650	850
Abbreviated Scale Score	56,082	742.43	38.65	650	850
Full Scale Score CSEM	56,082	9.26	1.77	8	15
Abbreviated Scale Score CSEM	56,082	10.87	2.34	9	20
Full Reading Claim Score	56,082	46.76	15.00	10	90
Abbreviated Reading Claim Score	56,082	44.84	14.28	10	90
Full Reading Claim Score CSEM	56,082	4.39	0.71	4	9
Abbreviated Reading Claim Score CSEM	56,082	5.13	0.92	5	10
Full Writing Claim Score	56,082	32.29	11.60	10	60
Abbreviated Writing Claim Score	56,082	31.21	12.77	10	60
Full Writing Claim Score CSEM	56,082	3.35	1.62	2	7
Abbreviated Writing Claim Score CSEM	56,082	3.90	1.42	3	7

Table 3.10. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 7 CBT by Core Form*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	18,747	743.12	38.12	650	850
	Abbreviated Scale Score	18,747	742.48	38.65	650	850
	Full Scale Score CSEM	18,747	9.50	1.71	8	15
	Abbreviated Scale Score CSEM	18,747	10.82	2.38	9	20
	Full Reading Claim Score	18,747	46.86	15.16	10	90
	Abbreviated Reading Claim Score	18,747	44.85	14.30	10	90
	Full Reading Claim Score CSEM	18,747	4.50	0.69	4	8
	Abbreviated Reading Claim Score CSEM	18,747	5.12	0.95	5	10
	Full Writing Claim Score	18,747	32.44	11.45	10	60
	Abbreviated Writing Claim Score	18,747	31.22	12.76	10	60
	Full Writing Claim Score CSEM	18,747	3.43	1.73	2	7
	Abbreviated Writing Claim Score CSEM	18,747	3.89	1.47	3	7
Core 2	Full Scale Score	18,801	742.79	37.92	650	850
	Abbreviated Scale Score	18,801	742.36	38.81	650	850
	Full Scale Score CSEM	18,801	9.28	2.08	8	15
	Abbreviated Scale Score CSEM	18,801	11.04	2.62	9	20
	Full Reading Claim Score	18,801	46.64	14.99	10	90
	Abbreviated Reading Claim Score	18,801	44.81	14.40	10	90
	Full Reading Claim Score CSEM	18,801	4.49	0.84	4	9
	Abbreviated Reading Claim Score CSEM	18,801	5.22	1.07	5	9
	Full Writing Claim Score	18,801	32.05	11.77	10	60
	Abbreviated Writing Claim Score	18,801	31.24	12.72	10	60
	Full Writing Claim Score CSEM	18,801	3.27	1.59	2	7
	Abbreviated Writing Claim Score CSEM	18,801	3.95	1.49	3	7
Core 3	Full Scale Score	18,534	743.06	37.73	650	850
	Abbreviated Scale Score	18,534	742.44	38.48	650	850
	Full Scale Score CSEM	18,534	9.02	1.42	8	15
	Abbreviated Scale Score CSEM	18,534	10.75	1.95	10	20
	Full Reading Claim Score	18,534	46.77	14.84	10	90
	Abbreviated Reading Claim Score	18,534	44.86	14.15	10	90
	Full Reading Claim Score CSEM	18,534	4.19	0.51	4	7
	Abbreviated Reading Claim Score CSEM	18,534	5.04	0.71	5	9
	Full Writing Claim Score	18,534	32.39	11.57	10	60
	Abbreviated Writing Claim Score	18,534	31.18	12.82	10	60
	Full Writing Claim Score CSEM	18,534	3.35	1.53	2	7
	Abbreviated Writing Claim Score CSEM	18,534	3.85	1.29	3	6

Table 3.11. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 8 CBT*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	53,924	742.17	38.55	650	850
Abbreviated Scale Score	53,924	741.68	39.47	650	850
Full Scale Score CSEM	53,924	9.40	1.71	8	15
Abbreviated Scale Score CSEM	53,924	10.96	2.30	9	20
Full Reading Claim Score	53,924	46.75	15.52	10	90
Abbreviated Reading Claim Score	53,924	44.88	14.79	10	90
Full Reading Claim Score CSEM	53,924	4.54	0.68	4	8
Abbreviated Reading Claim Score CSEM	53,924	5.30	0.91	5	10
Full Writing Claim Score	53,924	32.14	11.35	10	60
Abbreviated Writing Claim Score	53,924	31.56	12.31	10	60
Full Writing Claim Score CSEM	53,924	3.18	1.43	2	8
Abbreviated Writing Claim Score CSEM	53,924	3.63	1.19	3	7

Table 3.12. *Summary Statistics for Full and Abbreviated Scores for ELA/L Grade 8 CBT by Core Form*

		Count	Mean	Standard Deviation	Minimum	Maximum
Core 1	Full Scale Score	17,986	741.41	38.01	650	850
	Abbreviated Scale Score	17,986	740.64	38.64	650	850
	Full Scale Score CSEM	17,986	9.58	1.64	8	15
	Abbreviated Scale Score CSEM	17,986	10.80	2.17	9	20
	Full Reading Claim Score	17,986	46.56	15.54	10	90
	Abbreviated Reading Claim Score	17,986	45.32	15.11	10	90
	Full Reading Claim Score CSEM	17,986	4.68	0.65	4	8
	Abbreviated Reading Claim Score CSEM	17,986	5.34	0.80	5	9
	Full Writing Claim Score	17,986	32.35	10.70	10	60
	Abbreviated Writing Claim Score	17,986	31.60	11.67	10	60
	Full Writing Claim Score CSEM	17,986	3.12	1.41	2	8
	Abbreviated Writing Claim Score CSEM	17,986	3.55	1.18	3	7
Core 2	Full Scale Score	18,031	743.47	39.25	650	850
	Abbreviated Scale Score	18,031	743.32	40.66	650	850
	Full Scale Score CSEM	18,031	9.32	1.79	8	15
	Abbreviated Scale Score CSEM	18,031	11.16	2.52	9	20
	Full Reading Claim Score	18,031	47.24	15.70	10	90
	Abbreviated Reading Claim Score	18,031	45.08	14.85	10	90
	Full Reading Claim Score CSEM	18,031	4.45	0.76	4	8
	Abbreviated Reading Claim Score CSEM	18,031	5.32	1.10	5	10
	Full Writing Claim Score	18,031	32.29	11.67	10	60
	Abbreviated Writing Claim Score	18,031	31.93	12.66	10	60
	Full Writing Claim Score CSEM	18,031	3.23	1.45	2	6
	Abbreviated Writing Claim Score CSEM	18,031	3.70	1.19	3	6
Core 3	Full Scale Score	17,907	741.63	38.32	650	850
	Abbreviated Scale Score	17,907	741.07	39.02	650	850
	Full Scale Score CSEM	17,907	9.32	1.67	8	15
	Abbreviated Scale Score CSEM	17,907	10.92	2.17	9	20
	Full Reading Claim Score	17,907	46.45	15.30	10	90
	Abbreviated Reading Claim Score	17,907	44.24	14.38	10	90
	Full Reading Claim Score CSEM	17,907	4.48	0.61	4	8
	Abbreviated Reading Claim Score CSEM	17,907	5.24	0.80	5	9
	Full Writing Claim Score	17,907	31.78	11.63	10	60
	Abbreviated Writing Claim Score	17,907	31.15	12.56	10	60
	Full Writing Claim Score CSEM	17,907	3.19	1.45	2	6
	Abbreviated Writing Claim Score CSEM	17,907	3.64	1.20	3	7

Overall Performance Level Agreement

Table 3.13 lists the percent of students assigned the exact same performance level for both the full and the abbreviated ELA/L assessments by grade level. In addition, Table 3.13 lists the percent of students assigned to different performance levels between the full and abbreviated ELA/L assessments for each grade level and for each core form. If the abbreviated performance levels were a higher ability level compared to the full performance level the number and percent of students are listed as "Higher Level for Abbreviated". If the abbreviated performance levels were a lower ability level compared to the full performance level the number and percent of students are listed as "Lower Level for Abbreviated".

The percent of exact agreement in the overall performance level designation between the full assessment and the abbreviated assessment for any core form ranged from 80.9% - 85.1% across the grade levels. The percent of students in the Higher Level or the Lower Level for Abbreviated ranged from 6.1% - 11.4%.

Table 3.13. *Overall Performance Level Percent Agreement by Grade*

Grade	Core	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
3	1	83.6%	8.8%	7.6%
	2	83.7%	6.5%	9.8%
	3	85.1%	6.1%	8.9%
	Overall	**84.1%**	**7.1%**	**8.8%**
4	1	82.4%	9.3%	8.3%
	2	83.0%	8.2%	8.7%
	3	81.2%	7.8%	11.0%
	Overall	**82.2%**	**8.5%**	**9.4%**
5	1	83.2%	9.6%	7.2%
	2	80.9%	8.4%	10.7%
	3	81.8%	6.8%	11.4%
	Overall	**82.0%**	**8.3%**	**9.8%**
6	1	84.4%	7.9%	7.7%
	2	84.6%	9.1%	6.2%
	3	83.2%	7.8%	9.1%
	Overall	**84.1%**	**8.3%**	**7.7%**
7	1	81.6%	8.4%	10.1%
	2	82.7%	7.7%	9.5%
	3	81.8%	7.9%	10.3%
	Overall	**82.0%**	**8.0%**	**10.0%**
8	1	82.0%	6.7%	11.3%
	2	82.7%	7.7%	9.7%
	3	83.3%	7.3%	9.4%
	Overall	**82.7%**	**7.2%**	**10.1%**

Tables 3.14 – 3.37 show the number and percent of students by the full performance level designation and the abbreviated performance level designation for each grade level across modes. The values bolded in the tables represent exact agreement. For all the ELA/L assessments, if the performance level designation was not exact, the difference was most often within an adjacent performance level. There was a very small percentage of cases where the student's performance level changed two performance levels.

Table 3.14. *Grade 3 Overall Performance Level Percent Agreement*

Grade 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**9,646 (16.5%)**	1,111 (1.9%)				10,757 (18.5%)
	2	1,512 (2.6%)	**7,633 (13.1%)**	979 (1.7%)			10,124 (17.4%)
	3		1,852 (3.2%)	**10,397 (17.8%)**	1,568 (2.7%)		13,817 (23.7%)
	4			1,354 (2.3%)	**19,772 (33.9%)**	487 (0.8%)	21,613 (37.1%)
	5				399 (0.7%)	**1,590 (2.7%)**	1,989 (3.4%)
	Total	11,158 (19.1%)	10,596 (18.2%)	12,730 (21.8%)	21,739 (37.3%)	2,077 (3.6%)	58,300 (100%)

Table 3.15. *Grade 3 Core 1 Performance Level Percent Agreement*

Grade 3 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,009 (15.5%)**	480 (2.5%)				3,489 (18.0%)
	2	459 (2.4%)	**2,567 (13.2%)**	385 (2.0%)			3,411 (17.5%)
	3		582 (3.0%)	**3,424 (17.6%)**	710 (3.7%)		4,716 (24.3%)
	4			303 (1.6%)	**6,694 (34.4%)**	129 (0.7%)	7,126 (36.7%)
	5				139 (0.7%)	**555 (2.9%)**	694 (3.6%)
	Total	3,468 (17.8%)	3,629 (18.7%)	4,112 (21.2%)	7,543 (38.8%)	684 (3.5%)	19,436 (100%)

Table 3.16. *Grade 3 Core 2 Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,327 (17.1%)**	298 (1.5%)				3,625 (18.6%)
	2	495 (2.5%)	**2,553 (13.1%)**	260 (1.3%)			3,308 (17.0%)
	3		743 (3.8%)	**3,551 (18.2%)**	476 (2.4%)		4,770 (24.5%)
	4			569 (2.9%)	**6,295 (32.3%)**	228 (1.2%)	7,092 (36.4%)
	5				109 (0.6%)	**564 (2.9%)**	673 (3.5%)
	Total	3,822 (19.6%)	3,594 (18.5%)	4,380 (22.5%)	6,880 (35.3%)	792 (4.1%)	19,468 (100%)

Table 3.17. *Grade 3 Core 3 Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**3,310 (17.1%)**	333 (1.7%)				3,643 (18.8%)
	2	558 (2.9%)	**2,513 (13.0%)**	334 (1.7%)			3,405 (17.6%)
	3		527 (2.7%)	**3,422 (17.6%)**	382 (2.0%)		4,331 (22.3%)
	4			482 (2.5%)	**6,783 (35.0%)**	130 (0.7%)	7,395 (38.1%)
	5				151 (0.8%)	**471 (2.4%)**	622 (3.2%)
	Total	3,868 (19.9%)	3,373 (17.4%)	4,238 (21.8%)	7,316 (37.7%)	601 (3.1%)	19,396 (100%)

Table 3.18. *Grade 4 Overall Performance Level Percent Agreement*

Grade 4		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**6,558 (11.0%)**	643 (1.1%)				7,201 (12.0%)
	2	1,187 (2.0%)	**7,943 (13.3%)**	1,416 (2.4%)			10,546 (17.6%)
	3	3 (<0.1%)	1,603 (2.7%)	**11,895 (19.9%)**	1,969 (3.3%)		15,470 (25.9%)
	4			1,924 (3.2%)	**18,016 (30.1%)**	1,024 (1.7%)	20,964 (35.1%)
	5				883 (1.5%)	**4,727 (7.9%)**	5,610 (9.4%)
	Total	7,748 (13.0%)	10,189 (17.0%)	15,235 (25.5%)	20,868 (34.9%)	5,751 (9.6%)	59,791 (100%)

Table 3.19. *Grade 4 Core 1 Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,409 (12.0%)**	330 (1.6%)				2,739 (13.7%)
	2	279 (1.4%)	**2,631 (13.1%)**	400 (2.0%)			3,310 (16.5%)
	3		632 (3.2%)	**3,790 (18.9%)**	783 (3.9%)		5,205 (26.0%)
	4			487 (2.4%)	**6,103 (30.5%)**	349 (1.7%)	6,939 (34.7%)
	5				271 (1.4%)	**1,551 (7.7%)**	1,822 (9.1%)
	Total	2,688 (13.4%)	3,593 (18.0%)	4,677 (23.4%)	7,157 (35.8%)	1,900 (9.5%)	20,015 (100%)

Table 3.20. *Grade 4 Core 2 Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,096 (10.6%)**	151 (0.8%)				2,247 (11.4%)
	2	333 (1.7%)	**2,739 (13.9%)**	595 (3.0%)			3,667 (18.6%)
	3		330 (1.7%)	**4,195 (21.2%)**	538 (2.7%)		5,063 (25.6%)
	4			731 (3.7%)	**5,895 (29.8%)**	343 (1.7%)	6,969 (35.3%)
	5				333 (1.7%)	**1,477 (7.5%)**	1,810 (9.2%)
	Total	2,429 (12.3%)	3,220 (16.3%)	5,521 (27.9%)	6,766 (34.2%)	1,820 (9.2%)	19,756 (100%)

Table 3.21. *Grade 4 Core 3 Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,053 (10.3%)**	162 (0.8%)				2,215 (11.1%)
	2	575 (2.9%)	**2,573 (12.9%)**	421 (2.1%)			3,569 (17.8%)
	3	3 (<0.1%)	641 (3.2%)	**3,910 (19.5%)**	648 (3.2%)		5,202 (26.0%)
	4			706 (3.5%)	**6,018 (30.1%)**	332 (1.7%)	7,056 (35.2%)
	5				279 (1.4%)	**1,699 (8.5%)**	1,978 (9.9%)
	Total	2,631 (13.1%)	3,376 (16.9%)	5,037 (25.2%)	6,945 (34.7%)	2,031 (10.1%)	20,020 (100%)

Table 3.22. *Grade 5 Overall Performance Level Percent Agreement*

Grade 5		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**5,328 (8.9%)**	868 (1.5%)				6,196 (10.4%)
	2	1,472 (2.5%)	**6,980 (11.7%)**	1,541 (2.6%)			9,993 (16.7%)
	3	11 (<0.1%)	1,792 (3.0%)	**11,964 (20.0%)**	1,700 (2.8%)		15,467 (25.9%)
	4			1,984 (3.3%)	**21,954 (36.8%)**	843 (1.4%)	24,781 (41.5%)
	5				566 (0.9%)	**2,733 (4.6%)**	3,299 (5.5%)
	Total	6,811 (11.4%)	9,640 (16.1%)	15,489 (25.9%)	24,220 (40.5%)	3,576 (6.0%)	59,736 (100%)

Table 3.23. *Grade 5 Core 1 Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,685 (8.5%)**	420 (2.1%)				2,105 (10.6%)
	2	293 (1.5%)	**2,380 (11.9%)**	612 (3.1%)			3,285 (16.5%)
	3		397 (2.0%)	**4,056 (20.3%)**	527 (2.6%)		4,980 (25.0%)
	4			617 (3.1%)	**7,582 (38.0%)**	359 (1.8%)	8,558 (42.9%)
	5				119 (0.6%)	**890 (4.5%)**	1,009 (5.1%)
	Total	1,978 (9.9%)	3,197 (16.0%)	5,285 (26.5%)	8,228 (41.3%)	1,249 (6.3%)	19,937 (100%)

Table 3.24. *Grade 5 Core 2 Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,868 (9.4%)**	276 (1.4%)				2,144 (10.7%)
	2	571 (2.9%)	**2,235 (11.2%)**	475 (2.4%)			3,281 (16.4%)
	3	4 (<0.1%)	728 (3.6%)	**3,766 (18.9%)**	673 (3.4%)		5,171 (25.9%)
	4			609 (3.1%)	**7,296 (36.6%)**	259 (1.3%)	8,164 (40.9%)
	5				218 (1.1%)	**979 (4.9%)**	1,197 (6.0%)
	Total	2,443 (12.2%)	3,239 (16.2%)	4,850 (24.3%)	8,187 (41.0%)	1,238 (6.2%)	19,957 (100%)

Table 3.25. *Grade 5 Core 3 Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,775 (8.9%)**	172 (0.9%)				1,947 (9.8%)
	2	608 (3.1%)	**2,365 (11.9%)**	454 (2.3%)			3,427 (17.3%)
	3	7 (<0.1%)	667 (3.4%)	**4,142 (20.9%)**	500 (2.5%)		5,316 (26.8%)
	4			758 (3.8%)	**7,076 (35.7%)**	225 (1.1%)	8,059 (40.6%)
	5				229 (1.2%)	**864 (4.4%)**	1,093 (5.5%)
	Total	2,390 (12.0%)	3,204 (16.1%)	5,354 (27.0%)	7,805 (39.3%)	1,089 (5.5%)	19,842 (100%)

Table 3.26. *Grade 6 Overall Performance Level Percent Agreement*

Grade 6		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**4,864 (8.4%)**	888 (1.5%)				5,752 (10.0%)
	2	1,087 (1.9%)	**9,117 (15.8%)**	1,438 (2.5%)			11,642 (20.2%)
	3	3 (<0.1%)	1,326 (2.3%)	**13,848 (24.0%)**	1,534 (2.7%)		16,711 (29.0%)
	4			1,558 (2.7%)	**17,455 (30.3%)**	911 (1.6%)	19,924 (34.6%)
	5				444 (0.8%)	**3,156 (5.5%)**	3,600 (6.2%)
	Total	5,954 (10.3%)	11,331 (19.7%)	16,844 (29.2%)	19,433 (33.7%)	4,067 (7.1%)	57,629 (100%)

Table 3.27. *Grade 6 Core 1 Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,622 (8.5%)**	383 (2.0%)				2,005 (10.5%)
	2	374 (2.0%)	**2,956 (15.5%)**	418 (2.2%)			3,748 (19.6%)
	3	2 (<0.1%)	468 (2.4%)	**4,593 (24.0%)**	444 (2.3%)		5,507 (28.8%)
	4			499 (2.6%)	**5,834 (30.5%)**	267 (1.4%)	6,600 (34.5%)
	5				136 (0.7%)	**1,112 (5.8%)**	1,248 (6.5%)
	Total	1,998 (10.5%)	3,807 (19.9%)	5,510 (28.8%)	6,414 (33.6%)	1,379 (7.2%)	19,108 (100%)

Table 3.28. *Grade 6 Core 2 Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,704 (8.8%)**	335 (1.7%)				2,039 (10.5%)
	2	210 (1.1%)	**3,007 (15.5%)**	509 (2.6%)			3,726 (19.2%)
	3		409 (2.1%)	**4,737 (24.4%)**	621 (3.2%)		5,767 (29.6%)
	4			411 (2.1%)	**5,983 (30.8%)**	313 (1.6%)	6,707 (34.5%)
	5				181 (0.9%)	**1,031 (5.3%)**	1,212 (6.2%)
	Total	1,914 (9.8%)	3,751 (19.3%)	5,657 (29.1%)	6,785 (34.9%)	1,344 (6.9%)	19,451 (100%)

Table 3.29. *Grade 6 Core 3 Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**1,538 (8.1%)**	170 (0.9%)				1,708 (9.0%)
	2	503 (2.6%)	**3,154 (16.5%)**	511 (2.7%)			4,168 (21.9%)
	3	1 (<0.1%)	449 (2.4%)	**4,518 (23.7%)**	469 (2.5%)		5,437 (28.5%)
	4			648 (3.4%)	**5,638 (29.6%)**	331 (1.7%)	6,617 (34.7%)
	5				127 (0.7%)	**1,013 (5.3%)**	1,140 (6.0%)
	Total	2,042 (10.7%)	3,773 (19.8%)	5,677 (29.8%)	6,234 (32.7%)	1,344 (7.0%)	19,070 (100%)

Table 3.30. *Grade 7 Overall Performance Level Percent Agreement*

Grade 7		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**6,841 (12.2%)**	1,028 (1.8%)				7,869 (14.0%)
	2	1,066 (1.9%)	**7,191 (12.8%)**	1,105 (2.0%)			9,362 (16.7%)
	3	4 (<0.1%)	1,887 (3.4%)	**10,671 (19.0%)**	1,399 (2.5%)	1 (<0.1%)	13,962 (24.9%)
	4			1,786 (3.2%)	**14,499 (25.9%)**	949 (1.7%)	17,234 (30.7%)
	5				853 (1.5%)	**6,802 (12.1%)**	7,655 (13.6%)
	Total	7,911 (14.1%)	10,106 (18.0%)	13,562 (24.2%)	16,751 (29.9%)	7,752 (13.8%)	56,082 (100%)

Table 3.31. *Grade 7 Core 1 Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,273 (12.1%)**	375 (2.0%)				2,648 (14.1%)
	2	406 (2.2%)	**2,252 (12.0%)**	366 (2.0%)			3,024 (16.1%)
	3	2 (<0.1%)	667 (3.6%)	**3,664 (19.5%)**	553 (2.9%)		4,886 (26.1%)
	4			482 (2.6%)	**4,830 (25.8%)**	272 (1.5%)	5,584 (29.8%)
	5				331 (1.8%)	**2,274 (12.1%)**	2,605 (13.9%)
	Total	2,681 (14.3%)	3,294 (17.6%)	4,512 (24.1%)	5,714 (30.5%)	2,546 (13.6%)	18,747 (100%)

Table 3.32. *Grade 7 Core 2 Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,275 (12.1%)**	295 (1.6%)				2,570 (13.7%)
	2	323 (1.7%)	**2,492 (13.3%)**	390 (2.1%)			3,205 (17.0%)
	3	1 (<0.1%)	542 (2.9%)	**3,627 (19.3%)**	465 (2.5%)		4,635 (24.7%)
	4			639 (3.4%)	**4,891 (26.0%)**	306 (1.6%)	5,836 (31.0%)
	5				289 (1.5%)	**2,266 (12.1%)**	2,555 (13.6%)
	Total	2,599 (13.8%)	3,329 (17.7%)	4,656 (24.8%)	5,645 (30.0%)	2,572 (13.7%)	18,801 (100%)

Table 3.33. *Grade 7 Core 3 Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,293 (12.4%)**	358 (1.9%)				2,651 (14.3%)
	2	337 (1.8%)	**2,447 (13.2%)**	349 (1.9%)			3,133 (16.9%)
	3	1 (<0.1%)	678 (3.7%)	**3,380 (18.2%)**	381 (2.1%)	1 (<0.1%)	4,441 (24.0%)
	4			665 (3.6%)	**4,778 (25.8%)**	371 (2.0%)	5,814 (31.4%)
	5				233 (1.3%)	**2,262 (12.2%)**	2,495 (13.5%)
	Total	2,631 (14.2%)	3,483 (18.8%)	4,394 (23.7%)	5,392 (29.1%)	2,634 (14.2%)	18,534 (100%)

Table 3.34. *Grade 8 Overall Performance Level Percent Agreement*

Grade 8		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**7,086 (13.1%)**	902 (1.7%)				7,988 (14.8%)
	2	1,285 (2.4%)	**7,090 (13.1%)**	1,074 (2.0%)			9,449 (17.5%)
	3	4 (<0.1%)	1,624 (3.0%)	**10,341 (19.2%)**	1,083 (2.0%)		13,052 (24.2%)
	4		1 (<0.1%)	1,851 (3.4%)	**15,808 (29.3%)**	823 (1.5%)	18,483 (34.3%)
	5				696 (1.3%)	**4,256 (7.9%)**	4,952 (9.2%)
	Total	8,375 (15.5%)	9,617 (17.8%)	13,266 (24.6%)	17,587 (32.6%)	5,079 (9.4%)	53,924 (100%)

Table 3.35. *Grade 8 Core 1 Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,270 (12.6%)**	296 (1.6%)				2,566 (14.3%)
	2	478 (2.7%)	**2,398 (13.3%)**	324 (1.8%)			3,200 (17.8%)
	3	2 (<0.1%)	671 (3.7%)	**3,546 (19.7%)**	392 (2.2%)		4,611 (25.6%)
	4			624 (3.5%)	**5,268 (29.3%)**	189 (1.1%)	6,081 (33.8%)
	5				257 (1.4%)	**1,271 (7.1%)**	1,528 (8.5%)
	Total	2,750 (15.3%)	3,365 (18.7%)	4,494 (25.0%)	5,917 (32.9%)	1,460 (8.1%)	17,986 (100%)

Table 3.36. *Grade 8 Core 2 Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,409 (13.4%)**	243 (1.3%)				2,652 (14.7%)
	2	440 (2.4%)	**2,250 (12.5%)**	387 (2.1%)			3,077 (17.1%)
	3		449 (2.5%)	**3,261 (18.1%)**	372 (2.1%)		4,082 (22.6%)
	4		1 (<0.1%)	633 (3.5%)	**5,352 (29.7%)**	381 (2.1%)	6,367 (35.3%)
	5				219 (1.2%)	**1,634 (9.1%)**	1,853 (10.3%)
	Total	2,849 (15.8%)	2,943 (16.3%)	4,281 (23.7%)	5,943 (33.0%)	2,015 (11.2%)	18,031 (100%)

Table 3.37. *Grade 8 Core 3 Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Performance Levels					
CBT		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**2,407 (13.4%)**	363 (2.0%)				2,770 (15.5%)
	2	367 (2.0%)	**2,442 (13.6%)**	363 (2.0%)			3,172 (17.7%)
	3	2 (<0.1%)	504 (2.8%)	**3,534 (19.7%)**	319 (1.8%)		4,359 (24.3%)
	4			594 (3.3%)	**5,188 (29.0%)**	253 (1.4%)	6,035 (33.7%)
	5				220 (1.2%)	**1,351 (7.5%)**	1,571 (8.8%)
	Total	2,776 (15.5%)	3,309 (18.5%)	4,491 (25.1%)	5,727 (32.0%)	1,604 (9.0%)	17,907 (100%)

Reading & Writing Claim Performance Level Agreement

The performance levels for the Reading and Writing claims were determined for the full test and the abbreviated forms. Tables 3.38 – 3.43 list the percent of students assigned the exact same claim performance level for both the full and the abbreviated ELA/L assessments by grade level, overall and broken down by each core form.

The percent of exact agreement in the claim performance level designations between the full assessment and the abbreviated assessment claims ranged from 86.8% - 90.1% for the Reading claim and 79.3% - 92.3% for the Writing claim across the grade levels and cores.

Table 3.38. *Reading Claim Performance Level Percent Agreement by Grade*

Grade	Core	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
3	1	90.2%	4.8%	5.0%
	2	89.7%	7.5%	2.9%
	3	90.5%	5.8%	3.6%
	Overall	**90.1%**	**6.0%**	**3.8%**
4	1	90.1%	4.6%	5.3%
	2	91.1%	3.2%	5.7%
	3	88.7%	4.0%	7.4%
	Overall	**90.0%**	**3.9%**	**6.1%**
5	1	88.5%	4.3%	7.2%
	2	86.7%	7.0%	6.3%
	3	87.3%	8.0%	4.7%
	Overall	**87.5%**	**6.4%**	**6.1%**
6	1	89.5%	4.6%	5.9%
	2	90.6%	4.9%	4.6%
	3	89.9%	4.7%	5.4%
	Overall	**90.0%**	**4.8%**	**5.3%**
7	1	86.0%	1.9%	12.2%
	2	88.5%	1.9%	9.6%
	3	88.8%	3.6%	7.6%
	Overall	**87.7%**	**2.5%**	**9.8%**
8	1	87.2%	2.7%	10.1%
	2	86.9%	2.1%	11.0%
	3	86.3%	2.8%	10.9%
	Overall	**86.8%**	**2.5%**	**10.7%**

Table 3.39. *Writing Claim Performance Level Percent Agreement by Grade*

Grade	Core	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
3	1	80.3%	5.4%	14.3%
	2	80.8%	8.0%	11.3%
	3	76.7%	2.6%	20.7%
	Overall	**79.3%**	**5.3%**	**15.4%**
4	1	87.4%	5.9%	6.7%
	2	87.6%	5.3%	7.1%
	3	88.0%	7.5%	4.5%
	Overall	**87.7%**	**6.3%**	**6.1%**
5	1	89.0%	4.3%	6.8%
	2	88.3%	5.2%	6.5%
	3	88.6%	4.1%	7.2%
	Overall	**88.6%**	**4.5%**	**6.8%**
6	1	91.8%	2.0%	6.2%
	2	93.1%	3.4%	3.5%
	3	92.1%	4.2%	3.7%
	Overall	**92.3%**	**3.2%**	**4.5%**
7	1	80.6%	2.9%	16.5%
	2	81.8%	3.8%	14.5%
	3	81.4%	2.6%	16.0%
	Overall	**81.2%**	**3.1%**	**15.7%**
8	1	87.2%	2.7%	10.1%
	2	87.6%	2.8%	9.6%
	3	87.0%	2.6%	10.5%
	Overall	**87.0%**	**4.1%**	**8.9%**

Tables 3.40 through 3.75 show the number and percent of students by the claim performance level designation and the abbreviated claim performance level designation for each grade level. The values bolded in the tables represent exact agreement. For all the ELA/L assessments, if the performance level designation was not exact, the difference was most often within an adjacent performance level.

Table 3.40. *Grade 3 Core 1 Reading Claim Performance Level Percent Agreement*

Grade 3 Core 1		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,833 (14.6%)**	569 (2.9%)		3,402 (17.5%)
	2	406 (2.1%)	**7,017 (36.1%)**	369 (1.9%)	7,792 (40.1%)
	3		556 (2.9%)	**7,686 (39.6%)**	8,242 (42.4%)
	Total	3,239 (16.7%)	8,142 (41.9%)	8,055 (41.4%)	19,436 (100%)

Table 3.41. *Grade 3 Core 2 Reading Claim Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,994 (15.4%)**	572 (2.9%)		3,566 (18.3%)
	2	226 (1.2%)	**6,523 (33.5%)**	878 (4.5%)	7,627 (39.2%)
	3		339 (1.7%)	**7,936 (40.8%)**	8,275 (42.5%)
	Total	3,220 (16.5%)	7,434 (38.2%)	8,814 (45.3%)	19,468 (100%)

Table 3.42. *Grade 3 Core 3 Reading Claim Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**5,032 (25.9%)**	94 (0.5%)		5,126 (26.4%)
	2	2,932 (15.1%)	**2,095 (10.8%)**	403 (2.1%)	5,430 (28.0%)
	3	60 (0.3%)	1,030 (5.3%)	**7,750 (40.0%)**	8,840 (45.6%)
	Total	8,024 (41.4%)	3,219 (16.6%)	8,153 (42.0%)	19,396 (100%)

Table 3.43. *Grade 3 Core 1 Writing Claim Performance Level Percent Agreement*

Grade 3 Core 1		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**4,806 (24.7%)**	584 (3.0%)		5,390 (27.7%)
	2	1,580 (8.1%)	**3,352 (17.3%)**	466 (2.4%)	5,398 (27.8%)
	3	37 (0.2%)	1,161 (6.0%)	**7,450 (38.3%)**	8,648 (44.5%)
	Total	6,423 (33.1%)	5,097 (26.2%)	7,916 (40.7%)	19,436 (100%)

Table 3.44. *Grade 3 Core 2 Writing Claim Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**5,256 (27.0%)**	679 (3.5%)		5,935 (30.5%)
	2	1,028 (5.3%)	**3,315 (17.0%)**	874 (4.5%)	5,217 (26.8%)
	3	43 (0.2%)	1,122 (5.8%)	**7,151 (36.7%)**	8,316 (42.7%)
	Total	6,327 (32.5%)	5,116 (26.3%)	8,025 (41.2%)	19,468 (100%)

Table 3.45. *Grade 3 Core 3 Writing Claim Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**5,032 (25.9%)**	94 (0.5%)		5,126 (26.4%)
	2	2,932 (15.1%)	**2,095 (10.8%)**	403 (2.1%)	5,430 (28.0%)
	3	60 (0.3%)	1,030 (5.3%)	**7,750 (40.0%)**	8,840 (45.6%)
	Total	8,024 (41.4%)	3,219 (16.6%)	8,153 (42.0%)	19,396 (100%)

Table 3.46. *Grade 4 Core 1 Reading Claim Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,134 (10.7%)**	397 (2.0%)		2,531 (12.7%)
	2	318 (1.6%)	**7,623 (38.1%)**	527 (2.6%)	8,468 (42.3%)
	3		735 (3.7%)	**8,281 (41.4%)**	9,016 (45.1%)
	Total	2,452 (12.3%)	8,755 (43.7%)	8,808 (44.0%)	20,015 (100%)

Table 3.47. *Grade 4 Core 2 Reading Claim Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,959 (9.9%)**	136 (0.7%)		2,095 (10.6%)
	2	435 (2.2%)	**7,655 (38.8%)**	498 (2.5%)	8,588 (43.5%)
	3		686 (3.5%)	**8,387 (42.5%)**	9,073 (45.9%)
	Total	2,394 (12.1%)	8,477 (42.9%)	8,885 (45.0%)	19,756 (100%)

Table 3.48. *Grade 4 Core 3 Reading Claim Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,960 (9.8%)**	331 (1.7%)		2,291 (11.4%)
	2	624 (3.1%)	**7,820 (39.1%)**	459 (2.3%)	8,903 (44.5%)
	3		854 (4.3%)	**7,972 (39.8%)**	8,826 (44.1%)
	Total	2,584 (12.9%)	9,005 (45.0%)	8,431 (42.1%)	20,020 (100%)

Table 3.49. *Grade 4 Core 1 Writing Claim Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,849 (19.2%)**	33 (0.2%)		3,882 (19.4%)
	2	880 (4.4%)	**4,775 (23.9%)**	1,147 (5.7%)	6,802 (34.0%)
	3		459 (2.3%)	**8,872 (44.3%)**	9,331 (46.6%)
	Total	4,729 (23.6%)	5,267 (26.3%)	10,019 (50.1%)	10,015 (100%)

Table 3.50. *Grade 4 Core 2 Writing Claim Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,178 (16.1%)**	58 (0.3%)		3,236 (16.4%)
	2	590 (3.0%)	**5,377 (27.2%)**	994 (5.0%)	6,961 (35.2%)
	3	1 (<0.1%)	808 (4.1%)	**8,750 (44.3%)**	9,559 (48.4%)
	Total	3,769 (19.1%)	6,243 (31.6%)	9,744 (49.3%)	19,756 (100%)

Table 3.51. *Grade 4 Core 3 Writing Claim Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,413 (17.1%)**	154 (0.8%)		3,567 (17.8%)
	2	474 (2.4%)	**4,994 (25.0%)**	1,355 (6.8%)	6,823 (34.1%)
	3		416 (2.1%)	**9,214 (46.0%)**	9,630 (48.1%)
	Total	3,887 (19.4%)	5,564 (27.8%)	10,569 (52.8%)	20,020 (100%)

Table 3.52. *Grade 5 Core 1 Reading Claim Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,614 (8.1%)**	388 (2.0%)		2,002 (10.0%)
	2	488 (2.5%)	**7,501 (37.6%)**	470 (2.4%)	8,459 (42.4%)
	3		938 (4.7%)	**8,538 (42.8%)**	9,476 (47.5%)
	Total	2,102 (10.5%)	8,827 (44.3%)	9,008 (45.2%)	19,937 (100%)

Table 3.53. *Grade 5 Core 2 Reading Claim Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,576 (7.9%)**	580 (2.9%)		2,156 (10.8%)
	2	359 (1.8%)	**7,238 (36.3%)**	813 (4.1%)	8,410 (42.1%)
	3		907 (4.5%)	**8,484 (42.5%)**	9,391 (47.1%)
	Total	1,935 (9.7%)	8,725 (43.7%)	9,297 (46.6%)	19,957 (100%)

Table 3.54. *Grade 5 Core 3 Reading Claim Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,616 (8.1%)**	547 (2.8%)		2,163 (10.9%)
	2	335 (1.7%)	**7,422 (37.4%)**	1,044 (5.3%)	8,801 (44.4%)
	3		590 (3.0%)	**8,288 (41.8%)**	8,878 (44.7%)
	Total	1,951 (9.8%)	8,559 (43.1%)	9,332 (47.0%)	19,842 (100%)

Table 3.55. *Grade 5 Core 1 Writing Claim Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,602 (18.1%)**			3,602 (18.1%)
	2	1,152 (5.8%)	**4,457 (22.4%)**	848 (4.3%)	6,457 (32.4%)
	3		196 (1.0%)	**9,682 (48.6%)**	9,878 (49.6%)
	Total	4,754 (23.9%)	4,653 (23.3%)	10,530 (52.8%)	19,937 (100%)

Table 3.56. *Grade 5 Core 2 Writing Claim Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**2,998 (15.0%)**	478 (2.4%)		3,476 (17.4%)
	2	908 (4.5%)	**5,700 (28.6%)**	558 (2.8%)	7,166 (35.9%)
	3		395 (2.0%)	**8,920 (44.7%)**	9,315 (46.7%)
	Total	3,906 (19.6%)	6,573 (32.9%)	9,478 (47.5%)	19,957 (100%)

Table 3.57. *Grade 5 Core 3 Writing Claim Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**4,025 (20.3%)**			4,025 (20.3%)
	2	907 (4.6%)	**4,692 (23.7%)**	822 (4.1%)	6,421 (32.4%)
	3		528 (2.7%)	**8,868 (44.7%)**	9,396 (47.4%)
	Total	4,932 (24.9%)	5,220 (26.3%)	9,690 (48.8%)	19,842 (100%)

Table 3.58. *Grade 6 Core 1 Reading Claim Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,400 (7.3%)**	330 (1.7%)		1,730 (9.1%)
	2	613 (3.2%)	**8,699 (45.5%)**	555 (2.9%)	9,867 (51.6%)
	3		517 (2.7%)	**6,994 (36.6%)**	7,511 (39.3%)
	Total	2,013 (10.5%)	9,546 (50.0%)	7,549 (39.5%)	19,108 (100%)

Table 3.59. *Grade 6 Core 2 Reading Claim Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,426 (7.3%)**	366 (1.9%)		1,792 (9.2%)
	2	322 (1.7%)	**8,671 (44.6%)**	580 (3.0%)	9,573 (49.2%)
	3		568 (2.9%)	**7,518 (38.7%)**	8,086 (41.6%)
	Total	1,748 (9.0%)	9,605 (49.4%)	8,098 (41.6%)	19,451 (100%)

Table 3.60. *Grade 6 Core 3 Reading Claim Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**1,289 (6.8%)**	244 (1.3%)		1,533 (8.0%)
	2	459 (2.4%)	**8,614 (45.2%)**	660 (3.5%)	9,733 (51.0%)
	3		566 (3.0%)	**7,238 (38.0%)**	7,804 (40.9%)
	Total	1,748 (9.2%)	9,424 (49.4%)	7,898 (41.4%)	19,070 (100%)

Table 3.61. *Grade 6 Core 1 Writing Claim Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**4,106 (21.5%)**			4,106 (21.5%)
	2	746 (3.9%)	**5,016 (26.3%)**	382 (2.0%)	6,144 (32.2%)
	3		438 (2.3%)	**8,420 (44.1%)**	8,858 (46.4%)
	Total	4,852 (25.4%)	5,454 (28.5%)	8,802 (46.1%)	19,108 (100%)

Table 3.62. *Grade 6 Core 2 Writing Claim Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,334 (17.1%)**	25 (0.1%)		3,359 (17.3%)
	2	325 (1.7%)	**6,199 (31.9%)**	642 (3.3%)	7,166 (36.8%)
	3		356 (1.8%)	**8,570 (44.1%)**	8,926 (45.9%)
	Total	3,659 (18.8%)	6,580 (33.8%)	9,212 (47.4%)	19,451 (100%)

Table 3.63. *Grade 6 Core 3 Writing Claim Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,731 (19.6%)**	46 (0.2%)		3,777 (19.8%)
	2	335 (1.8%)	**6,202 (32.5%)**	757 (4.0%)	7,294 (38.3%)
	3		376 (2.0%)	**7,623 (40.0%)**	7,999 (42.0%)
	Total	4,066 (21.3%)	6,624 (34.7%)	8,380 (43.9%)	19,070 (100%)

Table 3.64. *Grade 7 Core 1 Reading Claim Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,296 (12.3%)**	172 (0.9%)		2,468 (13.2%)
	2	886 (4.7%)	**6,941 (37.0%)**	174 (0.9%)	8,001 (42.7%)
	3		1,399 (7.5%)	**6,879 (36.7%)**	8,278 (44.2%)
	Total	3,182 (17.0%)	8,512 (45.4%)	7,053 (37.6%)	18,747 (100%)

Table 3.65. *Grade 7 Core 2 Reading Claim Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,322 (12.4%)**	110 (0.6%)		2,432 (12.9%)
	2	840 (4.5%)	**7,196 (38.3%)**	255 (1.4%)	8,291 (44.1%)
	3		961 (5.1%)	**7,117 (37.9%)**	8,078 (43.0%)
	Total	3,162 (16.8%)	8,267 (44.0%)	7,372 (39.2%)	18,801 (100%)

Table 3.66. *Grade 7 Core 3 Reading Claim Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,201 (11.9%)**	361 (2.0%)		2,562 (13.8%)
	2	465 (2.5%)	**7,207 (38.9%)**	310 (1.7%)	7,982 (43.1%)
	3		950 (5.1%)	**7,040 (38.0%)**	7,990 (43.1%)
	Total	2,666 (14.4%)	8,518 (46.0%)	7,350 (39.7%)	18,534 (100%)

Table 3.67. *Grade 7 Core 1 Writing Claim Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,360 (17.9%)**	176 (0.9%)		3,536 (18.9%)
	2	1,082 (5.8%)	**4,499 (24.0%)**	371 (2.0%)	5,952 (31.8%)
	3	6 (<0.1%)	2,006 (10.7%)	**7,247 (38.7%)**	9,259 (49.4%)
	Total	4,448 (23.7%)	6,681 (35.6%)	7,618 (40.6%)	18,747 (100%)

Table 3.68. *Grade 7 Core 2 Writing Claim Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,466 (18.4%)**	25 (0.1%)		3,491 (18.6%)
	2	936 (5.0%)	**4,604 (24.5%)**	683 (3.6%)	6,223 (33.1%)
	3	9 (0.1%)	1,776 (9.5%)	**7,302 (38.8%)**	9,087 (48.3%)
	Total	4,411 (23.5%)	6,405 (34.1%)	7,985 (42.5%)	18,801 (100%)

Table 3.69. *Grade 7 Core 3 Writing Claim Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,343 (18.0%)**	188 (1.0%)		3,531 (19.1%)
	2	1,093 (5.9%)	**4,182 (22.6%)**	297 (1.6%)	5,572 (30.1%)
	3	3 (<0.1%)	1,870 (10.1%)	**7,558 (40.8%)**	9,431 (50.9%)
	Total	4,439 (24.0%)	6,240 (33.7%)	7,855 (42.4%)	18,534 (100%)

Table 3.70. *Grade 8 Core 1 Reading Claim Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,354 (13.1%)**	180 (1.0%)		2,534 (14.1%)
	2	788 (4.4%)	**6,629 (36.9%)**	300 (1.7%)	7,717 (42.9%)
	3		1,036 (5.8%)	**6,699 (37.3%)**	7,735 (43.0%)
	Total	3,142 (17.5%)	7,845 (43.6%)	6,999 (38.9%)	17,986 (100%)

Table 3.71. *Grade 8 Core 2 Reading Claim Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,227 (12.4%)**	210 (1.2%)		2,437 (13.5%)
	2	749 (4.2%)	**6,645 (36.9%)**	170 (0.9%)	7,564 (42.0%)
	3		1,229 (6.8%)	**6,801 (37.7%)**	8,030 (44.5%)
	Total	2,976 (16.5%)	8,084 (44.8%)	6,971 (38.7%)	18,031 (100%)

Table 3.72. *Grade 8 Core 3 Reading Claim Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Reading Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**2,091 (11.7%)**	320 (1.8%)		2,411 (13.5%)
	2	696 (3.9%)	**7,249 (40.5%)**	177 (1.0%)	8,122 (45.4%)
	3		1,258 (7.0%)	**6,116 (34.2%)**	7,374 (41.2%)
	Total	2,787 (15.6%)	8,827 (49.3%)	6,293 (35.1%)	17,907 (100%)

Table 3.73. *Grade 8 Core 1 Writing Claim Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**2,942 (16.4%)**	537 (3.0%)		3,479 (19.3%)
	2	606 (3.4%)	**4,824 (26.8%)**	715 (4.0%)	6,145 (34.2%)
	3		610 (3.4%)	**7,752 (43.1%)**	8,362 (46.5%)
	Total	3,548 (19.7%)	5,971 (33.2%)	8,467 (47.1%)	17,986 (100%)

Table 3.74. *Grade 8 Core 2 Writing Claim Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,237 (18.0%)**	116 (0.6%)		3,353 (18.6%)
	2	717 (4.0%)	**4,647 (25.8%)**	385 (2.1%)	5,749 (31.9%)
	3	1 (<0.1%)	1,016 (5.6%)	**7,912 (43.9%)**	8,929 (49.5%)
	Total	3,955 (21.9%)	5,779 (32.1%)	8,297 (46.0%)	18,031 (100%)

Table 3.75. *Grade 8 Core 3 Writing Claim Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Writing Claim Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**3,440 (19.2%)**	110 (0.6%)		3,550 (19.8%)
	2	787 (4.4%)	**4,729 (26.4%)**	350 (2.0%)	5,866 (32.8%)
	3		1,085 (6.1%)	**7,406 (41.4%)**	8,491 (47.4%)
	Total	4,227 (23.6%)	5,924 (33.1%)	7,756 (43.3%)	17,907 (100%)

Subclaim Performance Level Agreement

The performance levels for the various reading and writing subclaims were determined for the full test and the abbreviated forms. Tables 3.76 – 3.81 list the percent of students assigned the exact same subclaim performance level for both the full and the abbreviated ELA/L assessments by grade level,

overall and broken down by each core form. For some of the subclaims, the exact agreement is 100% due to no items being omitted for that subclaim.

The percent of exact agreement in the subclaim performance level designations between the full assessment and the abbreviated assessment subclaims ranged from 60.3% - 95.9% across the grade levels and modes.

Table 3.76. *Subclaim Performance Level Percent Agreement for Grade 3*

Form	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	Reading-RL	81.5%	4.1%	14.5%
	Reading-RI	86.3%	6.2%	7.5%
	Reading-RV	94.7%	5.3%	0%
	Writing-WE	74.0%	6.3%	19.6%
	Writing-WKL	87.4%	10.7%	1.9%
Core 2	Reading-RL	80.0%	6.2%	13.8%
	Reading-RI	78.1%	7.5%	14.3%
	Reading-RV	88.9%	3.6%	7.6%
	Writing-WE	76.6%	0%	23.4%
	Writing-WKL	87.1%	11.4%	1.5%
Core 3	Reading-RL	83.9%	6.3%	9.8%
	Reading-RI	78.1%	4.4%	17.4%
	Reading-RV	95.9%	4.1%	0%
	Writing-WE	74.1%	4.8%	21.2%
	Writing-WKL	87.4%	11.2%	1.4%
Overall	**Reading-RL**	**81.8%**	**5.5%**	**12.7%**
	Reading-RI	**80.9%**	**6.1%**	**13.1%**
	Reading-RV	**93.1%**	**4.3%**	**2.5%**
	Writing-WE	**74.9%**	**3.7%**	**21.4%**
	Writing-WKL	**87.3%**	**11.1%**	**1.6%**

Table 3.77. *Subclaim Performance Level Percent Agreement for Grade 4*

Form	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	Reading-RL	100%	0%	0%
	Reading-RI	73.6%	10.3%	16.1%
	Reading-RV	73.3%	15.1%	11.6%
	Writing-WE	79.7%	17.9%	2.4%
	Writing-WKL	91.7%	1.5%	6.8%
Core 2	Reading-RL	100%	0%	0%
	Reading-RI	73.2%	10.1%	16.7%
	Reading-RV	76.3%	15.5%	8.2%
	Writing-WE	81.3%	7.0%	11.6%
	Writing-WKL	89.5%	1.9%	8.6%
Core 3	Reading-RL	100%	0%	0%
	Reading-RI	73.8%	8.8%	17.4%
	Reading-RV	71.7%	13.8%	14.5%
	Writing-WE	78.0%	20.0%	2.0%
	Writing-WKL	84.8%	0.6%	14.7%
Overall	**Reading-RL**	**100%**	**0%**	**0%**
	Reading-RI	**73.5%**	**9.7%**	**16.8%**
	Reading-RV	**73.7%**	**14.8%**	**11.4%**
	Writing-WE	**79.7%**	**15.0%**	**5.3%**
	Writing-WKL	**88.7%**	**1.3%**	**10.1%**

Table 3.78. *Subclaim Performance Level Percent Agreement for Grade 5*

Form	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	Reading-RL	66.3%	14.8%	18.9%
	Reading-RI	100%	0%	0%
	Reading-RV	74.9%	9.6%	15.5%
	Writing-WE	85.7%	13.5%	0.9%
	Writing-WKL	88.1%	8.3%	3.7%
Core 2	Reading-RL	60.3%	24.7%	15.0%
	Reading-RI	100%	0%	0%
	Reading-RV	78.6%	10.1%	11.3%
	Writing-WE	87.6%	11.1%	1.3%
	Writing-WKL	88.2%	11.1%	0.8%
Core 3	Reading-RL	65.2%	19.8%	15.1%
	Reading-RI	100%	0%	0%
	Reading-RV	75.0%	12.6%	12.4%
	Writing-WE	81.6%	17.3%	1.1%
	Writing-WKL	89.6%	1.6%	8.8%
Overall	**Reading-RL**	**63.9%**	**19.8%**	**16.3%**
	Reading-RI	**100%**	**0%**	**0%**
	Reading-RV	**76.2%**	**10.8%**	**13.1%**
	Writing-WE	**84.9%**	**14.0%**	**1.1%**
	Writing-WKL	**88.6%**	**7.0%**	**4.4%**

Table 3.79. *Subclaim Performance Level Percent Agreement for Grade 6*

Form	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	Reading-RL	81.1%	8.1%	10.8%
	Reading-RI	85.7%	6.7%	7.6%
	Reading-RV	72.9%	17.4%	9.7%
	Writing-WE	86.2%	11.2%	2.7%
	Writing-WKL	87.7%	0.9%	11.4%
Core 2	Reading-RL	82.6%	8.5%	8.8%
	Reading-RI	85.0%	9.2%	5.9%
	Reading-RV	75.3%	17.3%	7.4%
	Writing-WE	89.4%	3.5%	7.2%
	Writing-WKL	89.7%	1.6%	8.7%
Core 3	Reading-RL	80.7%	11.6%	7.8%
	Reading-RI	80.2%	10.6%	9.2%
	Reading-RV	76.4%	15.6%	8.1%
	Writing-WE	89.2%	4.1%	6.8%
	Writing-WKL	89.9%	1.9%	8.2%
Overall	**Reading-RL**	**81.5%**	**9.4%**	**9.1%**
	Reading-RI	**83.6%**	**8.8%**	**7.6%**
	Reading-RV	**74.8%**	**16.8%**	**8.4%**
	Writing-WE	**88.2%**	**6.2%**	**5.5%**
	Writing-WKL	**89.1%**	**1.4%**	**9.5%**

Table 3.80. *Subclaim Performance Level Percent Agreement for Grade 7*

Form	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	Reading-RL	77.8%	9.3%	12.9%
	Reading-RI	82.5%	5.5%	12.0%
	Reading-RV	80.0%	15.4%	4.6%
	Writing-WE	76.3%	3.6%	20.1%
	Writing-WKL	79.0%	1.0%	20.1%
Core 2	Reading-RL	77.5%	5.3%	17.2%
	Reading-RI	83.5%	10.6%	6.0%
	Reading-RV	84.2%	8.4%	7.4%
	Writing-WE	76.3%	2.4%	21.3%
	Writing-WKL	81.5%	1.0%	17.5%
Core 3	Reading-RL	79.7%	6.9%	13.3%
	Reading-RI	83.1%	7.3%	9.6%
	Reading-RV	83.8%	7.0%	9.2%
	Writing-WE	78.2%	3.4%	18.5%
	Writing-WKL	84.6%	2.7%	12.7%
Overall	**Reading-RL**	**78.3%**	**7.2%**	**14.5%**
	Reading-RI	**83.0%**	**7.8%**	**9.2%**
	Reading-RV	**82.7%**	**10.3%**	**7.1%**
	Writing-WE	**76.9%**	**3.1%**	**20.0%**
	Writing-WKL	**81.7%**	**1.5%**	**16.8%**

Table 3.81. *Subclaim Performance Level Percent Agreement for Grade 8*

Form	Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Core 1	Reading-RL	67.1%	10.3%	22.7%
	Reading-RI	100%	0%	0%
	Reading-RV	78.9%	12.7%	8.4%
	Writing-WE	84.0%	7.2%	8.8%
	Writing-WKL	88.0%	6.4%	5.6%
Core 2	Reading-RL	65.8%	19.6%	14.5%
	Reading-RI	100%	0%	0%
	Reading-RV	78.8%	9.7%	11.5%
	Writing-WE	87.0%	9.4%	3.7%
	Writing-WKL	86.4%	11.2%	2.4%
Core 3	Reading-RL	80.5%	8.1%	11.4%
	Reading-RI	79.5%	5.4%	15.1%
	Reading-RV	82.7%	8.1%	9.2%
	Writing-WE	85.9%	3.9%	10.2%
	Writing-WKL	87.5%	10.2%	2.3%
Overall	**Reading-RL**	**71.1%**	**12.7%**	**16.2%**
	Reading-RI	**93.2%**	**1.8%**	**5.0%**
	Reading-RV	**80.1%**	**10.2%**	**9.7%**
	Writing-WE	**85.6%**	**6.8%**	**7.6%**
	Writing-WKL	**87.3%**	**9.3%**	**3.4%**

Tables 3.82 – 3.171 show the number and percent of students by the subclaim performance level designation and the abbreviated subclaim performance level designation for each grade level. The values bolded in the tables represent exact agreement. For all the ELA/L assessments, if the performance level designation was not exact, the difference was most often within an adjacent performance level.

Table 3.82. *Grade 3 Core 1 Subclaim 1 Performance Level Percent Agreement*

Grade 3 Core 1		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**7,048 (36.3%)**	1,058 (5.4%)		8,106 (41.7%)
	2	366 (1.9%)	**1,985 (10.2%)**	1,753 (9.0%)	4,104 (21.1%)
	3	21 (0.1%)	407 (2.1%)	**6,798 (35.0%)**	7,226 (37.2%)
	Total	7,435 (38.3%)	3,450 (17.8%)	8,551 (44.0%)	19,436 (100%)

Table 3.83. *Grade 3 Core 1 Subclaim 2 Performance Level Percent Agreement*

Grade 3 Core 1		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**7,685 (39.5%)**	690 (3.6%)	26 (0.1%)	8,401 (43.2%)
	2	724 (3.7%)	**2,321 (11.9%)**	743 (3.8%)	3,788 (19.5%)
	3		481 (2.5%)	**6,766 (34.8%)**	7,247 (37.3%)
	Total	8,409 (43.3%)	3,492 (18.0%)	7,535 (38.8%)	19,436 (100%)

Table 3.84. *Grade 3 Core 1 Subclaim 3 Performance Level Percent Agreement*

Grade 3 Core 1		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**8,514 (43.8%)**			8,514 (43.8%)
	2	361 (1.9%)	**3,422 (17.6%)**		3,783 (19.5%)
	3		674 (3.5%)	**6,465 (33.3%)**	7,139 (36.7%)
	Total	8,875 (45.7%)	4,096 (21.1%)	6,465 (33.3%)	19,436 (100%)

Table 3.85. *Grade 3 Core 1 Subclaim 4 Performance Level Percent Agreement*

Grade 3 Core 1		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**5,680 (29.2%)**	3,478 (17.9%)	334 (1.7%)	9,492 (48.8%)
	2				
	3		1,233 (6.3%)	**8,711 (44.8%)**	9,944 (51.2%)
	Total	5,680 (29.2%)	4,711 (24.2%)	9,045 (46.5%)	19,436 (100%)

Table 3.86. *Grade 3 Core 1 Subclaim 5 Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,358 (37.9%)**	285 (1.5%)	2 (<0.1%)	7,645 (39.3%)
	2	635 (3.3%)	**2,215 (11.4%)**	81 (0.4%)	2,931 (15.1%)
	3		1,446 (7.4%)	**7,414 (38.1%)**	8,860 (45.6%)
	Total	7,993 (41.1%)	3,946 (20.3%)	7,497 (38.6%)	19,436 (100%)

Table 3.87. *Grade 3 Core 2 Subclaim 1 Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,575 (33.8%)**	1,313 (6.7%)	98 (0.5%)	7,986 (41.0%)
	2	646 (3.3%)	**1,889 (9.7%)**	1,280 (6.6%)	3,815 (19.6%)
	3	15 (0.1%)	550 (2.8%)	**7,102 (36.5%)**	7,667 (39.4%)
	Total	7,236 (37.2%)	3,752 (19.3%)	8,480 (43.6%)	19,468 (100%)

Table 3.88. *Grade 3 Core 2 Subclaim 2 Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,626 (34.0%)**	679 (3.5%)	60 (0.3%)	7,365 (37.8%)
	2	1,247 (6.4%)	**1,909 (9.8%)**	2,051 (10.5%)	5,207 (26.7%)
	3		219 (1.1%)	**6,677 (34.3%)**	6,896 (35.4%)
	Total	7,873 (40.4%)	2,807 (14.4%)	8,788 (45.1%)	19,468 (100%)

Table 3.89. *Grade 3 Core 2 Subclaim 3 Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,159 (36.8%)**	802 (4.1%)		7,961 (40.9%)
	2	255 (1.3%)	**2,366 (12.2%)**	667 (3.4%)	3,288 (16.9%)
	3		442 (2.3%)	**7,777 (39.9%)**	8,219 (42.2%)
	Total	7,414 (38.1%)	3,610 (18.5%)	8,444 (43.4%)	19,468 (100%)

Table 3.90. *Grade 3 Core 2 Subclaim 4 Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**5,764 (29.6%)**	2,454 (12.6%)	148 (0.8%)	8,366 (43.0%)
	2		**2,324 (11.9%)**	1,956 (10.0%)	4,280 (22.0%)
	3			**6,822 (35.0%)**	6,822 (35.0%)
	Total	5,764 (29.6%)	4,778 (24.5%)	8,926 (45.8%)	19,468 (100%)

Table 3.91. *Grade 3 Core 2 Subclaim 5 Performance Level Percent Agreement*

Grade 3 Core 2		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,437 (38.2%)**	237 (1.2%)		7,674 (39.4%)
	2	755 (3.9%)	**2,100 (10.8%)**	59 (0.3%)	2,914 (15.0%)
	3		1,464 (7.5%)	**7,416 (38.1%)**	8,880 (45.6%)
	Total	8,192 (42.1%)	3,801 (19.5%)	7,475 (38.4%)	19,468 (100%)

Table 3.92. *Grade 3 Core 3 Subclaim 1 Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**7,880 (40.6%)**	634 (3.3%)	54 (0.3%)	8,568 (44.2%)
	2	848 (4.4%)	**1,683 (8.7%)**	1,220 (6.3%)	3,751 (19.3%)
	3	8 (<0.1%)	357 (1.8%)	**6,712 (34.6%)**	7,077 (36.5%)
	Total	8,736 (45.0%)	2,674 (13.8%)	7,986 (41.2%)	19,396 (100%)

Table 3.93. *Grade 3 Core 3 Subclaim 2 Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,392 (33.0%)**	1,854 (9.6%)	17 (0.1%)	8,263 (42.6%)
	2	418 (2.2%)	**2,278 (11.7%)**	1,511 (7.8%)	4,207 (21.7%)
	3		441 (2.3%)	**6,485 (33.4%)**	6,926 (35.7%)
	Total	6,810 (35.1%)	4,573 (23.6%)	8,013 (41.3%)	19,396 (100%)

Table 3.94. *Grade 3 Core 3 Subclaim 3 Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**6,938 (35.8%)**			6,938 (35.8%)
	2	254 (1.3%)	**4,818 (24.8%)**		5,072 (26.1%)
	3		543 (2.8%)	**6,843 (35.3%)**	7,386 (38.1%)
	Total	7,192 (37.1%)	5,361 (27.6%)	6,843 (35.3%)	19,396 (100%)

Table 3.95. *Grade 3 Core 3 Subclaim 4 Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**5,374 (27.7%)**	3,958 (20.4%)	150 (0.8%)	9,482 (48.9%)
	2				
	3		926 (4.8%)	**8,988 (46.3%)**	9,914 (51.1%)
	Total	5,374 (27.7%)	4,884 (25.2%)	9,138 (47.1%)	19,396 (100%)

Table 3.96. *Grade 3 Core 3 Subclaim 5 Performance Level Percent Agreement*

Grade 3 Core 3		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**8,236 (42.5%)**	224 (1.2%)	1 (<0.1%)	8,461 (43.6%)
	2	638 (3.3%)	**2,277 (11.7%)**	38 (0.2%)	2,953 (15.2%)
	3		1,542 (8.0%)	**6,440 (33.2%)**	7,982 (41.2%)
	Total	8,874 (45.8%)	4,043 (20.8%)	6,479 (33.4%)	19,396 (100%)

Table 3.97. *Grade 4 Core 1 Subclaim 1 Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**8,312 (41.5%)**			8,312 (41.5%)
	2		**5,429 (27.1%)**		5,429 (27.1%)
	3			**6,274 (31.3%)**	6,274 (31.3%)
	Total	8,312 (41.5%)	5,429 (27.1%)	6,274 (31.3%)	20,015 (100%)

Table 3.98. *Grade 4 Core 1 Subclaim 2 Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**7,753 (38.7%)**	640 (3.2%)	387 (1.9%)	8,780 (43.9%)
	2	1,570 (7.8%)	**1,167 (5.8%)**	2,198 (11.0%)	4,935 (24.7%)
	3	87 (0.4%)	404 (2.0%)	**5,809 (29.0%)**	6,300 (31.5%)
	Total	9,410 (47.0%)	2,211 (11.0%)	8,394 (41.9%)	20,015 (100%)

Table 3.99. *Grade 4 Core 1 Subclaim 3 Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,137 (35.7%)**	1,005 (5.0%)	190 (0.9%)	8,332 (41.6%)
	2	1,673 (8.4%)	**1,606 (8.0%)**	1,128 (5.6%)	4,407 (22.0%)
	3	245 (1.2%)	1,110 (5.5%)	**5,921 (29.6%)**	7,276 (36.4%)
	Total	9,055 (45.2%)	3,721 (18.6%)	7,239 (36.2%)	20,015 (100%)

Table 3.100. *Grade 4 Core 1 Subclaim 4 Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**8,856 (44.2%)**	417 (2.1%)	3 (<0.1%)	9,276 (46.3%)
	2	1,216 (6.1%)	**1,896 (9.5%)**	63 (0.3%)	3,175 (15.9%)
	3		2,362 (11.8%)	**5,202 (26.0%)**	7,564 (37.8%)
	Total	10,072 (50.3%)	4,675 (23.4%)	5,268 (26.3%)	20,015 (100%)

Table 3.101. *Grade 4 Core 1 Subclaim 5 Performance Level Percent Agreement*

Grade 4 Core 1		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**6,927 (34.6%)**	1,138 (5.7%)	14 (0.1%)	8,079 (40.4%)
	2	43 (0.2%)	**3,905 (19.5%)**	216 (1.1%)	4,164 (20.8%)
	3		251 (1.3%)	**7,521 (37.6%)**	7,772 (38.8%)
	Total	6,970 (34.8%)	5,294 (26.5%)	7,751 (38.7%)	20,015 (100%)

Table 3.102. *Grade 4 Core 2 Subclaim 1 Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**8,357 (42.3%)**			8,357 (42.3%)
	2		**5,338 (27.0%)**		5,338 (27.0%)
	3			**6,061 (30.7%)**	6,061 (30.7%)
	Total	8,357 (42.3%)	5,338 (27.0%)	6,061 (30.7%)	19,756 (100%)

Table 3.103. *Grade 4 Core 2 Subclaim 2 Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,922 (35.0%)**	1,811 (9.2%)	316 (1.6%)	9,049 (45.8%)
	2	635 (3.2%)	**1,808 (9.2%)**	1,179 (6.0%)	3,622 (18.3%)
	3	56 (0.3%)	1,295 (6.6%)	**5,734 (29.0%)**	7,085 (35.9%)
	Total	7,613 (38.5%)	4,914 (24.9%)	7,229 (36.6%)	19,756 (100%)

Table 3.104. *Grade 4 Core 2 Subclaim 3 Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,157 (36.2%)**	803 (4.1%)	14 (0.1%)	7,974 (40.4%)
	2	1,935 (9.8%)	**2,995 (15.2%)**	794 (4.0%)	5,724 (29.0%)
	3		1,136 (5.8%)	**4,922 (24.9%)**	6,058 (30.7%)
	Total	9,092 (46.0%)	4,934 (25.0%)	5,730 (29.0%)	19,756 (100%)

Table 3.105. *Grade 4 Core 2 Subclaim 4 Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**9,160 (46.4%)**		394 (2.0%)	9,554 (48.4%)
	2	1,391 (7.0%)		1,903 (9.6%)	3,294 (16.7%)
	3			**6,908 (35.0%)**	6,908 (35.0%)
	Total	10,551 (53.4%)		9,205 (46.6%)	19,756 (100%)

Table 3.106. *Grade 4 Core 2 Subclaim 5 Performance Level Percent Agreement*

Grade 4 Core 2		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**6,016 (30.5%)**	1,535 (7.8%)	7 (<0.1%)	7,558 (38.3%)
	2	43 (0.2%)	**4,885 (24.7%)**	162 (0.8%)	5,090 (25.8%)
	3		323 (1.6%)	**6,785 (34.3%)**	7,108 (36.0%)
	Total	6,059 (30.7%)	6,743 (34.1%)	6,954 (35.2%)	19,756 (100%)

Table 3.107. *Grade 4 Core 3 Subclaim 1 Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**8,246 (41.2%)**			8,246 (41.2%)
	2		**4,514 (22.5%)**		4,514 (22.5%)
	3			**7,260 (36.3%)**	7,260 (36.3%)
	Total	8,246 (41.2%)	4,514 (22.5%)	7,260 (36.3%)	20,020 (100%)

Table 3.108. *Grade 4 Core 3 Subclaim 2 Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,819 (34.1%)**	1,752 (8.8%)	236 (1.2%)	8,807 (44.0%)
	2	575 (2.9%)	**2,316 (11.6%)**	1,504 (7.5%)	4,395 (22.0%)
	3	36 (0.2%)	1,147 (5.7%)	**5,635 (28.1%)**	6,818 (34.1%)
	Total	7,430 (37.1%)	5,215 (26.0%)	7,375 (36.8%)	20,020 (100%)

Table 3.109. *Grade 4 Core 3 Subclaim 3 Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**5,955 (29.7%)**	1,966 (9.8%)		7,921 (39.6%)
	2	1,137 (5.7%)	**3,669 (18.3%)**	940 (4.7%)	5,746 (28.7%)
	3	74 (0.4%)	1,550 (7.7%)	**4,729 (23.6%)**	6,353 (31.7%)
	Total	7,166 (35.8%)	7,185 (35.9%)	5,669 (28.3%)	20,020 (100%)

Table 3.110. *Grade 4 Core 3 Subclaim 4 Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**9,255 (46.2%)**	359 (1.8%)		9,614 (48.0%)
	2	1,446 (7.2%)	**1,833 (9.2%)**	42 (0.2%)	3,321 (16.6%)
	3		2,555 (12.8%)	**4,530 (22.6%)**	7,085 (35.4%)
	Total	10,701 (53.5%)	4,747 (23.7%)	4,572 (22.8%)	20,020 (100%)

Table 3.111. *Grade 4 Core 3 Subclaim 5 Performance Level Percent Agreement*

Grade 4 Core 3		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**6,871 (34.3%)**	1,018 (5.1%)	3 (<0.1%)	7,892 (39.4%)
	2	118 (0.6%)	**5,205 (26.0%)**	1,915 (9.6%)	7,238 (36.2%)
	3			**4,890 (24.4%)**	4,890 (24.4%)
	Total	6,989 (34.9%)	6,223 (31.1%)	6,808 (34.0%)	20,020 (100%)

Table 3.112. *Grade 5 Core 1 Subclaim 1 Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,315 (31.7%)**	2,064 (10.4%)	243 (1.2%)	8,622 (43.2%)
	2	1,506 (7.6%)	**3,048 (15.3%)**	1,460 (7.3%)	6,014 (30.2%)
	3	106 (0.5%)	1,332 (6.7%)	**3,863 (19.4%)**	5,301 (26.6%)
	Total	7,927 (39.8%)	6,444 (32.3%)	5,566 (27.9%)	19,937 (100%)

Table 3.113. *Grade 5 Core 1 Subclaim 2 Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**9,298 (46.6%)**			9,298 (46.6%)
	2		**4,649 (23.3%)**		4,649 (23.3%)
	3			**5,990 (30.0%)**	5,990 (30.0%)
	Total	9,298 (46.6%)	4,649 (23.3%)	5,990 (30.0%)	19,937 (100%)

Table 3.114. *Grade 5 Core 1 Subclaim 3 Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,440 (37.3%)**	1,184 (5.9%)	111 (0.6%)	8,735 (43.8%)
	2	1,278 (6.4%)	**1,969 (9.9%)**	1,799 (9.0%)	5,046 (25.3%)
	3		640 (3.2%)	**5,516 (27.7%)**	6,156 (30.9%)
	Total	8,718 (43.7%)	3,793 (19.0%)	7,426 (37.2%)	19,937 (100%)

Table 3.115. *Grade 5 Core 1 Subclaim 4 Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**9,743 (48.9%)**	150 (0.8%)		9,893 (49.6%)
	2	826 (4.1%)	**2,187 (11.0%)**	29 (0.1%)	3,042 (15.3%)
	3		1,856 (9.3%)	**5,146 (25.8%)**	7,002 (35.1%)
	Total	10,569 (53.0%)	4,193 (21.0%)	5,175 (26.0%)	19,937 (100%)

Table 3.116. *Grade 5 Core 1 Subclaim 5 Performance Level Percent Agreement*

Grade 5 Core 1		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,788 (39.1%)**	710 (3.6%)		8,498 (42.6%)
	2	251 (1.3%)	**5,247 (26.3%)**	20 (0.1%)	5,518 (27.7%)
	3		1,398 (7.0%)	**4,523 (22.7%)**	5,921 (29.7%)
	Total	8,039 (40.3%)	7,355 (36.9%)	4,543 (22.8%)	19,937 (100%)

Table 3.117. *Grade 5 Core 2 Subclaim 1 Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**7,156 (35.9%)**		1,286 (6.4%)	8,442 (42.3%)
	2	2,967 (14.9%)		1,702 (8.5%)	4,669 (23.4%)
	3	1,966 (9.9%)		**4,880 (24.5%)**	6,846 (34.3%)
	Total	12,089 (60.6%)		7,868 (39.4%)	19,957 (100%)

Table 3.118. *Grade 5 Core 2 Subclaim 2 Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**8,935 (44.8%)**			8,935 (44.8%)
	2		**4,638 (23.2%)**		4,638 (23.2%)
	3			**6,384 (32.0%)**	6,384 (32.0%)
	Total	8,935 (44.8%)	4,638 (23.2%)	6,384 (32.0%)	19,957 (100%)

Table 3.119. *Grade 5 Core 2 Subclaim 3 Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,494 (37.6%)**	1,631 (8.2%)	20 (0.1%)	9,145 (45.8%)
	2	718 (3.6%)	**3,176 (15.9%)**	600 (3.0%)	4,494 (22.5%)
	3	30 (0.2%)	1,265 (6.3%)	**5,023 (25.2%)**	6,318 (31.7%)
	Total	8,242 (41.3%)	6,072 (30.4%)	5,643 (28.3%)	19,957 (100%)

Table 3.120. *Grade 5 Core 2 Subclaim 4 Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**8,246 (41.3%)**	214 (1.1%)	1 (<0.1%)	8,461 (42.4%)
	2	604 (3.0%)	**2,870 (14.4%)**	53 (0.3%)	3,527 (17.7%)
	3		1,613 (8.1%)	**6,356 (31.8%)**	7,969 (39.9%)
	Total	8,850 (44.3%)	4,697 (23.5%)	6,410 (32.1%)	19,957 (100%)

Table 3.121. *Grade 5 Core 2 Subclaim 5 Performance Level Percent Agreement*

Grade 5 Core 2		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**11,262 (56.4%)**	131 (0.7%)		11,393 (57.1%)
	2	639 (3.2%)	**1,830 (9.2%)**	18 (0.1%)	2,487 (12.5%)
	3		1,571 (7.9%)	**4,506 (22.6%)**	6,077 (30.5%)
	Total	11,901 (59.6%)	3,532 (17.7%)	4,524 (22.7%)	19,957 (100%)

Table 3.122. *Grade 5 Core 3 Subclaim 1 Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**7,968 (40.2%)**		1,481 (7.5%)	9,449 (47.6%)
	2	2,115 (10.7%)		1,506 (7.6%)	3,621 (18.2%)
	3	1,805 (9.1%)		**4,967 (25.0%)**	6,772 (34.1%)
	Total	11,888 (59.9%)		7,954 (40.1%)	19,842 (100%)

Table 3.123. *Grade 5 Core 3 Subclaim 2 Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**8,391 (42.3%)**			8,391 (42.3%)
	2		**5,665 (28.6%)**		5,665 (28.6%)
	3			**5,786 (29.2%)**	5,786 (29.2%)
	Total	8,391 (42.3%)	5,665 (28.6%)	5,786 (29.2%)	19,842 (100%)

Table 3.124. *Grade 5 Core 3 Subclaim 3 Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,936 (40.0%)**	771 (3.9%)	258 (1.3%)	8,965 (45.2%)
	2	1,818 (9.2%)	**1,604 (8.1%)**	1,438 (7.2%)	4,860 (24.5%)
	3	144 (0.7%)	535 (2.7%)	**5,338 (26.9%)**	6,017 (30.3%)
	Total	9,898 (49.9%)	2,910 (14.7%)	7,034 (35.5%)	19,842 (100%)

Table 3.125. *Grade 5 Core 3 Subclaim 4 Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**8,634 (43.5%)**	172 (0.9%)	1 (<0.1%)	8,807 (44.4%)
	2	1,036 (5.2%)	**1,811 (9.1%)**	45 (0.2%)	2,892 (14.6%)
	3		2,397 (12.1%)	**5,746 (29.0%)**	8,143 (41.0%)
	Total	9,670 (48.7%)	4,380 (22.1%)	5,792 (29.2%)	19,842 (100%)

Table 3.126. *Grade 5 Core 3 Subclaim 5 Performance Level Percent Agreement*

Grade 5 Core 3		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,713 (38.9%)**	396 (2.0%)		8,109 (40.9%)
	2	316 (1.6%)	**3,870 (19.5%)**	1,359 (6.8%)	5,545 (27.9%)
	3			**6,188 (31.2%)**	6,188 (31.2%)
	Total	8,029 (40.5%)	4,266 (21.5%)	7,547 (38.0%)	19,842 (100%)

Table 3.127. *Grade 6 Core 1 Subclaim 1 Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,138 (32.1%)**	1,081 (5.7%)	19 (0.1%)	7,238 (37.9%)
	2	668 (3.5%)	**3,498 (18.3%)**	969 (5.1%)	5,135 (26.9%)
	3		871 (4.6%)	**5,864 (30.7%)**	6,735 (35.2%)
	Total	6,806 (35.6%)	5,450 (28.5%)	6,852 (35.9%)	19,108 (100%)

Table 3.128. *Grade 6 Core 1 Subclaim 2 Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,418 (33.6%)**	626 (3.3%)		7,044 (36.9%)
	2	681 (3.6%)	**4,499 (23.5%)**	825 (4.3%)	6,005 (31.4%)
	3		603 (3.2%)	**5,456 (28.6%)**	6,059 (31.7%)
	Total	7,099 (37.2%)	5,728 (30.0%)	6,281 (32.9%)	19,108 (100%)

Table 3.129. *Grade 6 Core 1 Subclaim 3 Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**6,323 (33.1%)**	1,131 (5.9%)	39 (0.2%)	7,493 (39.2%)
	2	1,469 (7.7%)	**2,663 (13.9%)**	673 (3.5%)	4,805 (25.1%)
	3	125 (0.7%)	1,738 (9.1%)	**4,947 (25.9%)**	6,810 (35.6%)
	Total	7,917 (41.4%)	5,532 (29.0%)	5,659 (29.6%)	19,108 (100%)

Table 3.130. *Grade 6 Core 1 Subclaim 4 Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**7,716 (40.4%)**	462 (2.4%)		8,178 (42.8%)
	2	406 (2.1%)	**3,848 (20.1%)**	44 (0.2%)	4,298 (22.5%)
	3		1,735 (9.1%)	**4,897 (25.6%)**	6,632 (34.7%)
	Total	8,122 (42.5%)	6,045 (31.6%)	4,941 (25.9%)	19,108 (100%)

Table 3.131. *Grade 6 Core 1 Subclaim 5 Performance Level Percent Agreement*

Grade 6 Core 1		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,913 (41.4%)**	508 (2.7%)	1 (<0.1%)	8,422 (44.1%)
	2	166 (0.9%)	**2,815 (14.7%)**	1,669 (8.7%)	4,650 (24.3%)
	3			**6,036 (31.6%)**	6,036 (31.6%)
	Total	8,079 (42.3%)	3,323 (17.4%)	7,706 (40.3%)	19,108 (100%)

Table 3.132. *Grade 6 Core 2 Subclaim 1 Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,944 (35.7%)**	1,048 (5.4%)	12 (0.1%)	8,004 (41.1%)
	2	871 (4.5%)	**3,216 (16.5%)**	659 (3.4%)	4,746 (24.4%)
	3		786 (4.0%)	**5,915 (30.4%)**	6,701 (34.5%)
	Total	7,815 (40.2%)	5,050 (26.0%)	6,586 (33.9%)	19,451 (100%)

Table 3.133. *Grade 6 Core 2 Subclaim 2 Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**7,101 (36.5%)**	489 (2.5%)		7,590 (39.0%)
	2	1,023 (5.3%)	**3,533 (18.2%)**	655 (3.4%)	5,211 (26.8%)
	3		759 (3.9%)	**5,891 (30.3%)**	6,650 (34.2%)
	Total	8,124 (41.8%)	4,781 (24.6%)	6,546 (33.7%)	19,451 (100%)

Table 3.134. *Grade 6 Core 2 Subclaim 3 Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,048 (36.2%)**	805 (4.1%)	29 (0.1%)	7,882 (40.5%)
	2	1,633 (8.4%)	**2,383 (12.3%)**	612 (3.1%)	4,628 (23.8%)
	3	153 (0.8%)	1,581 (8.1%)	**5,207 (26.8%)**	6,941 (35.7%)
	Total	8,834 (45.4%)	4,769 (24.5%)	5,848 (30.1%)	19,451 (100%)

Table 3.135. *Grade 6 Core 2 Subclaim 4 Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**8,643 (44.4%)**	352 (1.8%)	3 (<0.1%)	8,998 (46.3%)
	2	671 (3.4%)	**2,969 (15.3%)**	1,042 (5.4%)	4,682 (24.1%)
	3			**5,771 (29.7%)**	5,771 (29.7%)
	Total	9,314 (47.9%)	3,321 (17.1%)	6,816 (35.0%)	19,451 (100%)

Table 3.136. *Grade 6 Core 2 Subclaim 5 Performance Level Percent Agreement*

Grade 6 Core 2		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**8,892 (45.7%)**	350 (1.8%)	1 (<0.1%)	9,243 (47.5%)
	2	314 (1.6%)	**3,123 (16.1%)**	1,349 (6.9%)	4,786 (24.6%)
	3			**5,422 (27.9%)**	5,422 (27.9%)
	Total	9,206 (47.3%)	3,473 (17.9%)	6,772 (34.8%)	19,451 (100%)

Table 3.137. *Grade 6 Core 3 Subclaim 1 Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,720 (35.2%)**	554 (2.9%)	1 (<0.1%)	7,275 (38.1%)
	2	1,517 (8.0%)	**3,367 (17.7%)**	926 (4.9%)	5,810 (30.5%)
	3		686 (3.6%)	**5,299 (27.8%)**	5,985 (31.4%)
	Total	8,237 (43.2%)	4,607 (24.2%)	6,226 (32.6%)	19,070 (100%)

Table 3.138. *Grade 6 Core 3 Subclaim 2 Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,574 (34.5%)**	796 (4.2%)	14 (0.1%)	7,384 (38.7%)
	2	980 (5.1%)	**3,093 (16.2%)**	952 (5.0%)	5,025 (26.4%)
	3		1,038 (5.4%)	**5,623 (29.5%)**	6,661 (34.9%)
	Total	7,554 (39.6%)	4,927 (25.8%)	6,589 (34.6%)	19,070 (100%)

Table 3.139. *Grade 6 Core 3 Subclaim 3 Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,120 (37.3%)**	853 (4.5%)		7,973 (41.8%)
	2	1,291 (6.8%)	**2,258 (11.8%)**	683 (3.6%)	4,232 (22.2%)
	3	161 (0.8%)	1,522 (8.0%)	**5,182 (27.2%)**	6,865 (36.0%)
	Total	8,572 (45.0%)	4,633 (24.3%)	5,865 (30.8%)	19,070 (100%)

Table 3.140. *Grade 6 Core 3 Subclaim 4 Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**7,567 (39.7%)**	317 (1.7%)	4 (<0.1%)	7,888 (41.4%)
	2	774 (4.1%)	**2,913 (15.3%)**	966 (5.1%)	4,653 (24.4%)
	3			**6,529 (34.2%)**	6,529 (34.2%)
	Total	8,341 (43.7%)	3,230 (16.9%)	7,499 (39.3%)	19,070 (100%)

Table 3.141. *Grade 6 Core 3 Subclaim 5 Performance Level Percent Agreement*

Grade 6 Core 3		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,999 (41.9%)**	339 (1.8%)	3 (<0.1%)	8,341 (43.7%)
	2	352 (1.8%)	**3,194 (16.7%)**	1,225 (6.4%)	4,771 (25.0%)
	3			**5,958 (31.2%)**	5,958 (31.2%)
	Total	8,351 (43.8%)	3,533 (18.5%)	7,186 (37.7%)	19,070 (100%)

Table 3.142. *Grade 7 Core 1 Subclaim 1 Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,754 (36.0%)**	862 (4.6%)	80 (0.4%)	7,696 (41.1%)
	2	1,124 (6.0%)	**2,281 (12.2%)**	1,476 (7.9%)	4,881 (26.0%)
	3	28 (0.1%)	587 (3.1%)	**5,555 (29.6%)**	6,170 (32.9%)
	Total	7,906 (42.2%)	3,730 (19.9%)	7,111 (37.9%)	18,747 (100%)

Table 3.143. *Grade 7 Core 1 Subclaim 2 Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,937 (37.0%)**	1,190 (6.3%)	70 (0.4%)	8,197 (43.7%)
	2	474 (2.5%)	**2,452 (13.1%)**	987 (5.3%)	3,913 (20.9%)
	3		557 (3.0%)	**6,080 (32.4%)**	6,637 (35.4%)
	Total	7,411 (39.5%)	4,199 (22.4%)	7,137 (38.1%)	18,747 (100%)

Table 3.144. *Grade 7 Core 1 Subclaim 3 Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**7,049 (37.6%)**	578 (3.1%)		7,627 (40.7%)
	2	1,213 (6.5%)	**1,709 (9.1%)**	287 (1.5%)	3,209 (17.1%)
	3		1,675 (8.9%)	**6,236 (33.3%)**	7,911 (42.2%)
	Total	8,262 (44.1%)	3,962 (21.1%)	6,523 (34.8%)	18,747 (100%)

Table 3.145. *Grade 7 Core 1 Subclaim 4 Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**6,649 (35.5%)**	2,596 (13.8%)	205 (1.1%)	9,450 (50.4%)
	2	143 (0.8%)	**1,238 (6.6%)**	973 (5.2%)	2,354 (12.6%)
	3		523 (2.8%)	**6,420 (34.2%)**	6,943 (37.0%)
	Total	6,792 (36.2%)	4,357 (23.2%)	7,598 (40.5%)	18,747 (100%)

Table 3.146. *Grade 7 Core 1 Subclaim 5 Performance Level Percent Agreement*

Grade 7 Core 1		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,197 (38.4%)**	1,756 (9.4%)	70 (0.4%)	9,023 (48.1%)
	2	179 (1.0%)	**2,189 (11.7%)**	1,935 (10.3%)	4,303 (23.0%)
	3			**5,421 (28.9%)**	5,421 (28.9%)
	Total	7,376 (39.3%)	3,945 (21.0%)	7,426 (39.6%)	18,747 (100%)

Table 3.147. *Grade 7 Core 2 Subclaim 1 Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,967 (37.1%)**	1,264 (6.7%)	88 (0.5%)	8,319 (44.2%)
	2	617 (3.3%)	**2,085 (11.1%)**	1,888 (10.0%)	4,590 (24.4%)
	3		381 (2.0%)	**5,511 (29.3%)**	5,892 (31.3%)
	Total	7,584 (40.3%)	3,730 (19.8%)	7,487 (39.8%)	18,801 (100%)

Table 3.148. *Grade 7 Core 2 Subclaim 2 Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**7,106 (37.8%)**	466 (2.5%)	12 (0.1%)	7,584 (40.3%)
	2	1,246 (6.6%)	**2,870 (15.3%)**	649 (3.5%)	4,765 (25.3%)
	3		737 (3.9%)	**5,715 (30.4%)**	6,452 (34.3%)
	Total	8,352 (44.4%)	4,073 (21.7%)	6,376 (33.9%)	18,801 (100%)

Table 3.149. *Grade 7 Core 2 Subclaim 3 Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**6,850 (36.4%)**	504 (2.7%)		7,354 (39.1%)
	2	1,083 (5.8%)	**2,583 (13.7%)**	893 (4.7%)	4,559 (24.2%)
	3		487 (2.6%)	**6,401 (34.0%)**	6,888 (36.6%)
	Total	7,933 (42.2%)	3,574 (19.0%)	7,294 (38.8%)	18,801 (100%)

Table 3.150. *Grade 7 Core 2 Subclaim 4 Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**6,779 (36.1%)**	2,146 (11.4%)	243 (1.3%)	9,168 (48.8%)
	2	447 (2.4%)	**1,914 (10.2%)**	1,619 (8.6%)	3,980 (21.2%)
	3			**5,653 (30.1%)**	5,653 (30.1%)
	Total	7,226 (38.4%)	4,060 (21.6%)	7,515 (40.0%)	18,801 (100%)

Table 3.151. *Grade 7 Core 2 Subclaim 5 Performance Level Percent Agreement*

Grade 7 Core 2		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,534 (40.1%)**	1,702 (9.1%)	83 (0.4%)	9,319 (49.6%)
	2	178 (0.9%)	**2,156 (11.5%)**	1,513 (8.0%)	3,847 (20.5%)
	3			**5,635 (30.0%)**	5,635 (30.0%)
	Total	7,712 (41.0%)	3,858 (20.5%)	7,231 (38.5%)	18,801 (100%)

Table 3.152. *Grade 7 Core 3 Subclaim 1 Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,859 (37.0%)**	1,200 (6.5%)	74 (0.4%)	8,133 (43.9%)
	2	585 (3.2%)	**1,836 (9.9%)**	1,199 (6.5%)	3,620 (19.5%)
	3	44 (0.2%)	655 (3.5%)	**6,082 (32.8%)**	6,781 (36.6%)
	Total	7,488 (40.4%)	3,691 (19.9%)	7,355 (39.7%)	18,534 (100%)

Table 3.153. *Grade 7 Core 3 Subclaim 2 Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,696 (36.1%)**	632 (3.4%)	16 (0.1%)	7,344 (39.6%)
	2	883 (4.8%)	**2,641 (14.2%)**	1,128 (6.1%)	4,652 (25.1%)
	3	5 (<0.1%)	463 (2.5%)	**6,070 (32.8%)**	6,538 (35.3%)
	Total	7,584 (40.9%)	3,736 (20.2%)	7,214 (38.9%)	18,534 (100%)

Table 3.154. *Grade 7 Core 3 Subclaim 3 Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**6,529 (35.2%)**	1,126 (6.1%)		7,655 (41.3%)
	2	518 (2.8%)	**2,498 (13.5%)**	578 (3.1%)	3,594 (19.4%)
	3		785 (4.2%)	**6,500 (35.1%)**	7,285 (39.3%)
	Total	7,047 (38.0%)	4,409 (23.8%)	7,078 (38.2%)	18,534 (100%)

Table 3.155. *Grade 7 Core 3 Subclaim 4 Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**7,006 (37.8%)**	2,365 (12.8%)	193 (1.0%)	9,564 (51.6%)
	2	108 (0.6%)	**1,147 (6.2%)**	864 (4.7%)	2,119 (11.4%)
	3		515 (2.8%)	**6,336 (34.2%)**	6,851 (37.0%)
	Total	7,114 (38.4%)	4,027 (21.7%)	7,393 (39.9%)	18,534 (100%)

Table 3.156. *Grade 7 Core 3 Subclaim 5 Performance Level Percent Agreement*

Grade 7 Core 3		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,465 (40.3%)**	1,762 (9.5%)	81 (0.4%)	9,308 (50.2%)
	2	94 (0.5%)	**1,609 (8.7%)**	503 (2.7%)	2,206 (11.9%)
	3		410 (2.2%)	**6,610 (35.7%)**	7,020 (37.9%)
	Total	7,559 (40.8%)	3,781 (20.4%)	7,194 (38.8%)	18,534 (100%)

Table 3.157. *Grade 8 Core 1 Subclaim 1 Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**5,548 (30.8%)**	1,015 (5.6%)	1,038 (5.8%)	7,601 (42.3%)
	2	1,157 (6.4%)	**834 (4.6%)**	2,025 (11.3%)	4,016 (22.3%)
	3	264 (1.5%)	424 (2.4%)	**5,681 (31.6%)**	6,369 (35.4%)
	Total	6,969 (38.7%)	2,273 (12.6%)	8,744 (48.6%)	17,986 (100%)

Table 3.158. *Grade 8 Core 1 Subclaim 2 Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**7,549 (42.0%)**			7,549 (42.0%)
	2		**3,935 (21.9%)**		3,935 (21.9%)
	3			**6,502 (36.2%)**	6,502 (36.2%)
	Total	7,549 (42.0%)	3,935 (21.9%)	6,502 (36.2%)	17,986 (100%)

Table 3.159. *Grade 8 Core 1 Subclaim 3 Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**5,822 (32.4%)**	934 (5.2%)	38 (0.2%)	6,794 (37.8%)
	2	881 (4.9%)	**2,252 (12.5%)**	541 (3.0%)	3,674 (20.4%)
	3		1,407 (7.8%)	**6,111 (34.0%)**	7,518 (41.8%)
	Total	6,703 (37.3%)	4,593 (25.5%)	6,690 (37.2%)	17,986 (100%)

Table 3.160. *Grade 8 Core 1 Subclaim 4 Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**7,790 (43.3%)**	600 (3.3%)	28 (0.2%)	8,418 (46.8%)
	2	683 (3.8%)	**2,297 (12.8%)**	962 (5.3%)	3,942 (21.9%)
	3		609 (3.4%)	**5,017 (27.9%)**	5,626 (31.3%)
	Total	8,473 (47.1%)	3,506 (19.5%)	6,007 (33.4%)	17,986 (100%)

Table 3.161. *Grade 8 Core 1 Subclaim 5 Performance Level Percent Agreement*

Grade 8 Core 1		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**8,310 (46.2%)**	343 (1.9%)		8,653 (48.1%)
	2	702 (3.9%)	**2,698 (15.0%)**	662 (3.7%)	4,062 (22.6%)
	3		445 (2.5%)	**4,826 (26.8%)**	5,271 (29.3%)
	Total	9,012 (50.1%)	3,486 (19.4%)	5,488 (30.5%)	17,986 (100%)

Table 3.162. *Grade 8 Core 2 Subclaim 1 Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,459 (35.8%)**	982 (5.4%)	384 (2.1%)	7,825 (43.4%)
	2	1,937 (10.7%)	**1,106 (6.1%)**	1,251 (6.9%)	4,294 (23.8%)
	3	630 (3.5%)	975 (5.4%)	**4,307 (23.9%)**	5,912 (32.8%)
	Total	9,026 (50.1%)	3,063 (17.0%)	5,942 (33.0%)	18,031 (100%)

Table 3.163. *Grade 8 Core 2 Subclaim 2 Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**8,186 (45.4%)**			8,186 (45.4%)
	2		**3,456 (19.2%)**		3,456 (19.2%)
	3			**6,389 (35.4%)**	6,389 (35.4%)
	Total	8,186 (45.4%)	3,456 (19.2%)	6,389 (35.4%)	18,031 (100%)

Table 3.164. *Grade 8 Core 2 Subclaim 3 Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**6,969 (38.7%)**	1,308 (7.3%)		8,277 (45.9%)
	2	477 (2.6%)	**2,458 (13.6%)**	763 (4.2%)	3,698 (20.5%)
	3	41 (0.2%)	1,234 (6.8%)	**4,781 (26.5%)**	6,056 (33.6%)
	Total	7,487 (41.5%)	5,000 (27.7%)	5,544 (30.7%)	18,031 (100%)

Table 3.165. *Grade 8 Core 2 Subclaim 4 Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**7,102 (39.4%)**	232 (1.3%)	10 (0.1%)	7,344 (40.7%)
	2	1,127 (6.3%)	**2,608 (14.5%)**	421 (2.3%)	4,156 (23.0%)
	3		559 (3.1%)	**5,972 (33.1%)**	6,531 (36.2%)
	Total	8,229 (45.6%)	3,399 (18.9%)	6,403 (35.5%)	18,031 (100%)

Table 3.166. *Grade 8 Core 2 Subclaim 5 Performance Level Percent Agreement*

Grade 8 Core 2		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,451 (41.3%)**	143 (0.8%)		7,594 (42.1%)
	2	1,207 (6.7%)	**2,462 (13.7%)**	297 (1.6%)	3,966 (22.0%)
	3		810 (4.5%)	**5,661 (31.4%)**	6,471 (35.9%)
	Total	8,658 (48.0%)	3,415 (18.9%)	5,958 (33.0%)	18,031 (100%)

Table 3.167. *Grade 8 Core 3 Subclaim 1 Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Subclaim 1 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**6,925 (38.7%)**	657 (3.7%)	60 (0.3%)	7,642 (42.7%)
	2	1,062 (5.9%)	**1,695 (9.5%)**	1,328 (7.4%)	4,085 (22.8%)
	3	15 (0.1%)	378 (2.1%)	**5,787 (32.3%)**	6,180 (34.5%)
	Total	8,002 (44.7%)	2,730 (15.2%)	7,175 (40.1%)	17,907 (100%)

Table 3.168. *Grade 8 Core 3 Subclaim 2 Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Subclaim 2 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**6,036 (33.7%)**	1,294 (7.2%)	68 (0.4%)	7,398 (41.3%)
	2	319 (1.8%)	**2,452 (13.7%)**	1,345 (7.5%)	4,116 (23.0%)
	3		639 (3.6%)	**5,754 (32.1%)**	6,393 (35.7%)
	Total	6,355 (35.5%)	4,385 (24.5%)	7,167 (40.0%)	17,907 (100%)

Table 3.169. *Grade 8 Core 3 Subclaim 3 Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Subclaim 3 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**5,991 (33.5%)**	1,091 (6.1%)		7,082 (39.5%)
	2	489 (2.7%)	**3,334 (18.6%)**	564 (3.1%)	4,387 (24.5%)
	3		952 (5.3%)	**5,486 (30.6%)**	6,438 (36.0%)
	Total	6,480 (36.2%)	5,377 (30.0%)	6,050 (33.8%)	17,907 (100%)

Table 3.170. *Grade 8 Core 3 Subclaim 4 Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Subclaim 4 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim Performance Levels	1	**7,396 (41.3%)**	1,386 (7.7%)	52 (0.3%)	8,834 (49.3%)
	2	182 (1.0%)	**1,586 (8.9%)**	393 (2.2%)	2,161 (12.1%)
	3		513 (2.9%)	**6,399 (35.7%)**	6,912 (38.6%)
	Total	7,578 (42.3%)	3,485 (19.5%)	6,844 (38.2%)	17,907 (100%)

Table 3.171. *Grade 8 Core 3 Subclaim 5 Performance Level Percent Agreement*

Grade 8 Core 3		Abbreviated Form Subclaim 5 Performance Levels			
CBT		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**7,280 (40.7%)**	114 (0.6%)		7,394 (41.3%)
	2	1,143 (6.4%)	**2,447 (13.7%)**	298 (1.7%)	3,888 (21.7%)
	3		689 (3.8%)	**5,936 (33.1%)**	6,625 (37.0%)
	Total	8,423 (47.0%)	3,250 (18.1%)	6,234 (34.8%)	17,907 (100%)

Correlations and Overall Scale Score Differences

The correlation between the overall scale scores and abbreviated form scale scores were calculated for all grades as shown in Table 3.172. Correlations ranged between .971 and .981 for the overall scale score. For each grade level, Figures 3.1 – 3.24 display the scatterplot of overall scale scores versus abbreviated scale scores, across the grade level and then for each core form, and then the frequency distribution of the differences in scale scores between full and abbreviated scale scores, across the grade level and then for each core form.

Table 3.172. *Pearson Correlations between Full and Abbreviated Form Scale Scores*

Grade	Form	Overall Scale Score	Reading Claim Score	Writing Claim Score
3	1	0.979	0.978	0.905
	2	0.979	0.978	0.917
	3	0.981	0.980	0.907
	Overall	**0.980**	**0.975**	**0.910**
4	1	0.977	0.971	0.943
	2	0.978	0.974	0.947
	3	0.975	0.970	0.959
	Overall	**0.977**	**0.972**	**0.949**
5	1	0.976	0.965	0.952
	2	0.971	0.956	0.932
	3	0.973	0.957	0.964
	Overall	**0.973**	**0.959**	**0.949**
6	1	0.979	0.969	0.960
	2	0.981	0.971	0.970
	3	0.978	0.968	0.971
	Overall	**0.979**	**0.969**	**0.967**
7	1	0.978	0.969	0.927
	2	0.981	0.974	0.938
	3	0.980	0.973	0.930
	Overall	**0.980**	**0.972**	**0.931**
8	1	0.977	0.970	0.936
	2	0.980	0.970	0.950
	3	0.980	0.971	0.948
	Overall	**0.979**	**0.970**	**0.945**

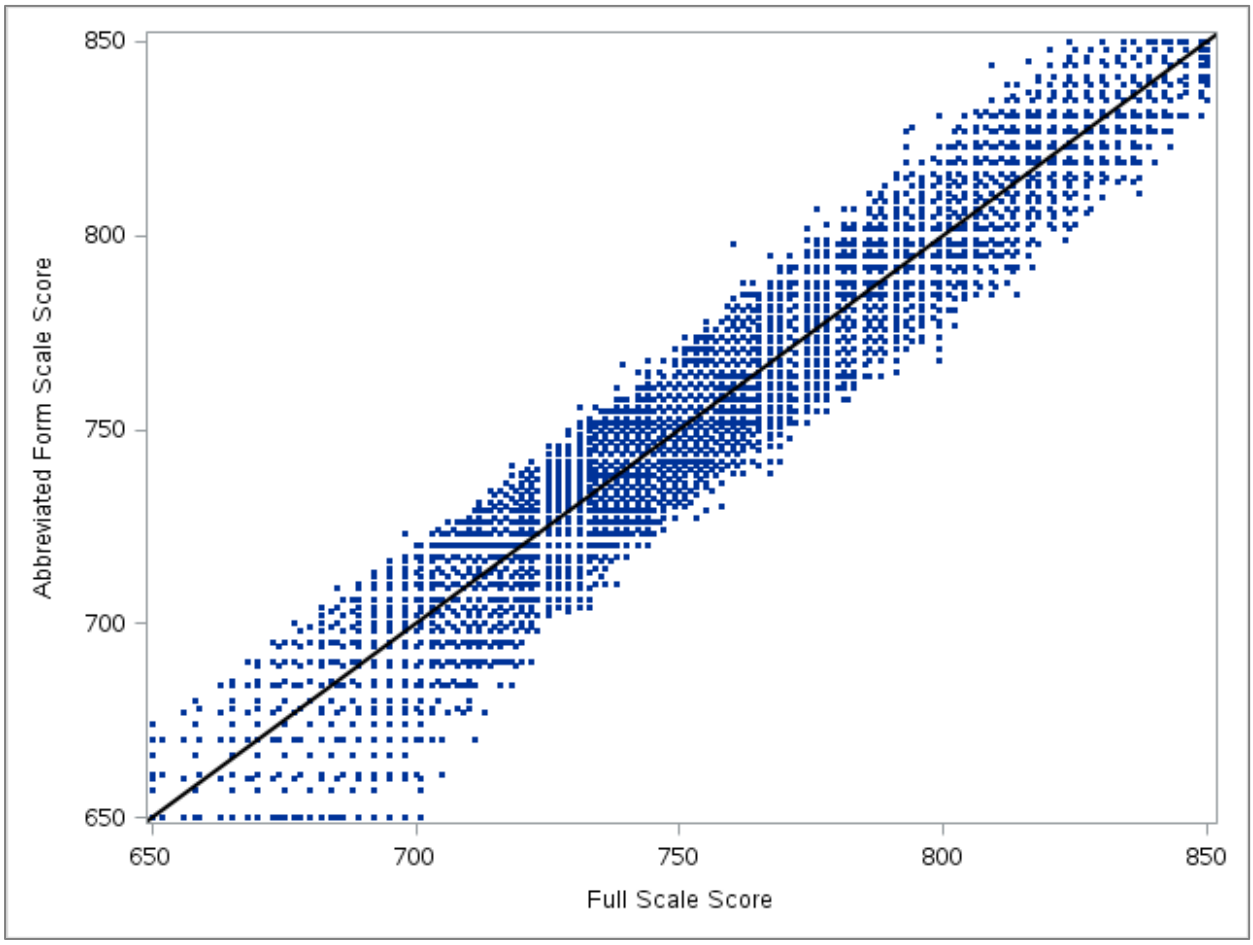

Figure 3.1. Grade 3 CBT Abbreviated vs. Full Scale Scores

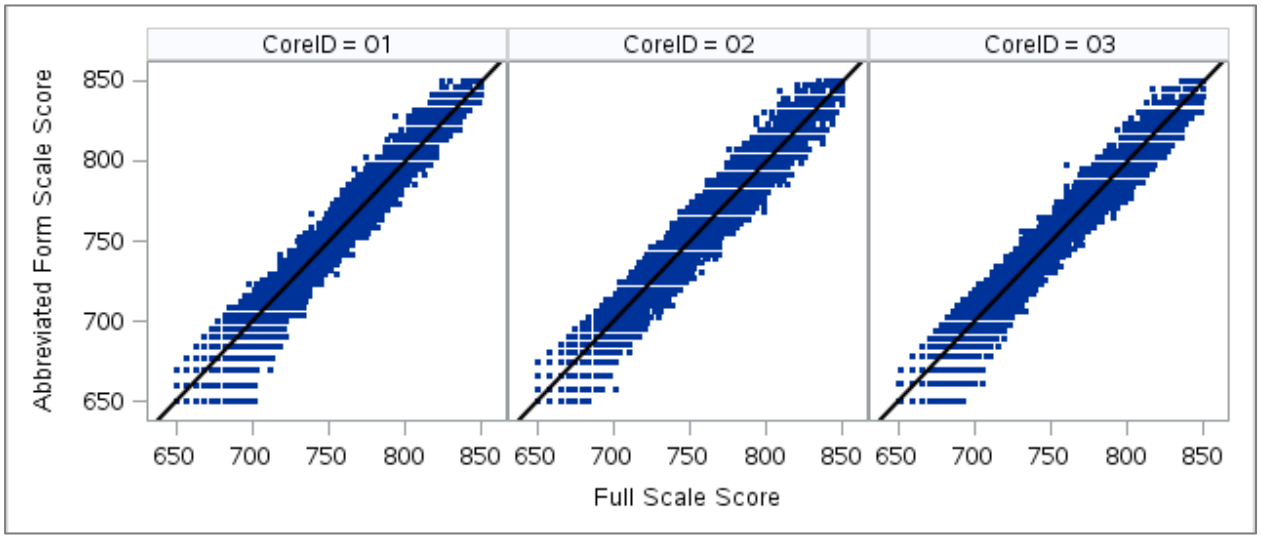

Figure 3.2. Grade 3 CBT Abbreviated vs. Full Scale Scores for Each Core Form

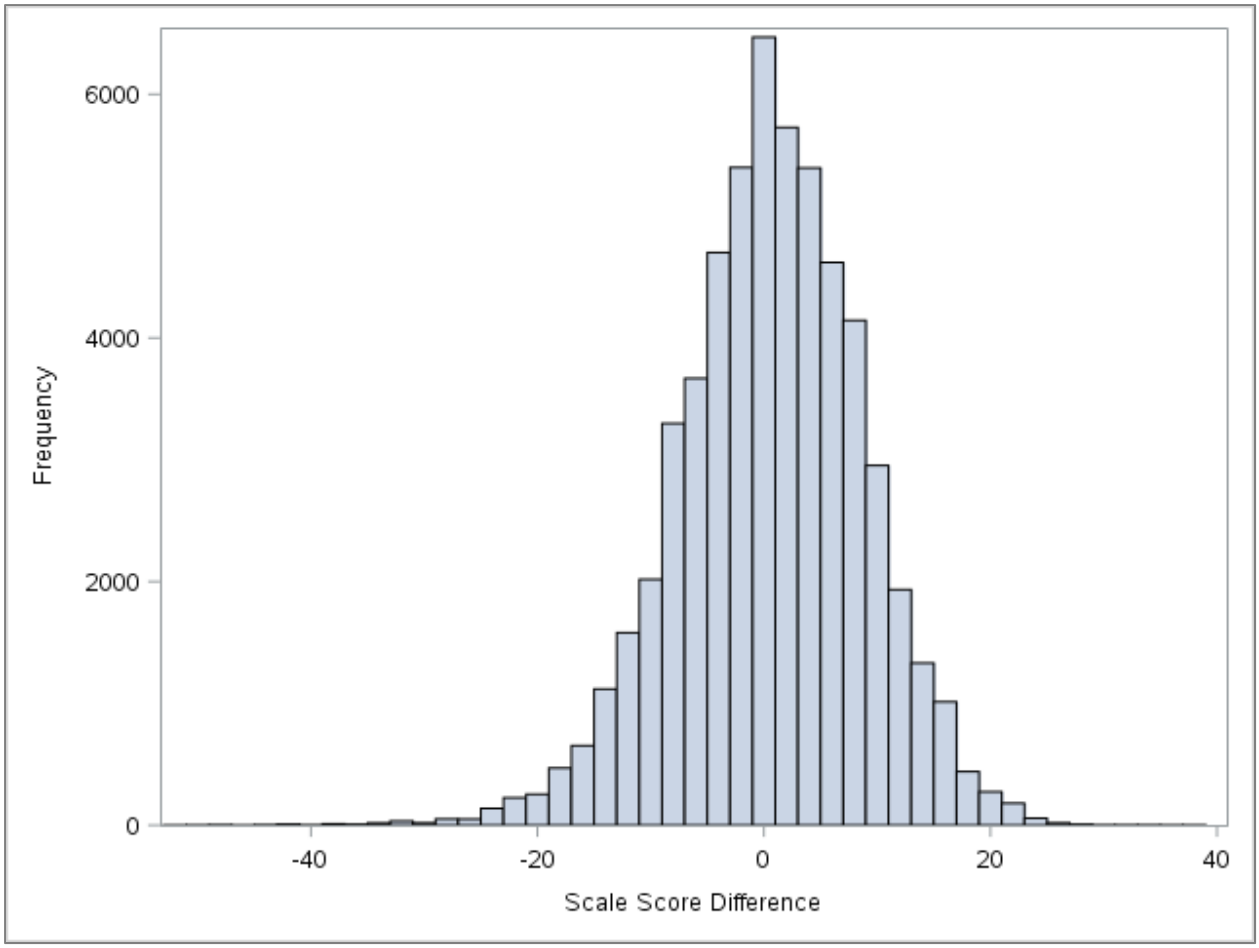

Figure 3.3. Grade 3 CBT Differences Between Abbreviated and Full Scale Scores

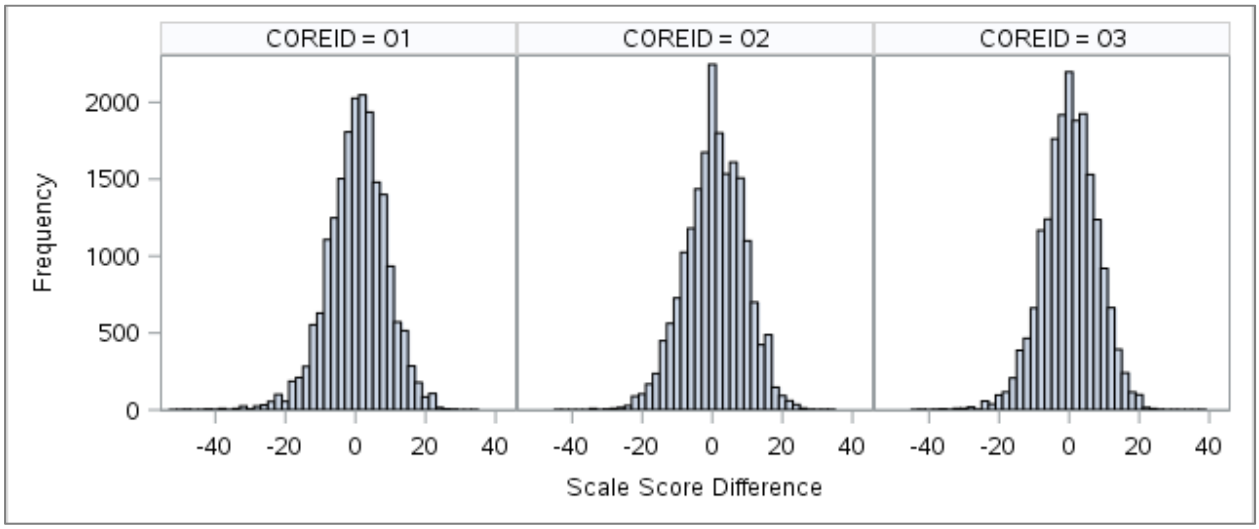

Figure 3.4. Grade 3 CBT Differences Between Abbreviated and Full Scale Scores for Each Core Form.

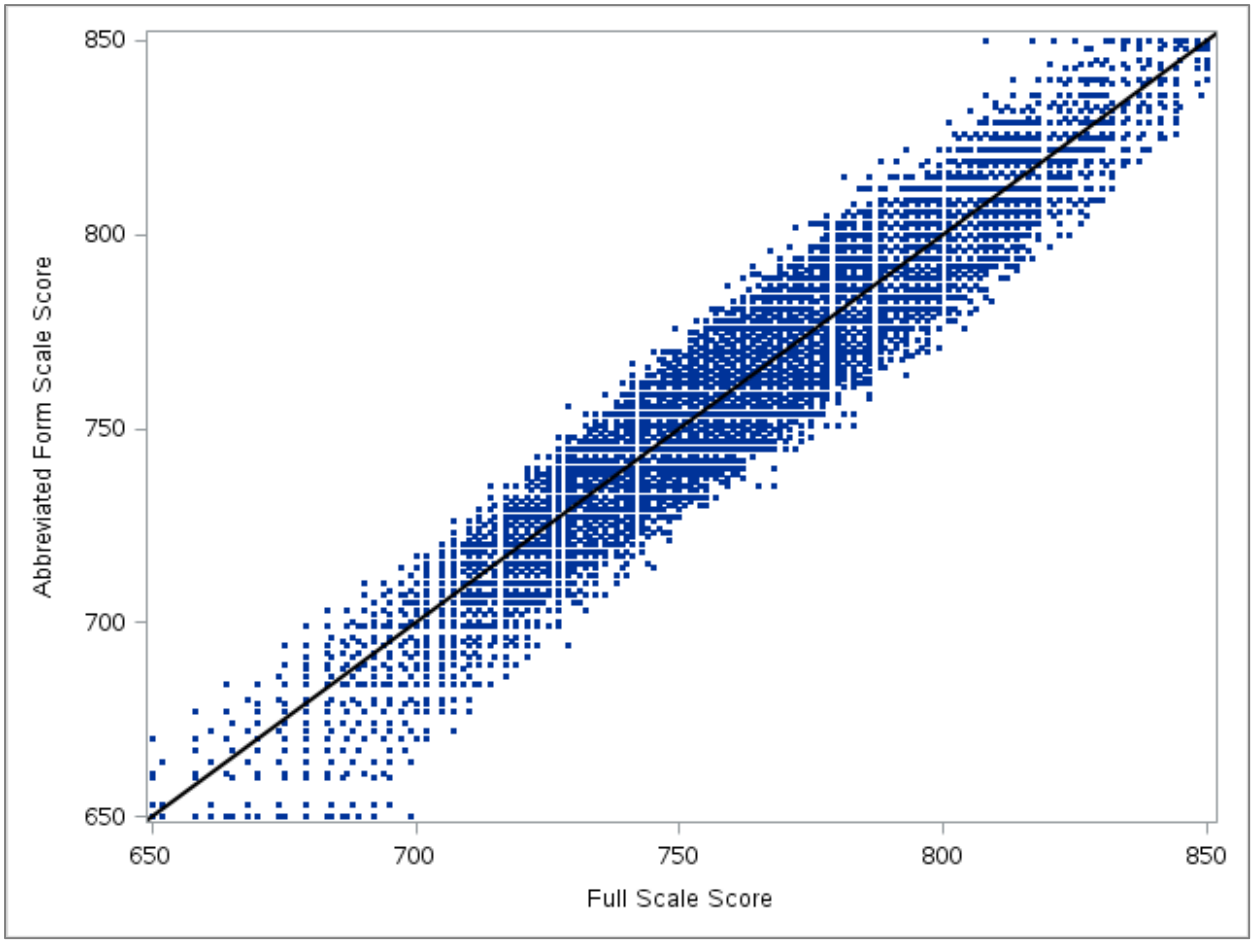

Figure 3.5. Grade 4 CBT Abbreviated vs. Full Scale Scores.

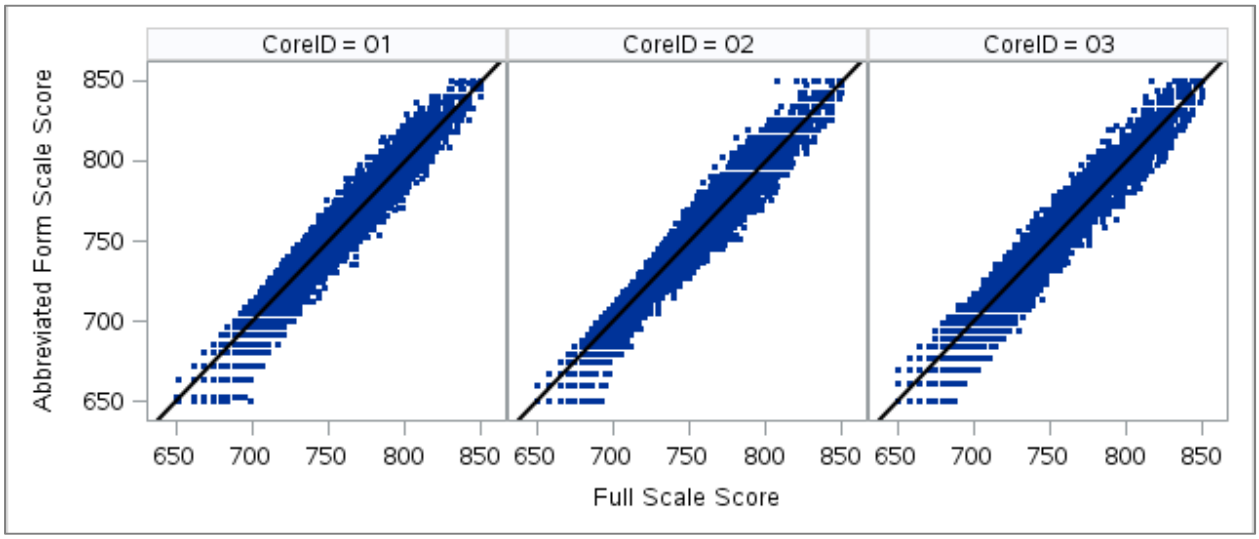

Figure 3.6. Grade 4 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

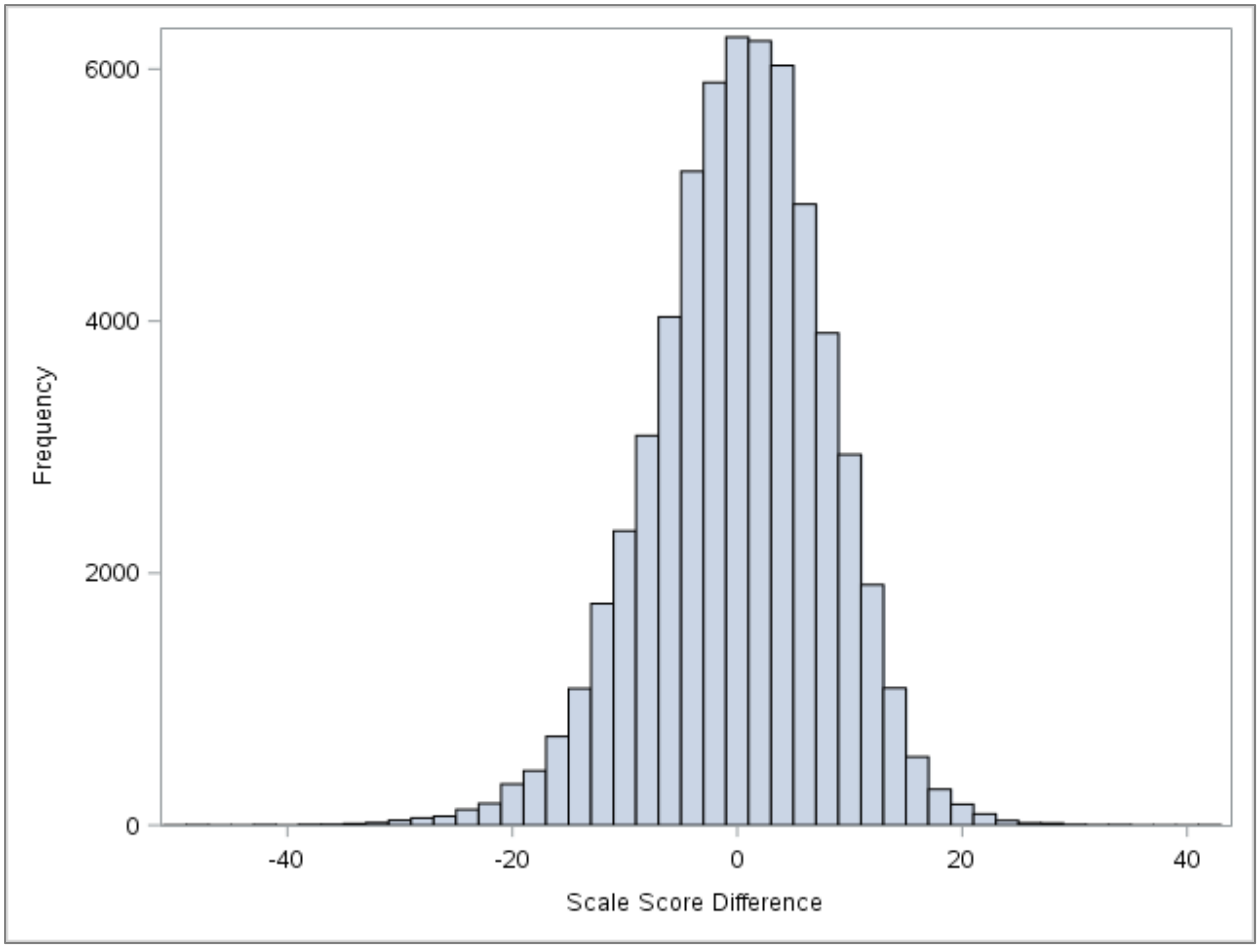

Figure 3.7. Grade 4 CBT Differences Between Abbreviated and Full Scale Scores.

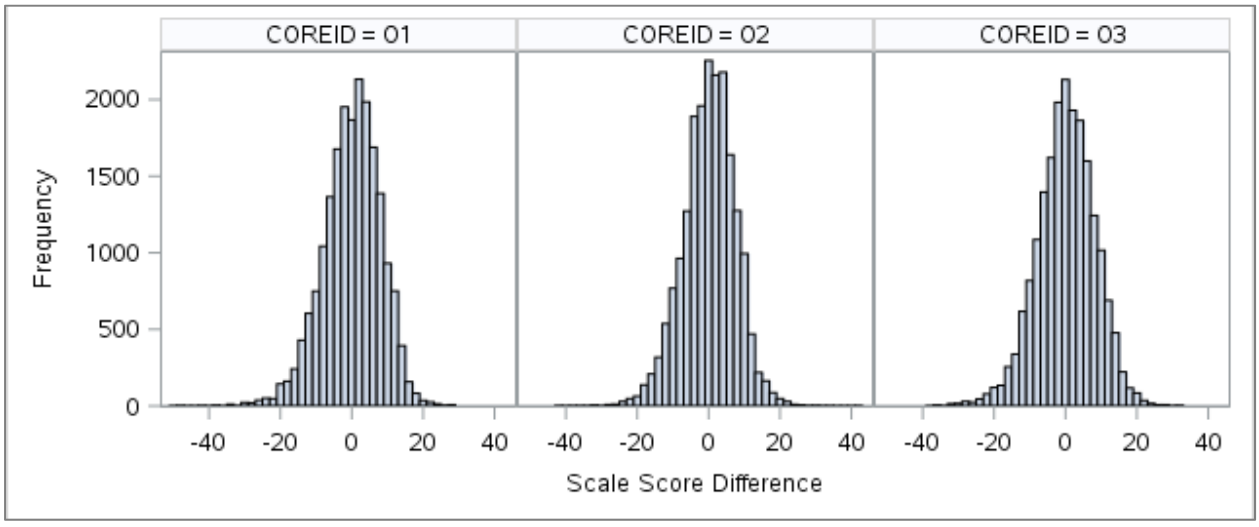

Figure 3.8. Grade 4 CBT Differences Between Abbreviated and Full Scale Scores for Each Core Form.

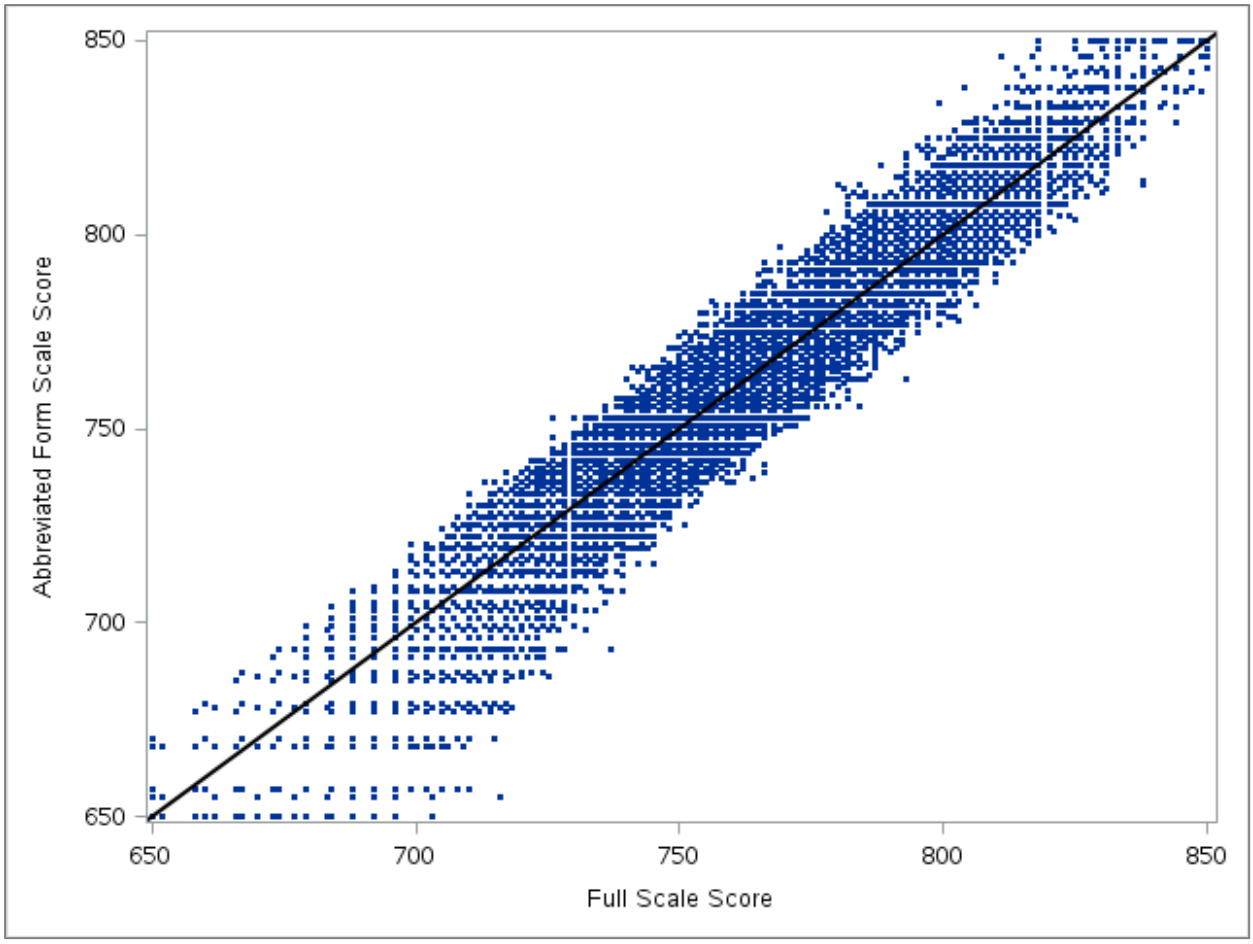

Figure 3.9. Grade 5 CBT Abbreviated vs. Full Scale Scores.

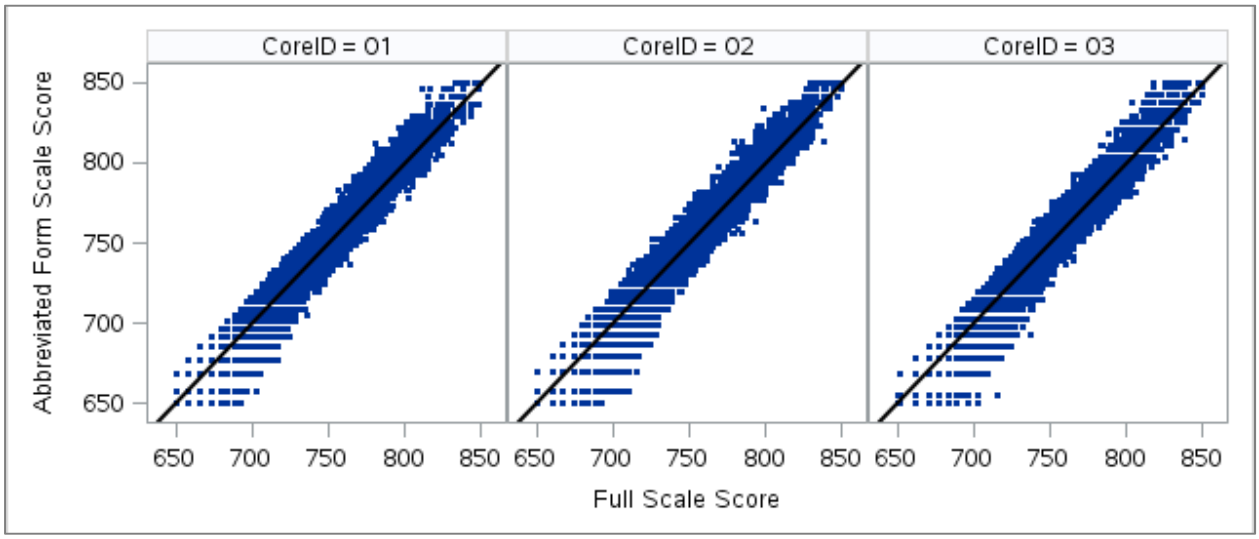

Figure 3.10. Grade 5 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

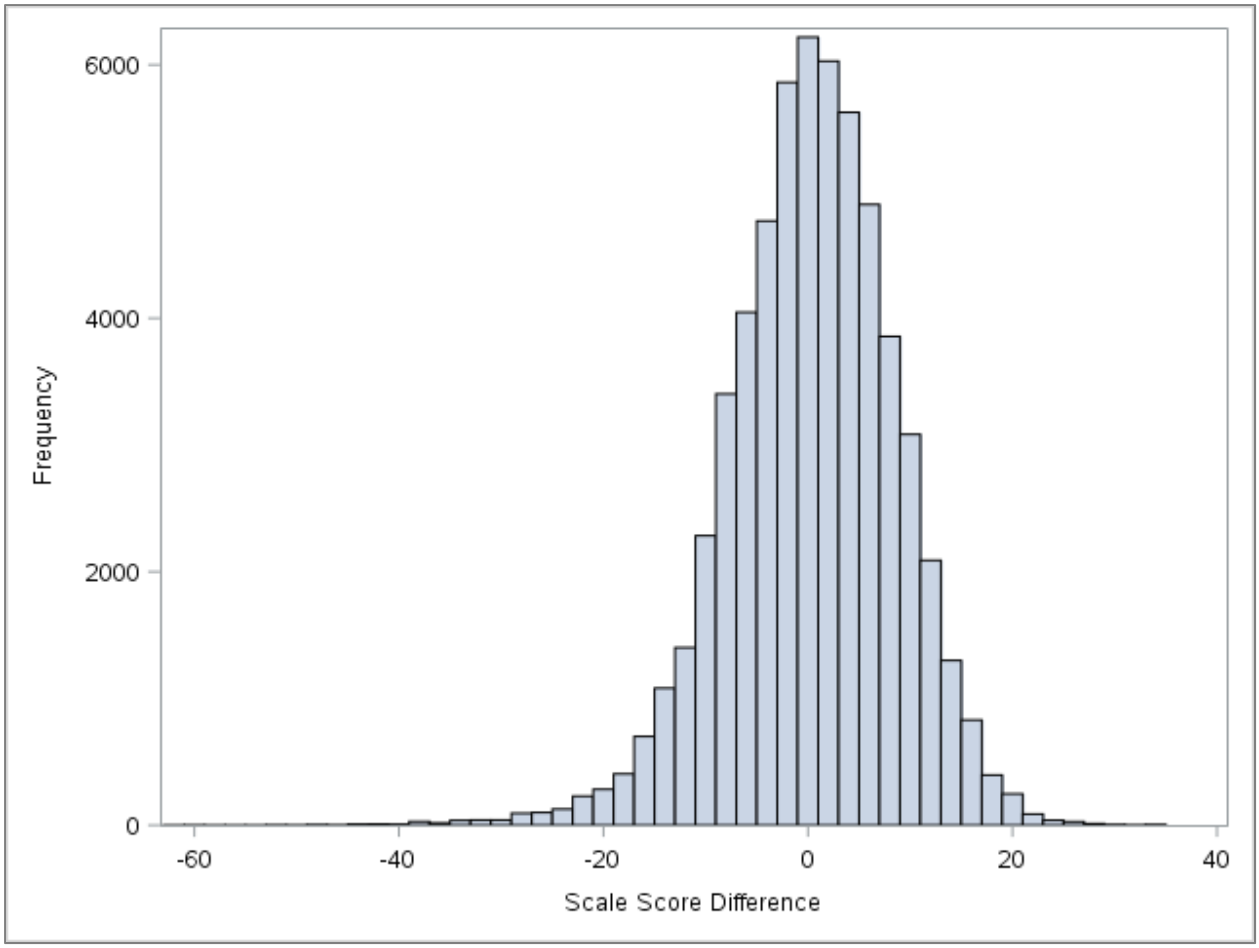

Figure 3.11. Grade 5 CBT Differences Between Abbreviated and Full Scale Scores.

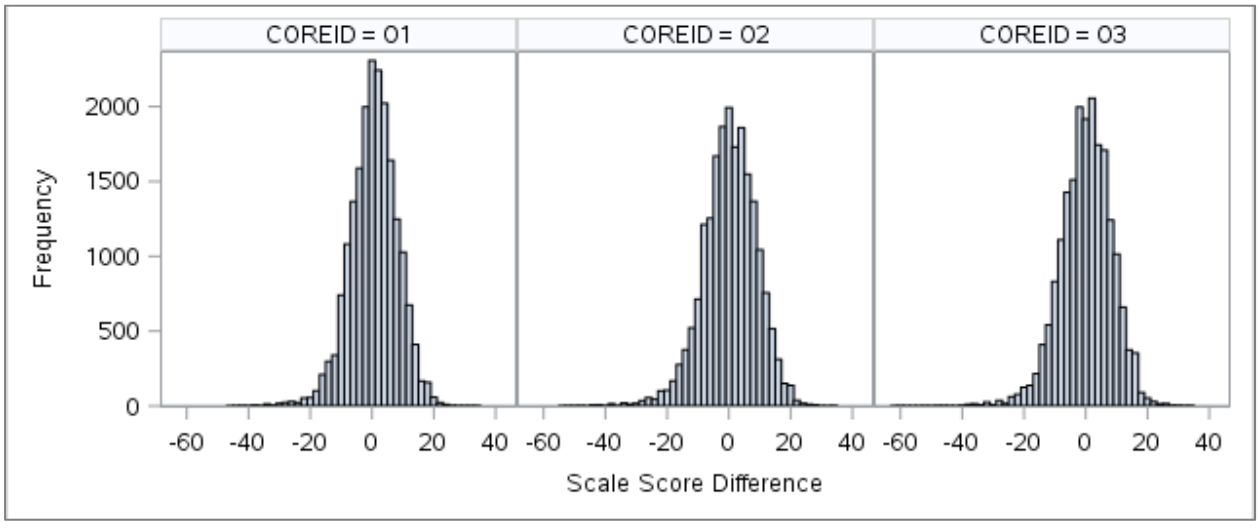

Figure 3.12. Grade 5 CBT Differences Between Abbreviated and Full Scale Scores for Each Core Form.

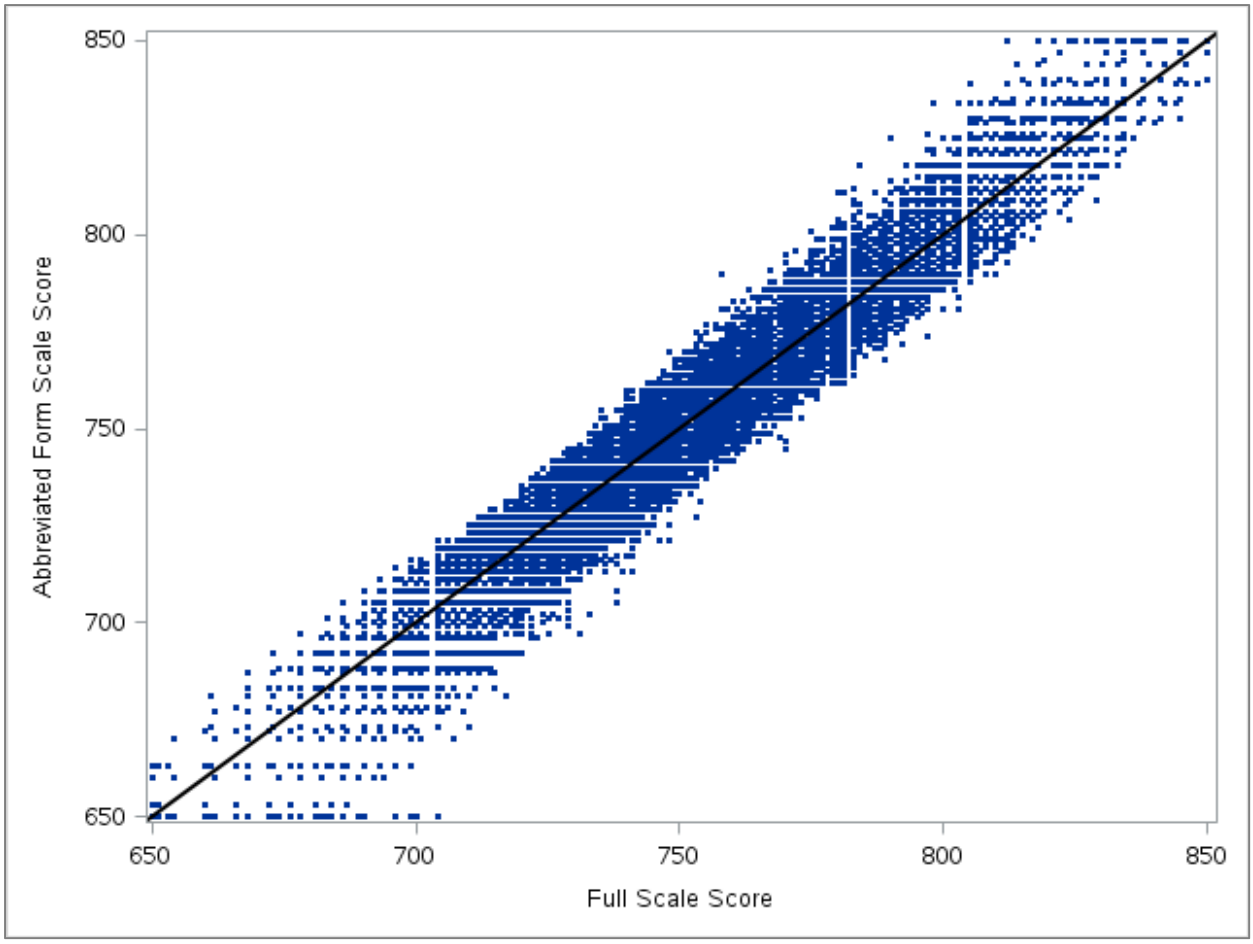

Figure 3.13. Grade 6 CBT Abbreviated vs. Full Scale Scores.

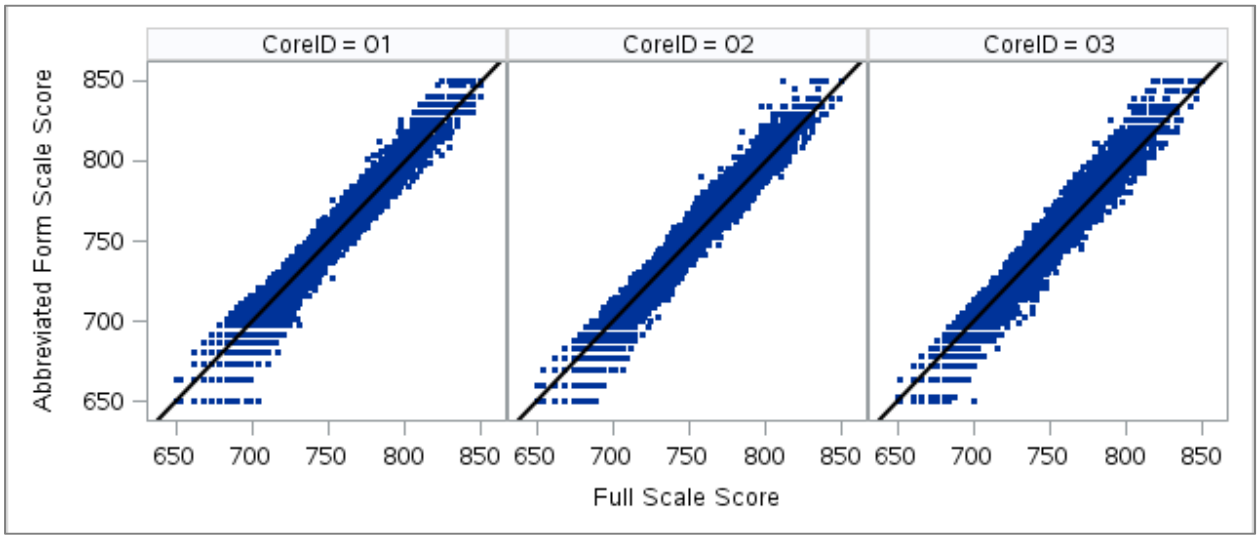

Figure 3.14. Grade 6 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

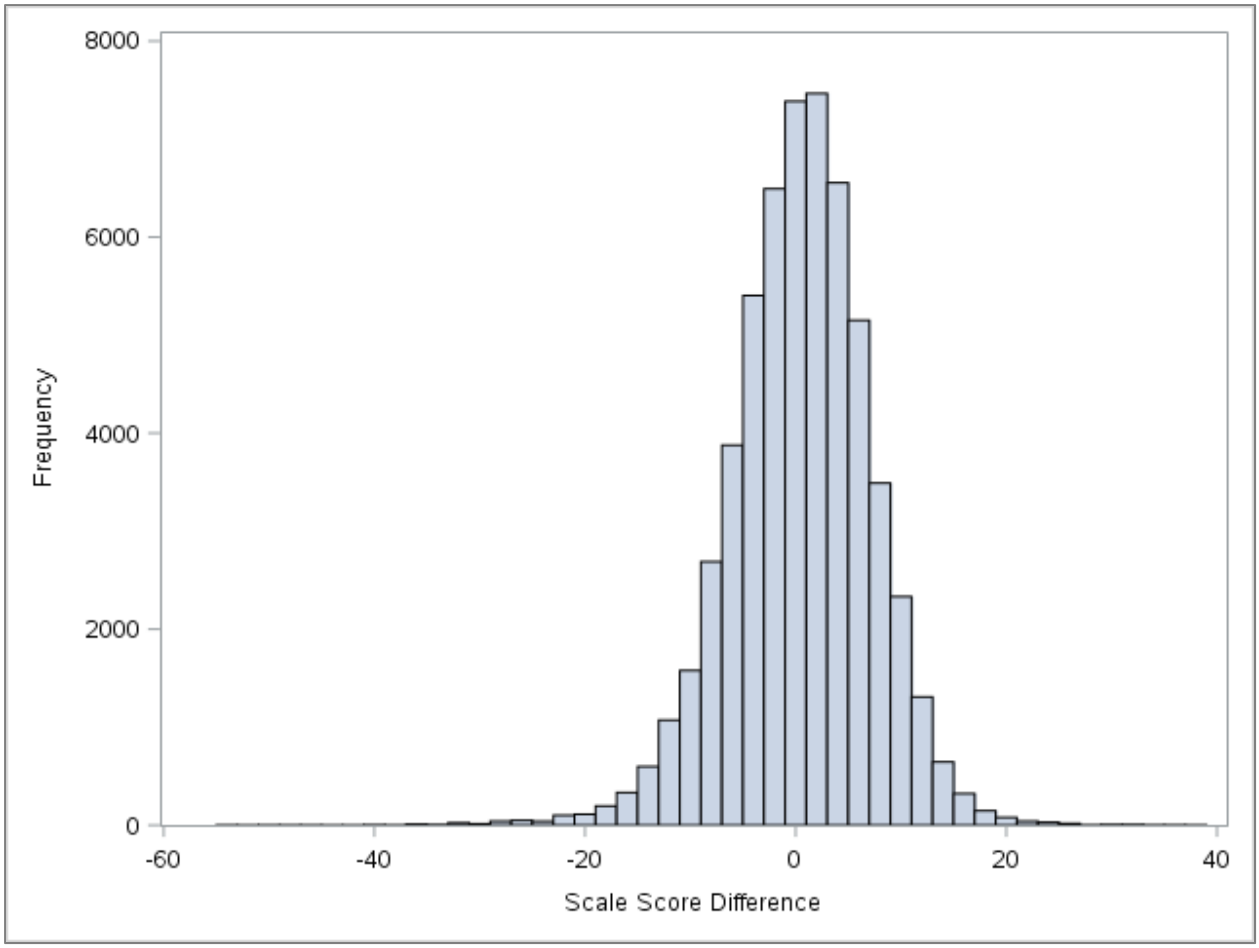

Figure 3.15. Grade 6 CBT Differences Between Abbreviated and Full Scale Scores.

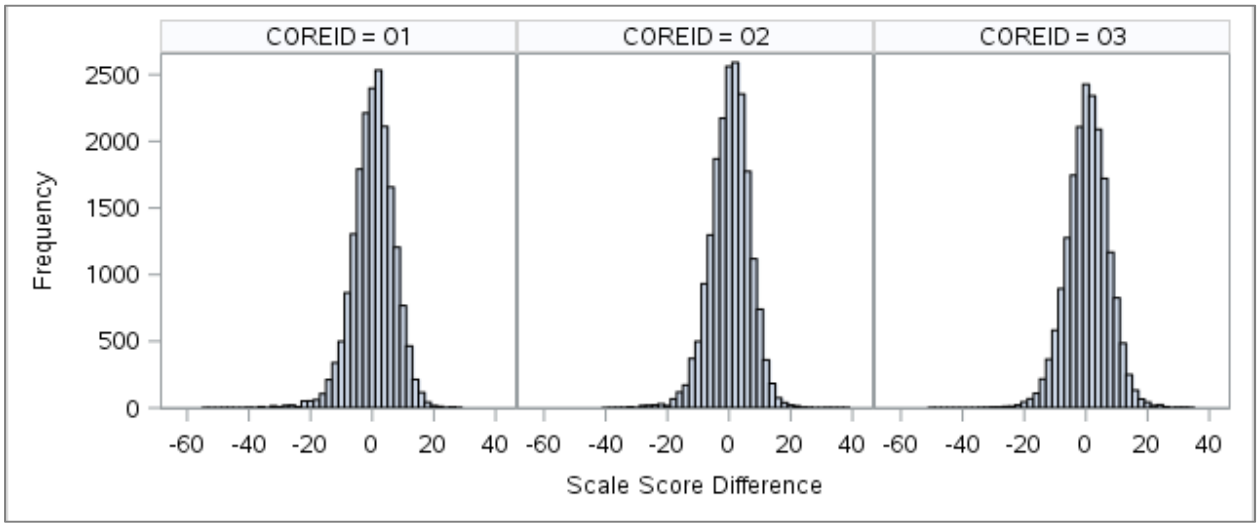

Figure 3.16. Grade 6 CBT Differences Between Abbreviated and Full Scale Scores for Each Core Form.

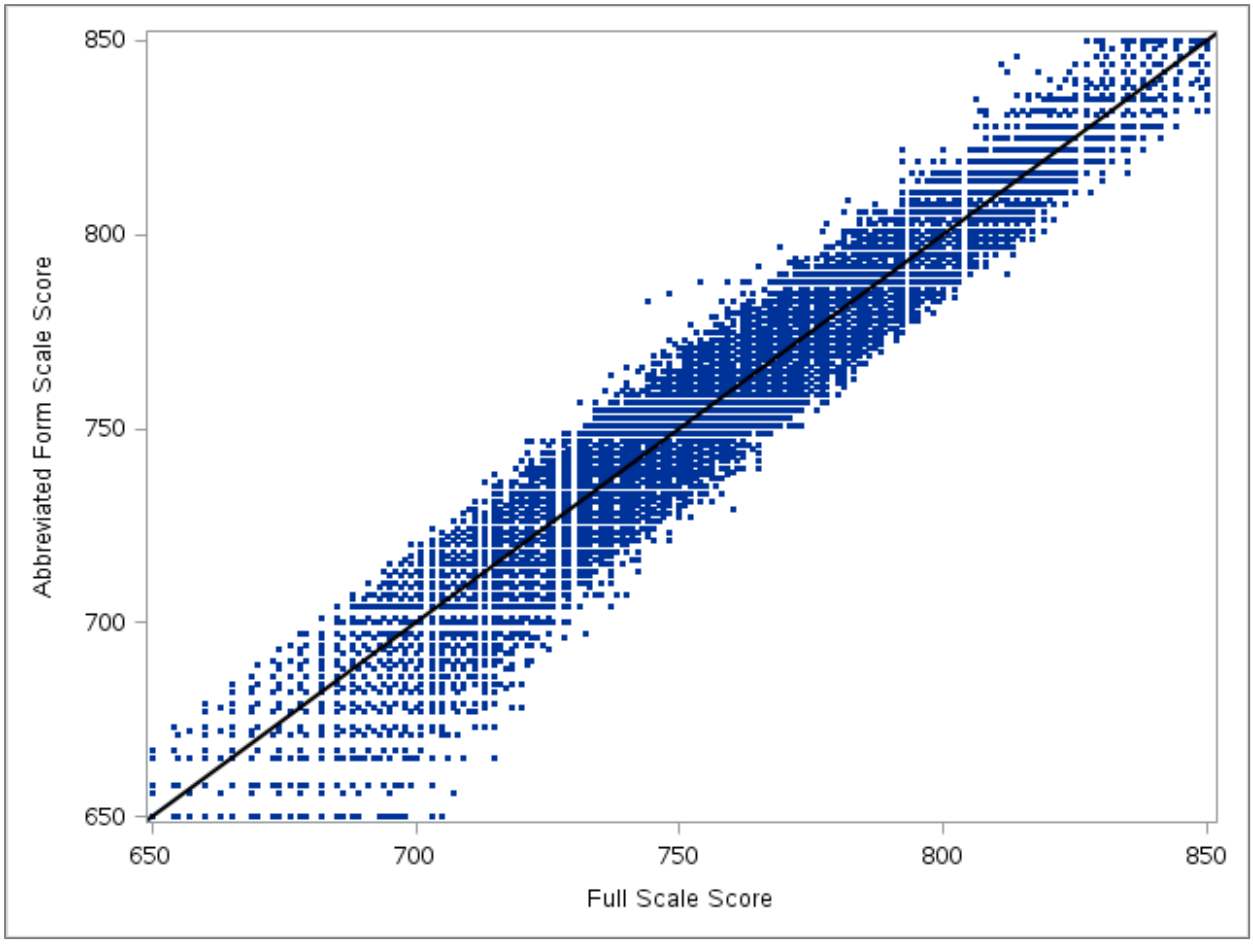

Figure 3.17. Grade 7 CBT Abbreviated vs. Full Scale Scores.

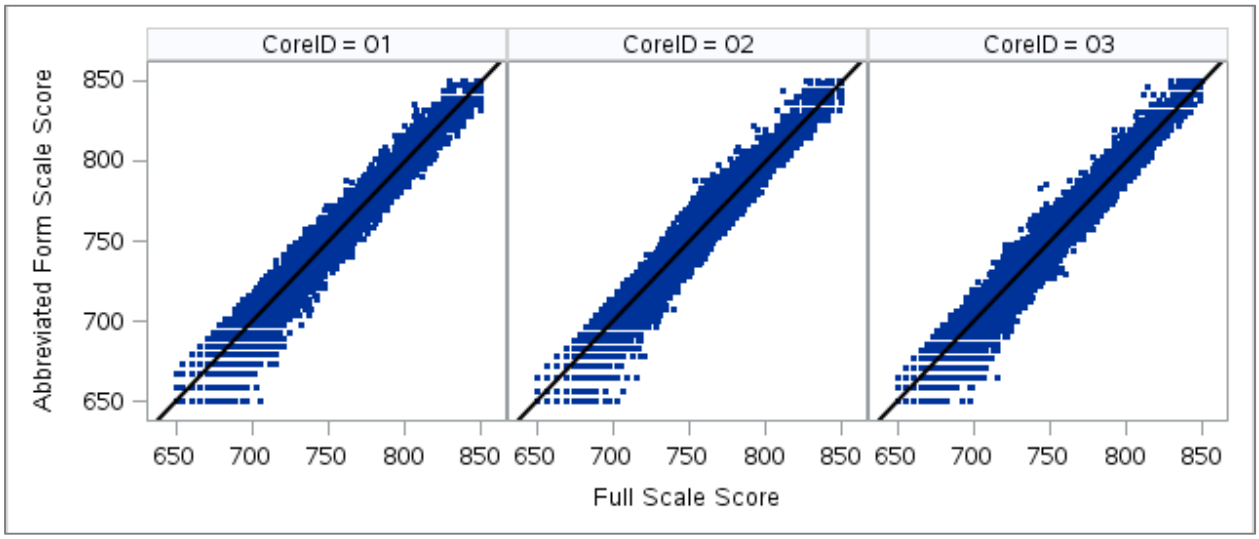

Figure 3.18. Grade 7 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

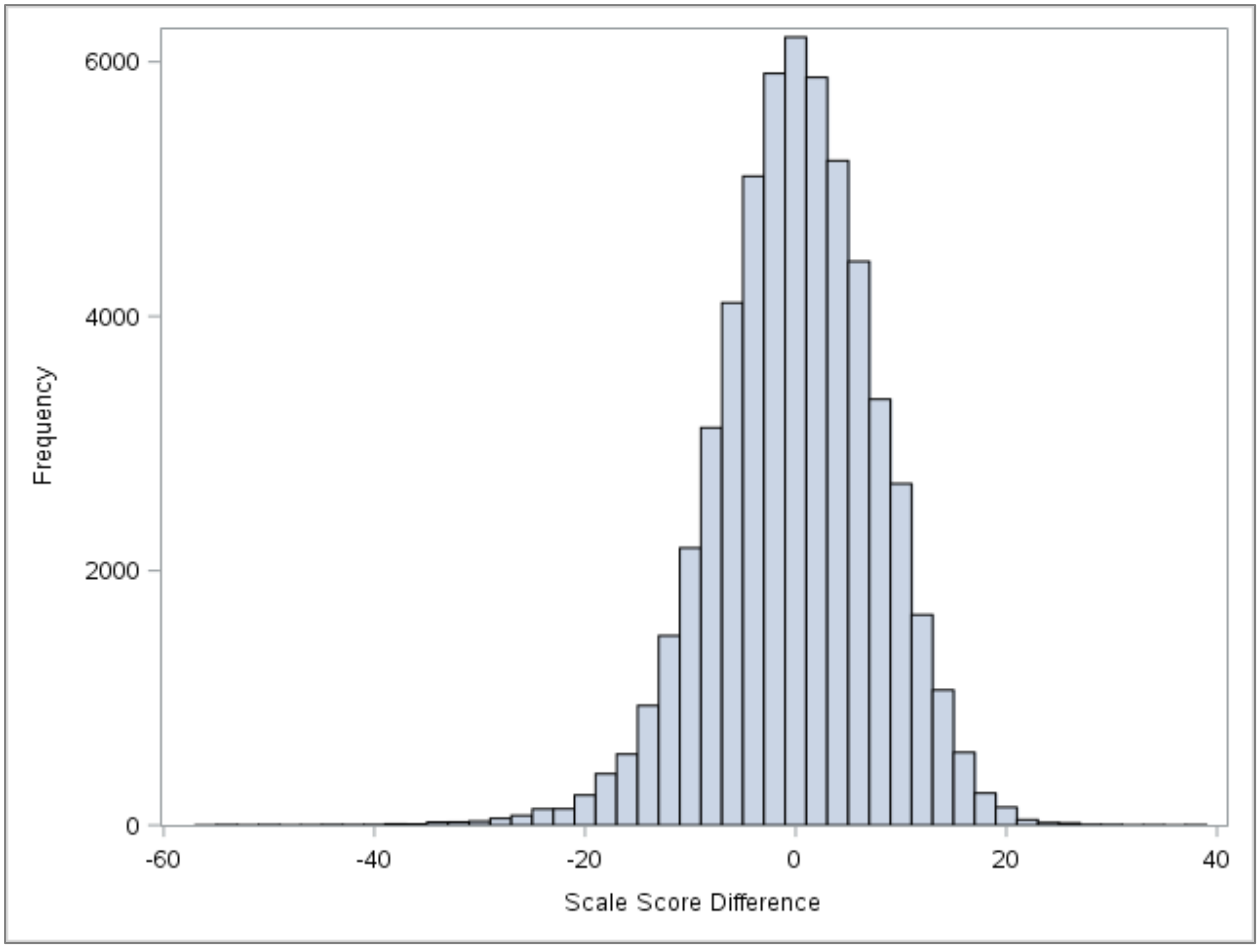

Figure 3.19. Grade 7 CBT Differences Between Abbreviated and Full Scale Scores.

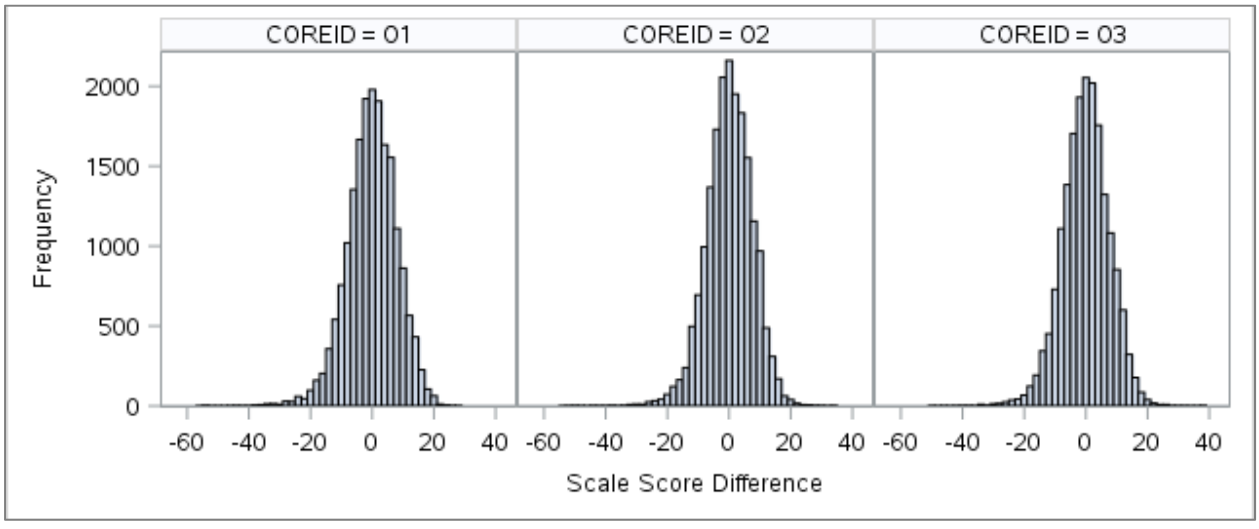

Figure 3.20. Grade 7 CBT Differences Between Abbreviated and Full Scale Scores for Each Core Form.

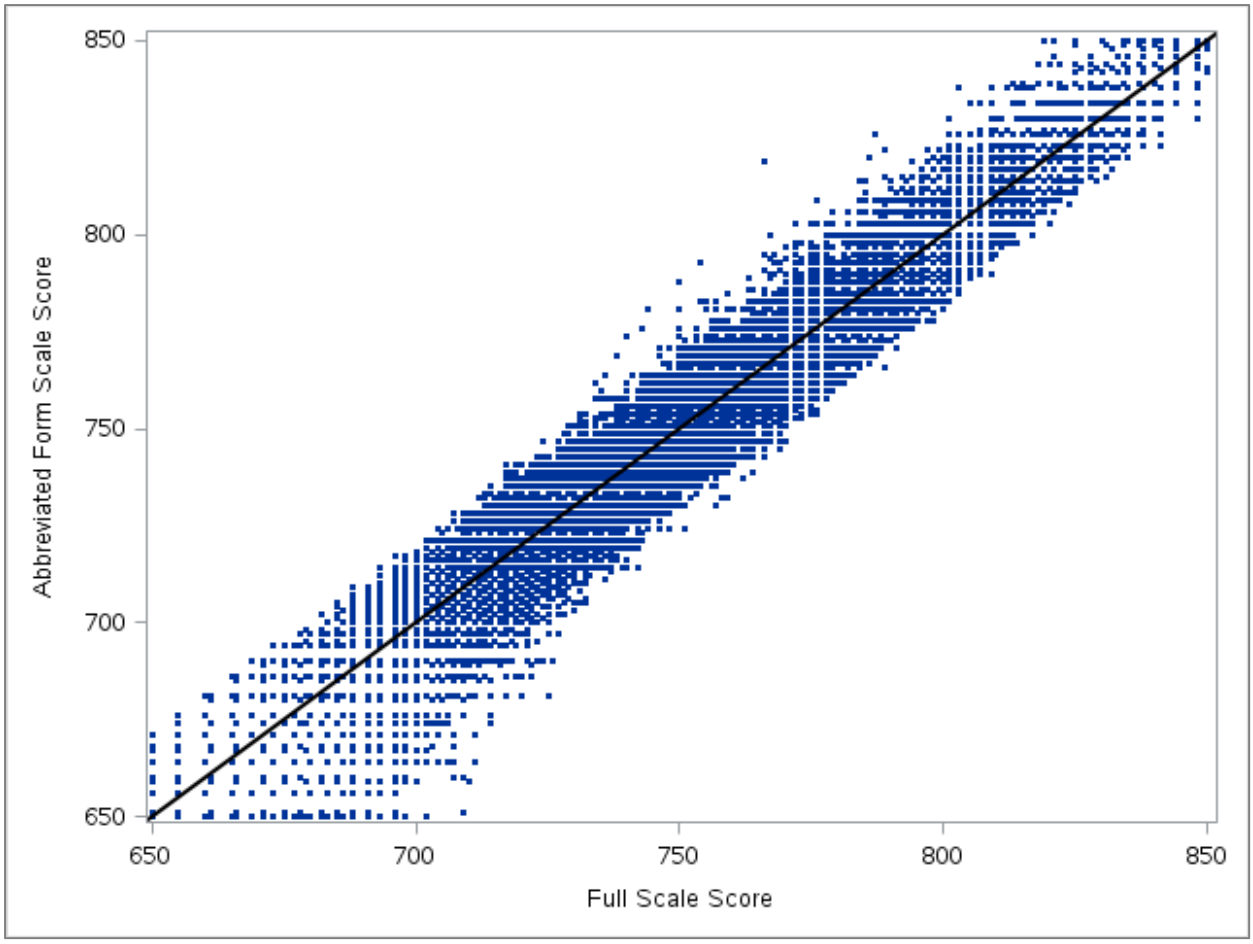

Figure 3.21. Grade 8 CBT Abbreviated vs. Full Scale Scores.

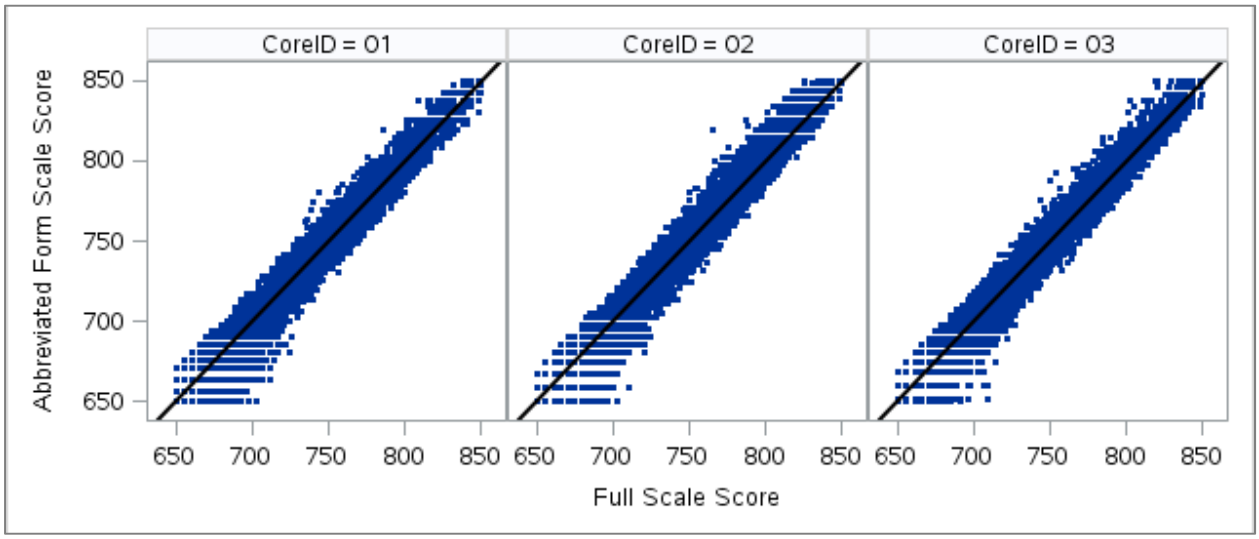

Figure 3.22. Grade 8 CBT Abbreviated vs. Full Scale Scores for Each Core Form.

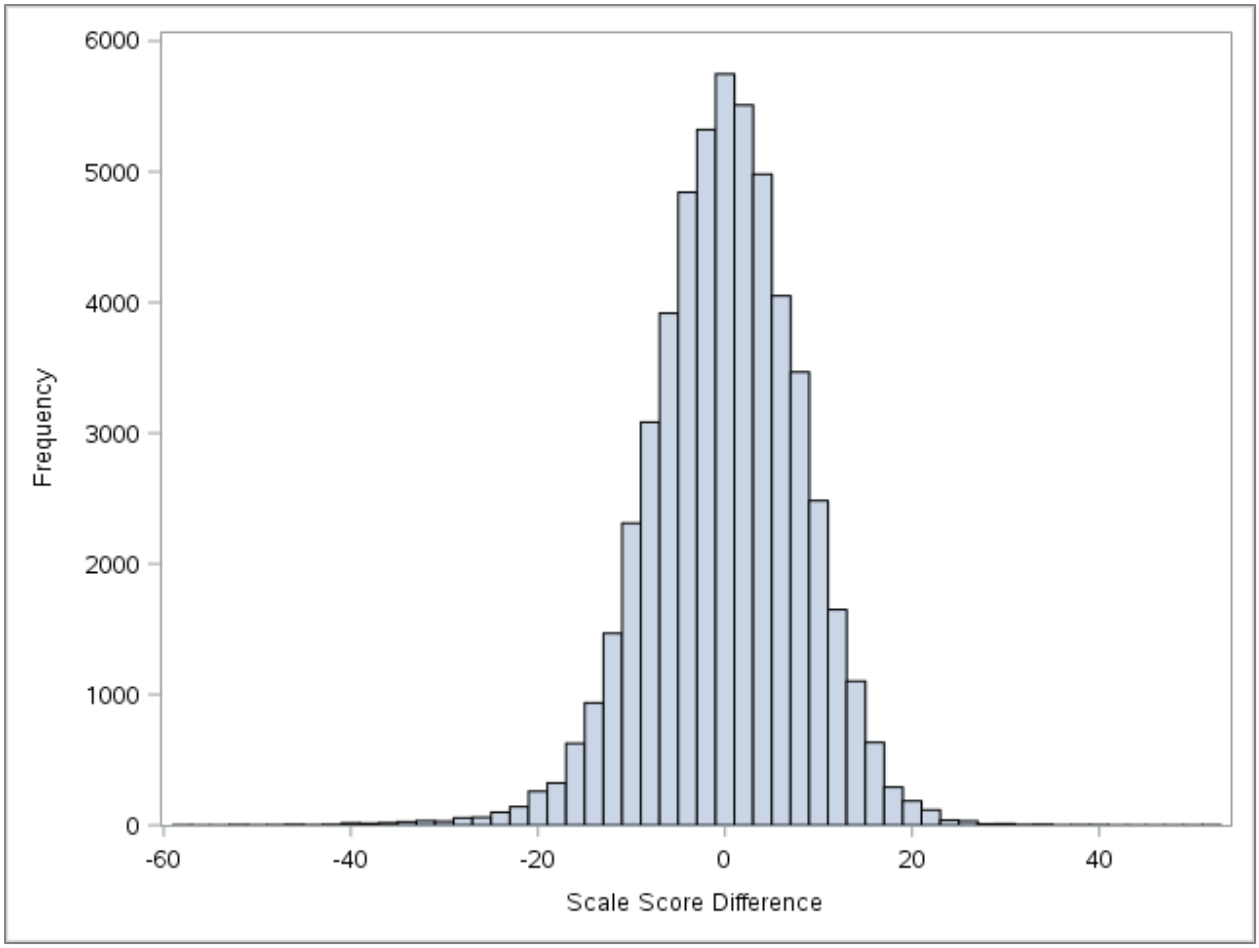

Figure 3.23. Grade 8 CBT Differences Between Abbreviated and Full Scale Scores.

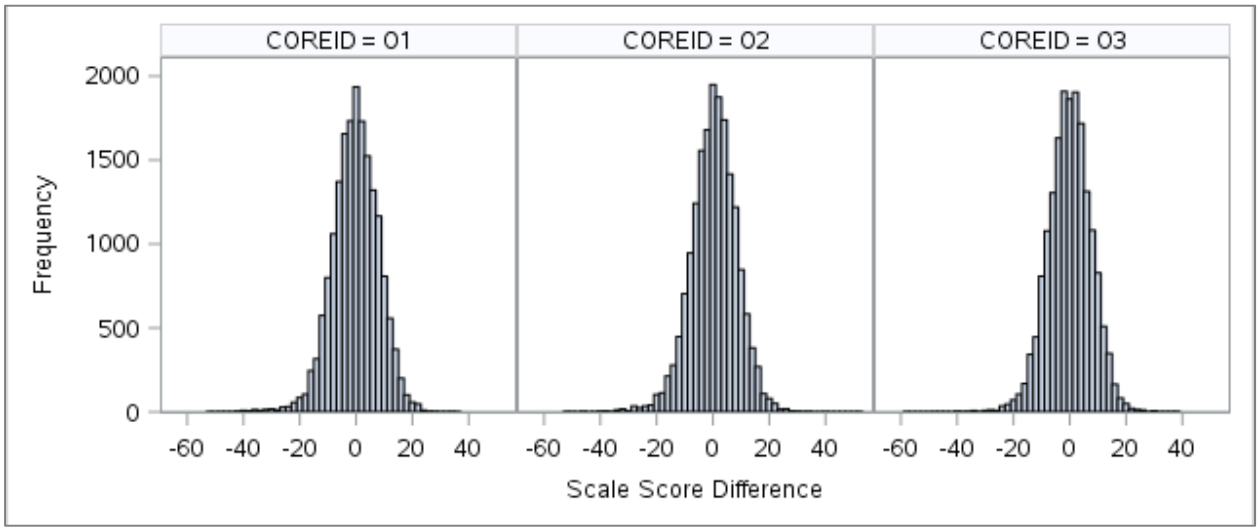

Figure 3.24. Grade 8 CBT Differences Between Abbreviated and Full Scale Scores for Each Core Form.

Summative Test Characteristic Curves

The test characteristic curves were generated for the raw score to theta scale for the overall theta scale. Due to the difference in raw score total and the number of operational items across the full and abbreviated forms, TCCs are provided based the percent of the total maximum possible score points. Figures 3.25 – 3.30 present the percent test characteristic curves for each grade. In general, the test characteristic curves for the abbreviated test forms are similar to the full test form test characteristic curves.

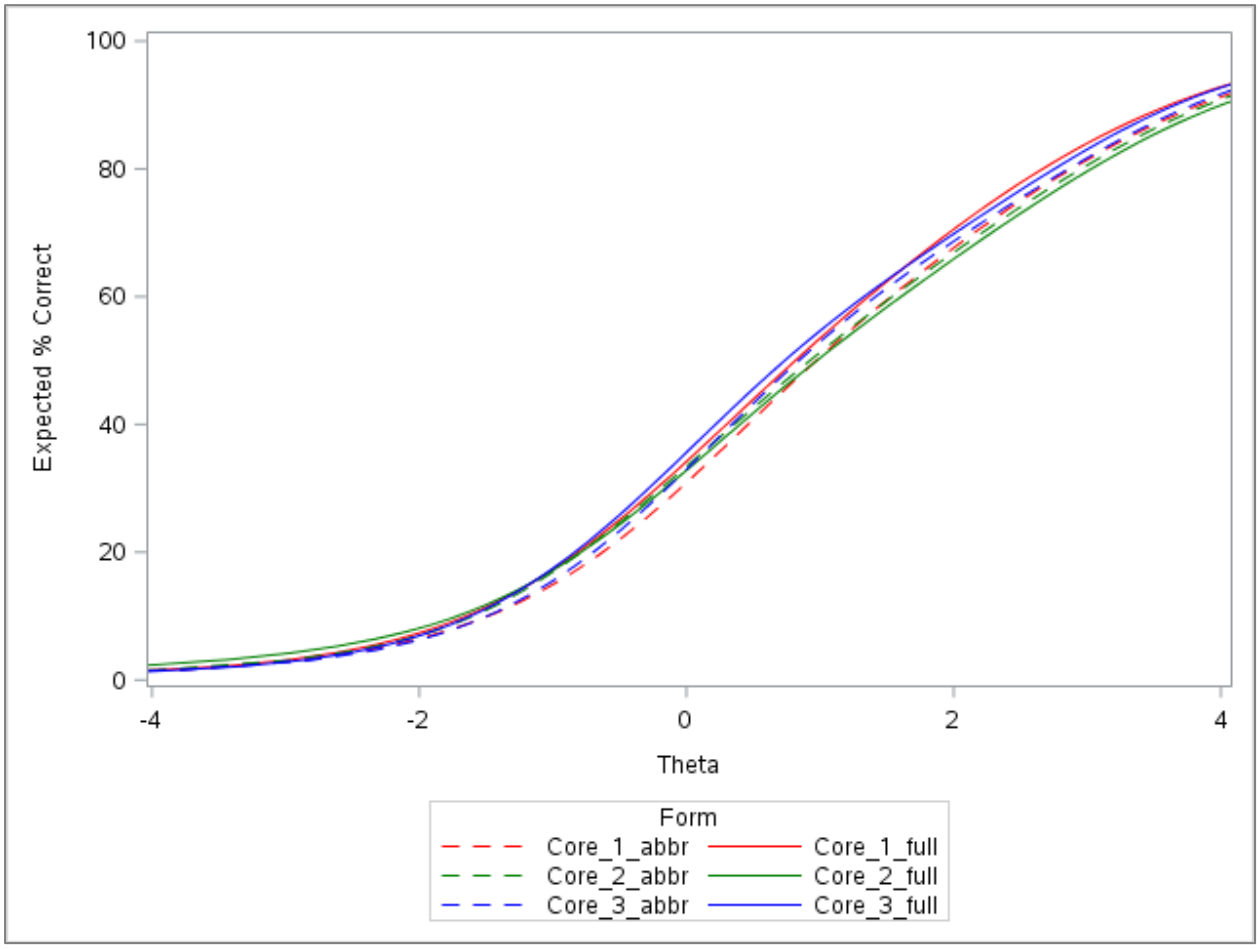

Figure 3.25. Grade 3 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

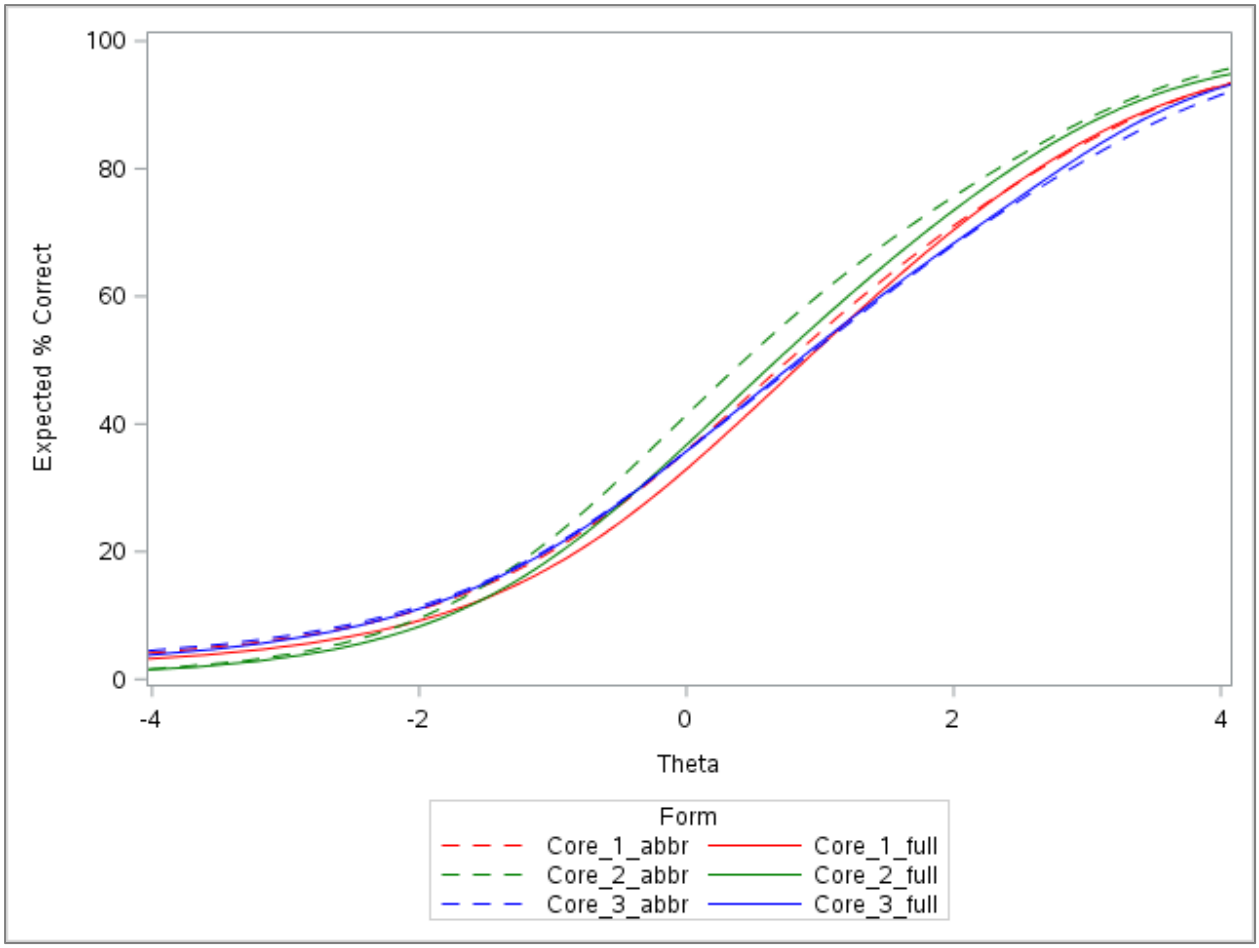

Figure 3.26. Grade 4 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

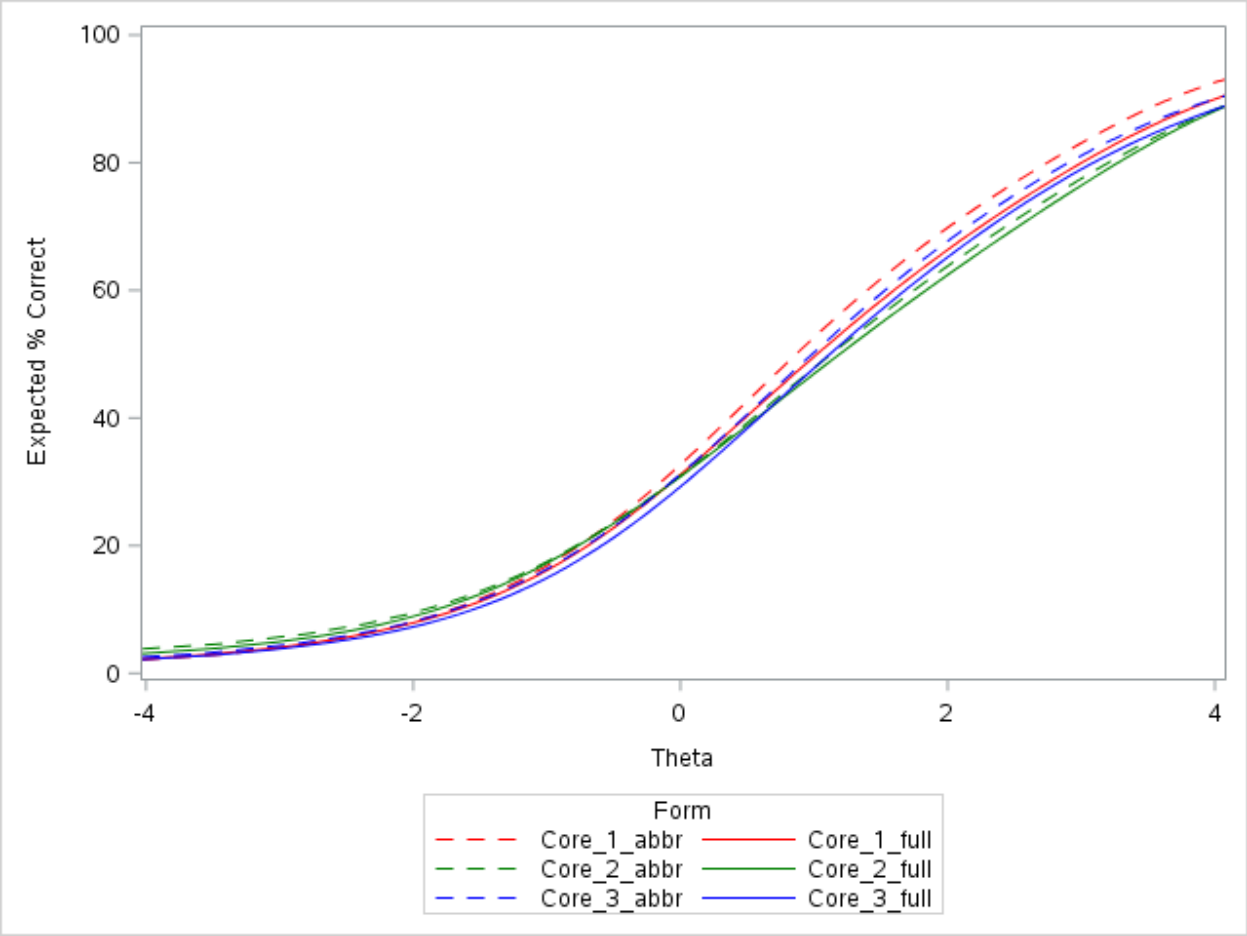

Figure 3.27. Grade 5 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

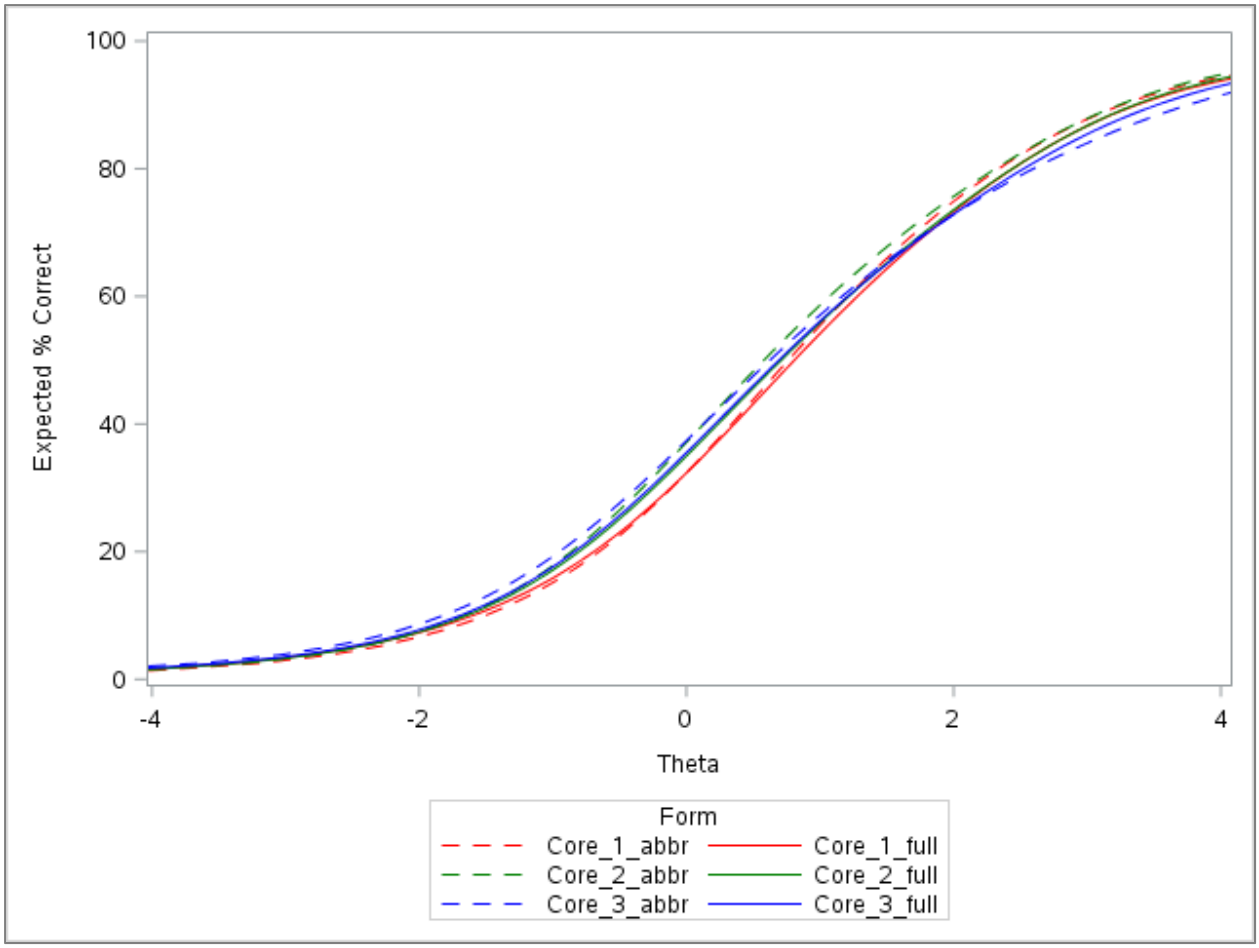

Figure 3.28. Grade 6 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

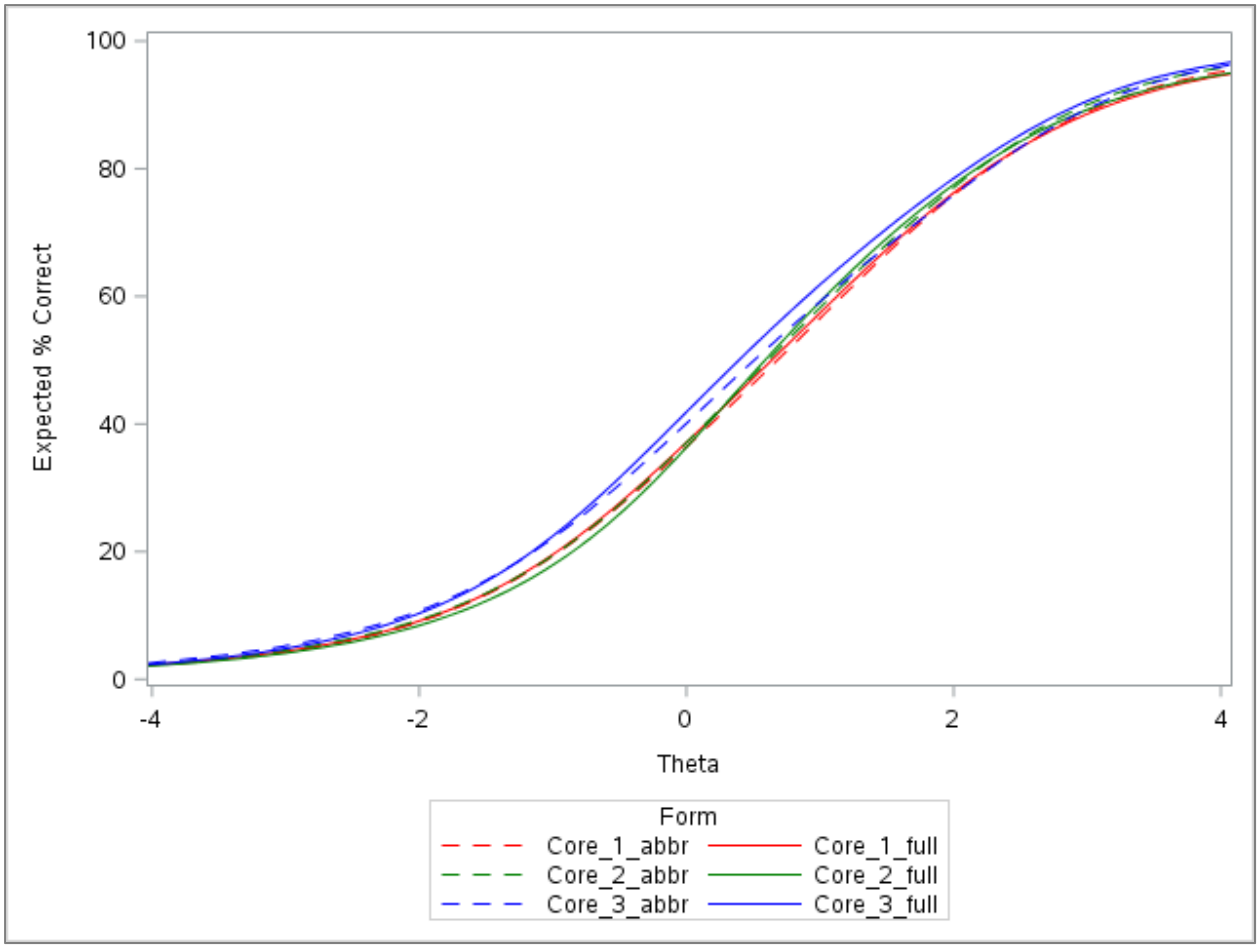

Figure 3.29. Grade 7 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

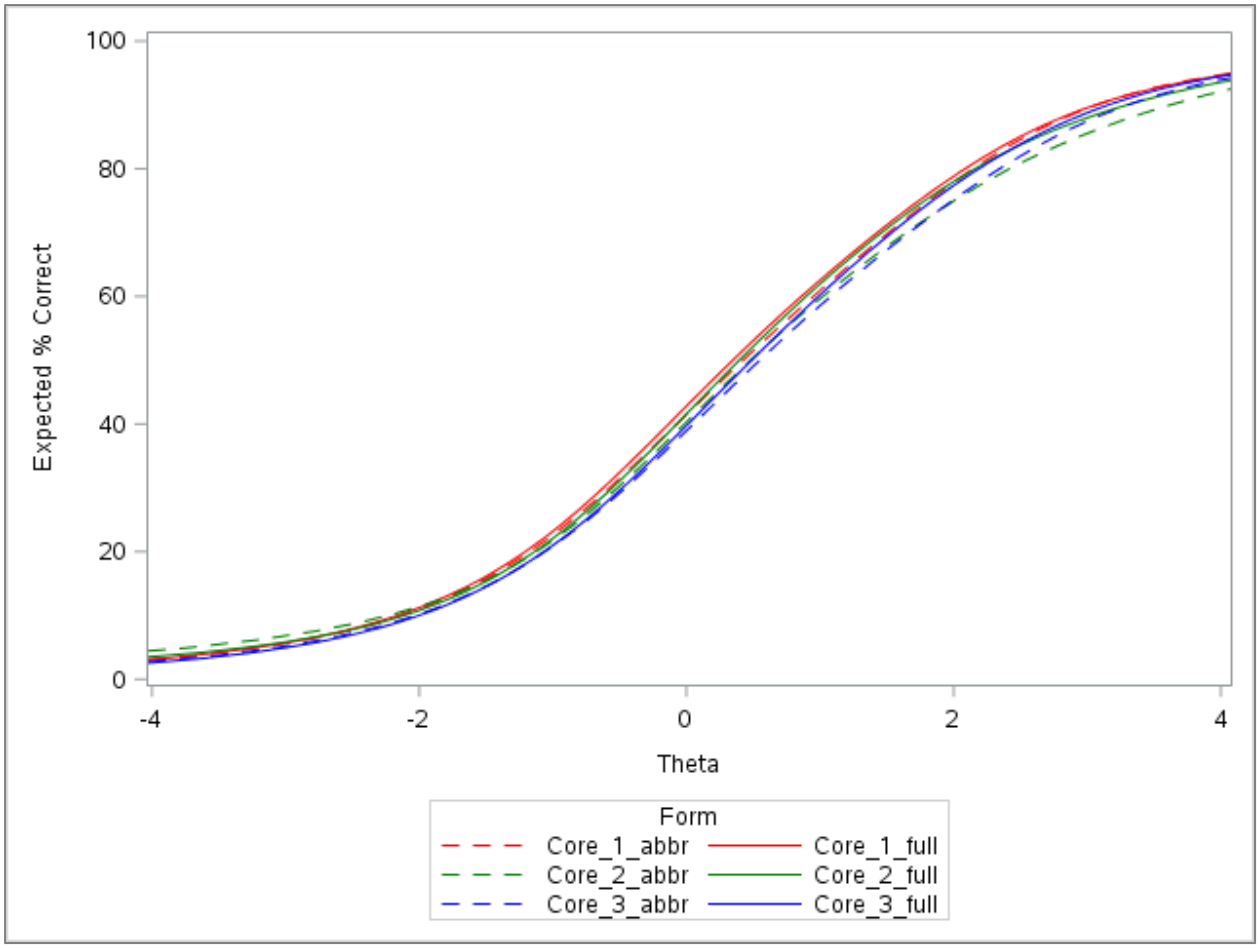

Figure 3.30. Grade 8 CBT Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores.

Section 4. Summary

This analysis used the spring 2017 administration of the grade 3-8 CMAS ELA/L assessments for Colorado students to study the potential impact of omitting some items in future administrations in order to reduce testing time. The passage or passages that were omitted varied by grade and ranged in points from 29-43. Scoring tables were generated based on the abbreviated number of operational items. Abbreviated form raw scores were computed based on the student response strings and omitting the selected items. The abbreviated form scoring tables were applied to the student abbreviated form raw scores. Analyses compared the students' spring 2017 scale scores and performance levels based on the full ELA/L assessments to the abbreviated form scale scores and performance levels based on the abbreviated ELA/L assessments.

The average scale scores were similar for the abbreviated and full test forms. The percent of exact agreement in the overall performance level designation between the full assessment and the abbreviated assessment on any of the core forms ranged from 80.9% - 85.1% exact agreement across the grade levels. In addition, the correlations were all greater than .97.

A potential limitation to this study is that the items that could be omitted were constrained to those in the 2017 administration. In addition, having fewer score points may impact the precision of performance level classification.

References

Muraki, E. (1992). A generalized partial credit model: Application of an EM algorithm. *Applied Psychological Measurement, 16,* 159–176.

APPENDIX D3: CSLA BLUEPRINT ABBREVIATION STUDY

CSLA Blueprint Abbreviation Results

This document contains the grades 3 and 4 reduced blueprint analysis results. The analyses compared students' spring 2017 scale scores and performance levels based on the full assessments to the scale scores and performance levels based on the reduced assessments. The blueprint abbreviations are exactly the same as those made for the ELA blueprints in Grades 3 and 4. For grade 4, the spring 2017 test did not contain the full subset of items needed to meet the abbreviated blueprint for the selected Short and Long Informational passages. In order to conduct the analyses, supplemental items were taken from an additional Informational passage on the spring 2017 test.

Table 1.1. *Grade 3 Blueprint and Abbreviated Form Points*

Item Types	Blueprint Points	Abbreviated Points
Reading - RI	21	14
Reading - RL	25	17
Reading - RV	12	10
Writing - WE	27*	18*
Writing - WKL	9	6
Total	94	65

*Based on a weight of 3.

Table 1.2. *Grade 4 Blueprint and Abbreviated Form Points*

Item Types	Blueprint Points	Abbreviated Points
Reading - RI	16	18
Reading - RL	20	20
RI or RL	16	N/A
Reading - RV	12	8
Writing - WE	33*	21*
Writing - WKL	9	6
Total	106	73

*Based on a weight of 3.

Results

This section presents the results for the CSLA abbreviated assessments in comparison to the full spring 2017 administration. The results include scale score summary statistics, overall performance level agreement, claim performance level agreement, subclaim performance level agreement, correlations, and overall test characteristic curves.

Scale Score Summary Statistics

The overall abbreviated scale score, abbreviated scale score conditional standard error of measurement (CSEM), the abbreviated reading claim scale score, the abbreviated reading claim scale score CSEM, the abbreviated writing claim scale score, and the abbreviated writing claim CSEM were calculated based on all operational items except for those associated with the passages omitted in this analysis. Tables 1.3 and 1.4 report summary statistics (count, mean, standard deviation, minimum, and maximum) for the full and abbreviated scale scores and CSEM, the full and abbreviated reading claim scale score and CSEM, and the writing claim scale scores and CSEM by grade level.

The average scale scores were similar for the abbreviated and full test forms. The overall scale score differences were less than .52 and, as expected, the conditional standard errors were slightly lower for the longer test forms. In addition, the average reading claim score and the average writing claim score were similar.

Table 1.3. *Summary Statistics for Full and Abbreviated Scores for CSLA Grade 3*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	1701	736.71	23.54	650	850
Abbreviated Scale Score	1701	736.72	24.72	650	850
Full Scale Score CSEM	1701	6.24	1.46	5	15
Abbreviated Scale Score CSEM	1701	7.61	1.71	6	15
Full Reading Claim Score	1701	44.19	8.55	10	90
Abbreviated Reading Claim Score	1701	44.09	9.08	10	90
Full Reading Claim Score CSEM	1701	3.18	0.51	3	11
Abbreviated Reading Claim Score CSEM	1701	3.56	0.90	3	12
Full Writing Claim Score	1701	31.59	8.73	10	60
Abbreviated Writing Claim Score	1701	31.60	9.83	10	60
Full Writing Claim Score CSEM	1701	2.66	1.13	2	6
Abbreviated Writing Claim Score CSEM	1701	3.54	1.00	3	6

Table 1.4. *Summary Statistics for Full and Abbreviated Scores for CSLA Grade 4*

	Count	Mean	Standard Deviation	Minimum	Maximum
Full Scale Score	835	726.21	21.23	650	850
Abbreviated Scale Score	835	725.69	23.20	650	850
Full Scale Score CSEM	835	6.18	1.41	5	15
Abbreviated Scale Score CSEM	835	7.69	1.76	6	15
Full Reading Claim Score	835	40.52	7.69	10	90

Abbreviated Reading Claim Score	835	40.49	8.73	10	90
Full Reading Claim Score CSEM	835	3.18	0.45	3	9
Abbreviated Reading Claim Score CSEM	835	3.56	0.85	3	9
Full Writing Claim Score	835	27.98	8.40	10	60
Abbreviated Writing Claim Score	835	27.09	9.79	10	60
Full Writing Claim Score CSEM	835	2.68	1.36	2	6
Abbreviated Writing Claim Score CSEM	835	3.48	1.47	2	6

Overall Performance Level Agreement

Table 1.5 lists the percent of students assigned the exact same performance level for both the full and the abbreviated CSLA assessments by grade level. In addition, Table 1.5 lists the percent of students assigned to different performance levels between the full and abbreviated assessments for each grade level. If the abbreviated performance levels were a higher ability level compared to the full performance level the number and percent of students are listed as “Higher Level for Abbreviated”. If the abbreviated performance levels were a lower ability level compared to the full performance level the number and percent of students are listed as “Lower Level for Abbreviated”.

Table 1.5. *Overall Performance Level Percent Agreement for CSLA by Grade*

Grade	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
3	84.7%	7.9%	7.4%
4	80.4%	9.6%	10.1%

Tables 1.6 and 1.7 show the number and percent of students by the full performance level designation and the abbreviated performance level designation for each grade level. The values bolded in the tables represent exact agreement. For both grades, if the performance level designation was not exact, the difference was within an adjacent performance level. Differences were slightly larger in 4th grade than in 3rd grade.

Table 1.6. *Performance Level Percent Agreement for CSLA Grade 3*

Grade 3		Abbreviated Form Performance Levels					
CSLA		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**81 (4.8%)**	16 (0.9%)				97 (5.7%)
	2	26 (1.5%)	**361 (21.2%)**	38 (2.2%)			425 (25.0%)
	3		54 (3.2%)	**573 (33.7%)**	52 (3.1%)		679 (39.9%)
	4			37 (2.2%)	**379 (22.3%)**	29 (1.7%)	445 (26.2%)
	5				8 (0.5%)	**47 (2.8%)**	55 (3.2%)
	Total	107 (6.3%)	431 (25.3%)	648 (38.1%)	439 (25.8%)	76 (4.5%)	1701 (100%)

Table 1.7. *Performance Level Percent Agreement for CSLA Grade 4*

Grade 4		Abbreviated Form Performance Levels					
CSLA		1	2	3	4	5	**Total**
Spring 2017 Performance Levels	1	**81 (9.7%)**	22 (2.6%)				103 (12.3%)
	2	25 (3.0%)	**233 (27.9%)**	34 (4.1%)			292 (35.0%)
	3		38 (4.6%)	**261 (31.3%)**	18 (2.2%)		317 (38.0%)
	4			19 (2.3%)	**86 (10.3%)**	6 (0.7%)	111 (13.3%)
	5				2 (0.2%)	**10 (1.2%)**	12 (1.4%)
	Total	106 (12.7%)	293 (35.1%)	314 (37.6%)	106 (12.7%)	16 (1.9%)	835 (100%)

Reading & Writing Claim Performance Level Agreement

The performance levels for the Reading and Writing claims were determined for the full test and the abbreviated test. Tables 1.8 and 1.9 list the percent of students assigned the exact same claim performance level for both the full and the abbreviated assessments by grade level. Differences for both grades were larger for the Writing claim than the Reading claim.

Table 1.8. *Reading Claim Performance Level Percent Agreement for CSLA by Grade*

Grade	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
3	93.0%	2.4%	4.6%
4	93.5%	3.2%	3.2%

Table 1.9. *Writing Claim Performance Level Percent Agreement for CSLA by Grade*

Grade	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
3	81.0%	8.9%	10.2%
4	75.8%	7.5%	16.7%

Tables 1.10 through 1.13 show the number and percent of students by the claim performance level designation and the abbreviated claim performance level designation for each grade level. The values bolded in the tables represent exact agreement. If the performance level designation was not exact, the difference was within an adjacent performance level.

Table 1.10. *Grade 3 Reading Claim Performance Level Percent Agreement*

Grade 3		Abbreviated Form Reading Claim Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**36 (2.1%)**	2 (0.1%)		38 (2.2%)
	2	36 (2.1%)	**1,138 (66.9%)**	39 (2.3%)	1,213 (71.3%)
	3		43 (2.5%)	**407 (23.9%)**	450 (26.5%)
	Total	72 (4.2%)	1,183 (69.6%)	446 (26.2%)	1,701 (100%)

Table 1.11. *Grade 4 Reading Claim Performance Level Percent Agreement*

Grade 4		Abbreviated Form Reading Claim Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Reading Claim Performance Levels	1	**47 (5.6%)**	7 (0.8%)		54 (6.5%)
	2	18 (2.2%)	**624 (74.7%)**	20 (2.4%)	662 (79.3%)
	3		9 (1.1%)	**110 (13.2%)**	119 (14.3%)
	Total	65 (7.8%)	640 (76.6%)	130 (15.6%)	835 (100%)

Table 1.12. *Grade 3 Writing Claim Performance Level Percent Agreement*

Grade 3		Abbreviated Form Writing Claim Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**221 (13.0%)**	30 (1.8%)		251 (14.8%)
	2	104 (6.1%)	**616 (36.2%)**	121 (7.1%)	841 (49.4%)
	3		69 (4.1%)	**540 (31.8%)**	609 (35.8%)
	Total	325 (19.1%)	715 (42.0%)	661 (38.9%)	1,701 (100%)

Table 1.13. *Grade 4 Writing Claim Performance Level Percent Agreement*

Grade 4		Abbreviated Form Writing Claim Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Writing Claim Performance Levels	1	**180 (21.6%)**	16 (1.9%)		196 (23.5%)
	2	114 (13.7%)	**323 (38.7%)**	47 (5.6%)	484 (58.0%)
	3		25 (3.0%)	**130 (15.6%)**	155 (18.6%)
	Total	294 (35.2%)	364 (43.6%)	177 (21.2%)	835 (100%)

Subclaim Performance Level Agreement

The performance levels for the various reading and writing subclaims were determined for the full test and the abbreviated test. Tables 1.14 and 1.15 list the percent of students assigned the exact same subclaim performance level for both the full and the abbreviated CSLA assessments by grade level.

The percent of exact agreement in the subclaim performance level designations between the full assessment and the abbreviated assessment subclaims ranged from 76.2% - 87.0%.

Table 1.14 *Subclaim Performance Level Percent Agreement for CSLA Grade 3*

Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Reading-RL	83.0%	8.2%	8.8%
Reading-RI	84.0%	10.1%	5.9%
Reading-RV	82.2%	6.7%	11.1%
Writing-WE	81.8%	10.4%	7.8%
Writing-WKL	82.5%	12.2%	5.4%

Note. Lowest numerical level=1 (Met or Exceeded Expectations); Middle level=2 (Approached Expectations); Highest numerical level=3 (Did Not Yet Meet or Partially Met Expectations)

Table 1.15 *Subclaim Performance Level Percent Agreement for CSLA Grade 4*

Subclaim	Exact Agreement	Higher Level for Abbreviated	Lower Level for Abbreviated
Reading-RL	86.5%	6.7%	6.8%
Reading-RI	85.9%	6.2%	7.9%
Reading-RV	76.7%	9.6%	13.8%
Writing-WE	76.2%	12.2%	11.6%
Writing-WKL	87.0%	6.7%	6.4%

Note. Lowest numerical level=1 (Met or Exceeded Expectations); Middle level=2 (Approached Expectations); Highest numerical level=3 (Did Not Yet Meet or Partially Met Expectations)

Table 1.16. *Grade 3 Subclaim 1: Reading-RL Performance Level Percent Agreement*

Grade 3		Abbreviated Form Subclaim 1 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**441 (25.9%)**	56 (3.3%)		497 (29.2%)
	2	80 (4.7%)	**471 (27.7%)**	84 (4.9%)	635 (37.3%)
	3		69 (4.1%)	**500 (29.4%)**	569 (33.5%)
	Total	521 (30.6%)	596 (35.0%)	584 (34.3%)	1701 (100%)

Table 1.17. *Grade 3 Subclaim 2: Reading-RI Performance Level Percent Agreement*

Grade 3		Abbreviated Form Subclaim 2 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**382 (22.5%)**	33 (1.9%)		415 (24.4%)
	2	66 (3.9%)	**543 (31.9%)**	139 (8.2%)	748 (44.0%)
	3		35 (2.1%)	**503 (29.6%)**	538 (31.6%)
	Total	448 (26.3%)	611 (35.9%)	642 (37.7%)	1701 (100%)

Table 1.18. *Grade 3 Subclaim 3: Reading-RV Performance Level Percent Agreement*

Grade 3		Abbreviated Form Subclaim 3 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**412 (24.2%)**	86 (5.1%)		498 (29.3%)
	2	57 (3.4%)	**454 (26.7%)**	28 (1.7%)	539 (31.7%)
	3		132 (7.8%)	**532 (31.3%)**	664 (39.0%)
	Total	469 (27.6%)	672 (39.5%)	560 (32.9%)	1701 (100%)

Table 1.19. *Grade 3 Subclaim 4: Reading-WE Performance Level Percent Agreement*

Grade 3		Abbreviated Form Subclaim 4 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 4 Performance Levels	1	**638 (37.5%)**	120 (7.1%)	1 (0.1%)	759 (44.6%)
	2	53 (3.1%)	**203 (11.9%)**	55 (3.2%)	311 (18.3%)
	3		80 (4.7%)	**551 (32.4%)**	631 (37.1%)
	Total	691 (40.6%)	403 (23.7%)	607 (35.7%)	1701 (100%)

Table 1.20. *Grade 3 Subclaim 5: Reading-WKL Performance Level Percent Agreement*

Grade 3		Abbreviated Form Subclaim 5 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**494 (29.0%)**	161 (9.5%)		655 (38.5%)
	2	13 (0.8%)	**396 (23.3%)**	46 (2.7%)	455 (26.8%)
	3		78 (4.6%)	**513 (30.2%)**	591 (34.7%)
	Total	507 (29.8%)	635 (37.3%)	559 (32.9%)	1701 (100%)

Table 1.21. *Grade 4 Subclaim 1: Reading-RL Performance Level Percent Agreement*

Grade 4		Abbreviated Form Subclaim 1 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 1 Performance Levels	1	**137 (16.4%)**	14 (1.7%)		151 (18.1%)
	2	41 (4.9%)	**200 (24.0%)**	42 (5.0%)	283 (33.9%)
	3		16 (1.9%)	**385 (46.1%)**	401 (48.0%)
	Total	178 (21.3%)	230 (27.5%)	427 (51.1%)	835 (100%)

Table 1.22. *Grade 4 Subclaim 2: Reading-RI Performance Level Percent Agreement*

Grade 4		Abbreviated Form Subclaim 2 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 2 Performance Levels	1	**98 (11.7%)**	20 (2.4%)		118 (14.1%)
	2	14 (1.7%)	**257 (30.8%)**	32 (3.8%)	303 (36.3%)
	3		52 (6.2%)	**362 (43.4%)**	414 (49.6%)
	Total	112 (13.4%)	329 (39.4%)	394 (47.2%)	835 (100%)

Table 1.23. *Grade 4 Subclaim 3: Reading-RV Performance Level Percent Agreement*

Grade 4		Abbreviated Form Subclaim 3 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 3 Performance Levels	1	**96 (11.5%)**	52 (6.2%)		148 (17.7%)
	2	23 (2.8%)	**194 (23.2%)**	28 (3.4%)	245 (29.3%)
	3		92 (11.0%)	**350 (41.9%)**	442 (52.9%)
	Total	119 (14.3%)	338 (40.5%)	378 (45.3%)	835 (100%)

Table 1.24. *Grade 4 Subclaim 4: Reading-WE Performance Level Percent Agreement*

Grade 4		Abbreviated Form Subclaim 4 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 4 Performance Levels	1	**172 (20.6%)**	21 (2.5%)		193 (23.1%)
	2	57 (6.8%)	**123 (14.7%)**	81 (9.7%)	261 (31.3%)
	3		40 (4.8%)	**341 (40.8%)**	381 (45.6%)
	Total	229 (27.4%)	184 (22.0%)	422 (50.5%)	835 (100%)

Table 1.25. *Grade 4 Subclaim 5: Reading-WKL Performance Level Percent Agreement*

Grade 4		Abbreviated Form Subclaim 5 Performance Levels			
CSLA		1	2	3	**Total**
Spring 2017 Subclaim 5 Performance Levels	1	**157 (18.8%)**	23 (2.8%)		180 (21.6%)
	2	26 (3.1%)	**139 (16.7%)**	33 (4.0%)	198 (23.7%)
	3		27 (3.2%)	**430 (51.5%)**	457 (54.7%)
	Total	183 (21.9%)	189 (22.6%)	463 (55.5%)	835 (100%)

Correlations and Overall Scale Score Differences

The correlation between the overall scale scores and abbreviated scale scores were calculated for all grades as shown in Table 1.26. Correlations were .974 for Grade 3 and .951 for Grade 4 for the overall scale score. Figures 1.3 - 1.6 display frequency distributions of the differences in scale scores between full and abbreviated scale scores and then scatterplots of the overall scale scores versus abbreviated scale scores.

Table 1.26. Pearson Correlations between Full and Abbreviated Scale Scores

Grade	Overall Scale Score	Reading Claim Score	Writing Claim Score
3	0.974	0.970	0.930
4	0.951	0.966	0.891

Summative Test Characteristic Curves

The test characteristic curves were generated for the raw score to theta scale for the overall theta scale. Due to the difference in raw score total and the number of operational items across the full and abbreviated forms, TCCs are provided based the percent of the total maximum possible score points. Figures 1.1 and 1.2 present the percent test characteristic curves for each grade. In general, the test characteristic curves for the abbreviated test forms are very similar to the full test form test characteristic curves.

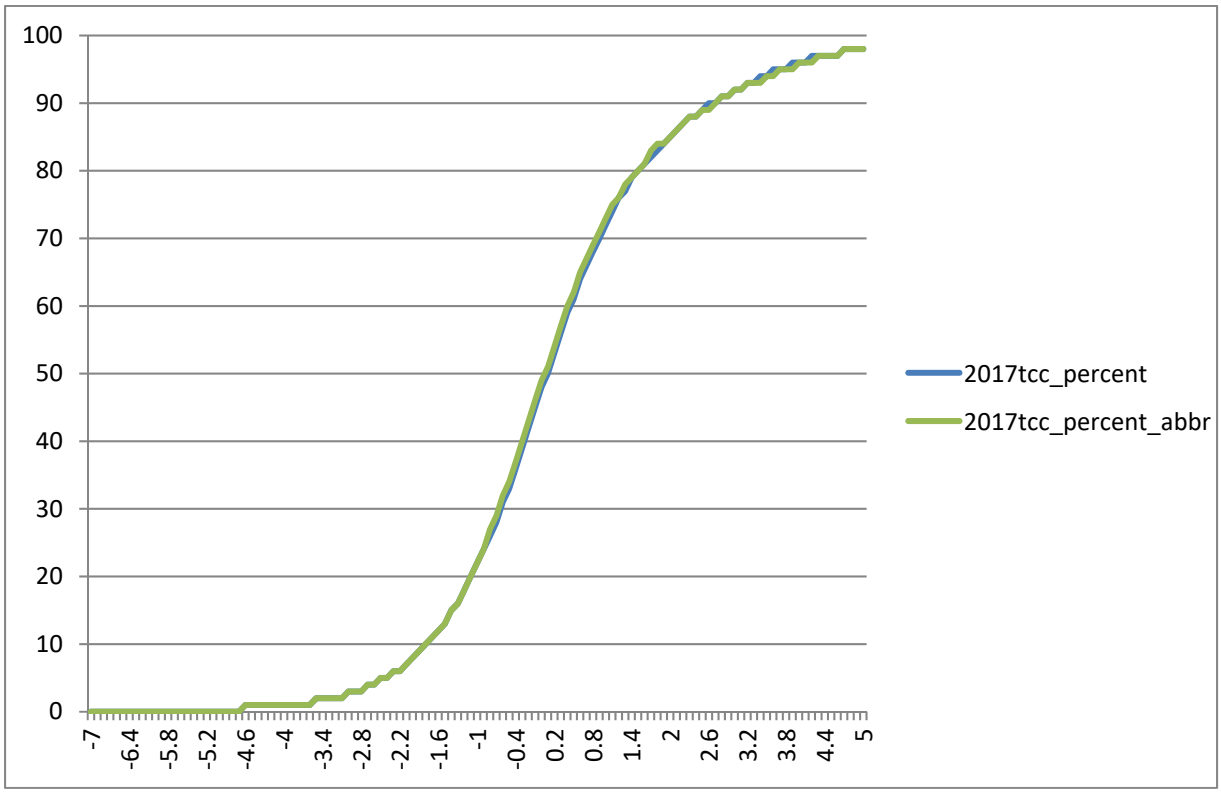

Figure 1.1. Grade 3 Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores

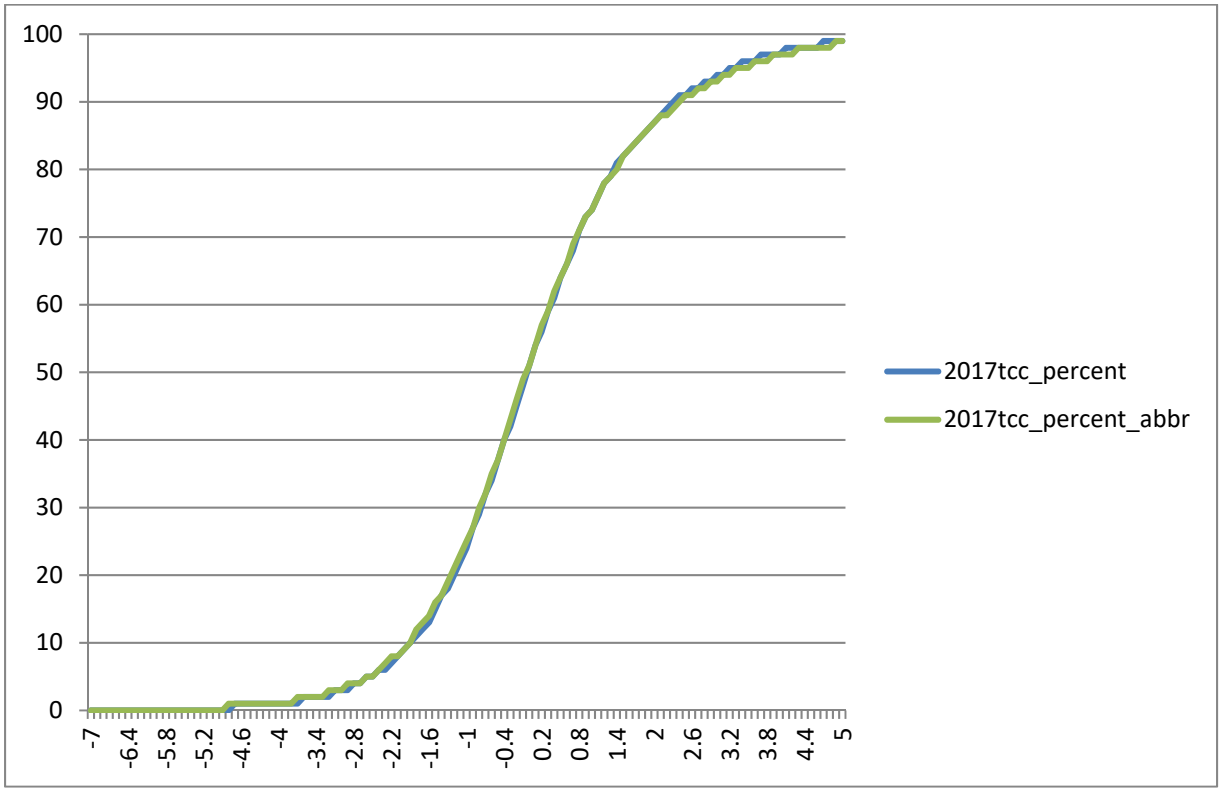

Figure 1.2. Grade 4 Percentage Test Characteristic Curves for Full and Abbreviated Raw Scores

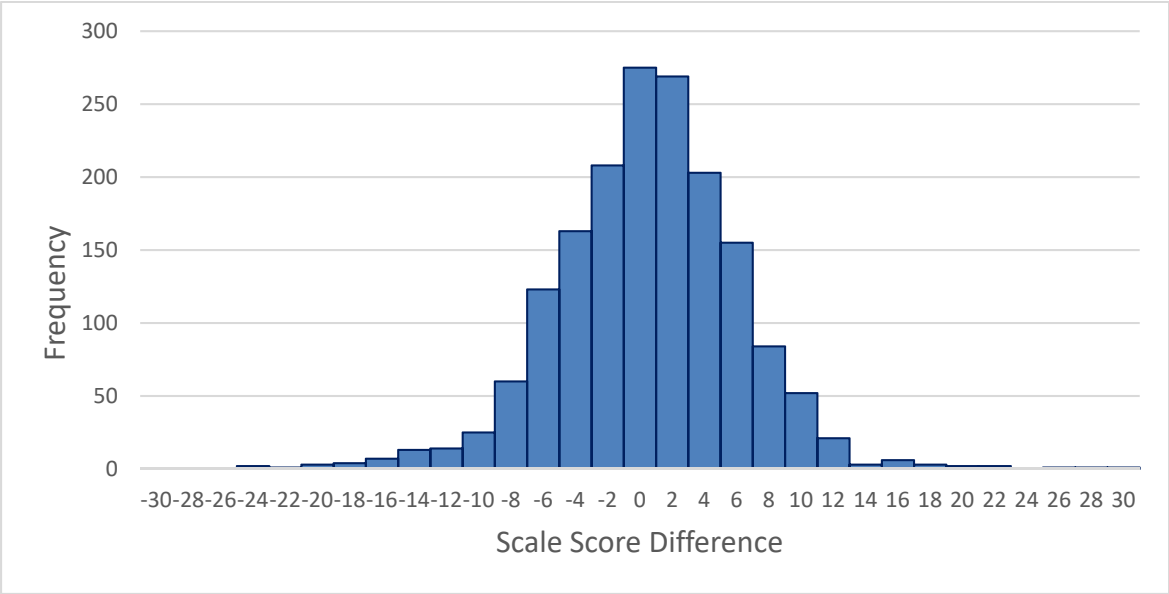

Figure 1.3. Grade 3 Differences between Abbreviated and Full Scale Scores

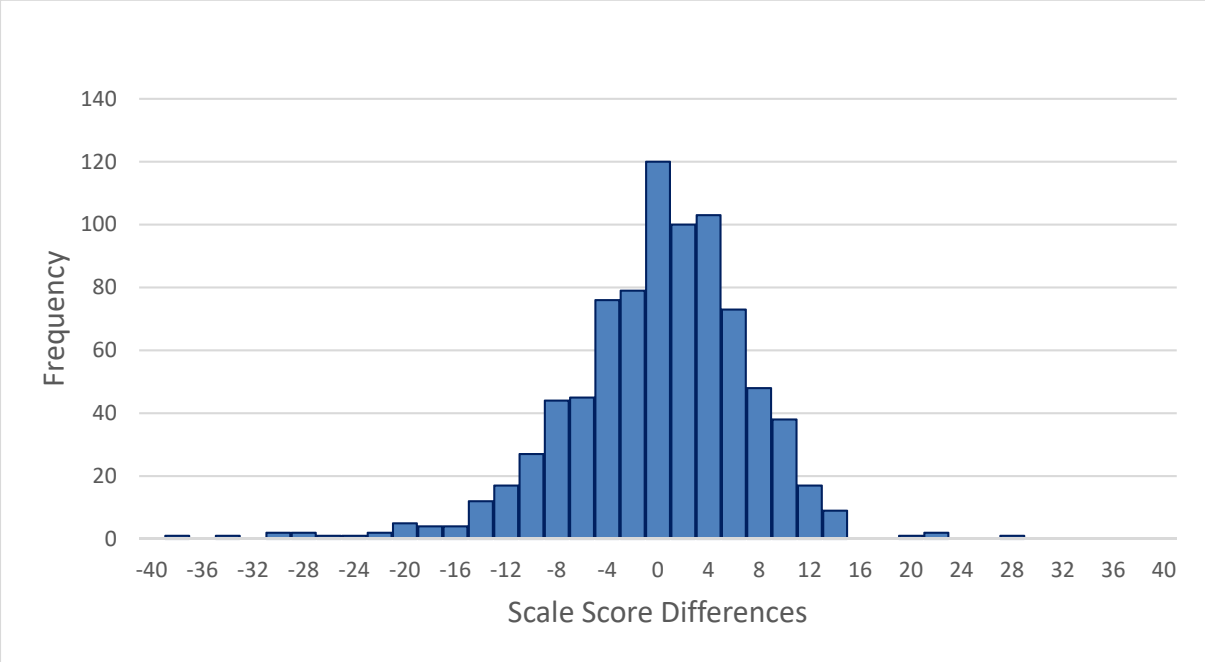

Figure 1.4. Grade 4 Differences between Abbreviated and Full Scale Scores

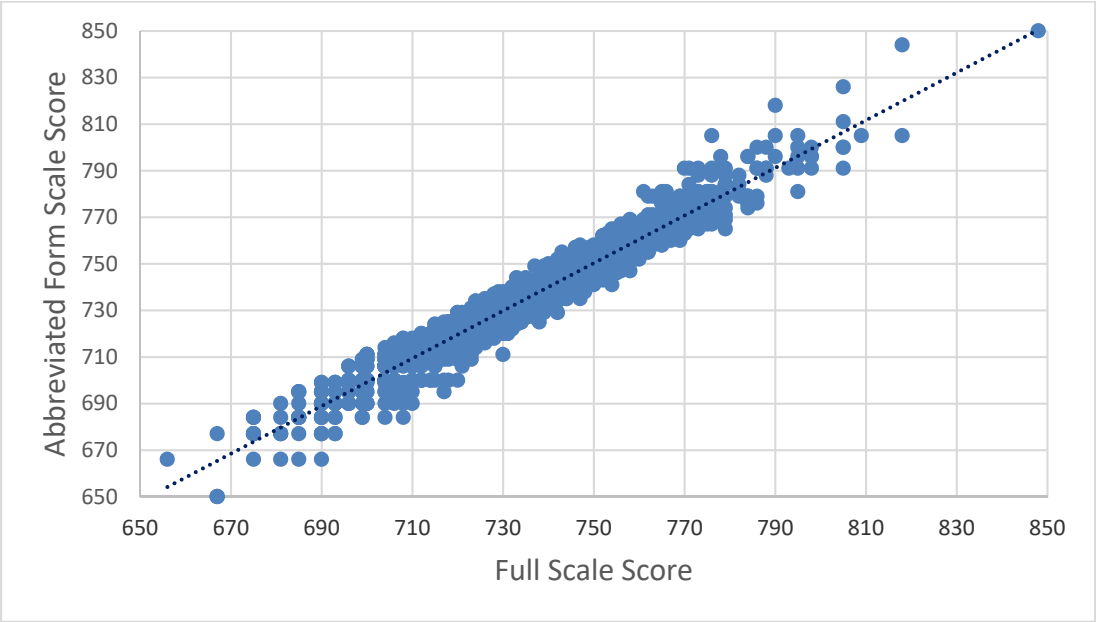

Figure 1.5. Grade 3 Abbreviated vs. Full Scale Scores

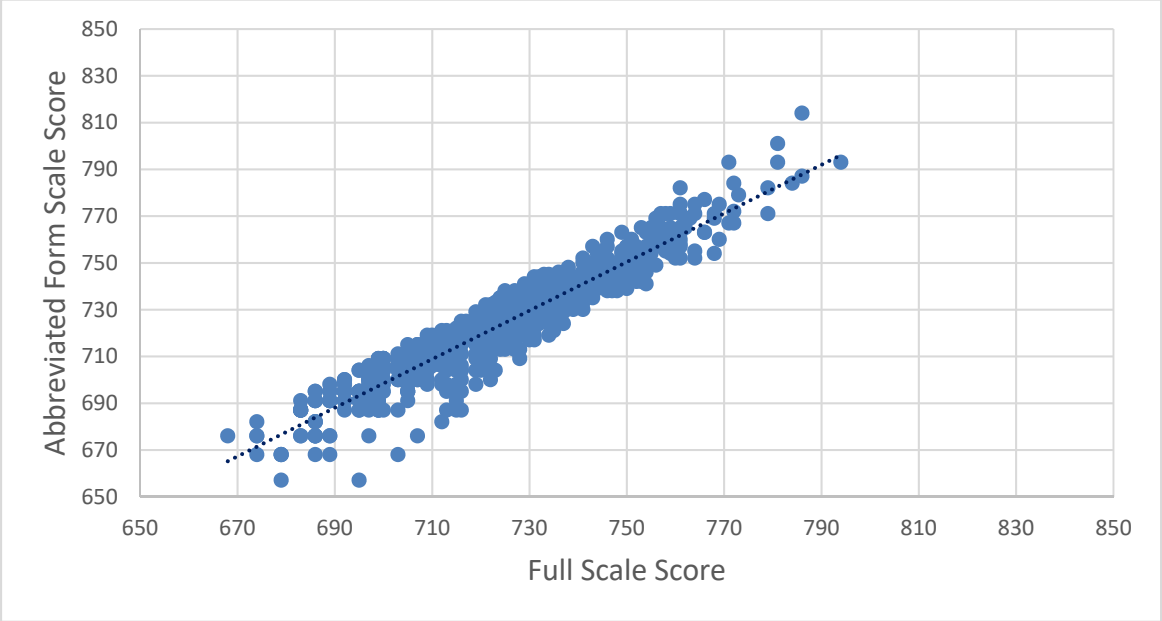

Figure 1.6. Grade 4 Abbreviated vs. Full Scale Scores

APPENDIX D4: COLORADO EQUATING SAMPLE INVARIANCE STUDY

Colorado Equating Sample Invariance Study

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Introduction

The Colorado Department of Education is exploring administration of shortened versions of Colorado Measures of Academic Success (CMAS) ELA/L assessments while maintaining the CMAS 2017 score reporting scale. The purpose of this research report is to examine the stability of parameter estimates between Colorado and the full multi-state consortium by comparing the spring 2017 operational equating results with those using only students from Colorado in 2017.

The operational scaling procedures from 2017 were replicated for the three online forms at each grade level. The base scale in each case was the 2016 CMAS scale. The target group for this study was the subset of 2017 students from Colorado, while the target group in the operational equating was the full 2017 multi-state consortium sample (i.e., including Colorado students). New raw-to-scale score conversion tables were constructed based on the Colorado-only equating, and the 2017 Colorado sample was rescored using these new conversion tables. The operational scoring results were compared with the Colorado-only results.

Methods

The data for this study were spring 2017 ELA/L assessment results in grades 3 – 8 for Colorado students. The spring administration consisted of three computer-based (CBT) operational forms and two paper-based (PBT) operational forms in addition to several accommodated forms. This study only included the three CBT operational forms.

For each grade level, data were operational student responses from the spring 2017 administration from Colorado students. Starting with this Colorado-only sample, the 2017 operational equating and scaling procedures were applied. As in the operational study, student records were removed prior to IRT calibration if the record met any of the following criteria: (1) had an invalid form number; (2) was flagged as “not valid”; (3) was a duplicate (if a student had duplicate valid records, only the record with the higher raw score was included); (4) indicated that the student attempted less than 25% of all operational items for ELA/L.

Table 2.1 lists the total number of students in the operational calibration sample and the number of students in the Colorado-only calibration. The table also lists the percentage by which the full calibration sample was reduced after excluding non-Colorado students.

Table 2.1. 2017 IRT Calibration Sample Sizes

Grade	Full Consortium	Colorado-only	Percent Reduction
3	319,709	58,243	81.8%
4	304,409	59,617	80.4%
5	333,896	58,093	82.6%
6	253,902	54,562	78.5%
7	230,200	50,410	78.1%
8	225,183	43,419	80.7%

The Colorado-only item response data were used to estimate item parameters following the operational procedures. All items on the ELA/L assessments were calibrated under the generalized partial credit model (GPCM; Muraki, 1992) using IRTPRO software (Cai, Thissen, & du Toit, 2011). Items across the three forms for each grade were calibrated concurrently. Table 2.2 lists the number of items per form and the total number of items calibrated at each grade level.

Table 2.2. Number of Items Calibrated at Each Grade Level

Grade	Items per Form	Total Items
3	34	82
4	36	86
5	35-36[a]	85
6	42	106
7	42	98
8	42	104

[a]Two of the three forms in Grade 5 had one item removed before calibration. These items were also removed prior to calibration in the operational equating analyses.

Following calibration, the item parameter estimates were equated using a non-equivalent groups with anchor test (NEAT) design (e.g., Kolen & Brennan, 2004) and the Stocking–Lord method (Stocking & Lord, 1983) to place the 2017 item parameter estimates onto the operational base scale The computer program STUIRT (Kim & Kolen, 2004) was used to calculate Stocking–Lord equating constants, which were then applied to the 2017 item parameter estimates.

Anchor Sets

For each grade level, the initial set of anchor items was the same as the initial anchor set used in the operational equating analysis. However, the operational procedures include performing an item-parameter stability check on the anchor items, and anchor items that are determined to be unstable between the base and target samples are removed before equating. The stability check involves performing the Stocking–Lord equating procedures twice. Item-parameter stability is checked after the initial run, and items are flagged and removed from the linking set, if necessary. A second equating is then performed, using the reduced anchor set. The results of the second equating are used to obtain the final equated item parameter estimates.

Anchor item flagging criteria. Four statistical criteria were used to flag items for exclusion from the final anchor sets. These criteria are as follows:

- item–total correlations less than 0.1 in the base or target sample
- weighted root mean squared difference (WRMSD) between ICCs greater than 0.075
- robust z statistic (Huynh & Meyer, 2010) for *b*-parameters greater than 2.33
- robust z statistic for *a*-parameters greater than 2.33

For a full description of the operational item-parameter stability check procedures, see the *Final Technical Report for 2017 Administration* (Pearson, 2017). A basic outline of the process is as follows:

1. First, items were removed from the initial anchor set if they had an item–total correlation less than 0.1 in the base group or target group.
2. An initial Stocking–Lord equating was performed using the remaining anchor items.
3. The resulting equating constants were used to calculate initial equated parameter estimates for the anchor items.
4. ICCs were calculated for each anchor item using both the base parameters and the initial equated parameters, and items were flagged for WRMSD.
5. Robust z statistics were calculated for each item using the base and initial equated a- and b-parameters. Items were flagged if either robust z statistic was greater than 2.33.
6. Flagged items were removed.
7. If the procedures above resulted in more than a 20% reduction of the original anchor set, items flagged *only* for unstable *a*-parameters (if any existed) were added back to the anchor set one-by-one, starting with the lowest robust z statistic, until the final reduction was as close as possible to 20%.

Two different equating procedures. The procedures described above were used for the operational 2017 equating, and were simply replicated in this study. However, because this anchor screening process relies on the item parameter estimates from the target sample, it was possible for the Colorado-only equating to yield a different final anchor set than the operational full-consortium equating. To determine the impact of these changes, the equating for this study was performed each of two ways:

- Equating Method 1 followed the procedures as written, allowing for a final Colorado-only anchor set that differed from the final operational anchor set.
- Equating Method 2 used the final operational anchor set, whether or not those items were stable between the base and target samples.

Table 2.3 lists the initial number of anchor items for each grade level as well as the final number of linking items used under each method. Note that the final anchor set for Method 2 is identical to the final operational (i.e., full consortium) anchor set. The last two columns of Table 2.3 list the number of items in each final anchor set that were unique to that method. For example, the Method 1 (CO-only) linking set for Grade 3 included one item that was excluded from the operational anchor set. Note that none of the grades had identical anchor sets between the two methods.

Table 2.3. Numbers of Anchor Items Used to Equate Under Each Equating Method

Grade	Initial Anchors	Final Method 1 Anchors	Final Method 2 Anchors	Unique Method 1 Anchors	Unique Method 2 Anchors
3	8	7	6	1	0
4	15	12	14	1	3
5	15	12	14	0	2
6	13	11	10	2	1
7	18	16	15	2	1
8	14	13	12	1	0

Anchor set content allocation. The CMAS 2017 ELA/L assessment items were classified according to two claims, Reading and Writing. The Reading claim items are further classified into one of three subclaims: Reading Informational Text (RI), Reading Literary Text (RL), or Vocabulary (RV). The Writing subclaims are Written Expression (WE) and Knowledge of Conventions (WKL). For more information about claim and subclaim reporting, see the *Final Technical Report for 2017 Administration* (Pearson, 2017).

Aside from the number of anchor items used in Method 1 and Method 2, the anchor sets produced by each method varied by the allocation of items among content claims and subclaims. Such differences could potentially affect the ability of each anchor set to capture group ability differences accurately, and could help determine why the two equating methods used here performed differently.

Conversion Tables

Raw Score-to-Scale Score (RSSS) conversion tables were then constructed for each of the three test forms at each grade level using the equated item parameter estimates. For details about the generation of RSSS tables, refer to the *Final Technical Report for 2017 Administration* (Pearson, 2017). Conversion tables were constructed for summative scale scores as well as Reading and Writing claim scale scores.

The results of the equating and scaling procedures under each equating method were compared with the same results from the 2017 operational equating and scaling analyses. Those results include the equated item parameter estimates, the summative RSSS conversion tables, the Colorado student scale score distributions, and the performance level classifications.

Results

The results of the study for each grade level are described separately for each of the two equating methods. Results for each grade using the new Colorado-only anchor sets (Method 1) are given first, followed by the results using the fixed operational anchor sets (Method 2).

Method 1

This section lists the results using Equating Method 1, wherein the initial anchor items were screened for stability between the 2016 full consortium sample and the 2017 Colorado-only sample.

Item parameter estimates. Table 3.1 gives the Pearson correlations between the equated 2017 item *b*- and *a*-parameter estimates from the Colorado-only sample and the equated 2017 operational estimates based on the full consortium sample. The correlations at each grade level for both sets of item parameters were very high, with all of them above 0.99.

Table 3.1. Pearson Correlations Between Method 1 Equated Colorado-Only and Full Consortium Item Parameter Estimates

Grade	*b*-parameters	*a*-parameters
3	0.99757	0.99670
4	0.99243	0.99422
5	0.99566	0.99681
6	0.99510	0.99653
7	0.99415	0.99516
8	0.99653	0.99811

Figures 3.1 through 3.12 plot the Method 1 equated Colorado-only vs. full consortium item difficulty parameter (i.e., b-parameter and category step parameters) and a-parameter estimates, respectively, for each grade level. The diagonal reference line on each plot reflects perfect agreement between the two sets of estimates. Points above the line were estimated to be more difficult (for the difficulty parameter plots) or better discriminators (for the *a*-parameter plots) for the Colorado students as compared with the full consortium sample. As with the correlations in Table 3.1, the plots show very high agreement between the equated parameter estimates at each grade level. Note that the *a*-parameter estimates in this report have been multiplied by the scaling constant D = 1.7.

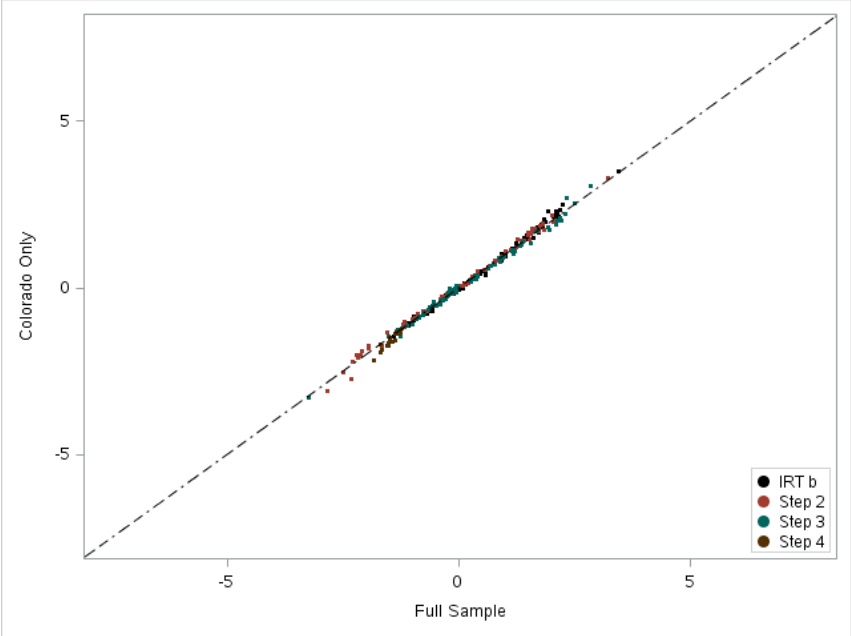

Figure 3.1. Grade 3 Method 1 Colorado-only vs. full sample item difficulty parameter estimates.

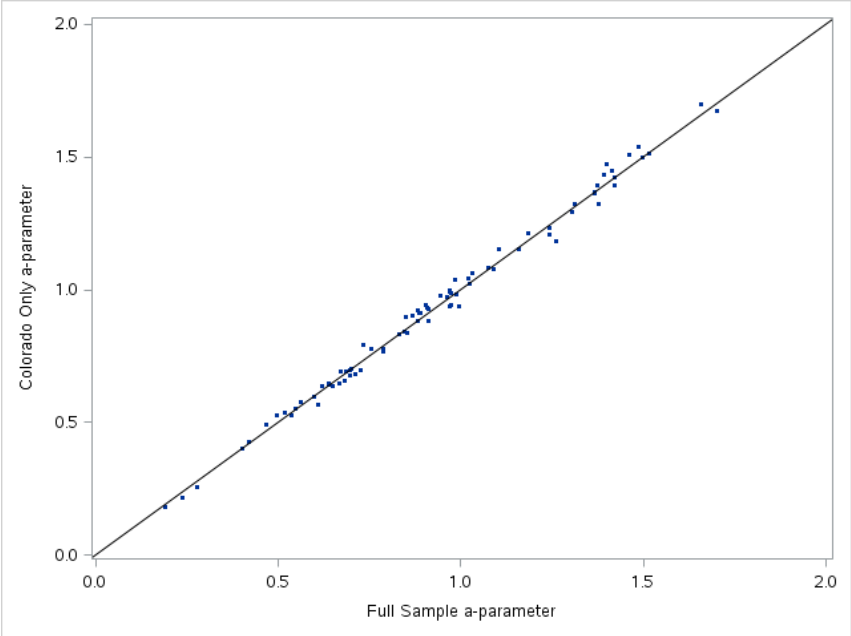

Figure 3.2. Grade 3 Method 1 Colorado-only vs. full sample item a-parameter estimates.

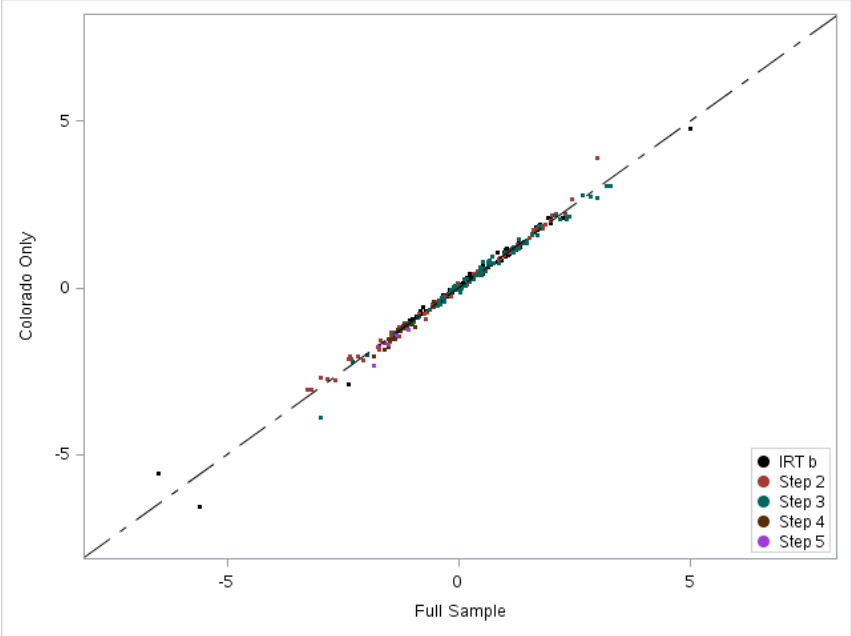

Figure 3.3. Grade 4 Method 1 Colorado-only vs. full sample item difficulty parameter estimates.

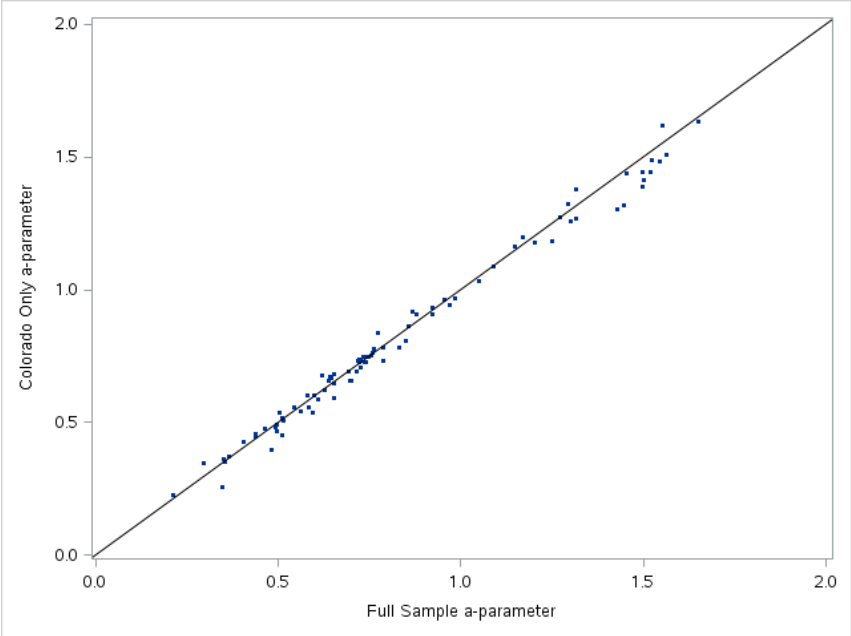

Figure 3.4. Grade 4 Method 1 Colorado-only vs. full sample item a-parameter estimates.

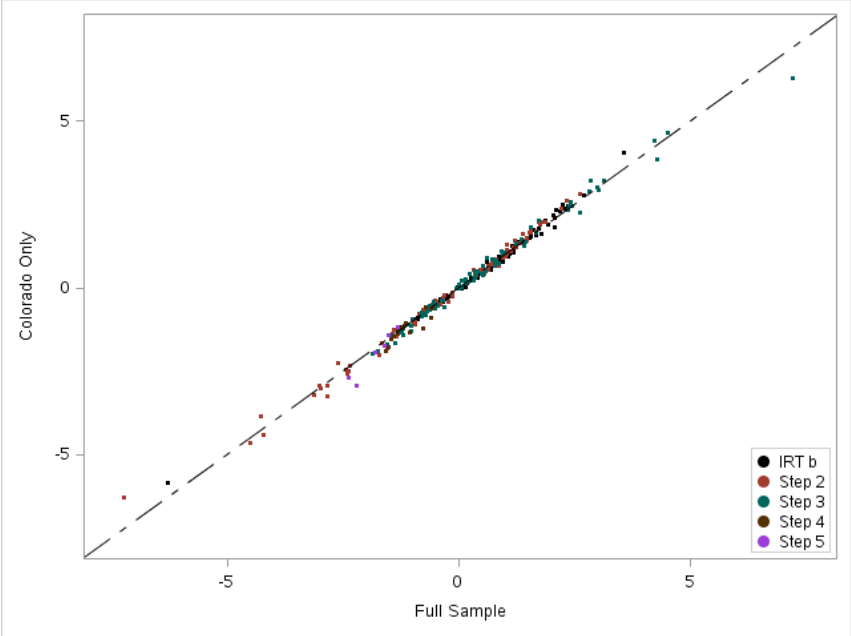

Figure 3.5. Grade 5 Method 1 Colorado-only vs. full sample item difficulty parameter estimates.

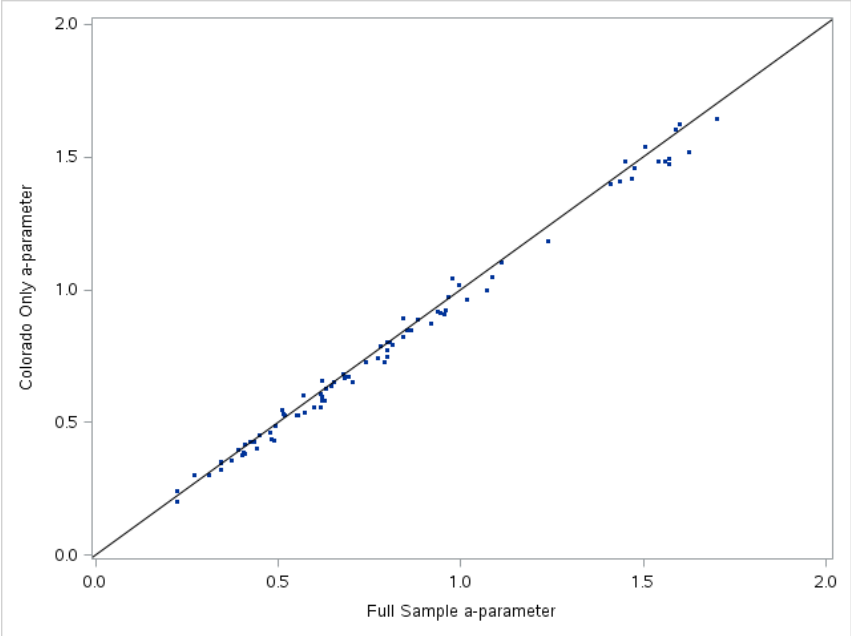

Figure 3.6. Grade 5 Method 1 Colorado-only vs. full sample item a-parameter estimates.

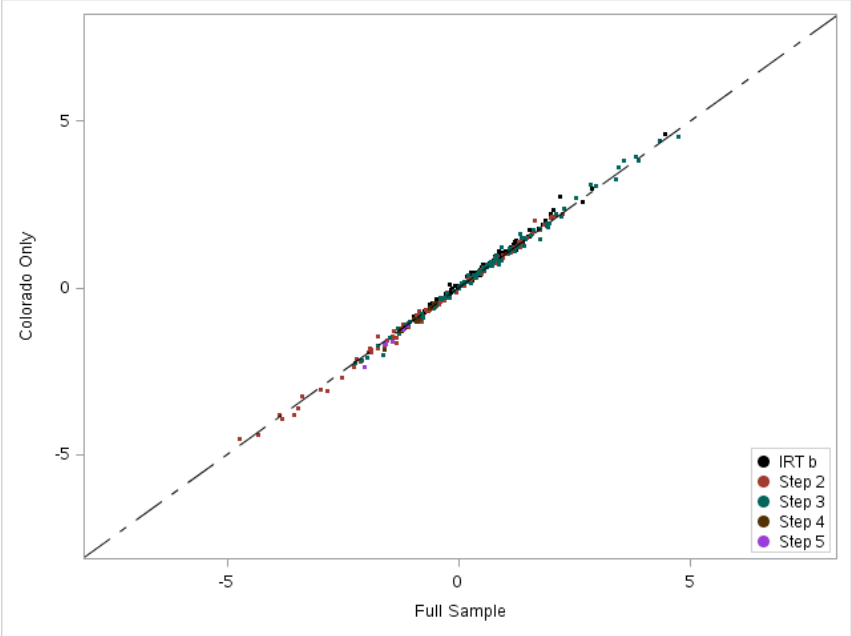

Figure 3.7. Grade 6 Method 1 Colorado-only vs. full sample item b-parameter estimates.

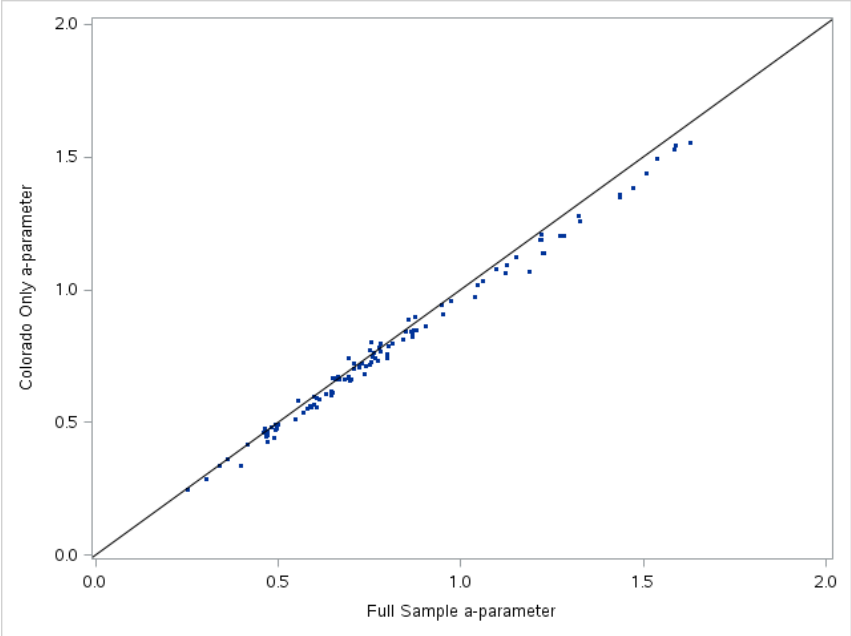

Figure 3.8. Grade 6 Method 1 Colorado-only vs. full sample item a-parameter estimates.

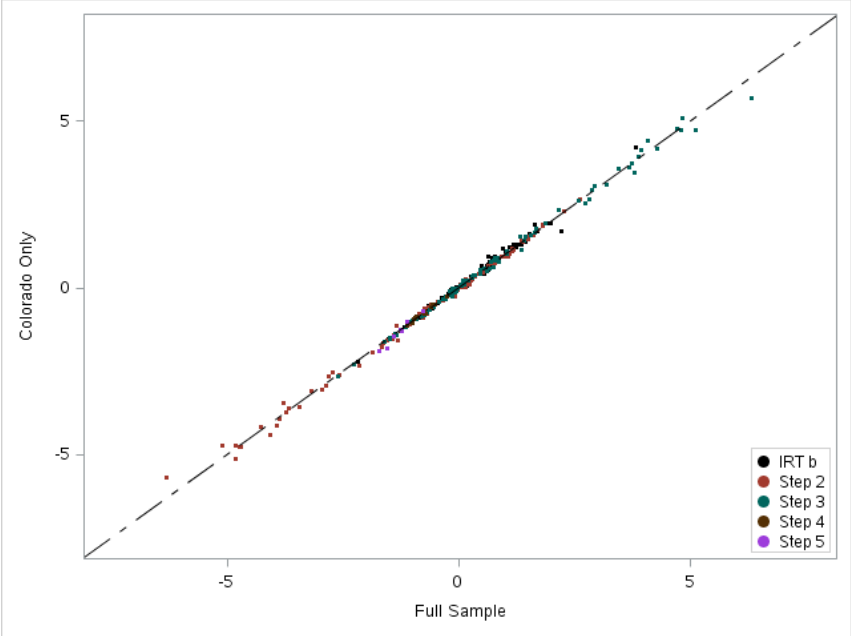

Figure 3.9. Grade 7 Method 1 Colorado-only vs. full sample item b-parameter estimates.

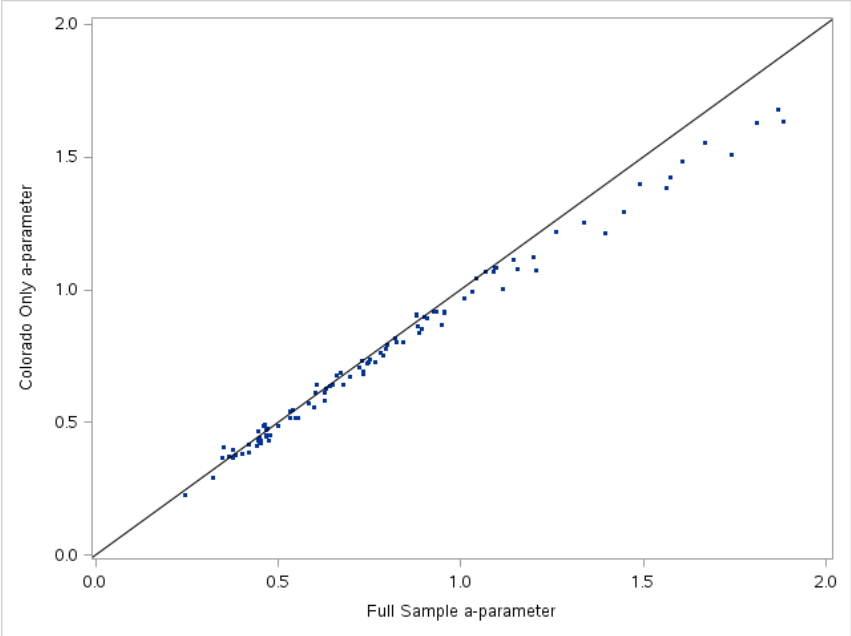

Figure 3.10. Grade 7 Method 1 Colorado-only vs. full sample item a-parameter estimates.

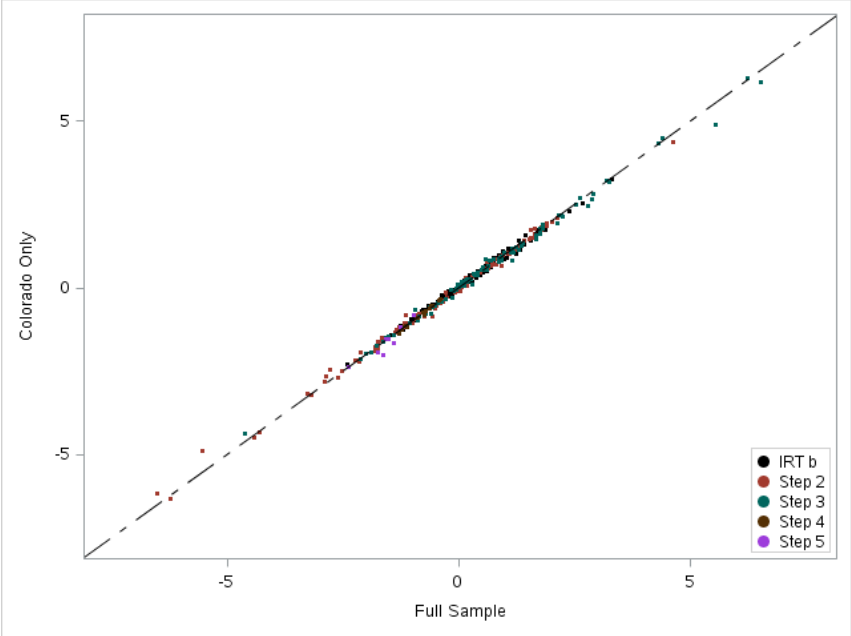

Figure 3.11. Grade 8 Method 1 Colorado-only vs. full sample item difficulty parameter estimates.

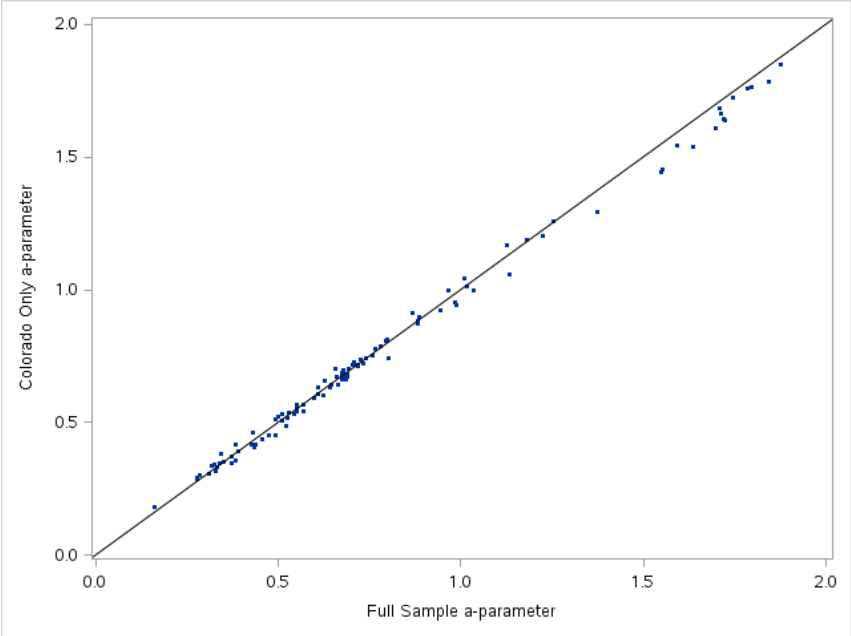

Figure 3.12. Grade 8 Method 1 Colorado-only vs. full sample item a-parameter estimates.

RSSS conversion tables. The raw score-to-scale score RSSS conversion tables for each form at each grade level are provided in the Appendix. To conserve space, the operational conversion, Method 1 conversion, and Method 2 conversion are listed in separate columns of the same table for each form. To help quantify the differences within each table, the operational conditional standard error of

measurement (CSEM) for is also listed in each RSSS conversion table. For Method 1, the largest difference at a given raw score between the Colorado-only scale score and the operational full consortium scale score was 8 scale points, which was observed on form 3 for Grade 6 for raw scores of both 109 and 110. Using the Colorado-only equating transformation, students at these raw score points would have been assigned scale scores of 847 and 850, respectively, while their scores were 839 and 842 using the operational full consortium equating. Although this particular difference reflects higher scores with the Colorado-only equating, the direction of differences across forms and grade levels was not consistent. Across all forms and grades, most of the scale score differences were within one or two scale points.

Student scale scores. Student scale score results are provided both for the overall summative scale scores, and for the Reading and Writing claim scores. Table 3.2 lists the correlation between Method 1 Colorado-only scale scores and operational scale scores for Colorado students. As was the case with the equated item parameter estimates, the correlations at every grade level were very high.

Summative scale scores. Figures 3.13 through 3.24 are plots of the difference between Colorado-only and operational summative scale scores according to operational scale score and a histogram of the scale score differences, respectively, for each grade level. On the difference scatter plots, the dashed horizontal reference line indicates identical scale scores. A positive difference indicates a higher scale score based on the Colorado-only equating than with the operational equating. Corresponding with the RSSS conversion tables, the largest differences were observed at the high end of score scale, with most students receiving the same or nearly the same scale score.

Table 3.2. Correlations between Method 1 Colorado-only and full sample scale scores

Grade	Summative	Reading Claim	Writing Claim
3	0.99981	0.99958	0.99936
4	0.99963	0.99949	0.99903
5	0.99975	0.99945	0.99894
6	0.99984	0.99930	0.99912
7	0.98846	0.99966	0.99868
8	0.99950	0.99945	0.99861

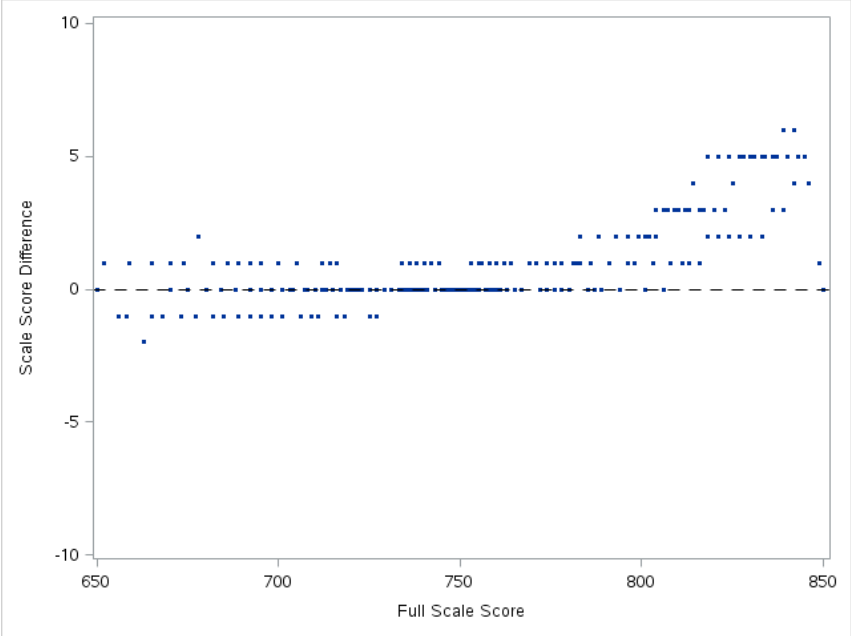

Figure 3.13. Grade 3 Method 1 scale score difference by operational scale score.

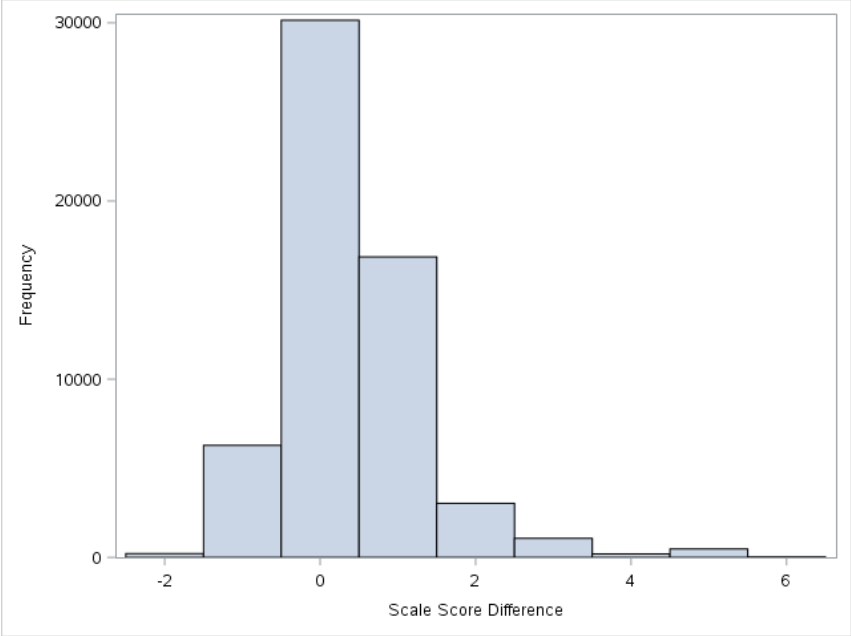

Figure 3.14. Grade 3 Method 1 scale score differences.

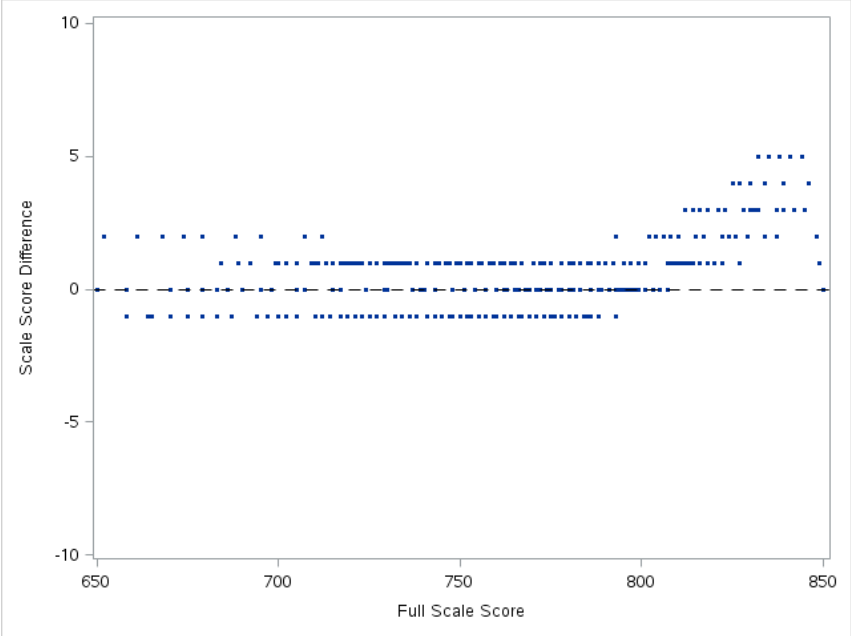

Figure 3.15. Grade 4 Method 1 scale score difference by operational scale score.

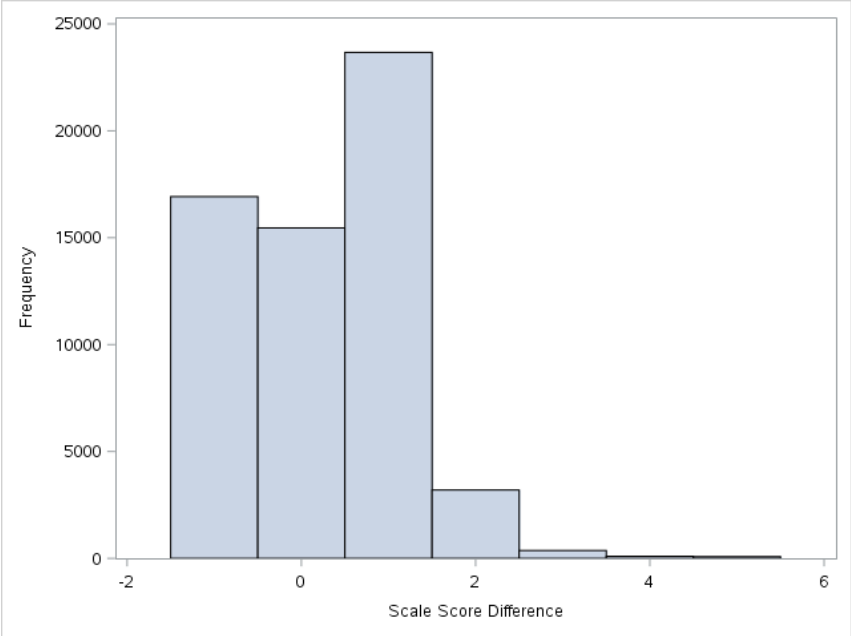

Figure 3.16. Grade 4 Method 1 scale score differences.

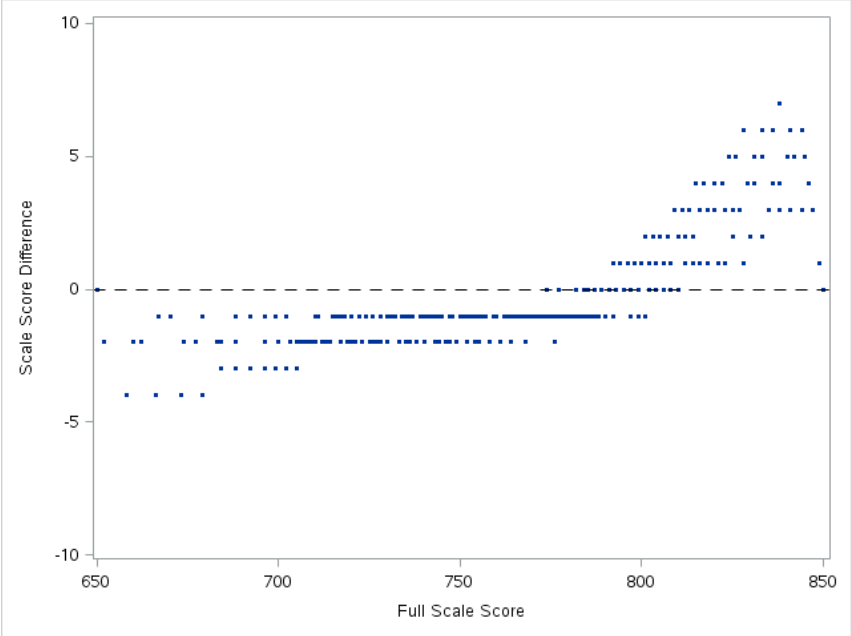

Figure 3.17. Grade 5 Method 1 scale score difference by operational scale score.

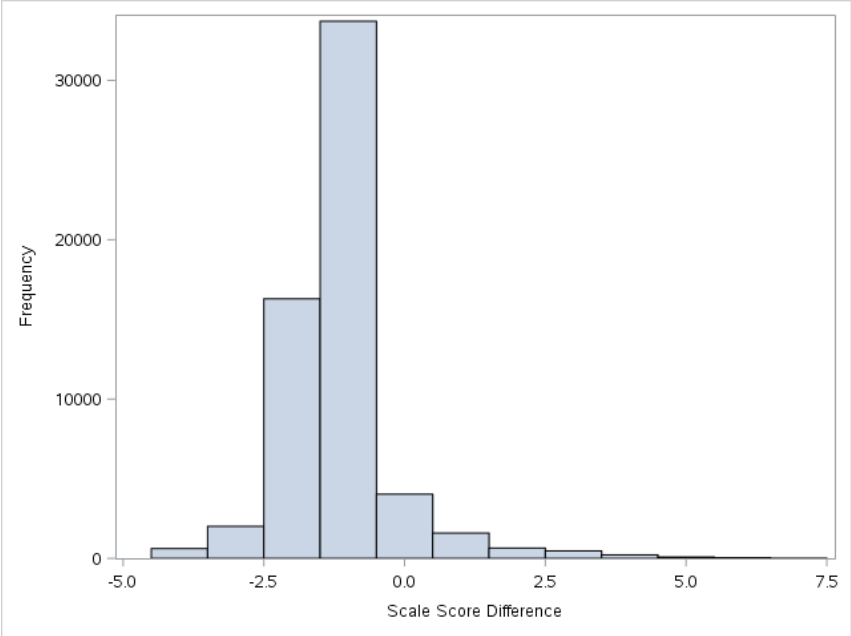

Figure 3.18. Grade 5 Method 1 scale score differences.

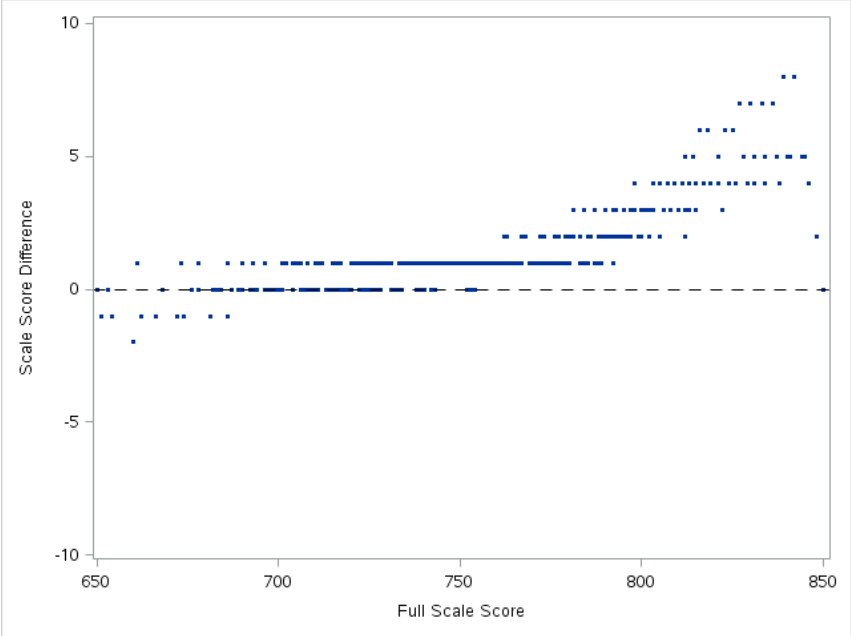

Figure 3.19. Grade 6 Method 1 scale score difference by operational scale score.

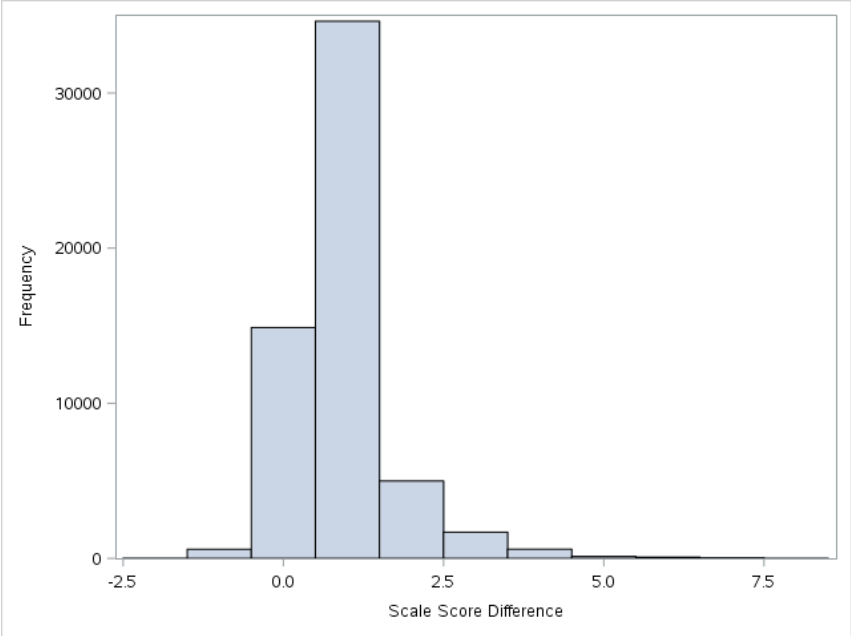

Figure 3.20. Grade 6 Method 1 scale score differences.

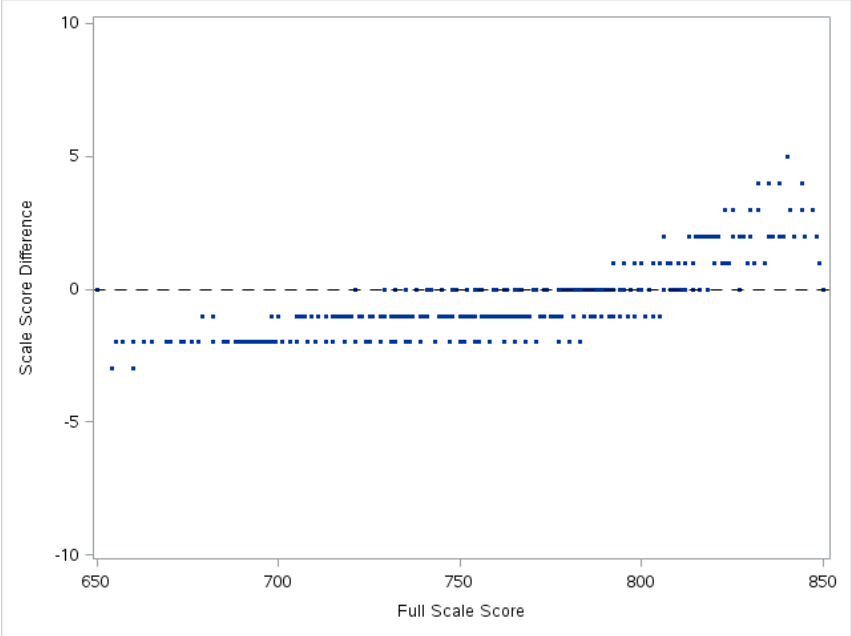

Figure 3.21. Grade 7 Method 1 scale score difference by operational scale score.

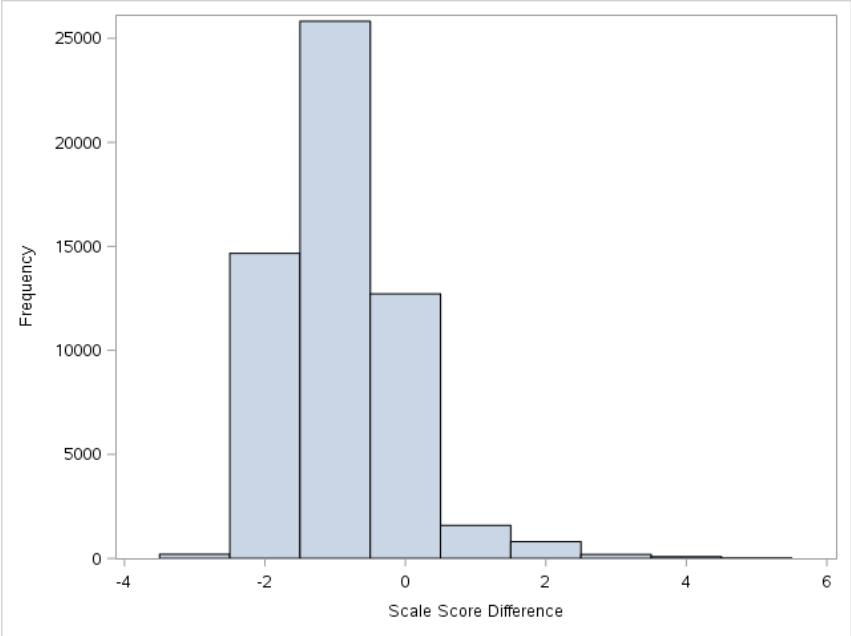

Figure 3.22. Grade 7 Method 1 scale score differences.

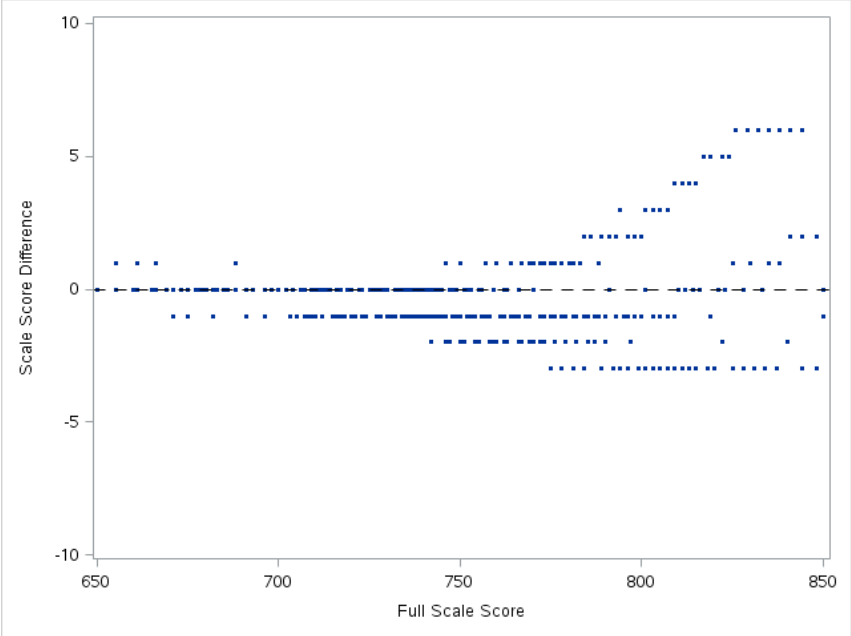

Figure 3.23. Grade 8 Method 1 scale score difference by operational scale score.

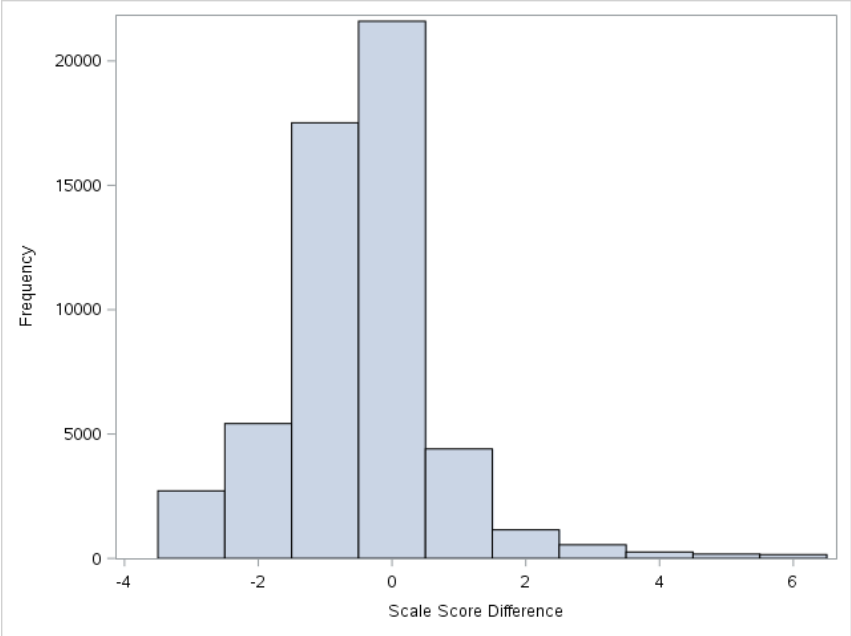

Figure 3.24. Grade 8 Method 1 scale score differences.

Reading and Writing claim scale scores. Figures 3.25 through 3.36 are scatterplots of the Reading and Writing claim scale scores, respectively, for each grade from the Method 1 Colorado-only equating vs. the operational full consortium equating. The diagonal reference line indicates perfect agreement between the Colorado-only and full consortium scale score. Points above the line are students receiving a higher scale score based on the Colorado-only equating than with the operational equating. The scale score differences appeared to be larger for the Writing claim than for the Reading claim, although it should be noted that the Writing claim scores scale range (10–60) includes fewer scale points than the Reading claim score scale (10–90), so the visual differences across the two plots are not directly comparable.

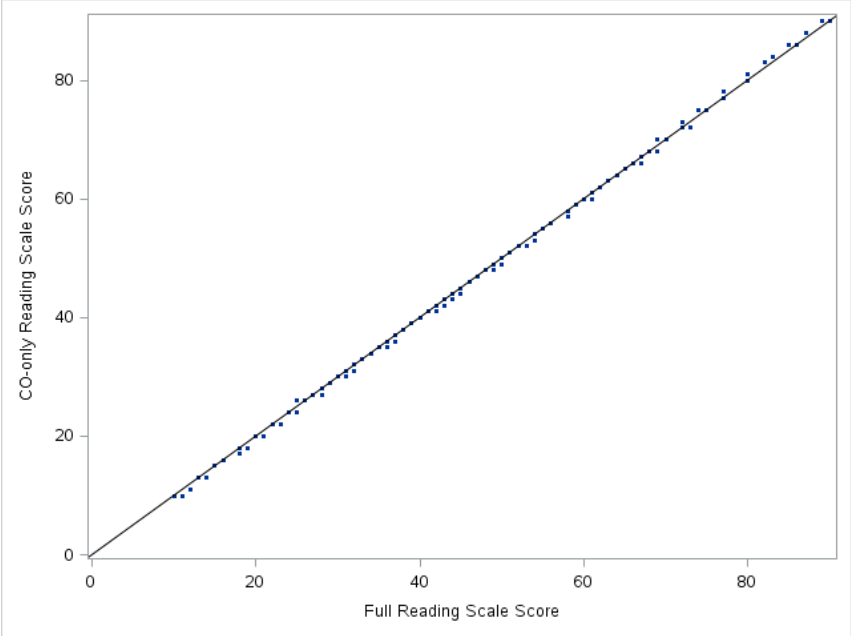

Figure 3.25. Grade 3 Method 1 Colorado-only vs. full sample Reading claim scale scores.

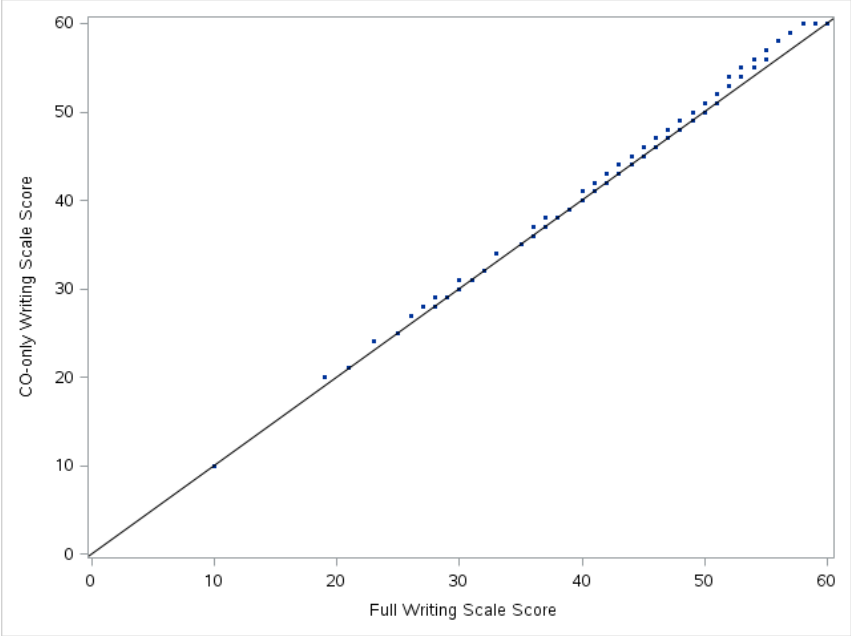

Figure 3.26. Grade 3 Method 1 Colorado-only vs. full sample Writing claim scale scores.

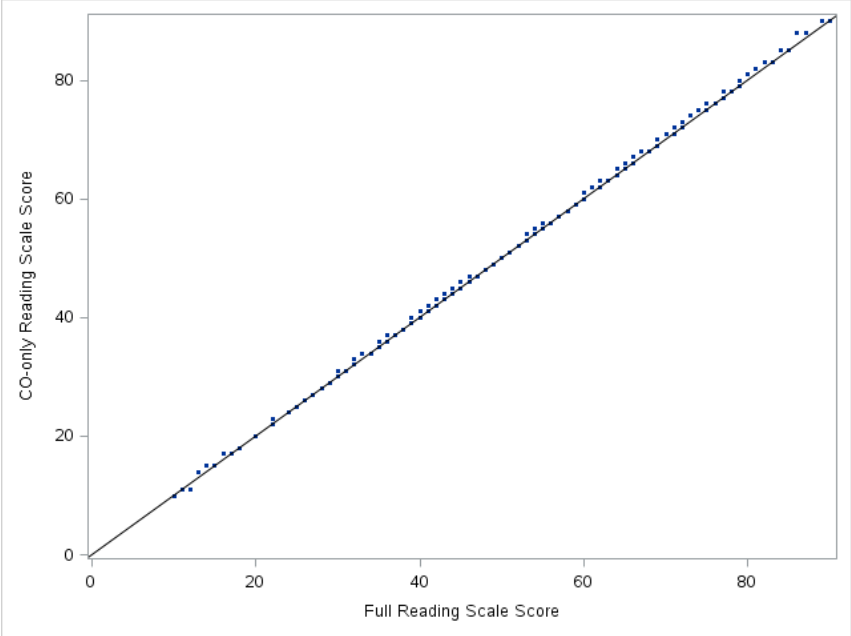

Figure 3.27. Grade 4 Method 1 Colorado-only vs. full sample Reading claim scale scores.

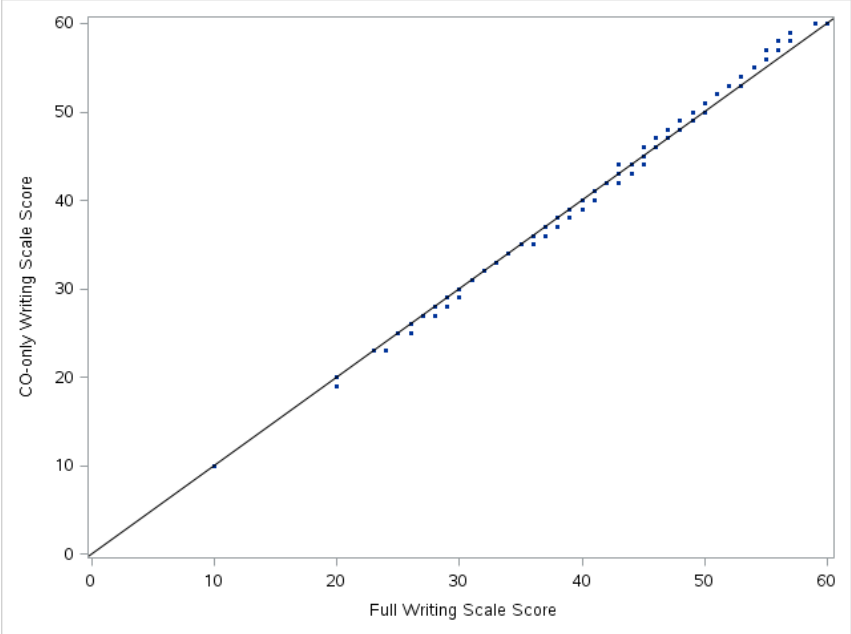

Figure 3.28. Grade 4 Method 1 Colorado-only vs. full sample Writing claim scale scores.

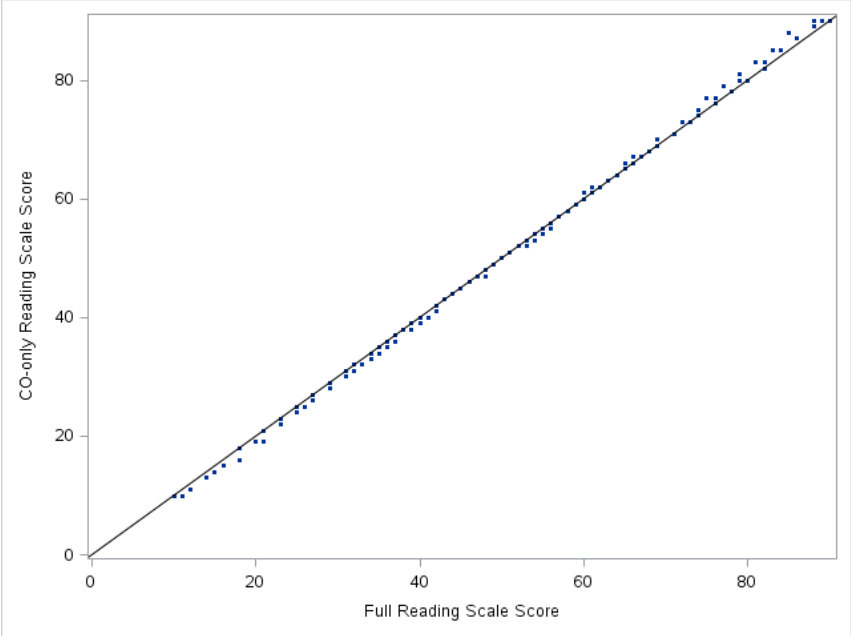

Figure 3.29. Grade 5 Method 1 Colorado-only vs. full sample Reading claim scale scores.

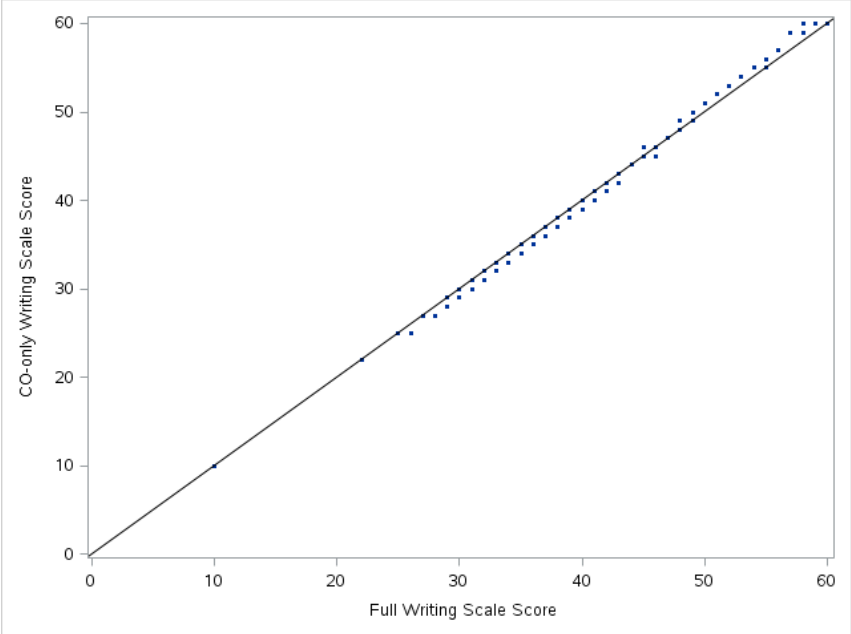

Figure 3.30. Grade 5 Method 1 Colorado-only vs. full sample Writing claim scale scores.

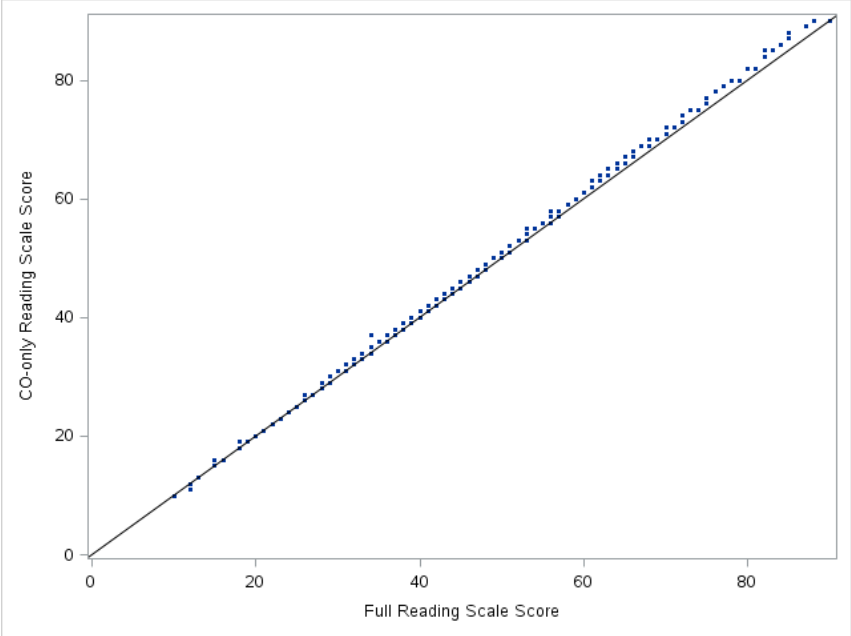

Figure 3.31. Grade 6 Method 1 Colorado-only vs. full sample Reading claim scale scores.

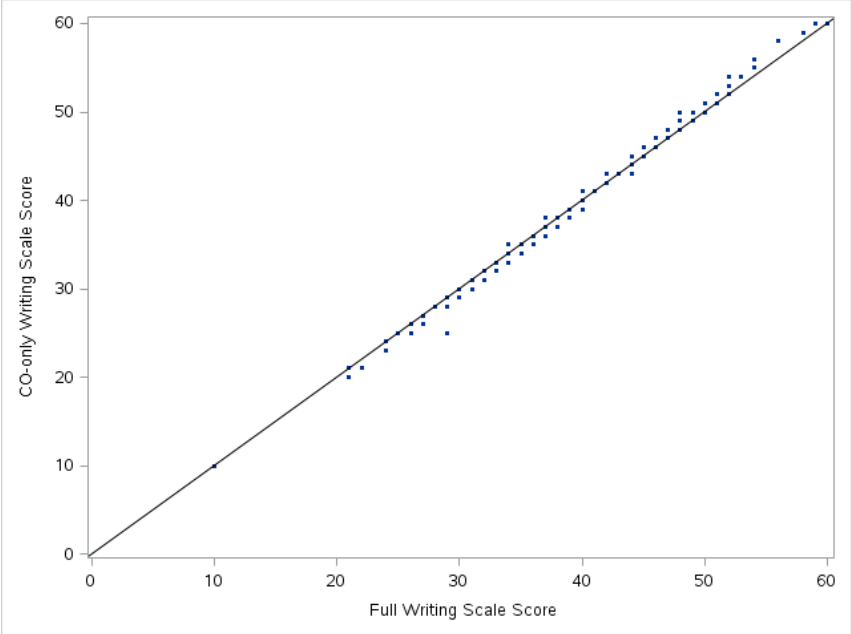

Figure 3.32. Grade 6 Method 1 Colorado-only vs. full sample Writing claim scale scores.

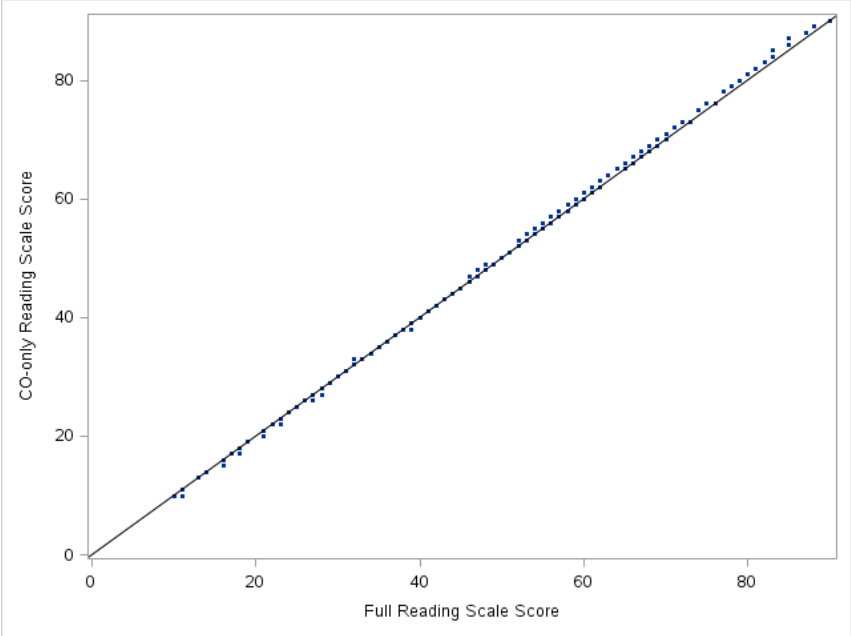

Figure 3.33. Grade 7 Method 1 Colorado-only vs. full sample Reading claim scale scores.

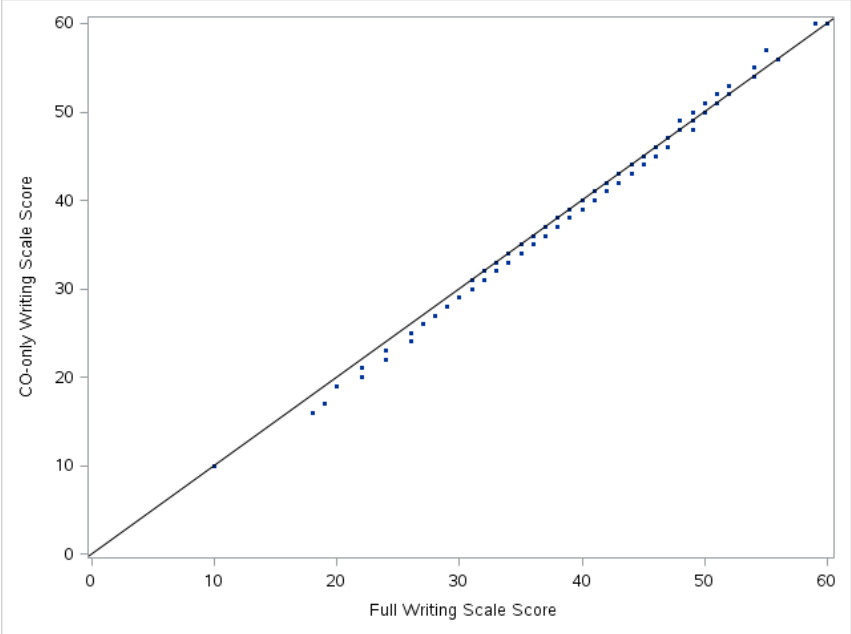

Figure 3.34. Grade 7 Method 1 Colorado-only vs. full sample Writing claim scale scores.

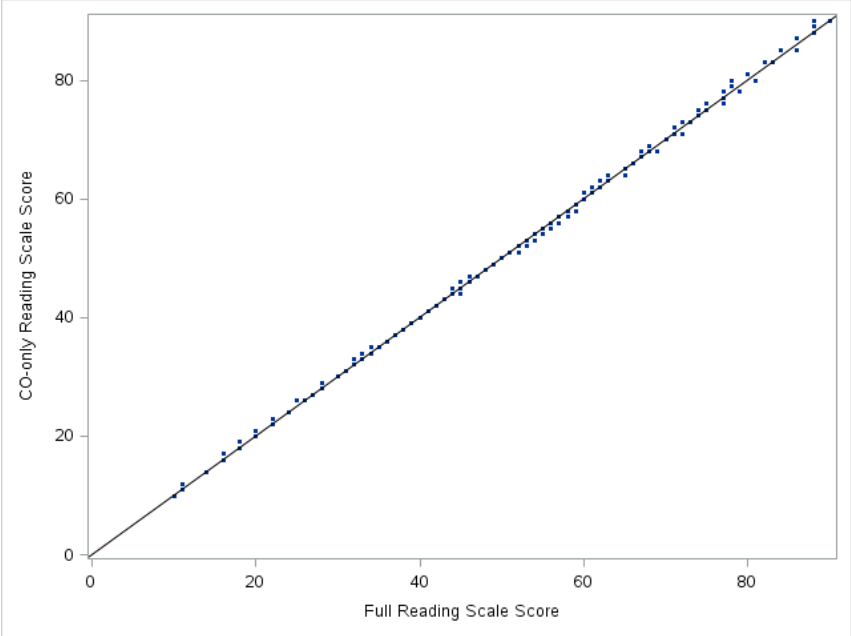

Figure 3.35. Grade 8 Method 1 Colorado-only vs. full sample Reading claim scale scores.

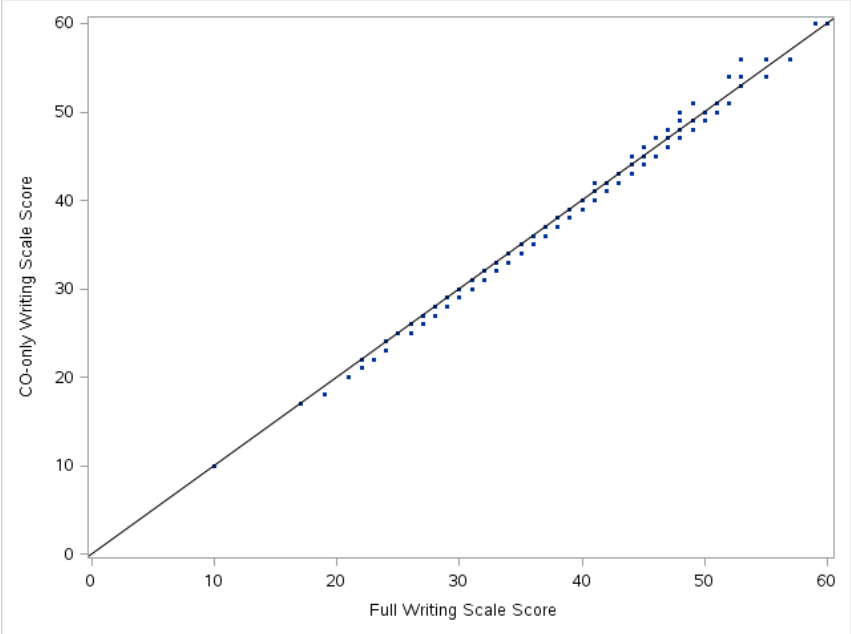

Figure 3.36. Grade 8 Method 1 Colorado-only vs. full sample Writing claim scale scores.

Performance level classifications. Tables 3.3 through 3.8 show the number and percentage of students falling into each performance level with the Method 1 Colorado-only equating and the operational full consortium equating. The values bolded in the tables represent exact agreement.

The largest differences in performance-level classification for Method 1 were observed in Grade 5, in which about 4.4% of students were classified differently using the Colorado-only equating. Grade 5 also had the largest difference within a single performance level, with 1,138 students (1.9% of the total sample) who were Level 4 in the operational scoring being classified as Level 3 under the Method 1 Colorado-only scoring. At any grade level, students whose performance level changed in the Colorado-only scoring were those with raw scores adjacent to the operational raw cutscores.

Table 3.3. Grade 3 Method 1 Performance Level Percent Agreement

Grade 3		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**10,761 (18.5%)**					10,761 (18.5%)
	2		**10,125 (17.4%)**				10,125 (17.4%)
	3		356 (0.6%)	**13,462 (23.1%)**			13,818 (23.7%)
	4				**21,382 (36.7%)**	231 (0.4%)	21,613 (37.1%)
	5					**1,989 (3.4%)**	1,989 (3.4%)
	Total	10,761 (18.5%)	10,481 (18.0%)	13,462 (23.1%)	21,382 (36.7%)	2,220 (3.8%)	58,306 (100%)

Table 3.4. Grade 4 Method 1 Performance Level Percent Agreement

Grade 4		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**6,886 (11.5%)**	319 (0.5%)				7,205 (12.0%)
	2	330 (0.6%)	**10,216 (17.1%)**				10,546 (17.6%)
	3		347 (0.6%)	**14,442 (24.2%)**	683 (1.1%)		15,472 (25.9%)
	4			388 (0.6%)	**20,576 (34.4%)**		20,964 (35.1%)
	5					**5,610 (9.4%)**	5,610 (9.4%)
	Total	7,216 (12.1%)	10,882 (18.2%)	14,830 (24.8%)	21,259 (35.6%)	5,610 (9.4%)	59,797 (100%)

Table 3.5. Grade 5 Method 1 Performance Level Percent Agreement

Grade 5		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**6,199 (10.4%)**					6,199 (10.4%)
	2	610 (1.0%)	**9,383 (15.7%)**				9,993 (16.7%)
	3		637 (1.1%)	**14,830 (24.8%)**			15,467 (25.9%)
	4			1,138 (1.9%)	**23,499 (39.3%)**	145 (0.2%)	24,782 (41.5%)
	5				123 (0.2%)	**3,176 (5.3%)**	3,299 (5.5%)
	Total	6,809 (11.4%)	10,020 (16.8%)	15,968 (26.7%)	23,622 (39.5%)	3,321 (5.6%)	59,740 (100%)

Table 3.6. Grade 6 Method 1 Performance Level Percent Agreement

Grade 6		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**5,755 (10.0%)**					5,755 (10.0%)
	2		**11,398 (19.8%)**	245 (0.4%)			11,643 (20.2%)
	3			**15,993 (27.7%)**	718 (1.2%)		16,711 (29.0%)
	4				**19,314 (33.5%)**	612 (1.1%)	19,926 (34.6%)
	5					**3,600 (6.2%)**	3,600 (6.2%)
	Total	5,755 (10.0%)	11,398 (19.8%)	16,238 (28.2%)	20,032 (34.8%)	4,212 (7.3%)	57,635 (100%)

Table 3.7. Grade 7 Method 1 Performance Level Percent Agreement

Grade 7		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**7,870 (14.0%)**					7,870 (14.0%)
	2	685 (1.2%)	**8,677 (15.5%)**				9,362 (16.7%)
	3		741 (1.3%)	**13,221 (23.6%)**			13,962 (24.9%)
	4			773 (1.4%)	**16,461 (29.4%)**		17,234 (30.7%)
	5					**7,655 (13.6%)**	7,655 (13.6%)
	Total	8,555 (15.3%)	9,418 (16.8%)	13,994 (25.0%)	16,461 (29.4%)	7,655 (13.6%)	56,083 (100%)

Table 3.8. Grade 8 Method 1 Performance Level Percent Agreement

Grade 8		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**7,991 (14.8%)**					7,991 (14.8%)
	2		**9,450 (17.5%)**				9,450 (17.5%)
	3			**13,051 (24.2%)**			13,051 (24.2%)
	4			681 (1.3%)	**17,672 (32.8%)**	130 (0.2%)	18,483 (34.3%)
	5				284 (0.5%)	**4,668 (8.7%)**	4,952 (9.2%)
	Total	7,991 (14.8%)	9,450 (17.5%)	13,732 (25.5%)	17,956 (33.3%)	4,798 (8.9%)	53,927 (100%)

Method 2

This section lists the results using Equating Method 2, wherein the final anchor set in the operational equating was fixed and applied for the Colorado-only calibration. These anchor items were used regardless of their stability between the 2016 full consortium sample and the 2017 Colorado-only sample.

Item parameter estimates. Table 3.9 gives the Pearson correlations between the equated 2017 item *b*- and *a*-parameter estimates from the Method 2 Colorado-only sample and the equated 2017 operational estimates based on the full consortium sample. The correlations at each grade level for both sets of item parameters were very high, with all of them above 0.99. Note that these correlations are identical, to five decimal places, to the same correlations calculated for Method 1. The extremely high agreement between these two indices is due to the fact that both Method 1 and Method 2 begin with the same item parameter estimates (i.e., the 2017 Colorado-only calibration estimates). Therefore, the only difference between the equated item parameter estimates in Method 1 and Method 2 comes from the different equating constants applied, which in each method is a linear transformation of the original estimates. Although the equated item parameter estimates changed between methods, their rank order did not.

Table 3.9. Pearson Correlations Between Method 2 Equated Colorado-Only and Full Consortium Item Parameter Estimates

Grade	*b*-parameters	*a*-parameters
3	0.99757	0.99670
4	0.99243	0.99422
5	0.99566	0.99681
6	0.99510	0.99653
7	0.99415	0.99516
8	0.99653	0.99811

Figures 3.10 through 3.22 plot the Method 2 equated Colorado-only vs. full consortium item difficulty parameter (i.e., b-parameter and category step parameters) and a-parameter estimates, respectively, for each grade level. The diagonal reference line on each plot reflects perfect agreement between the two sets of estimates. Points above the line were estimated to be more difficult (for the difficulty parameter plots) or better discriminators (for the *a*-parameter plots) for the Colorado students as compared with the full consortium sample. As with the correlations in Table 3.9, the plots show very high agreement between the equated parameter estimates at each grade level.

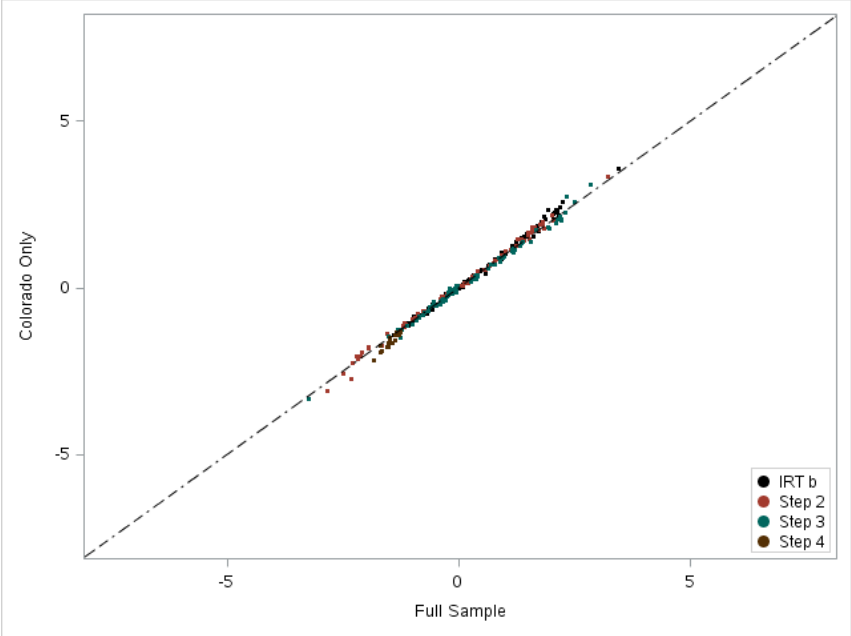

Figure 3.37. Grade 3 Method 2 Colorado-only vs. full sample item difficulty parameter estimates.

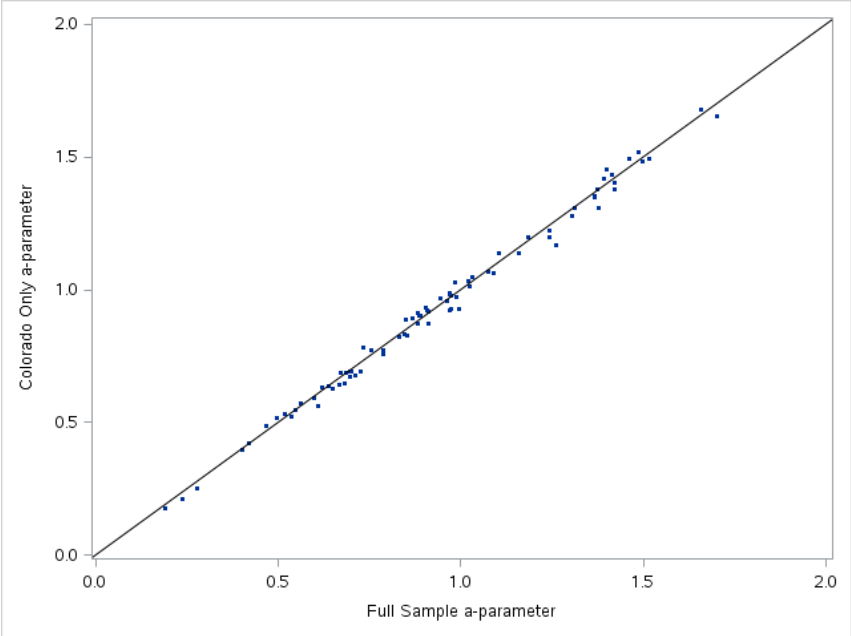

Figure 3.38. Grade 3 Method 2 Colorado-only vs. full sample item a-parameter estimates.

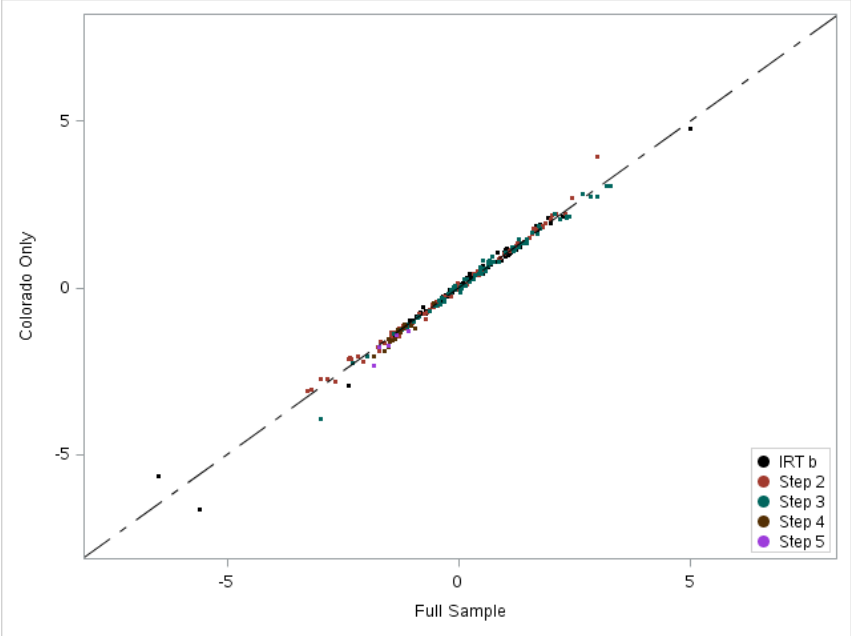

Figure 3.39. Grade 4 Method 2 Colorado-only vs. full sample item difficulty parameter estimates.

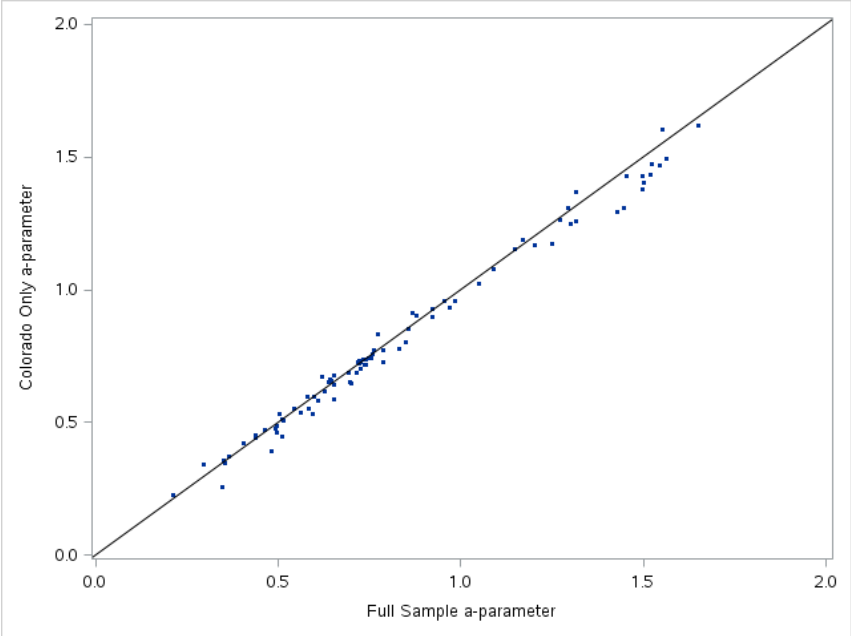

Figure 3.40. Grade 4 Method 2 Colorado-only vs. full sample item a-parameter estimates.

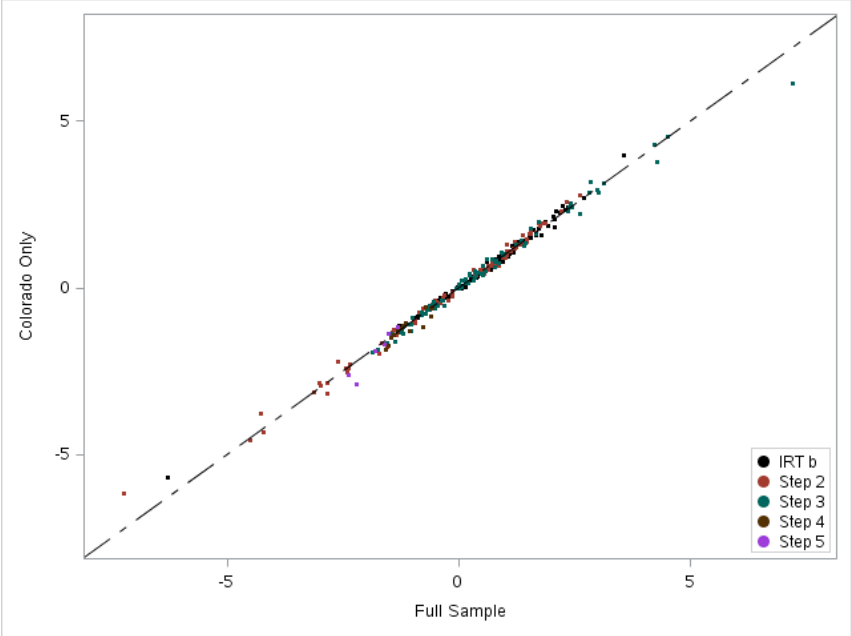

Figure 3.41. Grade 5 Method 2 Colorado-only vs. full sample item difficulty parameter estimates.

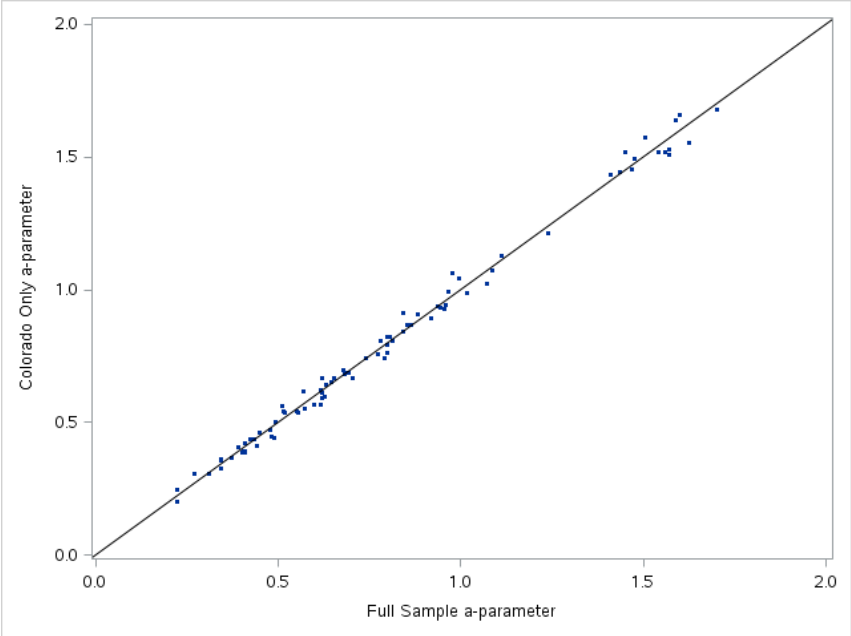

Figure 3.42. Grade 5 Method 2 Colorado-only vs. full sample item a-parameter estimates.

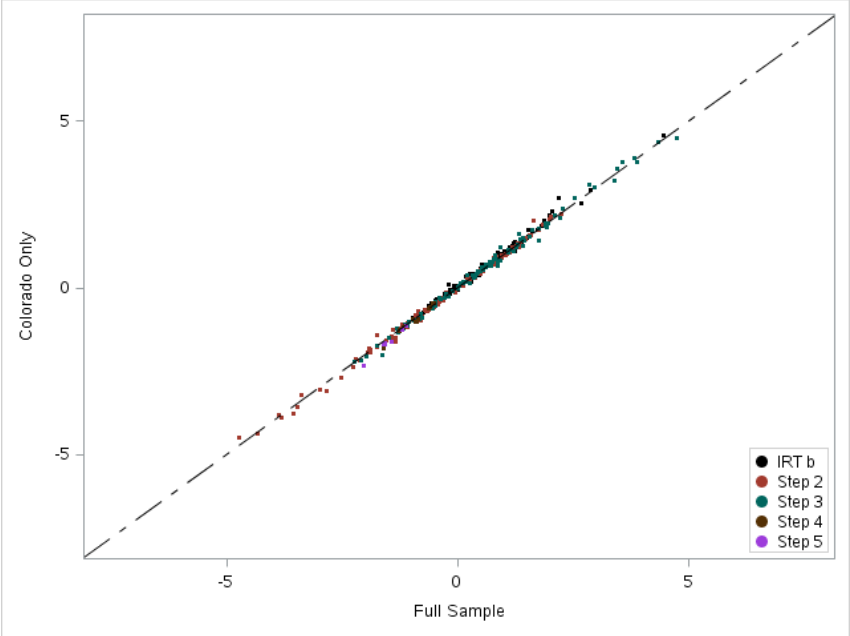

Figure 3.43. Grade 6 Method 2 Colorado-only vs. full sample item difficulty parameter estimates.

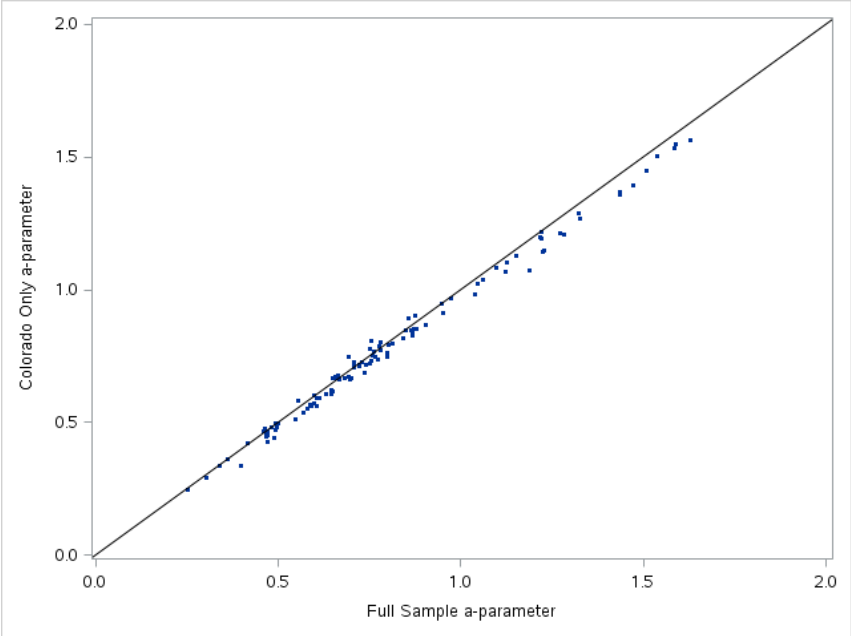

Figure 3.44. Grade 6 Method 2 Colorado-only vs. full sample item a-parameter estimates.

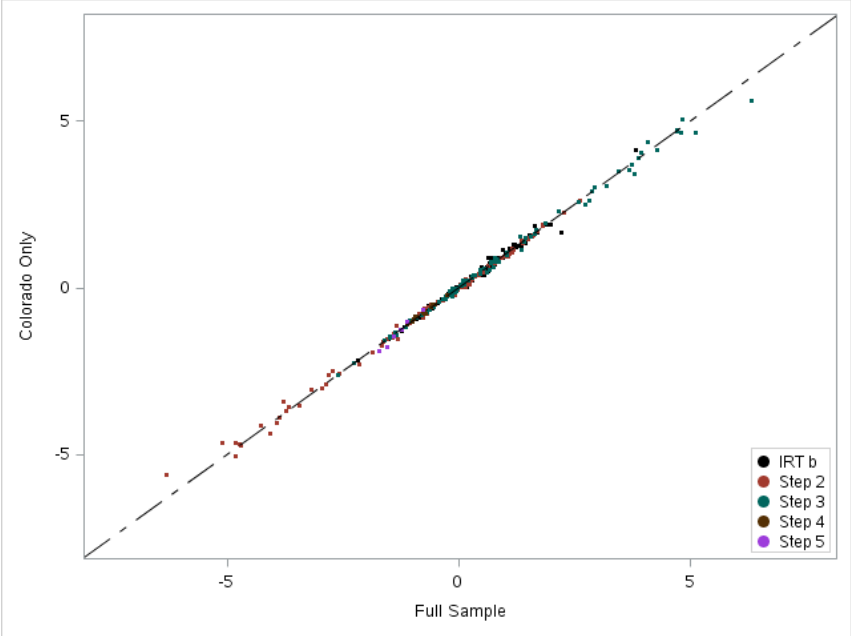

Figure 3.45. Grade 7 Method 2 Colorado-only vs. full sample item difficulty parameter estimates.

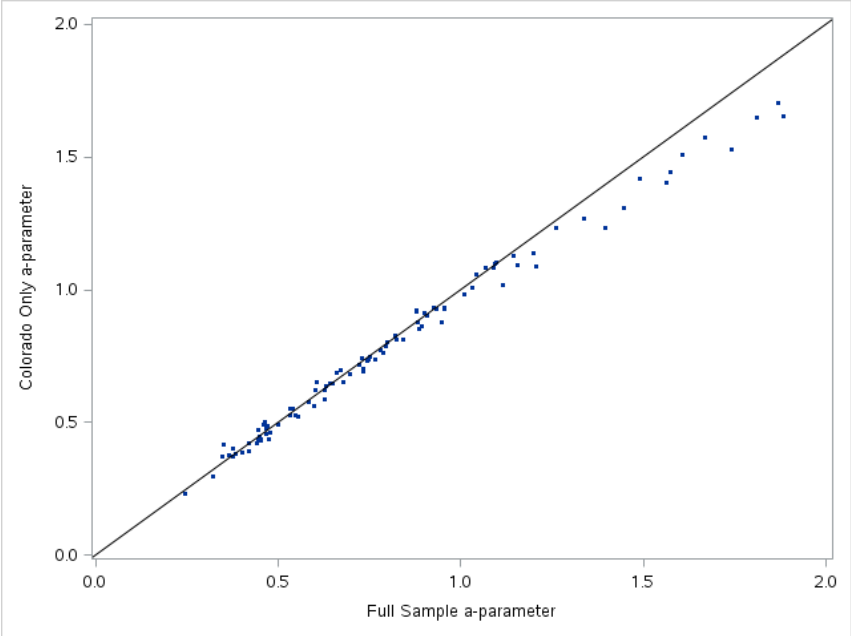

Figure 3.46. Grade 7 Method 2 Colorado-only vs. full sample item a-parameter estimates.

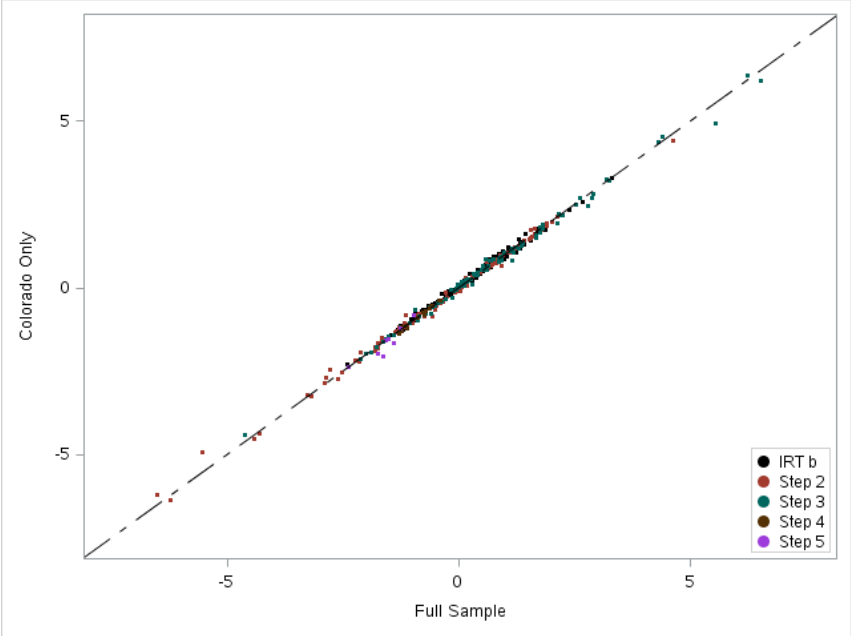

Figure 3.47. Grade 8 Method 2 Colorado-only vs. full sample item difficulty parameter estimates.

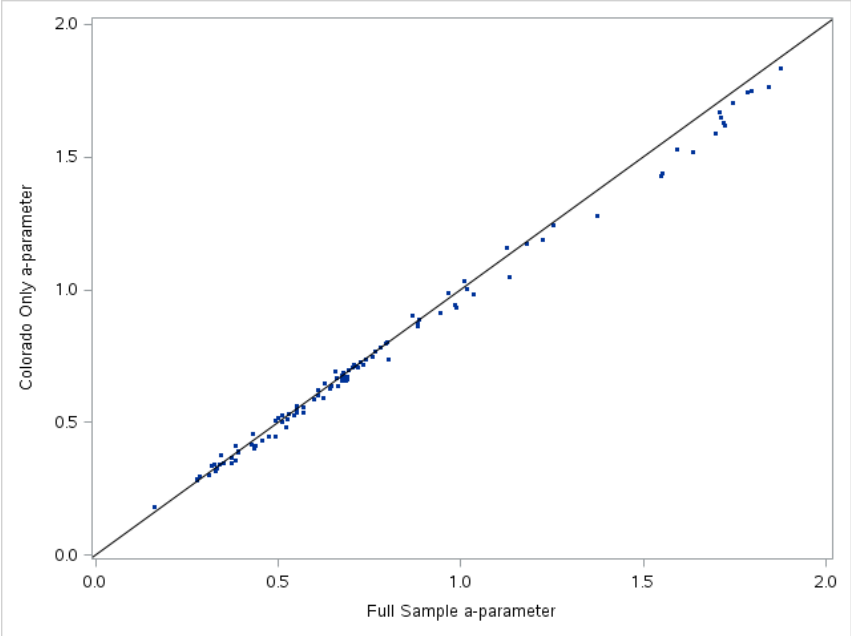

Figure 3.48. Grade 8 Method 2 Colorado-only vs. full sample item a-parameter estimates.

RSSS conversion tables. The raw score-to-scale score RSSS conversion tables for each form at each grade level are provided in the Appendix. As mentioned in the results section for Method 1, the operational conversion, Method 1 conversion, and Method 2 conversion are listed in separate columns of the same table for each form. The operational conditional standard error of measurement (CSEM) is also provided in each table. For Method 2, the largest difference at a given raw score between the Colorado-only scale score and the operational full consortium scale score was 8 scale points, which was observed on forms 2 and 3 for Grade 3, for raw scores near 70 points, as well as form 1 in Grade 8, for raw scores of 106 and 107. Although this particular difference reflects higher scores with the Colorado-only equating, the direction of differences across forms and grade levels was not consistent. Across all forms and grades, most of the scale score differences were within one or two scale points.

Student scale scores. Student scale score results are provided both for the overall summative scale scores, and for the Reading and Writing claim scores. Table 3.10 lists the correlation between Method 2 Colorado-only scale scores and operational scale scores for Colorado students. As was the case with the equated item parameter estimates, the correlations at every grade level were very high.

Summative scale scores. Figures 3.13 through 3.24 are plots of the difference between Colorado-only and operational summative scale scores according to operational scale score and a histogram of the scale score differences, respectively, for each grade level. On the difference scatter plots, the dashed horizontal reference line indicates identical scale scores. A positive difference indicates a higher scale score based on the Colorado-only equating than with the operational equating. Corresponding with the RSSS conversion tables, the largest differences were observed at the high end of score scale, with most students receiving the same or nearly the same scale score.

Table 3.10. Correlations between Method 2 Colorado-only and full sample scale scores

Grade	Summative	Reading Claim	Writing Claim
3	0.99980	0.99954	0.99951
4	0.99958	0.99953	0.99886
5	0.99980	0.99965	0.99908
6	0.99984	0.99929	0.99918
7	0.99984	0.99971	0.99889
8	0.99950	0.99952	0.99875

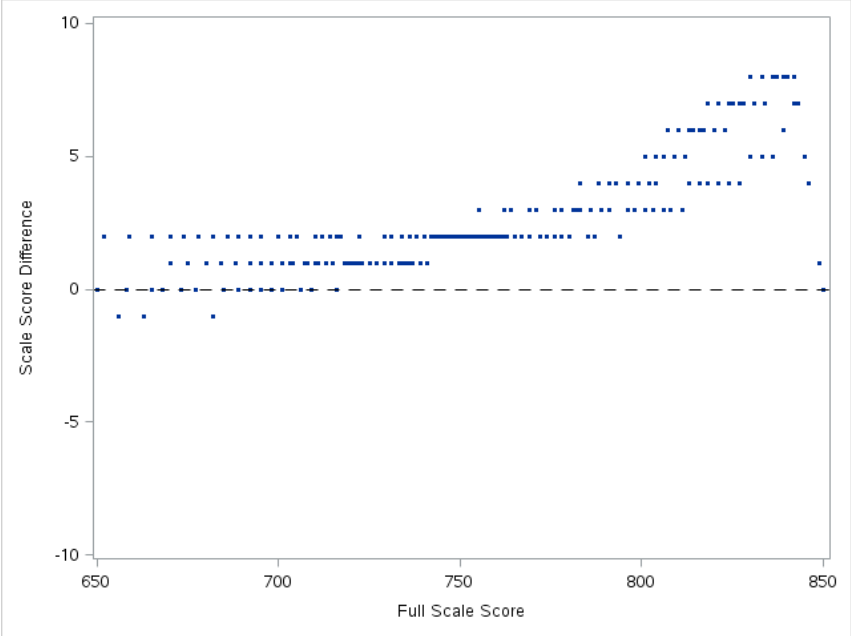

Figure 3.49. Grade 3 Method 2 scale score difference by operational scale score.

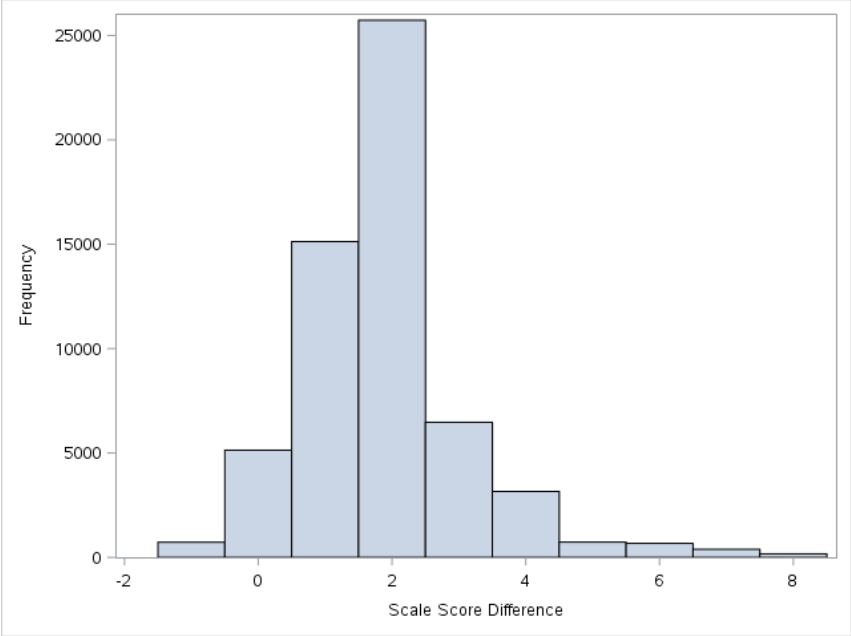

Figure 3.50. Grade 3 Method 2 scale score differences.

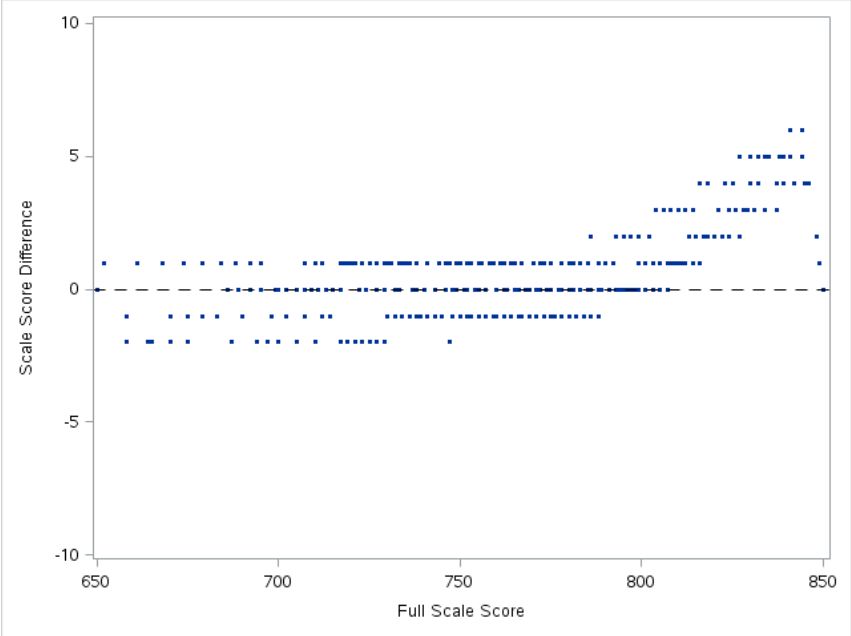

Figure 3.51. Grade 4 Method 2 scale score difference by operational scale score.

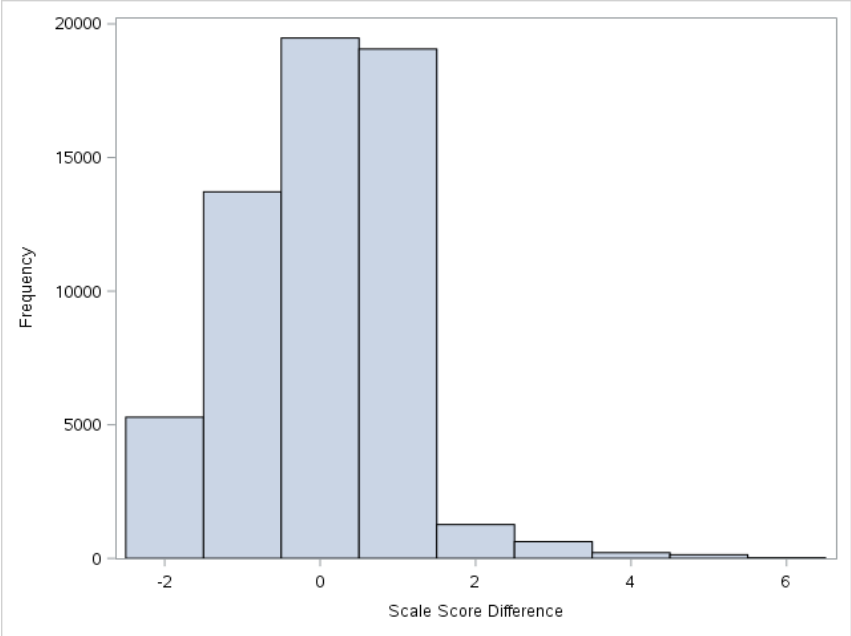

Figure 3.52. Grade 4 Method 2 scale score differences.

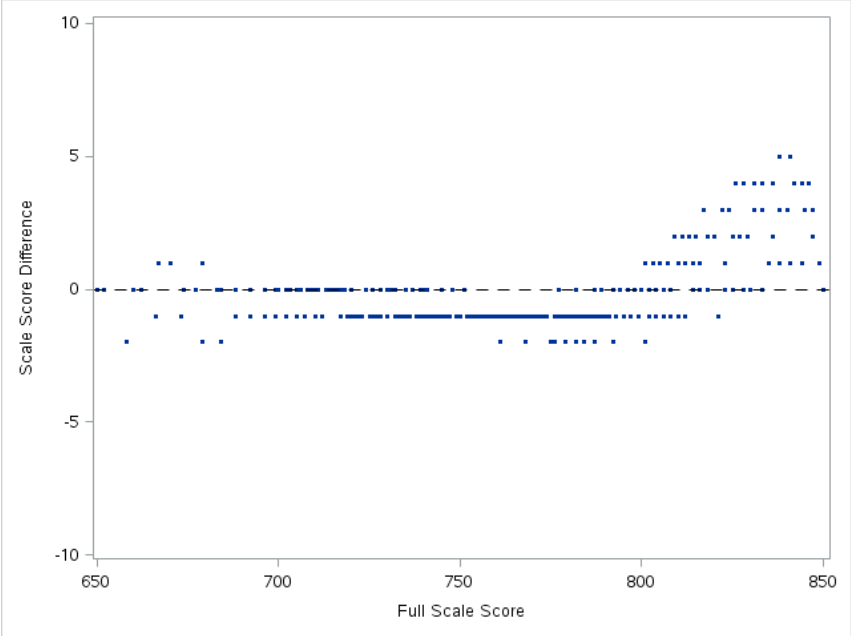

Figure 3.53. Grade 5 Method 2 Colorado-only vs. full sample scale scores.

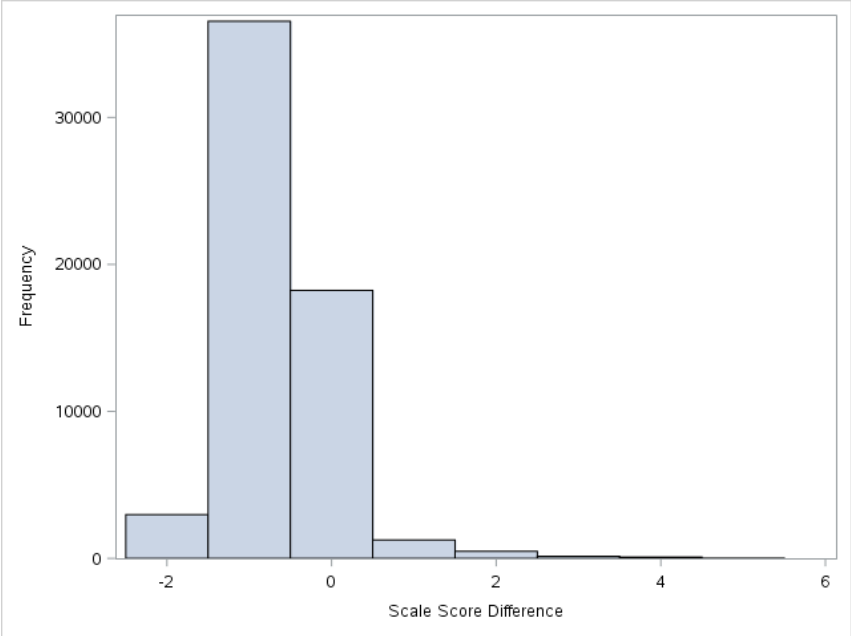

Figure 3.54. Grade 5 Method 2 scale score differences.

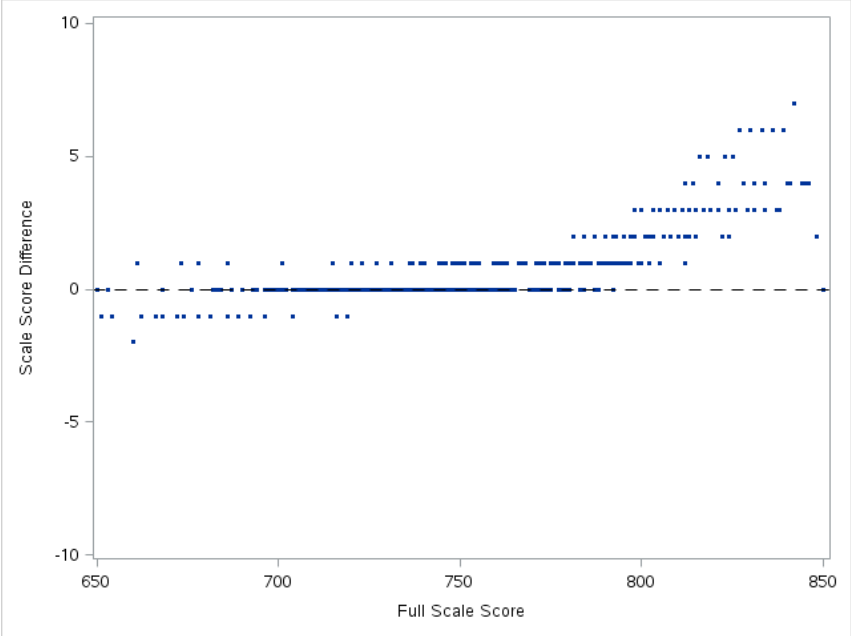

Figure 3.55. Grade 6 Method 2 Colorado-only vs. full sample scale scores.

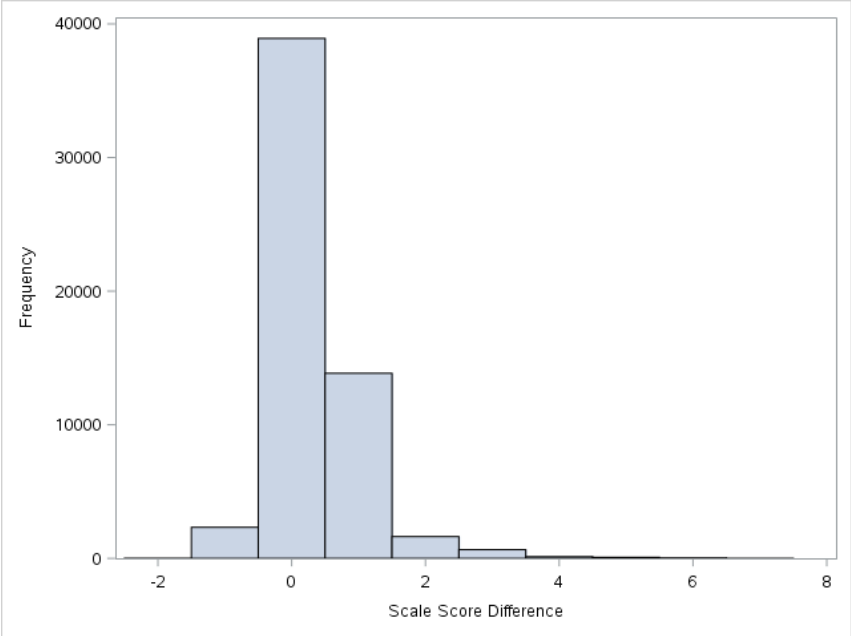

Figure 3.56. Grade 6 Method 2 scale score differences.

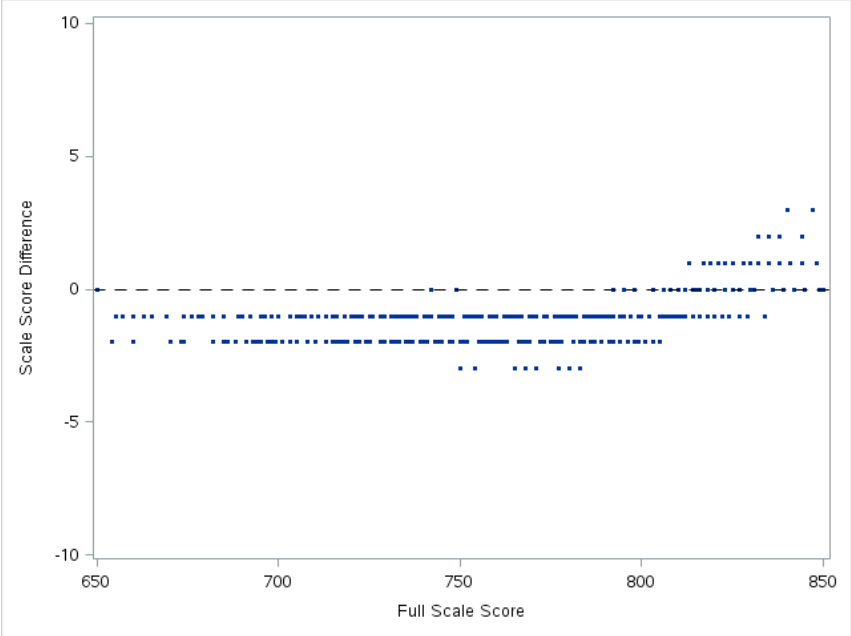

Figure 3.57. Grade 7 Method 2 Colorado-only vs. full sample scale scores.

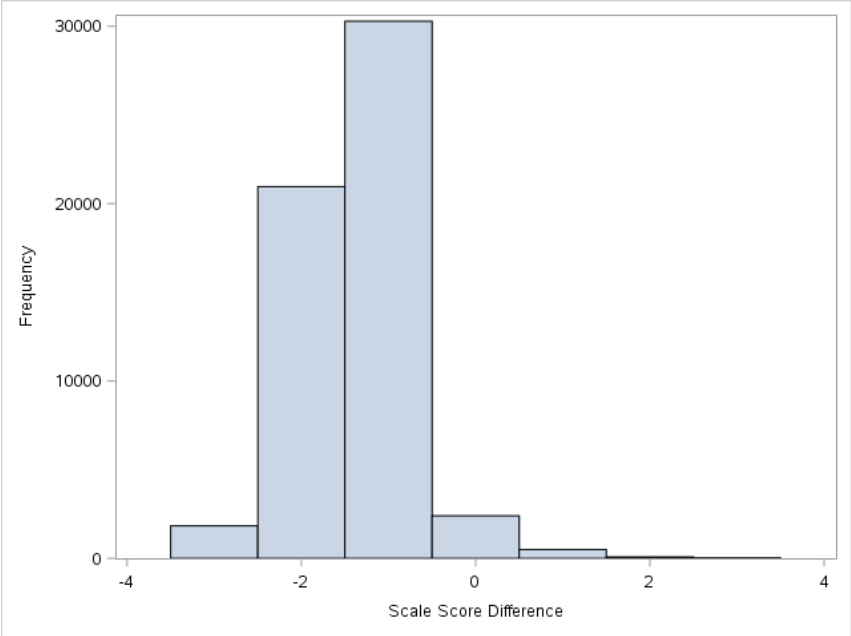

Figure 3.58. Grade 7 Method 2 scale score differences.

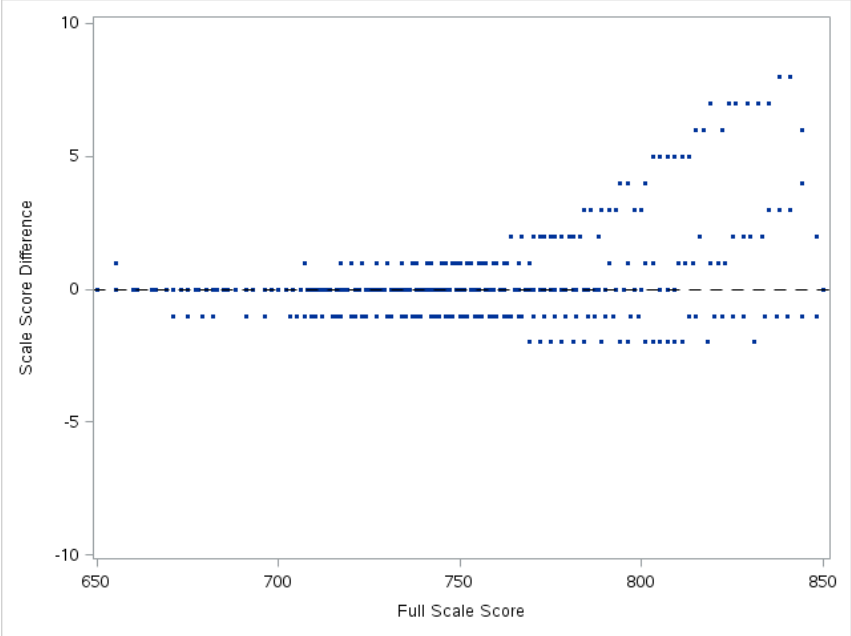

Figure 3.59. Grade 8 Method 2 Colorado-only vs. full sample scale scores.

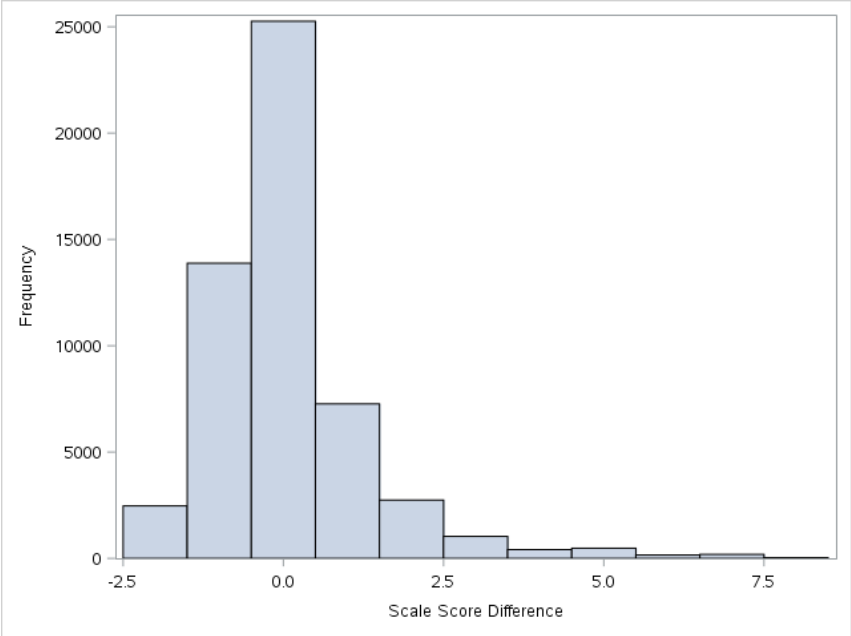

Figure 3.60. Grade 8 Method 2 scale score differences.

Reading and Writing claim scale scores. Figures 3.25 through 3.36 are scatterplots of the Reading and Writing claim scale scores, respectively, for each grade from the Method 2 Colorado-only equating vs. the operational full consortium equating. The diagonal reference line indicates perfect agreement between the Colorado-only and full consortium scale score. Points above the line are students receiving a higher scale score based on the Colorado-only equating than with the operational equating. The scale score differences appeared to be larger for the Writing claim than for the Reading claim, although it should be noted that the Writing claim scores scale range (10–60) includes fewer scale points than the Reading claim score scale (10–90), so the visual differences across the two plots are not directly comparable.

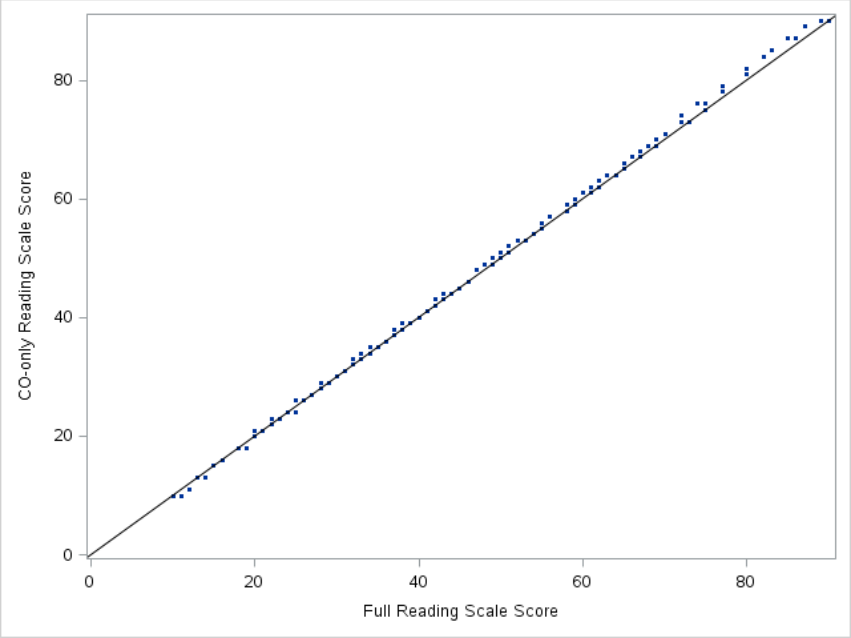

Figure 3.61. Grade 3 Method 2 Colorado-only vs. full sample Reading claim scale scores.

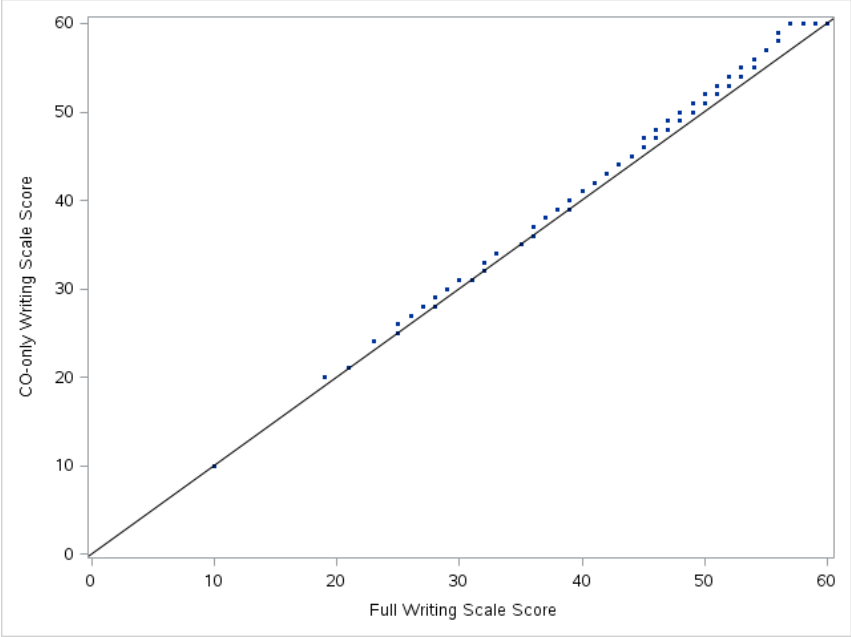

Figure 3.62. Grade 3 Method 2 Colorado-only vs. full sample Writing claim scale scores.

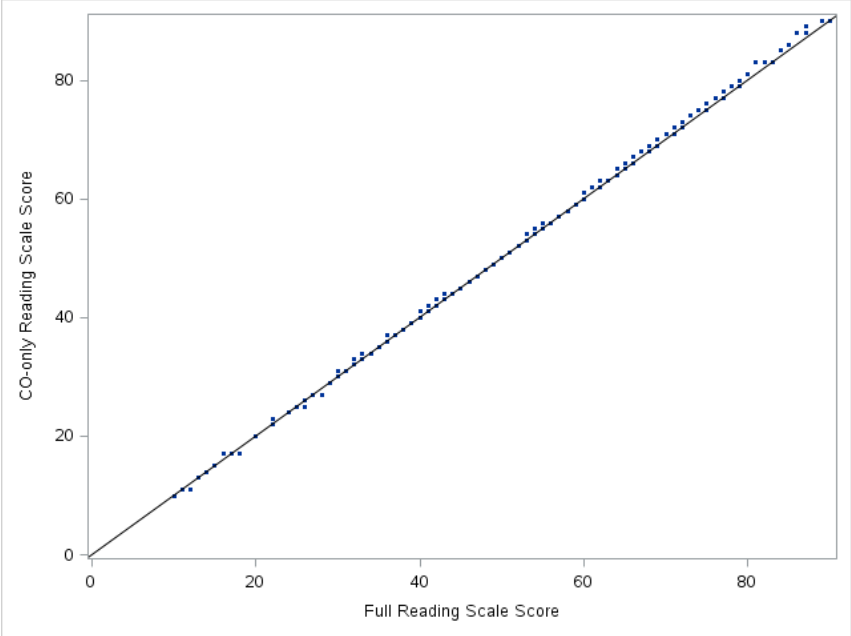

Figure 3.63. Grade 4 Method 2 Colorado-only vs. full sample Reading claim scale scores.

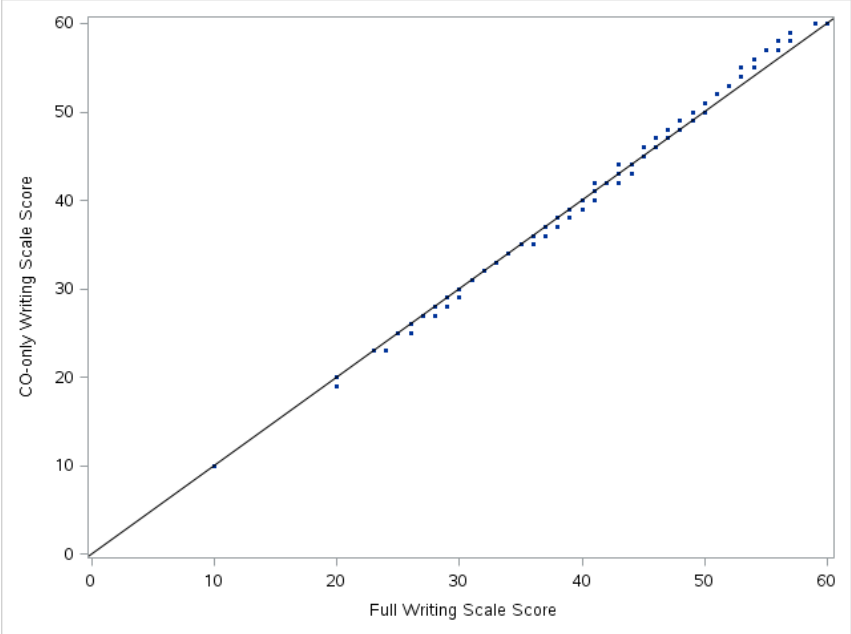

Figure 3.64. Grade 4 Method 2 Colorado-only vs. full sample Writing claim scale scores.

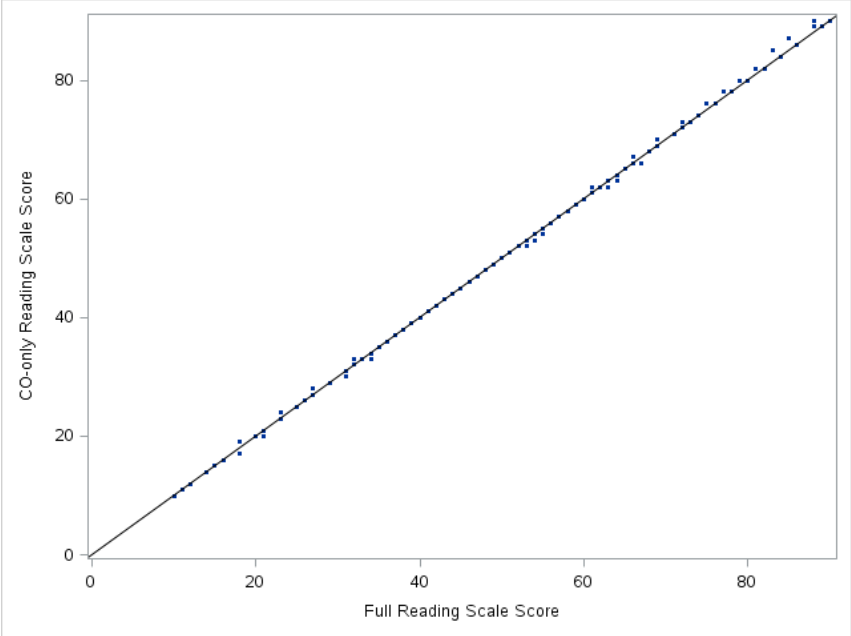

Figure 3.65. Grade 5 Method 2 Colorado-only vs. full sample Reading claim scale scores.

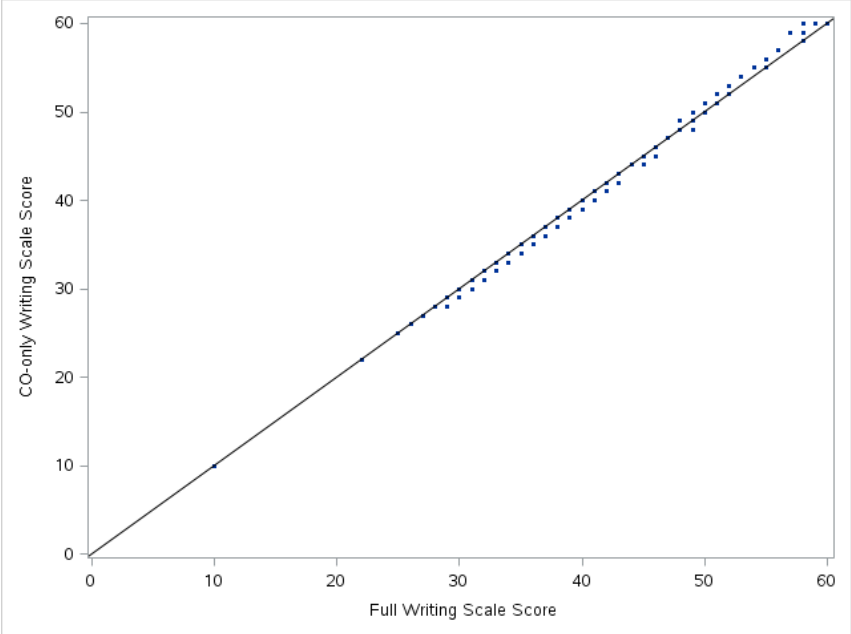

Figure 3.66. Grade 5 Method 2 Colorado-only vs. full sample Writing claim scale scores.

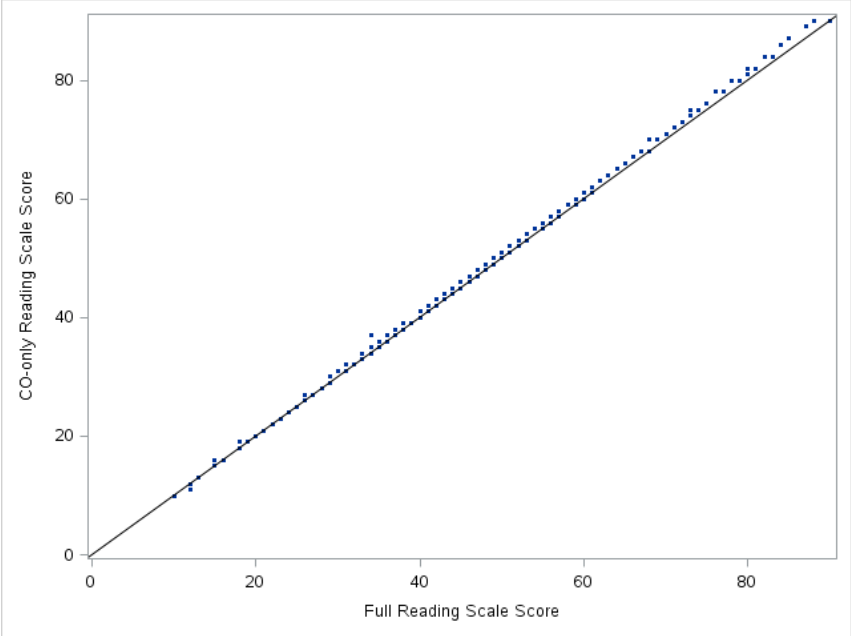

Figure 3.67. Grade 6 Method 2 Colorado-only vs. full sample Reading claim scale scores.

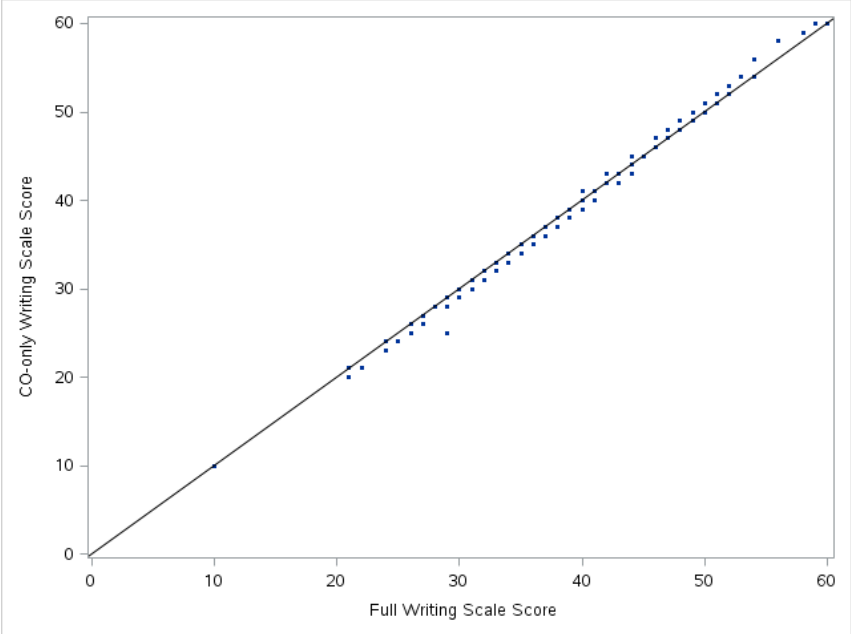

Figure 3.68. Grade 6 Method 2 Colorado-only vs. full sample Writing claim scale scores.

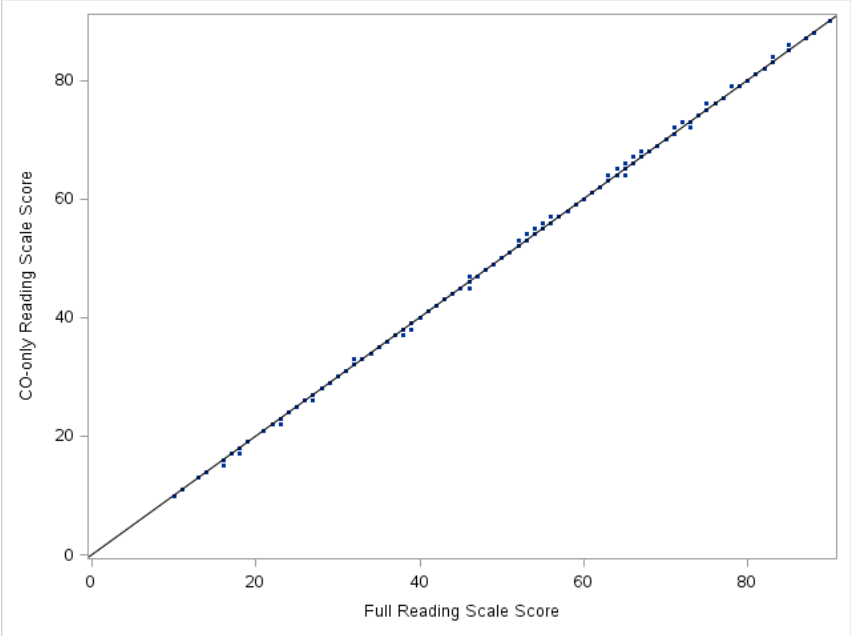

Figure 3.69. Grade 7 Method 2 Colorado-only vs. full sample Reading claim scale scores.

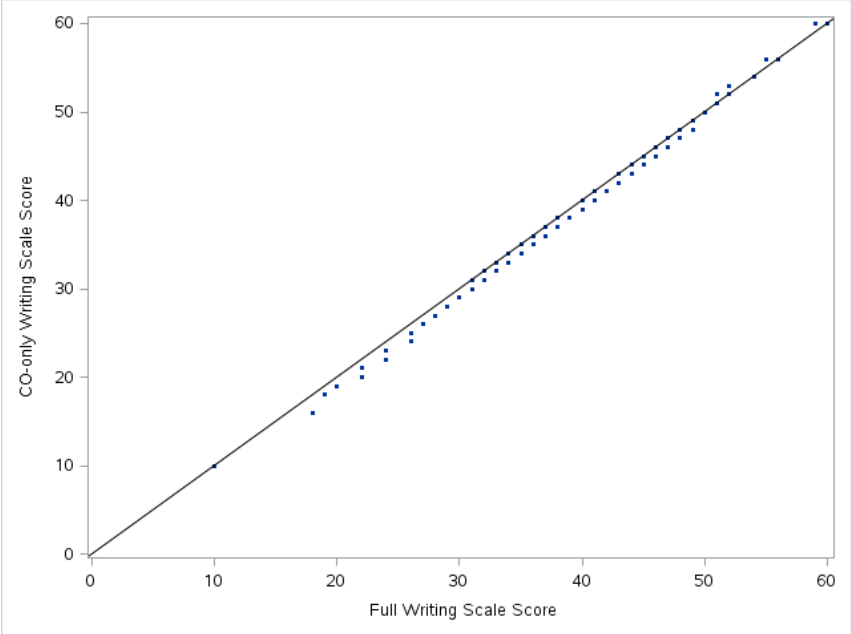

Figure 3.70. Grade 7 Method 2 Colorado-only vs. full sample Writing claim scale scores.

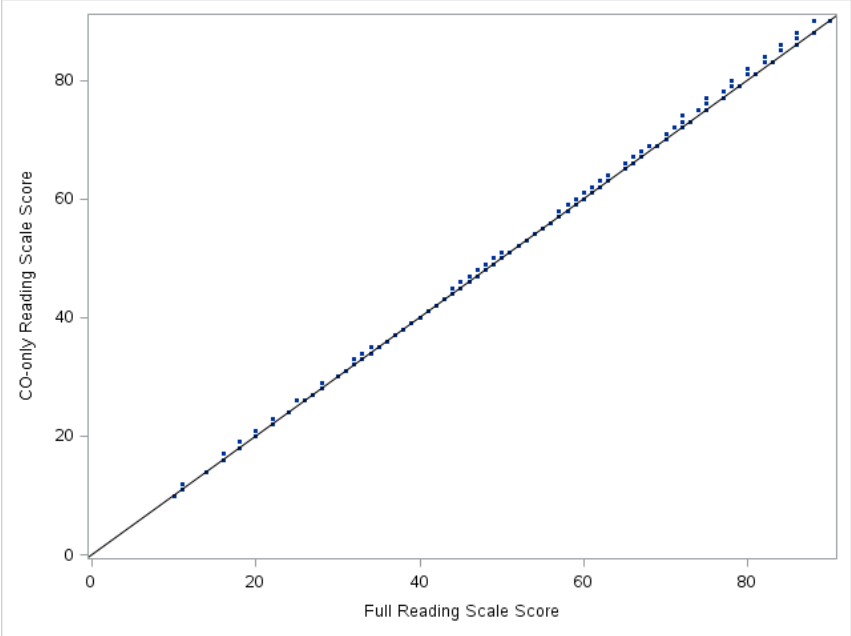

Figure 3.71. Grade 8 Method 2 Colorado-only vs. full sample Reading claim scale scores.

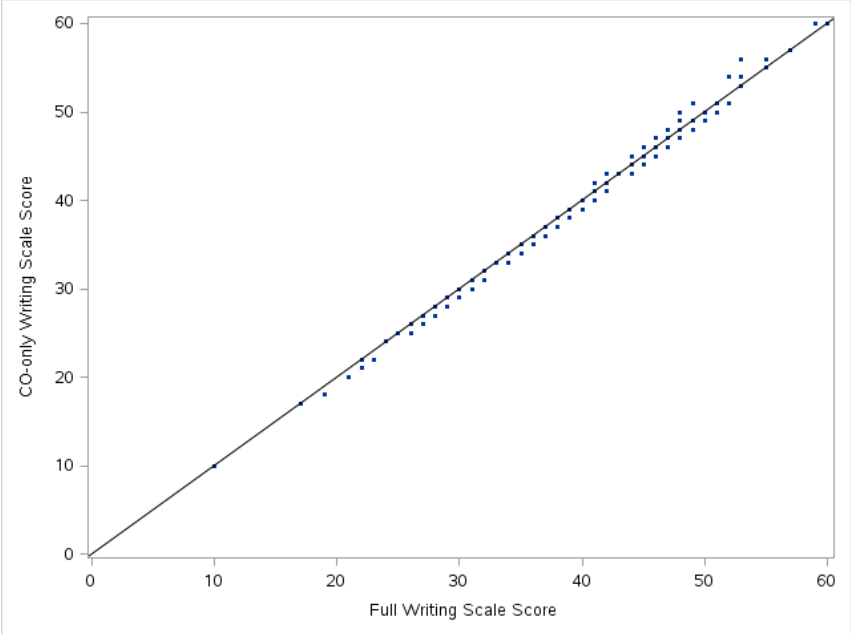

Figure 3.72. Grade 8 Method 2 Colorado-only vs. full sample Writing claim scale scores.

Performance level classifications. Tables 3.11 through 3.16 show the number and percentage of students falling into each performance level with the Method 2 Colorado-only equating and the operational full consortium equating. The values bolded in the tables represent exact agreement.

The largest differences in performance-level classification for Method 2 were observed in Grade 7, in which about 4.8% of students were classified differently using the Colorado-only equating. As with Method 1, Grade 5 had the largest difference within a single performance level, with 1,138 students (about 1.9% of the total sample) who were Level 3 in the operational scoring being classified as Level 4 under the Method 2 Colorado-only scoring (this difference is identical to the one observed in the Method 1 results). At any grade level, students whose performance level changed in the Colorado-only scoring were those with raw scores adjacent to the operational raw cutscores.

Table 3.11. Grade 3 Method 2 Performance Level Percent Agreement

Grade 3		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**10,761 (18.5%)**					10,761 (18.5%)
	2		**10,125 (17.4%)**				10,125 (17.4%)
	3			**12,762 (21.9%)**	1,056 (1.8%)		13,818 (23.7%)
	4				**21,156 (36.3%)**	457 (0.8%)	21,613 (37.1%)
	5					**1,989 (3.4%)**	1,989 (3.4%)
	Total	10,761 (18.5%)	10,125 (17.4%)	12,762 (21.9%)	22,212 (38.1%)	2,446 (4.2%)	58,306 (100%)

Table 3.12. Grade 4 Method 2 Performance Level Percent Agreement

Grade 4		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**7,205 (12.0%)**					7,205 (12.0%)
	2	330 (0.6%)	**10,216 (17.1%)**				10,546 (17.6%)
	3		347 (0.6%)	**14,800 (24.8%)**	325 (0.5%)		15,472 (25.9%)
	4			388 (0.6%)	**20,576 (34.4%)**		20,964 (35.1%)
	5					**5,610 (9.4%)**	5,610 (9.4%)
	Total	7,535 (12.6%)	10,563 (17.7%)	15,188 (25.4%)	20,901 (35.0%)	5,610 (9.4%)	59,797 (100%)

Table 3.13. Grade 5 Method 2 Performance Level Percent Agreement

Grade 5		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**6,199 (10.4%)**					6,199 (10.4%)
	2		**9,993 (16.7%)**				9,993 (16.7%)
	3		320 (0.5%)	**15,147 (25.4%)**			15,467 (25.9%)
	4			1,138 (1.9%)	**23,644 (39.6%)**		24,782 (41.5%)
	5				275 (0.5%)	**3,024 (5.1%)**	3,299 (5.5%)
	Total	6,199 (10.4%)	10,313 (17.3%)	16,285 (27.3%)	23,919 (40.0%)	3,024 (5.1%)	59,740 (100%)

Table 3.14. Grade 6 Method 2 Performance Level Percent Agreement

Grade 6		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**5,755 (10.0%)**					5,755 (10.0%)
	2		**11,643 (20.2%)**				11,643 (20.2%)
	3			**16,484 (28.6%)**	227 (0.4%)		16,711 (29.0%)
	4				**19,565 (33.9%)**	361 (0.6%)	19,926 (34.6%)
	5					**3,600 (6.2%)**	3,600 (6.2%)
	Total	5,755 (10.0%)	11,643 (20.2%)	16,484 (28.6%)	19,792 (34.3%)	3,961 (6.9%)	57,635 (100%)

Table 3.15. Grade 7 Method 2 Performance Level Percent Agreement

Grade 7		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**7,870 (14.0%)**					7,870 (14.0%)
	2	685 (1.2%)	**8,677 (15.5%)**				9,362 (16.7%)
	3		741 (1.3%)	**13,221 (23.6%)**			13,962 (24.9%)
	4			773 (1.4%)	**16,461 (29.4%)**		17,234 (30.7%)
	5				514 (0.9%)	**7,141 (12.7%)**	7,655 (13.6%)
	Total	8,555 (15.3%)	9,418 (16.8%)	13,994 (25.0%)	16,975 (30.3%)	7,141 (12.7%)	56,083 (100%)

Table 3.16. Grade 8 Method 2 Performance Level Percent Agreement

Grade 8		Colorado-only Performance Levels					
CBT		1	2	3	4	5	Total
Original 2017 Performance Levels	1	**7,991 (14.8%)**					7,991 (14.8%)
	2		**9,450 (17.5%)**				9,450 (17.5%)
	3			**12,819 (23.8%)**	232 (0.4%)		13,051 (24.2%)
	4			212 (0.4%)	**17,990 (33.4%)**	281 (0.5%)	18,483 (34.3%)
	5				146 (0.3%)	**4,806 (8.9%)**	4,952 (9.2%)
	Total	7,991 (14.8%)	9,450 (17.5%)	13,031 (24.2%)	18,368 (34.1%)	5,087 (9.4%)	53,927 (100%)

Discussion

The purpose of the current study was to examine the similarity of parameter estimates based on the 2017 operational equating and those based on the 2017 Colorado-only sample. The Colorado Department of Education (CDE) is considering the use of shortened versions CMAS 2017 assessments, which would be administered only to Colorado students, while maintaining the CMAS score reporting scale. In order to maintain the same scale for future Colorado-only administrations that was used for reporting prior administrations, item parameter estimates should be stable between the full consortium sample and the Colorado-only sample. Most of the scores calculated using only Colorado students were within one or two scale score points of the operational scores. However, larger differences occurred under both methods—particularly for very high-achieving students—with scale score differences of eight points observed in three of the six grade levels.

It should be noted that although the results of this study were grouped into three separate sections (item parameter estimates, raw score-to-scale score conversion tables, and student scale scores), all three sets of results are strongly related. The item parameter estimates are used to calculate the conversion tables, which are then used to translate student raw scores to scale scores. Viewing each set of results separately helps to understand how changes in the item difficulty estimates, for example, can affect the distribution of student scale scores, but it should be emphasized that the only outcomes of this study that have practical impact are the conversion tables themselves. The results make it evident that many of the item-parameter estimate changes can be "absorbed" without changing the conversion tables much. And because student raw scores were unaltered in this study, the changes in student scale score distributions simply follow from the conversion tables.

In addition to the summative scale scores, the results reported here include scatterplots of Reading and Writing claim scale scores for each equating method. Because the Writing claim includes only a few items per test, it was expected that the Writing items would account for more of the total summative difference than the Reading claim items. This did not appear to be true. In general, the Reading and

Writing claim scale scores appeared to be about equally stable for both anchor test structures. Although the Writing claim was measured with a relatively small proportion of the full test items, compared with the Reading claim items, a much higher proportion of the total Writing items were included in the anchor sets, which may help to explain why the Writing claim scale scores were stable despite accounting for a small proportion of the full tests.

The conversion tables, listed in the Appendix, include the operational CSEM associated with each raw score point. The largest difference between scale scores across all grades and equating methods was 8 scale points. This difference was observed in grades 3, 6, and 8, at scale score values near 830 to 840. The differences were not consistently larger for Method 1 or Method 2—in grades 3 and 8, the largest scale score differences occurred with Method 2, while in grade 6 it occurred with Method 1. At the summative scale score level, equating with Colorado students as the target sample appeared to produce similar results to equating with the full consortium sample.

The equating results did not appear to be systematically influenced by the choice of anchor set, as neither Method 1 nor Method 2 were superior across grade levels and forms. From the conversion tables, the mean difference between Colorado-only and operational scale scores at a given raw score point was 0.32 for Method 1 and 0.43 for Method 2, and the mean absolute difference was 1.11 for Method 1 and 1.14 for Method 2. It is encouraging that neither method shows systematic bias across all grade levels, but for individual grade levels there were clearer patterns. In grades 3 and 4, the differences were smaller with Method 1 for all three test forms, while Method 2 was favored for all other grades and forms with the exception of two forms in grade 7 and one form in grade 8. From a theoretical perspective, Method 1 was expected to show better results, as the anchor sets were, by definition, more stable from year to year. The fact that Method 2 was favored in many cases may be a result of differing content coverage across the two anchor sets. Although it is likely not practical (or defensible) to include unstable anchor items operationally, the results suggest that initial anchor sets should be constructed with careful attention to the allocation of item content in order to measure true group differences accurately between Colorado students and the full consortium. Taken as a whole, the results of this study suggest that item parameter estimates were largely invariant to the change in calibration sample from the full consortium to students form Colorado only.

The generalizability of these results is affected by a few important limitations of this study. The research described here analyzed only one subject area (ELA/L) and only one administration mode. The stability of item parameters for English Language Arts does not necessarily indicated the stability of parameter estimates for tests in other domains (e.g., Mathematics), and separate studies should be conducted for those tests if they are to be post-equated similarly to the ELA/L tests. Also, this study used data from only the three regular CBT test forms, and whether the results will hold for students taking accommodated or paper test forms, for example, may also need to be checked before using those equating results operationally.

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Appendix

Table A.1. Grade 3 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	656	655	655	15
7	663	661	662	15
8	668	667	668	14.8
9	673	672	673	14
10	677	676	677	13.3
11	682	681	681	12.7
12	685	684	685	12.2
13	689	688	689	11.8
14	692	691	692	11.5
15	695	694	695	11.2
16	698	697	698	10.9
17	701	700	701	10.7
18	703	703	704	10.5
19	706	705	706	10.4
20	709	708	709	10.2
21	711	710	712	10.1
22	713	713	714	10
23	716	715	716	10
24	718	717	719	9.9
25	720	720	721	9.8
26	722	722	723	9.8
27	725	724	726	9.8
28	727	726	728	9.7
29	729	729	730	9.7
30	731	731	732	9.7
31	733	733	734	9.7
32	735	735	736	9.6
33	737	737	738	9.6
34	739	739	740	9.6
35	741	741	742	9.6
36	743	743	745	9.6
37	745	745	747	9.7
38	747	747	749	9.7
39	749	749	751	9.7
40	751	751	753	9.7
41	753	753	755	9.7
42	755	755	757	9.8
43	757	757	759	9.8
44	759	759	761	9.9
45	761	761	763	9.9
46	763	763	765	9.9
47	765	765	767	10
48	767	767	769	10.1
49	769	770	771	10.1
50	772	772	774	10.2
51	774	774	776	10.2
52	776	776	778	10.3
53	778	778	780	10.4

Table A.1 Continued. Grade 3 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
54	780	780	782	10.4
55	782	783	785	10.5
56	785	785	787	10.6
57	787	787	789	10.6
58	789	789	792	10.7
59	791	792	794	10.8
60	794	794	796	10.9
61	796	797	799	11
62	798	799	801	11.1
63	801	801	804	11.1
64	803	804	806	11.2
65	806	806	809	11.3
66	808	809	811	11.5
67	811	812	814	11.6
68	813	814	817	11.7
69	816	817	820	11.8
70	818	820	822	12
71	821	823	825	12.1
72	824	826	828	12.3
73	827	829	831	12.5
74	830	832	835	12.7
75	833	835	838	12.9
76	836	839	841	13.1
77	839	842	845	13.4
78	842	846	849	13.7
79	846	850	850	14
80	849	850	850	14.3
81	850	850	850	14.3
82	850	850	850	14.3
83	850	850	850	14.3
84	850	850	850	14.3
85	850	850	850	14.3
86	850	850	850	14.3
87	850	850	850	14.3
88	850	850	850	14.3
89	850	850	850	14.3
90	850	850	850	14.3
91	850	850	850	14.3
92	850	850	850	14.3
93	850	850	850	14.3
94	850	850	850	14.3

Table A.2. Grade 3 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	658	657	658	15
8	665	664	665	15
9	670	670	671	15
10	675	675	676	14.6
11	680	680	681	13.8
12	684	684	685	13.1
13	688	688	689	12.6
14	692	692	693	12.2
15	695	695	696	11.8
16	698	698	699	11.5
17	701	701	702	11.3
18	704	704	705	11.1
19	707	707	708	10.9
20	710	710	711	10.8
21	712	712	714	10.6
22	715	715	716	10.5
23	717	717	719	10.4
24	720	720	721	10.4
25	722	722	724	10.3
26	725	725	726	10.2
27	727	727	728	10.2
28	729	729	731	10.1
29	731	731	733	10.1
30	734	734	735	10.1
31	736	736	737	10.1
32	738	738	740	10.1
33	740	740	742	10.1
34	742	743	744	10.1
35	744	745	746	10.2
36	747	747	749	10.2
37	749	749	751	10.3
38	751	751	753	10.3
39	753	754	755	10.4
40	755	756	758	10.4
41	758	758	760	10.5
42	760	760	762	10.6
43	762	763	764	10.7
44	764	765	767	10.8
45	767	767	769	10.9
46	769	770	772	11
47	771	772	774	11.1
48	774	775	776	11.2
49	776	777	779	11.3
50	778	779	781	11.4
51	781	782	784	11.5
52	783	785	787	11.6
53	786	787	789	11.7

Table A.2 Continued. Grade 3 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
54	788	790	792	11.8
55	791	792	795	11.8
56	793	795	797	11.9
57	796	798	800	12
58	799	801	803	12.1
59	801	803	806	12.2
60	804	806	808	12.3
61	806	809	811	12.4
62	809	812	814	12.5
63	812	815	817	12.5
64	814	818	820	12.6
65	817	820	823	12.7
66	820	823	826	12.8
67	823	826	829	12.9
68	825	829	832	13.1
69	828	833	835	13.2
70	831	836	838	13.3
71	834	839	841	13.5
72	837	842	845	13.6
73	840	845	848	13.8
74	843	848	850	14
75	846	850	850	14.2
76	849	850	850	14.4
77	850	850	850	14.4
78	850	850	850	14.4
79	850	850	850	14.4
80	850	850	850	14.4
81	850	850	850	14.4
82	850	850	850	14.4
83	850	850	850	14.4
84	850	850	850	14.4
85	850	850	850	14.4
86	850	850	850	14.4
87	850	850	850	14.4
88	850	850	850	14.4
89	850	850	850	14.4
90	850	850	850	14.4
91	850	850	850	14.4
92	850	850	850	14.4
93	850	850	850	14.4
94	850	850	850	14.4

Table A.3. Grade 3 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	652	653	654	15
6	659	660	661	15
7	665	666	667	15
8	670	671	672	14.2
9	674	675	676	13.4
10	678	680	680	12.8
11	682	683	684	12.2
12	686	687	688	11.8
13	689	690	691	11.4
14	692	693	694	11.1
15	695	696	697	10.9
16	698	698	699	10.6
17	700	701	702	10.4
18	703	703	705	10.2
19	705	706	707	10.1
20	708	708	709	9.9
21	710	710	712	9.8
22	712	713	714	9.7
23	714	715	716	9.6
24	716	717	718	9.5
25	719	719	720	9.5
26	721	721	722	9.4
27	723	723	724	9.3
28	725	725	726	9.3
29	727	727	728	9.3
30	729	729	730	9.3
31	731	731	732	9.2
32	733	733	734	9.2
33	734	735	736	9.2
34	736	737	738	9.3
35	738	739	740	9.3
36	740	741	742	9.3
37	742	743	744	9.3
38	744	745	746	9.4
39	746	746	748	9.4
40	748	748	750	9.5
41	750	750	752	9.5
42	752	752	754	9.6
43	754	754	756	9.7
44	756	757	758	9.8
45	758	759	760	9.8
46	760	761	762	9.9
47	762	763	765	10
48	765	765	767	10.1
49	767	767	769	10.2
50	769	770	771	10.4
51	771	772	774	10.5
52	774	774	776	10.6
53	776	777	779	10.7

Table A.3 Continued. Grade 3 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
54	778	779	781	10.9
55	781	782	784	11
56	783	784	786	11.1
57	786	787	789	11.3
58	788	790	792	11.4
59	791	792	795	11.5
60	793	795	797	11.6
61	796	798	800	11.8
62	799	801	803	11.9
63	802	804	806	12
64	804	807	809	12.1
65	807	810	813	12.2
66	810	813	816	12.3
67	813	816	819	12.4
68	816	819	822	12.5
69	818	823	825	12.6
70	821	826	828	12.7
71	824	829	831	12.9
72	827	832	834	13
73	830	835	838	13.1
74	833	838	841	13.2
75	836	841	844	13.4
76	839	845	847	13.6
77	842	848	850	13.7
78	845	850	850	13.9
79	849	850	850	14.2
80	850	850	850	14.2
81	850	850	850	14.2
82	850	850	850	14.2
83	850	850	850	14.2
84	850	850	850	14.2
85	850	850	850	14.2
86	850	850	850	14.2
87	850	850	850	14.2
88	850	850	850	14.2
89	850	850	850	14.2
90	850	850	850	14.2
91	850	850	850	14.2
92	850	850	850	14.2
93	850	850	850	14.2
94	850	850	850	14.2

Table A.4. Grade 4 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	652	654	653	15
7	661	663	662	15
8	668	670	669	15
9	674	676	675	15
10	679	681	680	14.7
11	684	685	685	13.9
12	688	690	689	13.2
13	692	693	693	12.6
14	695	697	696	12.1
15	699	700	699	11.7
16	702	703	702	11.3
17	705	706	705	11
18	707	709	708	10.8
19	710	711	711	10.5
20	712	714	713	10.3
21	715	716	715	10.1
22	717	718	718	9.9
23	719	720	720	9.8
24	721	722	722	9.6
25	723	724	724	9.5
26	725	726	726	9.4
27	727	728	728	9.3
28	729	730	730	9.2
29	731	732	732	9.1
30	733	734	733	9.1
31	734	735	735	9
32	736	737	737	8.9
33	738	739	738	8.9
34	740	740	740	8.8
35	741	742	742	8.8
36	743	744	743	8.8
37	744	745	745	8.7
38	746	747	747	8.7
39	748	748	748	8.7
40	749	750	750	8.7
41	751	751	751	8.7
42	752	753	753	8.6
43	754	754	754	8.6
44	755	756	756	8.6
45	757	757	757	8.6
46	758	759	759	8.6
47	760	760	760	8.6
48	762	762	762	8.6
49	763	763	763	8.6
50	765	765	765	8.7
51	766	766	766	8.7
52	768	768	768	8.7
53	769	769	769	8.7

Table A.4 Continued. Grade 4 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
54	771	771	771	8.7
55	772	772	772	8.7
56	774	774	774	8.8
57	775	775	775	8.8
58	777	777	777	8.8
59	778	778	778	8.9
60	780	780	780	8.9
61	781	781	781	8.9
62	783	783	783	9
63	785	784	785	9
64	786	786	786	9.1
65	788	788	788	9.1
66	789	789	789	9.2
67	791	791	791	9.2
68	793	792	793	9.3
69	794	794	794	9.4
70	796	796	796	9.4
71	798	798	798	9.5
72	799	799	800	9.6
73	801	801	801	9.7
74	803	803	803	9.8
75	805	805	805	9.9
76	807	807	807	10
77	808	809	809	10.1
78	810	811	811	10.2
79	812	813	813	10.3
80	814	815	815	10.5
81	816	817	817	10.6
82	818	819	820	10.8
83	820	821	822	11
84	822	824	824	11.2
85	824	826	827	11.4
86	827	828	829	11.6
87	829	831	832	11.8
88	831	834	834	12.1
89	834	836	837	12.4
90	837	839	840	12.7
91	839	842	843	13.1
92	842	845	846	13.5
93	845	848	849	14
94	848	850	850	14.5
95	850	850	850	14.5
96	850	850	850	14.5
97	850	850	850	14.5
98	850	850	850	14.5
99	850	850	850	14.5
100	850	850	850	14.5
101	850	850	850	14.5
102	850	850	850	14.5
103	850	850	850	14.5
104	850	850	850	14.5
105	850	850	850	14.5
106	850	850	850	14.5

Table A.5. Grade 4 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	658	658	657	15
6	665	664	663	15
7	670	670	669	14
8	675	675	674	13.1
9	679	679	678	12.4
10	683	683	682	11.8
11	686	686	686	11.3
12	689	690	689	10.9
13	692	693	692	10.6
14	695	695	695	10.3
15	698	698	697	10
16	700	701	700	9.8
17	702	703	702	9.6
18	705	705	705	9.4
19	707	707	707	9.3
20	709	710	709	9.1
21	711	712	711	9
22	713	714	713	8.9
23	715	715	715	8.8
24	717	717	717	8.7
25	718	719	719	8.6
26	720	721	721	8.6
27	722	723	722	8.5
28	724	724	724	8.5
29	725	726	726	8.4
30	727	728	727	8.4
31	729	729	729	8.3
32	730	731	731	8.3
33	732	733	732	8.3
34	733	734	734	8.3
35	735	736	736	8.2
36	737	737	737	8.2
37	738	739	739	8.2
38	740	740	740	8.2
39	741	742	742	8.2
40	743	743	743	8.2
41	744	745	745	8.2
42	746	747	746	8.2
43	747	748	748	8.2
44	749	750	749	8.2
45	750	751	751	8.3
46	752	753	752	8.3
47	753	754	754	8.3
48	755	756	755	8.3
49	756	757	757	8.3
50	758	759	759	8.4
51	759	760	760	8.4
52	761	762	762	8.4
53	762	763	763	8.4

Table A.5 Continued. Grade 4 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
54	764	765	765	8.5
55	765	766	766	8.5
56	767	768	768	8.5
57	769	769	769	8.6
58	770	771	771	8.6
59	772	773	773	8.6
60	773	774	774	8.7
61	775	776	776	8.7
62	777	777	777	8.7
63	778	779	779	8.8
64	780	781	781	8.8
65	781	782	782	8.9
66	783	784	784	8.9
67	785	786	786	9
68	786	787	788	9
69	788	789	789	9.1
70	790	791	791	9.1
71	792	793	793	9.2
72	793	795	795	9.3
73	795	796	797	9.3
74	797	798	799	9.4
75	799	800	801	9.5
76	801	802	802	9.6
77	802	804	804	9.7
78	804	806	807	9.7
79	806	808	809	9.8
80	808	810	811	10
81	810	812	813	10.1
82	812	815	815	10.2
83	814	817	817	10.3
84	816	819	820	10.5
85	818	821	822	10.6
86	821	824	824	10.8
87	823	826	827	11
88	825	829	829	11.2
89	827	831	832	11.4
90	830	834	835	11.7
91	832	837	837	12
92	835	840	840	12.4
93	838	843	843	12.7
94	841	846	846	13.2
95	844	849	850	13.7
96	848	850	850	14.4
97	850	850	850	14.4
98	850	850	850	14.4
99	850	850	850	14.4
100	850	850	850	14.4
101	850	850	850	14.4
102	850	850	850	14.4
103	850	850	850	14.4
104	850	850	850	14.4
105	850	850	850	14.4
106	850	850	850	14.4

Table A.6. Grade 4 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	650	650	650	15
8	658	657	656	15
9	664	663	662	15
10	670	669	668	14.8
11	675	674	673	14
12	679	678	678	13.3
13	683	682	682	12.8
14	687	686	685	12.3
15	690	690	689	11.9
16	694	693	692	11.5
17	697	696	695	11.2
18	700	699	698	10.9
19	702	701	701	10.7
20	705	704	703	10.5
21	707	707	706	10.3
22	710	709	708	10.1
23	712	711	711	10
24	714	713	713	9.8
25	717	716	715	9.7
26	719	718	717	9.6
27	721	720	719	9.5
28	723	722	721	9.4
29	725	724	723	9.4
30	727	726	725	9.3
31	729	728	727	9.3
32	730	730	729	9.2
33	732	731	731	9.2
34	734	733	733	9.2
35	736	735	735	9.1
36	738	737	737	9.1
37	739	739	738	9.1
38	741	740	740	9.1
39	743	742	742	9.1
40	745	744	744	9.1
41	747	746	745	9.1
42	748	747	747	9.1
43	750	749	749	9.1
44	752	751	751	9.1
45	753	752	752	9.1
46	755	754	754	9.1
47	757	756	756	9.1
48	759	758	758	9.2
49	760	759	759	9.2
50	762	761	761	9.2
51	764	763	763	9.2
52	766	765	765	9.3
53	767	766	766	9.3

Table A.6 Continued. Grade 4 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
54	769	768	768	9.3
55	771	770	770	9.3
56	773	772	772	9.4
57	775	774	774	9.4
58	776	775	775	9.5
59	778	777	777	9.5
60	780	779	779	9.5
61	782	781	781	9.6
62	784	783	783	9.6
63	786	785	785	9.7
64	788	787	787	9.7
65	789	789	789	9.8
66	791	791	791	9.8
67	793	793	793	9.9
68	795	795	795	9.9
69	797	797	797	10
70	799	799	799	10
71	801	801	801	10.1
72	803	803	804	10.1
73	805	805	806	10.2
74	807	808	808	10.2
75	809	810	810	10.3
76	811	812	812	10.3
77	813	814	815	10.4
78	815	817	817	10.4
79	817	819	819	10.5
80	820	821	822	10.5
81	822	823	824	10.6
82	824	826	826	10.7
83	826	828	829	10.8
84	828	831	831	10.9
85	830	833	834	11
86	832	835	836	11.1
87	834	838	839	11.3
88	837	840	841	11.5
89	839	843	844	11.7
90	841	846	847	11.9
91	844	849	849	12.2
92	846	850	850	12.5
93	849	850	850	12.9
94	850	850	850	12.9
95	850	850	850	12.9
96	850	850	850	12.9
97	850	850	850	12.9
98	850	850	850	12.9
99	850	850	850	12.9
100	850	850	850	12.9
101	850	850	850	12.9
102	850	850	850	12.9
103	850	850	850	12.9
104	850	850	850	12.9
105	850	850	850	12.9
106	850	850	850	12.9

Table A.7. Grade 5 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	658	654	656	15
6	666	662	665	15
7	673	669	672	15
8	679	675	677	15
9	684	681	682	14.3
10	688	685	687	13.4
11	692	689	691	12.7
12	696	693	695	12.1
13	699	696	698	11.6
14	702	699	701	11.2
15	705	702	704	10.8
16	707	705	706	10.5
17	710	708	709	10.2
18	712	710	711	9.9
19	714	712	714	9.7
20	717	715	716	9.5
21	719	717	718	9.3
22	721	719	720	9.1
23	723	721	722	9
24	724	723	724	8.9
25	726	724	725	8.8
26	728	726	727	8.7
27	730	728	729	8.6
28	731	730	731	8.5
29	733	731	732	8.4
30	735	733	734	8.3
31	736	735	735	8.3
32	738	736	737	8.2
33	740	738	739	8.2
34	741	740	740	8.2
35	743	741	742	8.1
36	744	743	743	8.1
37	746	744	745	8.1
38	747	746	746	8.1
39	749	747	748	8.1
40	750	749	749	8.1
41	752	750	751	8.1
42	753	752	752	8.1
43	755	753	754	8.1
44	756	755	755	8.1
45	758	756	757	8.1
46	759	758	758	8.1
47	761	759	760	8.1
48	762	761	761	8.2
49	764	762	763	8.2
50	765	764	764	8.2
51	767	766	766	8.2
52	768	767	767	8.3
53	770	769	769	8.3

Table A.7 Continued. Grade 5 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
54	771	770	770	8.4
55	773	772	772	8.4
56	774	774	773	8.4
57	776	775	775	8.5
58	777	777	777	8.6
59	779	778	778	8.6
60	781	780	780	8.7
61	782	782	782	8.7
62	784	784	783	8.8
63	786	785	785	8.9
64	787	787	787	8.9
65	789	789	789	9
66	791	791	790	9.1
67	792	793	792	9.2
68	794	795	794	9.2
69	796	797	796	9.3
70	798	799	798	9.4
71	800	801	800	9.5
72	801	803	802	9.6
73	803	805	804	9.7
74	805	807	806	9.8
75	807	809	808	9.9
76	809	812	811	10
77	811	814	813	10.1
78	813	816	815	10.2
79	815	819	817	10.3
80	817	821	820	10.5
81	820	824	822	10.6
82	822	826	825	10.8
83	824	829	827	10.9
84	826	831	830	11.1
85	828	834	832	11.2
86	831	836	835	11.4
87	833	839	837	11.7
88	836	842	840	11.9
89	838	845	843	12.2
90	841	847	846	12.5
91	844	850	848	12.8
92	846	850	850	13.2
93	849	850	850	13.6
94	850	850	850	13.6
95	850	850	850	13.6
96	850	850	850	13.6
97	850	850	850	13.6
98	850	850	850	13.6
99	850	850	850	13.6
100	850	850	850	13.6
101	850	850	850	13.6
102	850	850	850	13.6
103	850	850	850	13.6
104	850	850	850	13.6
105	850	850	850	13.6
106	850	850	850	13.6

Table A.8. Grade 5 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	660	658	660	15
7	667	666	668	15
8	674	672	674	15
9	679	678	680	14.7
10	684	682	684	13.8
11	688	687	688	13
12	692	691	692	12.4
13	696	694	696	11.9
14	699	698	699	11.5
15	702	701	702	11.1
16	705	703	705	10.8
17	708	706	708	10.5
18	710	709	710	10.3
19	713	711	713	10.1
20	715	714	715	9.9
21	717	716	717	9.7
22	720	718	719	9.6
23	722	721	721	9.5
24	724	723	724	9.4
25	726	725	726	9.3
26	728	727	728	9.2
27	730	729	730	9.1
28	732	731	731	9.1
29	734	733	733	9
30	736	734	735	9
31	738	736	737	8.9
32	739	738	739	8.9
33	741	740	741	8.8
34	743	742	742	8.8
35	745	744	744	8.8
36	747	745	746	8.8
37	748	747	748	8.8
38	750	749	749	8.8
39	752	751	751	8.8
40	754	752	753	8.8
41	755	754	754	8.8
42	757	756	756	8.8
43	759	758	758	8.8
44	761	759	759	8.8
45	762	761	761	8.8
46	764	763	763	8.8
47	766	765	765	8.8
48	768	766	766	8.9
49	769	768	768	8.9
50	771	770	770	8.9
51	773	772	772	8.9
52	775	774	773	9
53	776	775	775	9

Table A.8 Continued. Grade 5 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
54	778	777	777	9.1
55	780	779	779	9.1
56	782	781	781	9.1
57	784	783	782	9.2
58	785	785	784	9.2
59	787	787	786	9.3
60	789	789	788	9.3
61	791	791	790	9.4
62	793	793	792	9.4
63	795	795	794	9.5
64	797	797	796	9.5
65	799	799	798	9.6
66	800	801	800	9.7
67	802	803	802	9.7
68	804	805	804	9.8
69	806	807	806	9.9
70	808	809	808	9.9
71	810	812	811	10
72	812	814	813	10.1
73	814	816	815	10.2
74	816	819	817	10.3
75	818	821	820	10.3
76	820	823	822	10.4
77	823	826	824	10.5
78	825	828	827	10.6
79	827	830	829	10.7
80	829	833	831	10.8
81	831	835	834	11
82	833	838	836	11.1
83	836	840	838	11.2
84	838	842	841	11.4
85	840	845	843	11.6
86	842	847	846	11.8
87	845	850	848	12
88	847	850	850	12.2
89	850	850	850	12.5
90	850	850	850	12.5
91	850	850	850	12.5
92	850	850	850	12.5
93	850	850	850	12.5
94	850	850	850	12.5
95	850	850	850	12.5
96	850	850	850	12.5
97	850	850	850	12.5
98	850	850	850	12.5
99	850	850	850	12.5
100	850	850	850	12.5
101	850	850	850	12.5
102	850	850	850	12.5
103	850	850	850	12.5
104	850	850	850	12.5
105				
106				

Table A.9. Grade 5 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	652	650	652	15
5	662	660	662	15
6	670	669	671	15
7	677	675	677	15
8	683	681	683	15
9	688	686	688	14.1
10	692	691	692	13.2
11	696	695	696	12.5
12	700	698	700	11.9
13	703	701	703	11.4
14	706	704	706	11
15	709	707	709	10.6
16	711	710	711	10.3
17	714	712	714	10.1
18	716	715	716	9.8
19	718	717	718	9.6
20	720	719	720	9.5
21	723	721	722	9.3
22	725	723	724	9.2
23	727	725	726	9.1
24	728	727	728	8.9
25	730	729	730	8.8
26	732	731	732	8.8
27	734	733	733	8.7
28	735	734	735	8.6
29	737	736	737	8.5
30	739	738	738	8.5
31	740	739	740	8.4
32	742	741	741	8.4
33	744	742	743	8.4
34	745	744	745	8.3
35	747	746	746	8.3
36	748	747	748	8.3
37	750	749	749	8.3
38	751	750	751	8.3
39	753	752	752	8.3
40	754	753	753	8.2
41	756	755	755	8.2
42	757	756	756	8.2
43	759	758	758	8.3
44	760	759	759	8.3
45	762	761	761	8.3
46	763	762	762	8.3
47	765	764	764	8.3
48	766	765	765	8.3
49	768	767	767	8.4
50	769	768	768	8.4
51	771	770	770	8.4
52	772	771	771	8.5
53	774	773	773	8.5

Table A.9 Continued. Grade 5 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
54	776	774	774	8.5
55	777	776	776	8.6
56	779	778	777	8.6
57	780	779	779	8.7
58	782	781	780	8.7
59	783	782	782	8.8
60	785	784	784	8.8
61	787	786	785	8.9
62	788	787	787	9
63	790	789	789	9
64	792	791	790	9.1
65	793	793	792	9.2
66	795	795	794	9.3
67	797	796	796	9.3
68	799	798	798	9.4
69	801	800	799	9.5
70	802	802	801	9.6
71	804	804	803	9.7
72	806	806	805	9.8
73	808	808	807	10
74	810	810	809	10.1
75	812	813	811	10.2
76	814	815	814	10.4
77	816	817	816	10.5
78	818	819	818	10.7
79	821	822	820	10.9
80	823	824	823	11
81	825	827	825	11.3
82	828	829	828	11.5
83	830	832	830	11.7
84	833	835	833	12
85	835	838	836	12.3
86	838	841	839	12.6
87	841	844	842	13
88	844	847	845	13.4
89	847	850	849	13.8
90	850	850	850	13.8
91	850	850	850	13.8
92	850	850	850	13.8
93	850	850	850	13.8
94	850	850	850	13.8
95	850	850	850	13.8
96	850	850	850	13.8
97	850	850	850	13.8
98	850	850	850	13.8
99	850	850	850	13.8
100	850	850	850	13.8
101	850	850	850	13.8
102	850	850	850	13.8
103	850	850	850	13.8
104	850	850	850	13.8
105				
106				

Table A.10. Grade 6 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	653	653	653	15
5	661	662	662	15
6	668	668	668	15
7	673	674	674	14.1
8	678	679	679	13.2
9	683	683	683	12.5
10	686	687	687	11.8
11	690	691	690	11.3
12	693	694	693	10.8
13	696	697	696	10.4
14	699	699	699	10
15	701	702	702	9.7
16	704	704	704	9.4
17	706	707	706	9.1
18	708	709	708	8.9
19	710	711	710	8.7
20	712	713	712	8.5
21	714	714	714	8.3
22	715	716	716	8.1
23	717	718	717	8
24	719	719	719	7.8
25	720	721	721	7.7
26	722	723	722	7.6
27	723	724	724	7.5
28	725	725	725	7.4
29	726	727	726	7.3
30	727	728	728	7.2
31	729	730	729	7.1
32	730	731	730	7.1
33	731	732	732	7
34	733	733	733	7
35	734	735	734	6.9
36	735	736	735	6.8
37	736	737	736	6.8
38	737	738	738	6.8
39	739	739	739	6.7
40	740	740	740	6.7
41	741	742	741	6.7
42	742	743	742	6.6
43	743	744	743	6.6
44	744	745	744	6.6
45	745	746	745	6.6
46	746	747	746	6.6
47	747	748	747	6.6
48	748	749	749	6.5
49	749	750	750	6.5
50	750	751	751	6.5
51	752	752	752	6.5
52	753	753	753	6.5
53	754	754	754	6.5
54	755	756	755	6.6
55	756	757	756	6.6
56	757	758	757	6.6
57	758	759	758	6.6
58	759	760	759	6.6
59	760	761	760	6.6
60	761	762	761	6.6
61	762	763	762	6.7

Table A.10 Continued. Grade 6 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
62	763	764	763	6.7
63	764	765	764	6.7
64	765	766	765	6.7
65	766	767	767	6.8
66	767	768	768	6.8
67	769	770	769	6.9
68	770	771	770	6.9
69	771	772	771	6.9
70	772	773	772	7
71	773	774	773	7
72	774	775	774	7.1
73	775	776	776	7.1
74	777	778	777	7.2
75	778	779	778	7.2
76	779	780	779	7.3
77	780	781	780	7.3
78	781	783	782	7.4
79	783	784	783	7.5
80	784	785	784	7.5
81	785	786	786	7.6
82	786	788	787	7.6
83	788	789	788	7.7
84	789	790	790	7.8
85	790	792	791	7.9
86	792	793	792	8
87	793	795	794	8
88	794	796	795	8.1
89	796	798	797	8.2
90	797	799	798	8.3
91	799	801	800	8.4
92	800	802	801	8.5
93	802	804	803	8.6
94	803	806	805	8.8
95	805	807	806	8.9
96	806	809	808	9
97	808	811	810	9.2
98	810	813	812	9.4
99	812	814	813	9.5
100	813	816	815	9.7
101	815	818	817	9.9
102	817	821	820	10.2
103	819	823	822	10.4
104	822	825	824	10.7
105	824	828	827	11
106	826	830	829	11.4
107	829	833	832	11.8
108	831	836	835	12.3
109	834	839	838	12.8
110	838	842	841	13.4
111	841	846	845	14.1
112	845	850	849	15
113	850	850	850	15
114	850	850	850	15
115	850	850	850	15
116	850	850	850	15
117	850	850	850	15
118	850	850	850	15
119	850	850	850	15
120	850	850	850	15
121	850	850	850	15

Table A.11. Grade 6 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	654	653	653	15
5	662	661	661	15
6	668	668	667	15
7	674	673	673	14.4
8	678	678	677	13.3
9	682	682	682	12.5
10	686	685	685	11.8
11	689	689	688	11.2
12	692	692	691	10.7
13	694	694	694	10.3
14	697	697	697	9.9
15	699	699	699	9.6
16	701	701	701	9.3
17	704	704	703	9
18	705	706	705	8.8
19	707	707	707	8.6
20	709	709	709	8.4
21	711	711	711	8.2
22	712	713	712	8.1
23	714	714	714	7.9
24	716	716	715	7.8
25	717	717	717	7.7
26	719	719	718	7.6
27	720	720	720	7.5
28	721	722	721	7.4
29	723	723	723	7.3
30	724	724	724	7.3
31	725	726	725	7.2
32	727	727	727	7.1
33	728	728	728	7.1
34	729	730	729	7
35	730	731	730	7
36	731	732	731	6.9
37	733	733	733	6.9
38	734	734	734	6.9
39	735	736	735	6.9
40	736	737	736	6.8
41	737	738	737	6.8
42	738	739	738	6.8
43	739	740	740	6.8
44	740	741	741	6.8
45	742	742	742	6.8
46	743	743	743	6.8
47	744	745	744	6.8
48	745	746	745	6.8
49	746	747	746	6.8
50	747	748	747	6.8
51	748	749	748	6.8
52	749	750	749	6.8
53	750	751	751	6.8
54	751	752	752	6.8
55	753	753	753	6.8
56	754	755	754	6.9
57	755	756	755	6.9
58	756	757	756	6.9
59	757	758	757	6.9
60	758	759	758	7
61	759	760	760	7

Table A.11 Continued. Grade 6 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
62	760	761	761	7
63	762	763	762	7
64	763	764	763	7.1
65	764	765	764	7.1
66	765	766	765	7.1
67	766	767	767	7.2
68	767	769	768	7.2
69	769	770	769	7.3
70	770	771	770	7.3
71	771	772	771	7.4
72	772	773	773	7.4
73	774	775	774	7.4
74	775	776	775	7.5
75	776	777	777	7.5
76	777	779	778	7.6
77	779	780	779	7.6
78	780	781	780	7.7
79	781	783	782	7.8
80	783	784	783	7.8
81	784	785	785	7.9
82	785	787	786	7.9
83	787	788	787	8
84	788	790	789	8.1
85	789	791	790	8.2
86	791	793	792	8.2
87	792	794	793	8.3
88	794	796	795	8.4
89	795	797	796	8.5
90	797	799	798	8.6
91	798	801	800	8.7
92	800	802	801	8.8
93	801	804	803	8.9
94	803	806	805	9
95	805	807	806	9.1
96	806	809	808	9.2
97	808	811	810	9.4
98	810	813	812	9.5
99	812	815	814	9.7
100	813	817	816	9.9
101	815	819	818	10.1
102	817	821	820	10.3
103	819	823	822	10.5
104	821	825	824	10.8
105	824	828	826	11.1
106	826	830	829	11.4
107	828	833	832	11.7
108	831	835	834	12.2
109	834	838	837	12.6
110	837	842	840	13.2
111	840	845	844	13.8
112	844	849	848	14.6
113	848	850	850	15
114	850	850	850	15
115	850	850	850	15
116	850	850	850	15
117	850	850	850	15
118	850	850	850	15
119	850	850	850	15
120	850	850	850	15
121	850	850	850	15

Table A.12. Grade 6 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	651	650	650	15
5	660	658	658	15
6	666	665	665	15
7	672	671	671	13.9
8	676	676	676	12.9
9	681	680	680	12.1
10	684	684	684	11.4
11	687	687	687	10.8
12	690	690	690	10.4
13	693	693	693	9.9
14	696	696	695	9.6
15	698	698	698	9.3
16	700	700	700	9
17	702	703	702	8.7
18	704	705	704	8.5
19	706	706	706	8.3
20	708	708	708	8.1
21	710	710	710	8
22	711	712	711	7.8
23	713	713	713	7.7
24	715	715	715	7.6
25	716	717	716	7.5
26	718	718	718	7.4
27	719	719	719	7.3
28	720	721	720	7.2
29	722	722	722	7.1
30	723	724	723	7.1
31	724	725	724	7
32	726	726	726	7
33	727	728	727	6.9
34	728	729	728	6.9
35	729	730	729	6.8
36	731	731	731	6.8
37	732	732	732	6.8
38	733	734	733	6.8
39	734	735	734	6.7
40	735	736	735	6.7
41	736	737	737	6.7
42	738	738	738	6.7
43	739	739	739	6.7
44	740	741	740	6.7
45	741	742	741	6.7
46	742	743	742	6.7
47	743	744	743	6.7
48	744	745	745	6.7
49	745	746	746	6.7
50	746	747	747	6.7
51	748	749	748	6.7
52	749	750	749	6.7
53	750	751	750	6.7
54	751	752	751	6.8
55	752	753	752	6.8
56	753	754	754	6.8
57	754	755	755	6.8
58	755	756	756	6.8
59	757	758	757	6.9
60	758	759	758	6.9
61	759	760	759	6.9

Table A.12 Continued. Grade 6 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
62	760	761	760	7
63	761	762	762	7
64	762	764	763	7
65	763	765	764	7.1
66	765	766	765	7.1
67	766	767	767	7.2
68	767	769	768	7.2
69	768	770	769	7.3
70	770	771	770	7.3
71	771	772	772	7.4
72	772	774	773	7.4
73	773	775	774	7.5
74	775	776	776	7.6
75	776	778	777	7.6
76	777	779	778	7.7
77	779	781	780	7.8
78	780	782	781	7.8
79	781	784	783	7.9
80	783	785	784	8
81	784	787	786	8.1
82	786	788	787	8.2
83	787	790	789	8.2
84	789	791	790	8.3
85	790	793	792	8.4
86	792	795	794	8.5
87	793	796	795	8.6
88	795	798	797	8.7
89	797	800	799	8.8
90	798	802	801	8.9
91	800	803	803	9
92	802	805	804	9.1
93	803	807	806	9.3
94	805	809	808	9.4
95	807	811	810	9.5
96	809	813	812	9.7
97	811	815	814	9.8
98	812	817	816	10
99	814	819	818	10.2
100	816	822	821	10.4
101	818	824	823	10.6
102	821	826	825	10.8
103	823	829	828	11.1
104	825	831	830	11.4
105	827	834	833	11.7
106	830	837	836	12.1
107	833	840	839	12.5
108	836	843	842	13
109	839	847	845	13.5
110	842	850	849	14.2
111	846	850	850	14.9
112	850	850	850	15
113	850	850	850	15
114	850	850	850	15
115	850	850	850	15
116	850	850	850	15
117	850	850	850	15
118	850	850	850	15
119	850	850	850	15
120	850	850	850	15
121	850	850	850	15

Table A.13. Grade 7 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	654	651	652	15
8	660	657	658	15
9	665	663	664	15
10	670	668	668	15
11	674	672	673	14.5
12	678	676	677	13.8
13	682	680	680	13.2
14	685	683	683	12.7
15	688	686	686	12.2
16	691	689	689	11.8
17	694	692	692	11.5
18	696	694	695	11.2
19	698	697	697	10.9
20	701	699	699	10.6
21	703	701	702	10.4
22	705	704	704	10.2
23	707	706	706	10
24	709	708	708	9.8
25	711	710	710	9.7
26	713	712	712	9.6
27	715	714	713	9.4
28	716	715	715	9.3
29	718	717	717	9.2
30	720	719	719	9.1
31	721	721	720	9
32	723	722	722	9
33	725	724	724	8.9
34	726	725	725	8.8
35	728	727	727	8.8
36	729	729	728	8.7
37	731	730	730	8.7
38	732	732	731	8.6
39	734	733	733	8.6
40	735	735	734	8.5
41	737	736	736	8.5
42	738	738	737	8.5
43	740	739	739	8.5
44	741	741	740	8.4
45	742	742	742	8.4
46	744	743	743	8.4
47	745	745	744	8.4
48	747	746	746	8.4
49	748	748	747	8.4
50	749	749	749	8.4
51	751	750	750	8.4
52	752	752	751	8.4
53	754	753	753	8.4
54	755	755	754	8.4
55	756	756	755	8.4
56	758	757	757	8.4
57	759	759	758	8.4
58	761	760	759	8.4
59	762	762	761	8.4
60	763	763	762	8.4
61	765	764	764	8.4

Table A.13 Continued. Grade 7 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
62	766	766	765	8.4
63	767	767	766	8.4
64	769	768	768	8.4
65	770	770	769	8.4
66	771	771	770	8.4
67	773	773	772	8.5
68	774	774	773	8.5
69	776	775	775	8.5
70	777	777	776	8.5
71	778	778	777	8.6
72	780	780	779	8.6
73	781	781	780	8.6
74	783	783	781	8.7
75	784	784	783	8.7
76	785	785	784	8.7
77	787	787	786	8.8
78	788	788	787	8.8
79	790	790	789	8.9
80	791	791	790	8.9
81	792	793	792	9
82	794	794	793	9.1
83	795	796	795	9.1
84	797	797	796	9.2
85	798	799	798	9.3
86	800	801	799	9.4
87	802	802	801	9.5
88	803	804	803	9.6
89	805	806	804	9.7
90	806	808	806	9.8
91	808	809	808	9.9
92	810	811	810	10
93	812	813	812	10.2
94	813	815	814	10.3
95	815	817	815	10.5
96	817	819	818	10.7
97	819	821	820	10.9
98	821	823	822	11.1
99	823	826	824	11.3
100	825	828	826	11.6
101	828	830	829	11.8
102	830	833	831	12.1
103	832	836	834	12.4
104	835	839	837	12.8
105	838	842	840	13.1
106	840	845	843	13.6
107	844	848	846	14.1
108	847	850	850	14.6
109	850	850	850	14.6
110	850	850	850	14.6
111	850	850	850	14.6
112	850	850	850	14.6
113	850	850	850	14.6
114	850	850	850	14.6
115	850	850	850	14.6
116	850	850	850	14.6
117	850	850	850	14.6
118	850	850	850	14.6
119	850	850	850	14.6
120	850	850	850	14.6
121	850	850	850	14.6

Table A.14. Grade 7 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	657	655	656	15
8	663	661	662	15
9	669	667	668	15
10	674	672	672	15
11	678	676	677	14.8
12	682	680	681	14
13	686	684	684	13.4
14	689	687	688	12.8
15	692	690	691	12.4
16	695	693	694	11.9
17	698	696	696	11.5
18	700	699	699	11.2
19	703	701	701	10.8
20	705	703	704	10.5
21	707	706	706	10.3
22	709	708	708	10
23	711	710	710	9.8
24	713	712	712	9.6
25	715	714	714	9.4
26	717	716	715	9.2
27	718	717	717	9.1
28	720	719	719	8.9
29	722	721	721	8.8
30	723	722	722	8.7
31	725	724	724	8.5
32	726	725	725	8.4
33	728	727	727	8.3
34	729	728	728	8.2
35	731	730	729	8.2
36	732	731	731	8.1
37	733	732	732	8
38	735	734	733	7.9
39	736	735	735	7.9
40	737	736	736	7.8
41	739	738	737	7.8
42	740	739	739	7.7
43	741	740	740	7.7
44	742	742	741	7.7
45	744	743	742	7.7
46	745	744	744	7.6
47	746	745	745	7.6
48	747	746	746	7.6
49	748	748	747	7.6
50	750	749	748	7.6
51	751	750	750	7.6
52	752	751	751	7.6
53	753	752	752	7.6
54	754	754	753	7.6
55	756	755	754	7.6
56	757	756	755	7.6
57	758	757	757	7.7
58	759	759	758	7.7
59	760	760	759	7.7
60	762	761	760	7.7
61	763	762	761	7.8

Table A.14 Continued. Grade 7 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
62	758	756	756	7.8
63	759	758	757	7.8
64	760	759	758	7.9
65	762	760	760	7.9
66	763	762	761	8
67	765	763	762	8
68	766	765	764	8
69	768	766	765	8.1
70	769	768	767	8.1
71	771	769	768	8.2
72	772	771	770	8.3
73	773	772	771	8.3
74	775	774	773	8.4
75	777	775	774	8.4
76	778	777	776	8.5
77	780	778	777	8.6
78	781	780	779	8.7
79	783	781	780	8.7
80	784	783	782	8.8
81	786	785	784	8.9
82	787	786	785	9
83	789	788	787	9.1
84	791	790	789	9.2
85	792	791	790	9.3
86	794	793	792	9.4
87	796	795	794	9.5
88	798	797	796	9.6
89	799	799	797	9.7
90	801	800	799	9.8
91	803	802	801	10
92	805	804	803	10.1
93	806	806	805	10.3
94	808	808	807	10.4
95	810	810	809	10.6
96	812	812	811	10.7
97	814	814	813	10.9
98	816	816	815	11.1
99	818	818	817	11.3
100	820	821	819	11.6
101	822	823	821	11.8
102	824	825	823	12.1
103	827	827	826	12.4
104	829	830	828	12.8
105	831	832	831	13.2
106	834	835	833	13.6
107	836	838	836	14.1
108	839	841	839	14.7
109	842	844	842	15
110	845	847	845	15
111	849	850	849	15
112	850	850	850	15
113	850	850	850	15
114	850	850	850	15
115	850	850	850	15
116	850	850	850	15
117	850	850	850	15
118	850	850	850	15
119	850	850	850	15
120	850	850	850	15
121	850	850	850	15

Table A.15. Grade 7 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	650	650	650	15
8	655	653	654	15
9	660	658	659	15
10	665	663	664	14.4
11	669	667	668	13.7
12	673	671	671	13
13	676	674	675	12.4
14	679	678	678	12
15	682	681	681	11.5
16	685	683	684	11.1
17	688	686	686	10.8
18	690	688	689	10.5
19	693	691	691	10.2
20	695	693	693	10
21	697	695	695	9.8
22	699	697	697	9.6
23	701	699	699	9.4
24	703	701	701	9.3
25	705	703	703	9.1
26	706	705	705	9
27	708	706	706	8.9
28	710	708	708	8.8
29	711	710	710	8.7
30	713	711	711	8.6
31	715	713	713	8.5
32	716	715	714	8.4
33	718	716	716	8.4
34	719	718	717	8.3
35	721	719	719	8.3
36	722	721	720	8.2
37	724	722	722	8.2
38	725	723	723	8.1
39	726	725	725	8.1
40	728	726	726	8.1
41	729	728	727	8.1
42	731	729	729	8
43	732	730	730	8
44	733	732	731	8
45	735	733	733	8
46	736	734	734	8
47	737	736	735	8
48	739	737	737	8
49	740	739	738	8
50	741	740	739	8
51	743	741	741	8
52	744	743	742	8
53	745	744	743	8
54	747	745	745	8
55	748	747	746	8
56	750	748	747	8
57	751	749	749	8.1
58	752	751	750	8.1
59	754	752	751	8.1
60	755	753	753	8.1
61	756	755	754	8.2

Table A.15 Continued. Grade 7 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
62	758	756	756	8.2
63	759	758	757	8.2
64	760	759	758	8.2
65	762	760	760	8.3
66	763	762	761	8.3
67	765	763	762	8.3
68	766	765	764	8.4
69	768	766	765	8.4
70	769	768	767	8.5
71	771	769	768	8.5
72	772	771	770	8.6
73	773	772	771	8.6
74	775	774	773	8.7
75	777	775	774	8.7
76	778	777	776	8.8
77	780	778	777	8.8
78	781	780	779	8.9
79	783	781	780	8.9
80	784	783	782	9
81	786	785	784	9
82	787	786	785	9.1
83	789	788	787	9.2
84	791	790	789	9.2
85	792	791	790	9.3
86	794	793	792	9.4
87	796	795	794	9.5
88	798	797	796	9.5
89	799	799	797	9.6
90	801	800	799	9.7
91	803	802	801	9.8
92	805	804	803	9.9
93	806	806	805	10
94	808	808	807	10.1
95	810	810	809	10.2
96	812	812	811	10.3
97	814	814	813	10.4
98	816	816	815	10.6
99	818	818	817	10.7
100	820	821	819	10.9
101	822	823	821	11
102	824	825	823	11.2
103	827	827	826	11.5
104	829	830	828	11.7
105	831	832	831	12
106	834	835	833	12.3
107	836	838	836	12.6
108	839	841	839	13
109	842	844	842	13.4
110	845	847	845	13.9
111	849	850	849	14.6
112	850	850	850	14.6
113	850	850	850	14.6
114	850	850	850	14.6
115	850	850	850	14.6
116	850	850	850	14.6
117	850	850	850	14.6
118	850	850	850	14.6
119	850	850	850	14.6
120	850	850	850	14.6
121	850	850	850	14.6

Table A.16. Grade 8 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	650	650	650	15
8	650	650	650	15
9	655	655	655	15
10	660	660	660	15
11	665	665	665	15
12	669	669	669	14.7
13	673	673	673	14
14	677	677	677	13.3
15	680	680	680	12.8
16	683	683	683	12.3
17	686	686	686	11.9
18	688	689	688	11.5
19	691	691	691	11.2
20	693	693	693	10.9
21	696	696	696	10.6
22	698	698	698	10.4
23	700	700	700	10.2
24	702	702	702	10
25	704	704	704	9.8
26	706	706	706	9.6
27	707	707	708	9.5
28	709	709	709	9.3
29	711	711	711	9.2
30	713	713	713	9.1
31	714	714	714	9
32	716	716	716	8.9
33	717	717	718	8.8
34	719	719	719	8.7
35	720	720	721	8.7
36	722	722	722	8.6
37	723	723	724	8.5
38	725	725	725	8.5
39	726	726	726	8.5
40	727	727	728	8.4
41	729	729	729	8.4
42	730	730	731	8.4
43	732	732	732	8.3
44	733	733	733	8.3
45	734	734	735	8.3
46	736	736	736	8.3
47	737	737	738	8.3
48	738	738	739	8.3
49	740	740	740	8.3
50	741	741	742	8.3
51	742	742	743	8.3
52	744	744	744	8.3
53	745	745	746	8.4
54	746	747	747	8.4
55	748	748	749	8.4
56	749	749	750	8.4
57	750	751	751	8.5
58	752	752	753	8.5
59	753	753	754	8.5
60	755	755	756	8.6
61	756	756	757	8.6

Table A.16 Continued. Grade 8 Form 1 Raw-to-Scale Score Conversions.

RS	Form 1 Operational	Form 1 Method 1	Form 1 Method 2	Operational CSEM
62	757	758	758	8.6
63	759	759	760	8.7
64	760	761	761	8.7
65	762	762	763	8.8
66	763	763	764	8.8
67	764	765	766	8.8
68	766	766	767	8.9
69	767	768	769	8.9
70	769	770	770	9
71	770	771	772	9
72	772	773	774	9.1
73	773	774	775	9.1
74	775	776	777	9.2
75	776	777	778	9.3
76	778	779	780	9.3
77	780	781	782	9.4
78	781	782	783	9.4
79	783	784	785	9.5
80	784	786	787	9.5
81	786	788	789	9.6
82	788	789	790	9.7
83	789	791	792	9.8
84	791	793	794	9.8
85	793	795	796	9.9
86	794	797	798	10
87	796	798	800	10.1
88	798	800	801	10.2
89	800	802	803	10.3
90	801	804	805	10.4
91	803	806	808	10.5
92	805	808	810	10.6
93	807	810	812	10.8
94	809	813	814	10.9
95	811	815	816	11.1
96	813	817	818	11.3
97	815	819	821	11.5
98	817	822	823	11.7
99	819	824	826	11.9
100	822	827	828	12.2
101	824	829	831	12.5
102	826	832	833	12.8
103	829	835	836	13.1
104	832	838	839	13.5
105	835	841	842	14
106	838	844	846	14.5
107	841	847	849	15
108	844	850	850	15
109	848	850	850	15
110	850	850	850	15
111	850	850	850	15
112	850	850	850	15
113	850	850	850	15
114	850	850	850	15
115	850	850	850	15
116	850	850	850	15
117	850	850	850	15
118	850	850	850	15
119	850	850	850	15
120	850	850	850	15
121	850	850	850	15

Table A.17. Grade 8 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	650	650	650	15
8	650	650	650	15
9	655	656	656	15
10	661	662	661	15
11	666	667	666	15
12	671	671	671	14.4
13	675	675	675	13.6
14	679	679	678	12.9
15	682	682	682	12.4
16	685	685	685	11.9
17	688	688	688	11.4
18	691	690	690	11.1
19	693	693	693	10.7
20	696	695	695	10.4
21	698	698	698	10.1
22	700	700	700	9.9
23	702	702	702	9.7
24	704	704	704	9.5
25	706	706	706	9.3
26	708	707	708	9.1
27	710	709	709	9
28	712	711	711	8.9
29	713	713	713	8.7
30	715	714	714	8.6
31	717	716	716	8.5
32	718	717	718	8.4
33	720	719	719	8.4
34	721	720	721	8.3
35	723	722	722	8.2
36	724	723	723	8.2
37	725	725	725	8.1
38	727	726	726	8.1
39	728	727	728	8
40	730	729	729	8
41	731	730	730	8
42	732	731	732	7.9
43	734	733	733	7.9
44	735	734	734	7.9
45	736	735	736	7.9
46	738	737	737	7.9
47	739	738	738	7.9
48	740	739	740	7.9
49	742	740	741	7.9
50	743	742	742	7.9
51	744	743	743	7.9
52	746	744	745	7.9
53	747	745	746	7.9
54	748	747	747	7.9
55	750	748	749	8
56	751	749	750	8
57	752	751	751	8
58	754	752	753	8.1
59	755	753	754	8.1
60	756	755	755	8.1
61	758	756	757	8.2

Table A.17 Continued. Grade 8 Form 2 Raw-to-Scale Score Conversions.

RS	Form 2 Operational	Form 2 Method 1	Form 2 Method 2	Operational CSEM
62	759	757	758	8.2
63	760	758	759	8.2
64	762	760	761	8.3
65	763	761	762	8.3
66	764	763	763	8.4
67	766	764	765	8.4
68	767	765	766	8.5
69	769	767	767	8.5
70	770	768	769	8.6
71	772	770	770	8.7
72	773	771	772	8.7
73	775	772	773	8.8
74	776	774	775	8.8
75	778	775	776	8.9
76	779	777	778	9
77	781	778	779	9
78	782	780	781	9.1
79	784	781	782	9.2
80	785	783	784	9.3
81	787	785	786	9.4
82	789	786	787	9.4
83	790	788	789	9.5
84	792	789	791	9.6
85	794	791	792	9.7
86	796	793	794	9.8
87	797	795	796	10
88	799	796	798	10.1
89	801	798	799	10.2
90	803	800	801	10.4
91	805	802	803	10.5
92	807	804	805	10.7
93	809	806	807	10.9
94	811	808	809	11.1
95	813	810	812	11.3
96	815	812	814	11.5
97	818	815	816	11.8
98	820	817	819	12.1
99	822	820	821	12.4
100	825	822	824	12.7
101	828	825	827	13.1
102	831	828	829	13.5
103	834	831	833	14
104	837	834	836	14.5
105	840	838	839	15
106	844	841	843	15
107	848	845	847	15
108	850	849	850	15
109	850	850	850	15
110	850	850	850	15
111	850	850	850	15
112	850	850	850	15
113	850	850	850	15
114	850	850	850	15
115	850	850	850	15
116	850	850	850	15
117	850	850	850	15
118	850	850	850	15
119	850	850	850	15
120	850	850	850	15
121	850	850	850	15

Table A.18. Grade 8 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
0	650	650	650	15
1	650	650	650	15
2	650	650	650	15
3	650	650	650	15
4	650	650	650	15
5	650	650	650	15
6	650	650	650	15
7	650	650	650	15
8	655	655	655	15
9	661	661	661	15
10	666	666	666	15
11	671	670	670	14.3
12	675	674	674	13.7
13	678	678	678	13.1
14	682	681	681	12.5
15	685	685	685	12.1
16	688	688	688	11.7
17	691	690	690	11.3
18	693	693	693	11
19	696	695	695	10.7
20	698	698	698	10.4
21	700	700	700	10.2
22	703	702	702	10
23	705	704	704	9.8
24	707	706	706	9.6
25	709	708	708	9.4
26	710	710	710	9.3
27	712	712	712	9.1
28	714	714	714	9
29	716	715	715	8.9
30	717	717	717	8.8
31	719	719	719	8.7
32	721	720	720	8.6
33	722	722	722	8.5
34	724	723	724	8.5
35	725	725	725	8.4
36	727	726	727	8.3
37	728	728	728	8.3
38	730	729	729	8.2
39	731	730	731	8.2
40	732	732	732	8.2
41	734	733	734	8.1
42	735	735	735	8.1
43	737	736	736	8.1
44	738	737	738	8.1
45	739	739	739	8
46	741	740	741	8
47	742	741	742	8
48	743	743	743	8
49	745	744	745	8
50	746	745	746	8
51	747	747	747	8
52	749	748	749	8
53	750	749	750	8.1
54	751	751	751	8.1
55	753	752	753	8.1
56	754	753	754	8.1
57	755	755	755	8.1
58	757	756	757	8.2
59	758	757	758	8.2
60	759	759	759	8.2
61	761	760	761	8.2

Table A.18 Continued. Grade 8 Form 3 Raw-to-Scale Score Conversions.

RS	Form 3 Operational	Form 3 Method 1	Form 3 Method 2	Operational CSEM
62	762	761	762	8.3
63	764	763	763	8.3
64	765	764	765	8.4
65	766	765	766	8.4
66	768	767	768	8.4
67	769	768	769	8.5
68	770	770	770	8.5
69	772	771	772	8.6
70	773	772	773	8.6
71	775	774	775	8.7
72	776	775	776	8.7
73	778	777	778	8.7
74	779	778	779	8.8
75	781	780	781	8.9
76	782	781	782	8.9
77	784	783	784	9
78	785	784	785	9
79	787	786	787	9.1
80	788	787	788	9.2
81	790	789	790	9.2
82	791	791	792	9.3
83	793	792	793	9.4
84	795	794	795	9.5
85	796	795	797	9.5
86	798	797	798	9.6
87	800	799	800	9.7
88	801	801	802	9.8
89	803	802	804	9.9
90	805	804	805	10.1
91	807	806	807	10.2
92	809	808	809	10.3
93	810	810	811	10.5
94	812	812	813	10.6
95	814	814	815	10.8
96	816	816	818	11
97	819	818	820	11.2
98	821	821	822	11.4
99	823	823	824	11.6
100	825	826	827	11.9
101	828	828	830	12.2
102	830	831	832	12.5
103	833	833	835	12.8
104	835	836	838	13.2
105	838	839	841	13.6
106	841	843	844	14
107	844	846	848	14.6
108	848	850	850	15
109	850	850	850	15
110	850	850	850	15
111	850	850	850	15
112	850	850	850	15
113	850	850	850	15
114	850	850	850	15
115	850	850	850	15
116	850	850	850	15
117	850	850	850	15
118	850	850	850	15
119	850	850	850	15
120	850	850	850	15
121	850	850	850	15