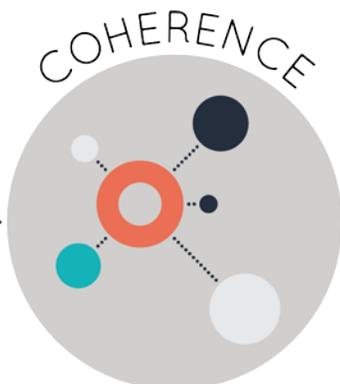


Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Math Interim Assessments**

Grade: **6-8**

Publisher: **Achievement Network**

Copyright: **2016**

Overall Rating: **Tier I, Exemplifies quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
1. Alignment of Test Items (Non-Negotiable)	
2. Focus on Major Work (Non-Negotiable)	
3. Focus (Non-Negotiable)	
4. Rigor and Balance (Non-Negotiable)	
5. Practice-Content Connections	
6. Assessing Supporting Content	
7. Calling for Variety in Item Type, Student Work	
8. Constructing Forms Without Cueing Solution Proc	
9. Quality Materials	

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I*. If there is a “Yes” for all indicators in Column 2 for Section I, then the materials receive a “Yes” in Column 1. If there is a “No” for any indicator in Column 2 for Section I, then the materials receive a “No” in Column 1. In Section II, review each indicator individually.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 9.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Section II.

Tier 3 ratings receive a “No” in Column 1 in Section I.

* The criteria in Section I apply to fixed form or CAT assessments, whether summative assessments or a set of interim/benchmark assessments. Item banks also should reflect the full intent of the indicators.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all non-negotiable criteria in order for the review to continue.			
<p>Non-Negotiable</p> <p>1. ALIGNMENT OF TEST ITEMS:</p> <p>Test items and/or sets of items elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted Standard(s)</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>1a) 90% of items and/or sets of items exhibit alignment to the full intent of the LSSM for that grade/course.</p>	<p>Yes</p>	<p>The Achievement Network has a robust bank of items through which they are able to create assessments that assess the full intent of the LSSM. The items provided for review, either individually or as a set of items, assess the full intent of the LSSM for each grade. For example, there is a set of items aligned to 6.NS.A.1 that assess students' ability to interpret quotients of fractions, compute quotients of fractions, and solve word problems involving division of fractions, which are each an explicit expectation of the target standard.</p>
	<p>1b) Items and/or sets of items adhere to content limitations outlined in the LSSM and the Assessment Guides. All limitations for all grades K-HS provided in footnotes of the LSSM are also followed.</p>	<p>Yes</p>	<p>In the 6th Grade materials, content limitations are adhered to as outlined in the LSSM and Assessment Guide. For example, questions 17, 18, 19, and 20 require students to solve one-step equations, as required by 6.EE.B.7. There were no two-step equations required to be solved under this standard. Questions 12, 13, and 14 of the sample item packet did provide two-step and multi-step problems, but only required students to determine if a solution was true by evaluating the equation for given possible solutions as required by 6.EE.A.2c. Items 1, 13, and 17 use only whole number quantities in the ratio tables (6.RP.A.3a).</p> <p>In the 7th Grade materials, content limitations are adhered to as outlined in the LSSM and Assessment Guide. For example, all questions related to solving equations and inequalities were limited to two-step equations.</p> <p>In the 8th Grade materials, content limitations are adhered to as outlined in the LSSM and Assessment Guide. For example, all questions related to functions do not use nor require function notation.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	<p>1c) Items and/or sets of items use the number system appropriate to the grade/course. For example, in grade 3 there are some items involving fractions greater than 1; in the middle grades, arithmetic and algebra use the rational number system, not just the integers.</p>	<p>Yes</p>	<p>Items use the number systems appropriate for sixth, seventh and eighth grade mathematics.</p> <p>For example, in the 6th, students utilize either fractions or decimals to perform specific operations. Items 59, 60, and 61 require students to calculate a percent, calculate the whole given a part and a percent, and interpret information from a double number line with percentages.</p> <p>For example, in 7th grade, students utilize fractions, decimals, rational numbers, integers, and percents. Item 22 in the Sample Item Packet requires students to infer the sign of an unknown value based on their knowledge of the relative position of the two unknown numbers on a number line. Item 7 requires students to use complex fractions to calculate a unit rate. Item 20 uses positive and negative rational numbers to evaluate an expression.</p> <p>For example, in 8th grade, utilize numbers found in the real number system, including rational and irrational numbers. Items 1 and 2 use positive and negative exponents to evaluate expressions. Item 7 uses scientific notation to evaluate an expression. Item 56 uses student understanding of irrational numbers as a possible solution to a problem.</p>
<p>Non-Negotiable 2. FOCUS ON MAJOR WORK: The large majority of points in each grade/course are devoted to the major work of the grade.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>2a) Each grade/course’s assessments meet or exceed the following score-point distributions for the major work of the grade.</p> <ul style="list-style-type: none"> • 85% of the total points in grades K–2 align exclusively to the major work of the grade. • 75% of the total points in grades 3–5 align exclusively to the major work of the grade. • 65% of the total points in grades 6–12 align exclusively to the major work of the grade. 	<p>Yes</p>	<p>Sample Packet Items and Interim Assessment are combined for Grades 6-8 and exceed the score point distributions for the major work of each grade.</p> <p>In grade 6, 67% (76 out of 113 items) aligned to the major work of the grade: Ratios and Proportional Relationships, Number Systems, and Expressions and Equations. For example, Item 4 in the interim assessment requires students to solve a unit rate problem including unit pricing and constant speed (6.RP.A.3d).</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			<p>In grade 7, 81% (87 out of 107 items) aligned to the major work of the grade: Ratios and Proportional Relationships, Number Systems, and Expressions and Equations. For example, Item 6 in the sample packet requires students to solve multi-step real-life problems using positive and negative rational numbers in decimal form (7.EE.B.3).</p> <p>In grade 8, 76% (70 out of 92 items) aligned to the major work of the grade: Expressions and Equations, Functions, and Geometry. For example, Item 2 in the interim assessment requires students to add to numbers in scientific notation form (8.EE.A.4).</p>
<p>Non-Negotiable 3. FOCUS: No item assesses topics directly or indirectly before they are introduced in the LSSM.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>3a) 100% of items on an assessment address only knowledge of topics found in the LSSM in the specified grade/course.</p>	<p>Yes</p>	<p>Yes, 100% of the items address only knowledge of topics found in the LSSM in each of the specified grades. Each item set is unique to the specified grade and does not assess content from previous or future grades/courses.</p>
<p>Non-Negotiable 4. RIGOR AND BALANCE: Each grade/course’s assessments reflect the balances in the Standards and help students meet the Standards’ rigorous expectations by helping students develop conceptual understanding, procedural skill and fluency, and application.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>4a) For Conceptual Understanding: K–High School: At least 20% of the total score-points on the assessment(s) for each grade or course explicitly require students to demonstrate conceptual understanding especially where called for in specific content standards.</p>	<p>Yes</p>	<p>At least 20% of the total score points on the sixth, seventh, and eighth grade benchmark Interim Assessments and Sample Item Packet explicitly require students to demonstrate conceptual understanding. Conceptual understanding items comprise 60% (59 out of 99) of the total score-points on the Grade 6 items reviewed; 72% (66 out of 91) from the Grade 7 items; and 77% (65 out of 84) from the Grade 8 items. For example on the sixth grade benchmark interim assessment, Item 11 tests student ability to find the whole of a given part demonstrating and understanding of percent of a whole (6.RP.A.3c) and Item 39 students are required to relate the position of integers on a number by comparing the values of the given numbers (6.NS.C.6). In the seventh grade</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	<p>4b) For Procedural Skill and Fluency: K–High School: At least 20% of the total score-points on the assessment(s) for each grade or course explicitly require students to demonstrate procedural skill and fluency, especially where called for in specific content standards.</p> <p>4c) For Applications</p> <ul style="list-style-type: none"> • K–5: At least 20% of the total score-points on the assessment(s) for each grade explicitly assess solving single- or multi-step word problems. • 6–8: At least 25% of the total score points on the assessment(s) for each grade explicitly assess solving single- and multi-step word problems and simple models. • High School: At least 30% of the total score-points on the assessment(s) for each high school course explicitly assess single- and multi-step word problems, simple models, and substantial modeling/application problems. 	<p>Yes</p> <p>Yes</p>	<p>sample packet items, question 58 requires students to explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation (7.RP.A.2d). In the eighth grade assessment for example, Item 52 requires students to describe the transformations of a triangle on a coordinate plane (8.G.A.2-4).</p> <p>While having a large number of items that require and assess conceptual understanding along with an adequate amount of real-world, non-routine application items, there also exists items that assess students' ability perform mathematical procedures required at each grade as well as the explicit fluency expectations in Grades 6 and 7.</p> <p>The Achievement Network offers a vast number of items targeting application. At each grade there exists items targeting application that scaffold in complexity, allowing students at all levels of mastery to engage in meaningful application.</p>
SECTION II: ADDITIONAL INDICATORS OF QUALITY			
	<p>5. Practice-Content Connections. Each grade/course's assessments include items that meaningfully connect the Standards for Mathematical Content and Standards for Mathematical Practice. However, not all items need to align to a Standard for Mathematical Practice, and there is no requirement to have an equal balance among the Standards for Mathematical Practice in any set of items or test forms.</p>	<p>Yes</p>	<p>Of the items provided for review, several items meaningfully connect Math Practices 1, 3, and 4 to the content standards, requiring students to engage in real-world problem solving by solving and explaining their solutions to non-routine problems. Furthermore, the scoring guides for such items show teachers how to hold students accountable for Math Practice 6, attending to precision, by providing exemplar answers that use precise mathematical language.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
6. Assessing Supporting Content. Supporting content and major work are not always be assessed together and not always assessed separately. There exists Items and/or sets of items assessing supporting content that enhance focus and coherence simultaneously by engaging students in the major work of the grade or course.		Yes	While the Major Work was the focus of most items, Supporting and Additional content was assessed in a meaningful way, enhancing the focus on Major Work. For example, assessment of 8.NS.A.2, supporting, was well connected to 8.EE.A.2, major.
7. Calling for Variety in Item Type and Student Work. Assessments include a variety of item types (e.g., multiple choice, multiple select, numeric response, constructed response) that require a variety in what students produce. For example, items require students to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations (including items that explicitly assess expressing and/or communicating mathematical reasoning), diagrams, mathematical models, etc.		Yes	Of the items provided for review, there existed a wide array of item types including multiple choice, multiple select, numeric response, and constructed response. Furthermore, there was a variety in what students were expected to produce, providing teachers with a more clear picture of the students' mastery of the targeted standards.
8. Constructing Forms Without Cueing Solution Processes. Item sequences do not cue the student to use a certain solution process during problem solving and assessments include problems requiring different types of solution processes within the same section.		Yes	On the sample assessment provided for review, the items were arranged in such a way as to not scaffold the mathematical concepts/topics being assessed in a way that would make progressing through the later portion of the assessment easier based on the earlier portion of the assessment.
9. Quality Materials. The assessment items, answer keys, and documentation are free from mathematical errors.		Yes	All provided answer keys and scoring guides were free from mathematical errors. Moreover, the use of precise mathematical language was both consistent and grade appropriate.
FINAL EVALUATION <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 4 and a “Yes” for all additional indicators 5 – 11. <i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” for additional indicators 5 – 9. <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one criteria in Section I.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Alignment of Test Items	Yes	Greater than 90% of the test items exhibited alignment to the full intent of the LSSM for the targeted grades. Items do adhere to content limitations of the grades and the correct number systems of the grades.
	2. Focus on Major Work	Yes	At least 65% of the total score points is Major Work of the sixth, seventh, and eighth grade, respectively.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	3. Focus	Yes	All items provided for review were focused on the explicit expectations of each course.
	4. Rigor and Balance	Yes	The components of rigor were well balanced, and points fairly distributed across the components of rigor.
II: Additional Indicators of Quality	5. Practice-Content Connections	Yes	Connections to the Standards for Mathematical Practice were consistent and meaningful.
	6. Assessing Supporting Content	Yes	While the Major Work was the focus of most items, Supporting and Additional content was assessed in a meaningful way, enhancing the focus on Major Work.
	7. Calling for Variety in Item Type and Student Work	Yes	There existed a wide array of items calling for a variety in what students were asked to produce.
	8. Constructing Forms Without Cueing Solution Processes	Yes	The forms were well constructed and sequenced to allow for a fair and accurate assessment.
	9. Quality Materials	Yes	The materials were free from error.
FINAL DECISION FOR THIS MATERIAL: Tier I, Exemplifies quality			

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

Public Comments

There were no public comments submitted.