TEXTBOOK REVIEW FORM

MATHEMATICS

GRADE 5

Textbook/Series: _____

Edition _____ **Copyright** _____ **Publisher** _____

Reviewed by: _____

This form was based in part on:

Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core Standards for Mathematics

A project of

The Charles A. Dana Center

At the University of Texas at Austin

Adapted for Alabama State Department of Education

STANDARDS FOR MATHEMATICAL PRACTICE – MATHEMATICS – GRADE K-12 – OVERALL

Textbook/Series: _____

Edition _____ Copyright _____ Publisher _____

OVERALL RATING:	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	**Comments:**
1. Make sense of problems and preserve in solving them. **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	2. Reason abstractly and quantitatively. **Summary/Justification/Evidence** ☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)
3. Construct viable arguments and critique the reasoning of others. **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	4. Model with mathematics. **Summary/Justification/Evidence:** ☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)
5. Use appropriate tools strategically. **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	6. Attend to precision. **Summary/Justification/Evidence:** ☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)
7. Look for and make use of structure. **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	8. Look for and express regularity in repeated reasoning. **Summary/Justification/Evidence:** ☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)

Weak: This is the lowest rating a book can receive. In general, a book that was rated as "weak" scored mostly 1s and 2s on a 4-point scale.

Moderate: This is the middle rating a book can receive. In general, a book that was rated as "moderate" scored mostly 2s and 3s on a 4-point scale.

Strong: This is the highest rating a book can receive. In general, a book that was rated as "strong" scored mostly 3s and 4s on a 4-point scale.

TEXTBOOK REVIEW FORM – MATHEMATICS – STANDARDS FOR MATHEMATICAL PRACTICE – GRADES K-12

Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

1. Make sense of problems and persevere in solving them.

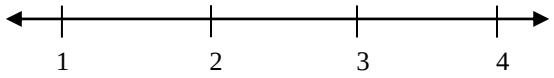
These students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. These students consider analogous problems and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to obtain the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solve complex problems and identify correspondences between different approaches.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

2. Reason abstractly and quantitatively.

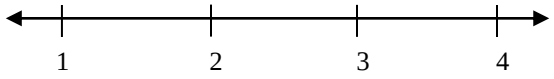
Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships. One is the ability to *decontextualize*, to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents. The second is the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

3. Construct viable arguments and critique the reasoning of others.

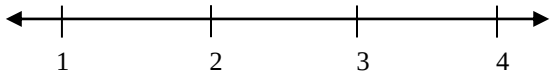
These students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. These students justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments; distinguish correct logic or reasoning from that which is flawed; and, if there is a flaw in an argument, explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until the middle or upper grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

4. Model with mathematics.

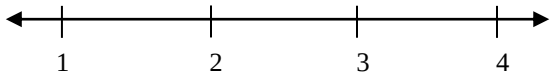
These students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, students might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, students might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts, and formulas and can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

5. Use appropriate tools strategically.

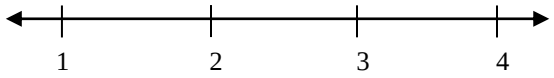
Mathematically proficient students consider available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a Web site, and use these to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

6. Attend to precision.

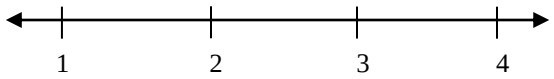
These students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. Mathematically proficient students are careful about specifying units of measure and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, and express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

7. Look for and make use of structure.

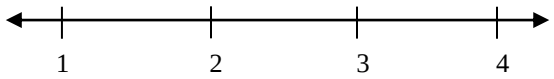
Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well-remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. These students also can pause and reflect for an overview and shift perspective. They can observe the complexities of mathematics, such as some algebraic expressions as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Documenting Alignment to the Standards for Mathematical Practice

Mathematically proficient students:

8. Look for and express regularity in repeated reasoning.

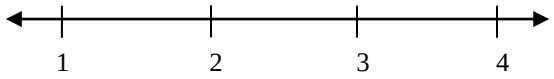
They notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y – 2)/(x – 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x – 1)(x + 1)$, $(x – 1)(x^2 + x + 1)$, and $(x – 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As students work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details and continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), sections, and/or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



TEXTBOOK REVIEW FORM – MATHEMATICS – OVERALL
COLLEGE- AND CAREER-READY STANDARDS & OTHER CRITERIA – GRADE K

Textbook/Series: _____

Edition _____ Copyright _____ Publisher _____

OVERALL RATING:	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Important Mathematical Ideas: **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)
Skills and Procedures: **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Mathematical Relationships: **Summary/Justification/Evidence**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)
Content: **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Instruction: **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)
Assessment: **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Technology: **Summary/Justification/Evidence:**	☐ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)

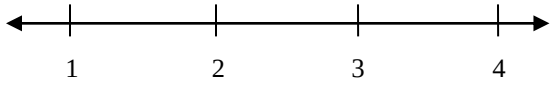
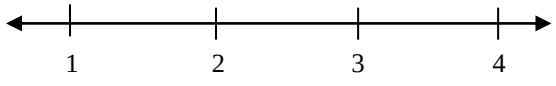
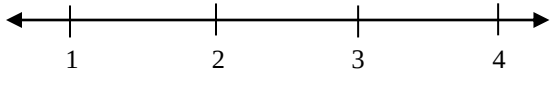
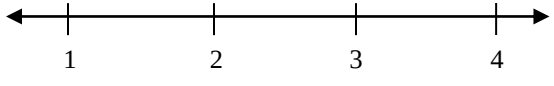
Weak: This is the lowest rating a book can receive. In general, a book that was rated as "weak" scored mostly 1s and 2s on a 4-point scale.

Moderate: This is the middle rating a book can receive. In general, a book that was rated as "moderate" scored mostly 2s and 3s on a 4-point scale.

Strong: This is the highest rating a book can receive. In general, a book that was rated as "strong" scored mostly 3s and 4s on a 4-point scale.

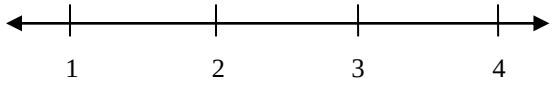
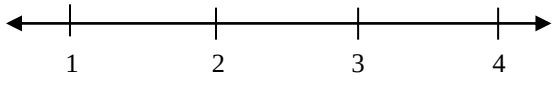
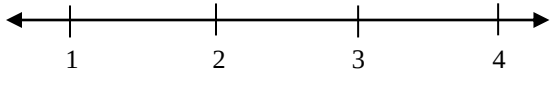
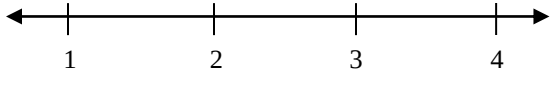
Students will:

Operations and Algebraic Thinking

Write and interpret numerical expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. [5-OA1]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

Students will:

Operations and Algebraic Thinking

Write and interpret numerical expressions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. [5-OA2] Examples: Express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18{,}932 + 921)$ is three times as large as 18,932 + 921, without having to calculate the indicated sum or product. **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 

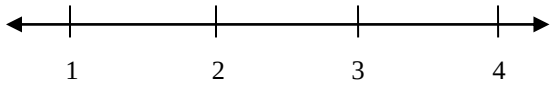
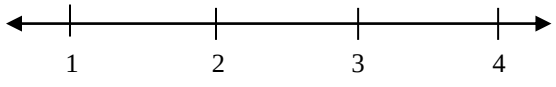
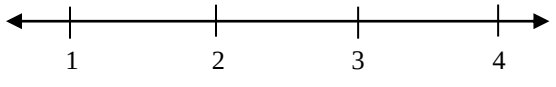
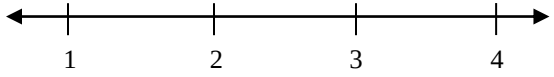
Students will:

Operations and Algebraic Thinking

Analyze patterns and relationships.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. [5-OA3] Example: Given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

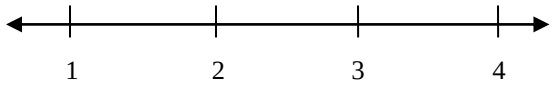
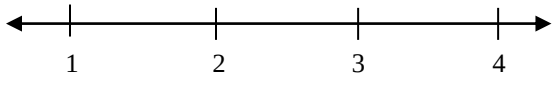
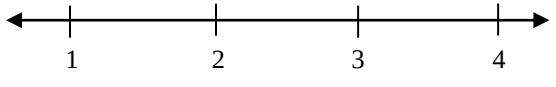
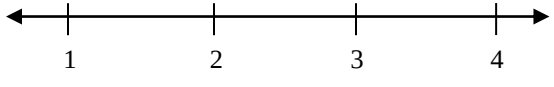
Students will:

Number and Operations in Base Ten

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
4. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left. [5-NBT1]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

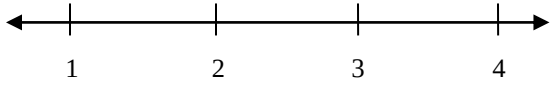
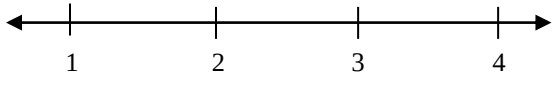
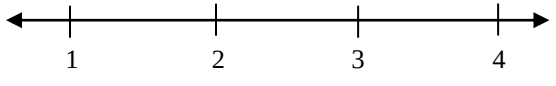
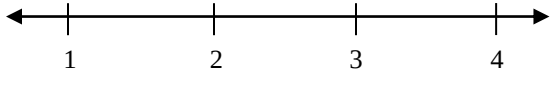
Students will:

Number and Operations in Base Ten

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. [5-NBT2]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

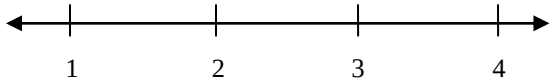
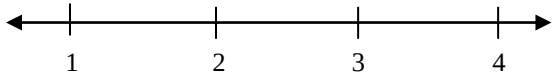
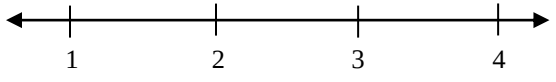
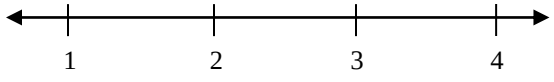
Students will:

Number and Operations in Base Ten

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
6. Read, write, and compare decimals to thousandths. [5-NBT3]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

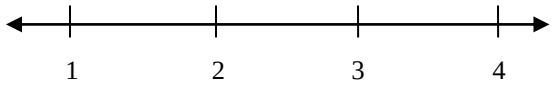
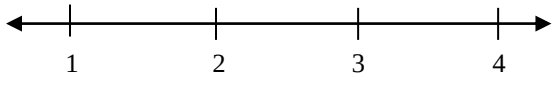
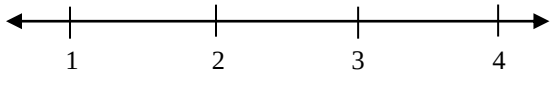
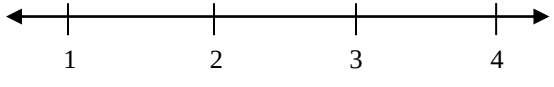
Students will:

Number and Operations in Base Ten

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (\frac{1}{10}) + 9 \times (\frac{1}{100}) + 2 \times (\frac{1}{1000})$. [5-NBT3a]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

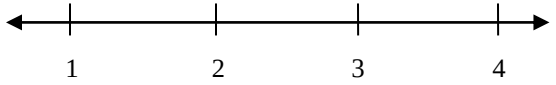
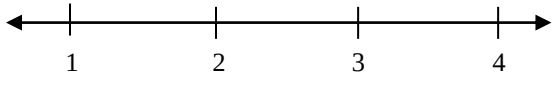
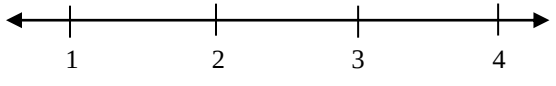
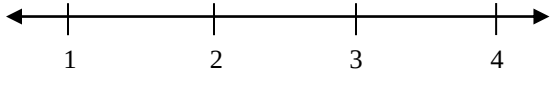
Students will:

Number and Operations in Base Ten

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. [5-NBT3b]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

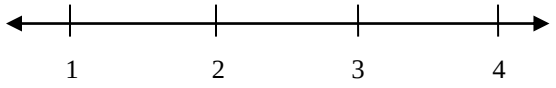
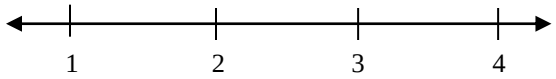
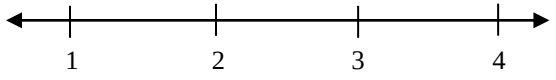
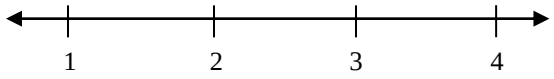
Students will:

Number and Operations in Base Ten

Understand the place value system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
7. Use place value understanding to round decimals to any place. [5-NBT4] **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 

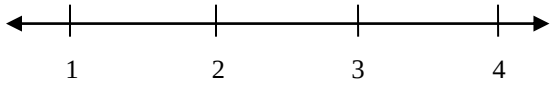
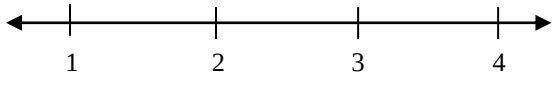
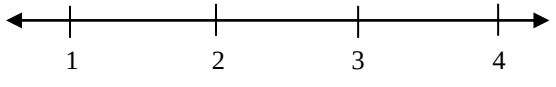
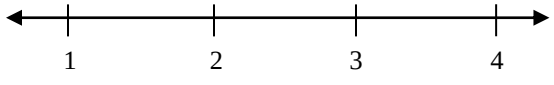
Students will:

Number and Operations in Base Ten

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8. Fluently multiply multi-digit whole numbers using the standard algorithm. [5-NBT5]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

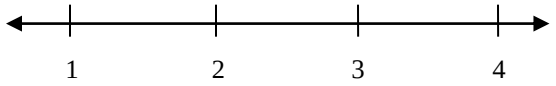
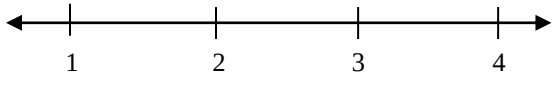
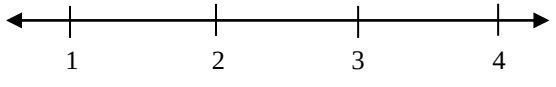
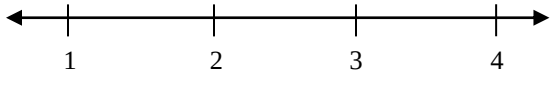
Students will:

Number and Operations in Base Ten

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
9. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. [5-NBT6]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

Students will:

Number and Operations in Base Ten

Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
10. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method, and explain the reasoning used. [5-NBT7]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

Students will:

Number and Operations – Fractions

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
11. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. [5-NF1] Example: $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$. (In general, $\frac{a}{b} + \frac{c}{d} = \frac{(ad + bc)}{bd}$.)	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 1 2 3 4

Students will:

Number and Operations – Fractions

Use equivalent fractions as a strategy to add and subtract fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
12. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally, and assess the reasonableness of answers. [5-NF2] Example: Recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$ by observing that $\frac{3}{7} < \frac{1}{2}$.	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary/Justification/Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Overall Rating** 1 2 3 4

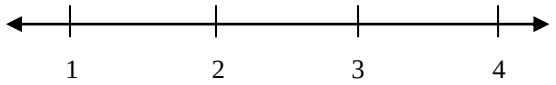
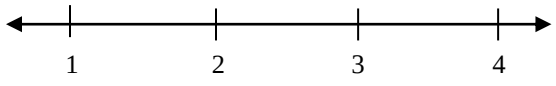
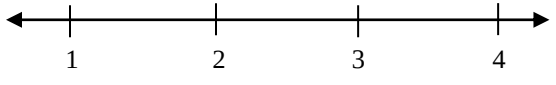
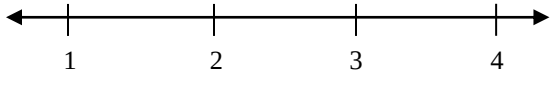
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
13. Interpret a fraction as division of the numerator by the denominator ($\frac{a}{b}$ = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. [5-NF3] Examples: Interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between which two whole numbers does your answer lie?	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary/Justification/Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Overall Rating** 1 2 3 4

Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
14. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. [5-NF4]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

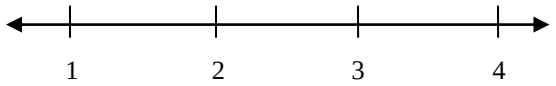
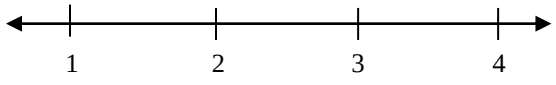
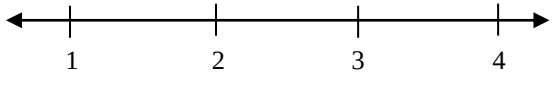
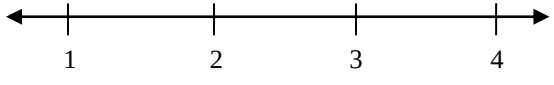
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
a. Interpret the product $(\frac{a}{b}) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. [5-NF4a] Example: Use a visual fraction model to show $(\frac{2}{3}) \times 4 = \frac{8}{3}$, and create a story context for this equation. Do the same with $(\frac{2}{3}) \times (\frac{4}{5}) = \frac{8}{15}$. (In general, $(\frac{a}{b}) \times (\frac{c}{d}) = \frac{ac}{bd}$.) **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

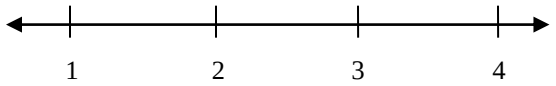
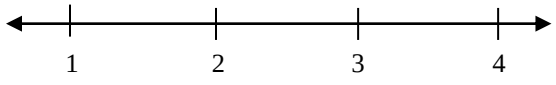
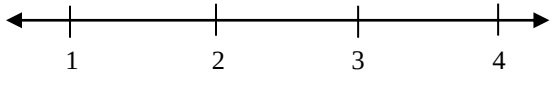
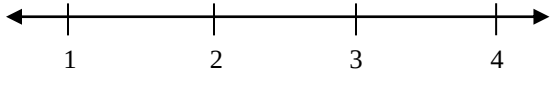
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. [5-NF4b]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

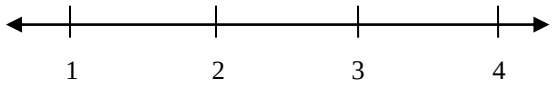
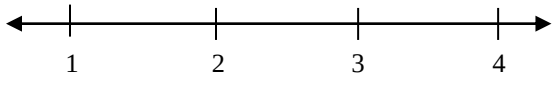
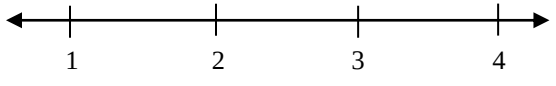
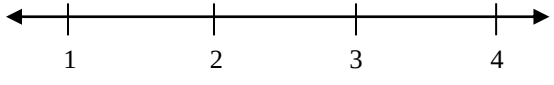
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
15. Interpret multiplication as scaling (resizing), by: [5-NF5] **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 

Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. [5-NF5a]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

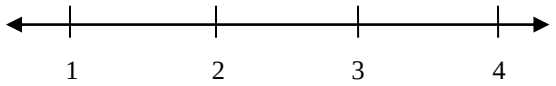
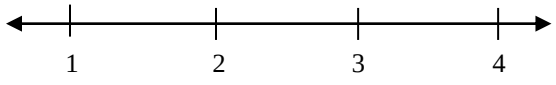
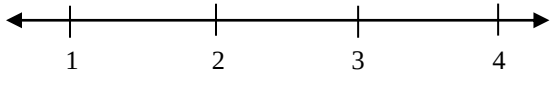
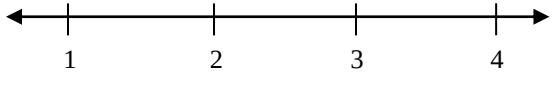
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case), explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number, and relating the principle of fraction equivalence $\frac{a}{b} = \frac{(n \times a)}{(n \times b)}$ to the effect of multiplying $\frac{a}{b}$ by 1. [5-NF5b]	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary/Justification/Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Overall Rating** 1 2 3 4

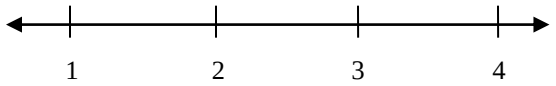
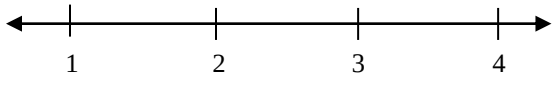
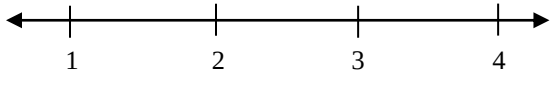
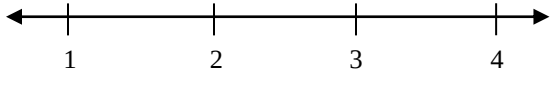
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
16. Solve real-world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem. [5-NF6]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

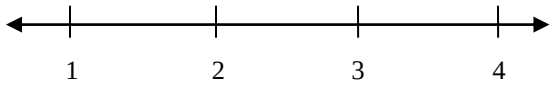
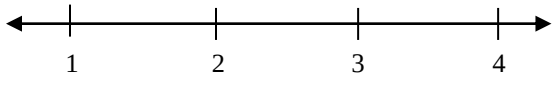
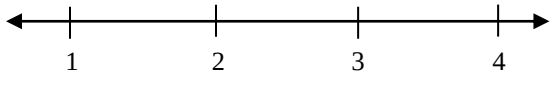
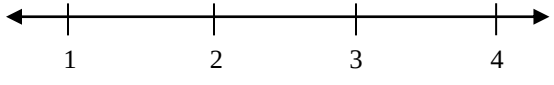
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
17. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (Students able to multiply fractions in general can develop strategies to divide fractions in general by reasoning about the relationship between multiplication and division. However, division of a fraction by a fraction is not a requirement at this grade.) [5-NF7]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
a. Interpret division of a unit fraction by a nonzero whole number, and compute such quotients. [5-NF7a] Example: Create a story context for $(\frac{1}{3}) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(\frac{1}{3}) \div 4 = \frac{1}{12}$ because $(\frac{1}{12}) \times 4 = \frac{1}{3}$. **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 

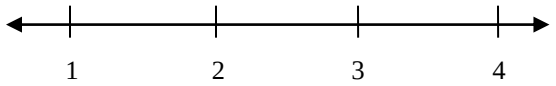
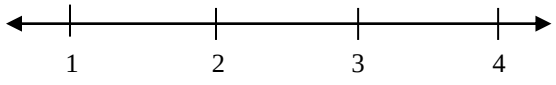
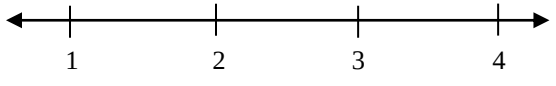
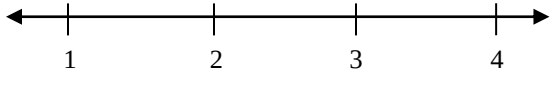
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
b. Interpret division of a whole number by a unit fraction, and compute such quotients. [5-NF7b] Example: Create a story context for $4 \div (\frac{1}{5})$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (\frac{1}{5}) = 20$ because $20 \times (\frac{1}{5}) = 4$. **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4 Mathematical Relationships 1 2 3 4 **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 1 2 3 4

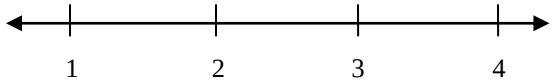
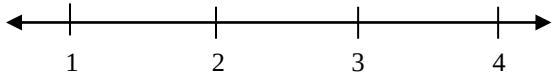
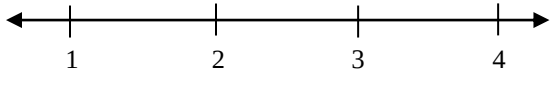
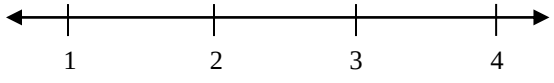
Students will:

Number and Operations – Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
c. Solve real-world problems involving division of unit fractions by nonzero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. [5-NF7c] Examples: How much chocolate will each person get if 3 people share $\frac{1}{2}$ lb of chocolate equally? How many $\frac{1}{3}$-cup servings are in 2 cups of raisins?	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

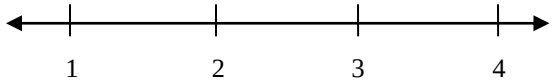
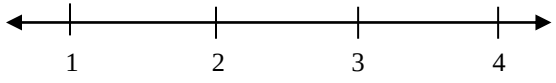
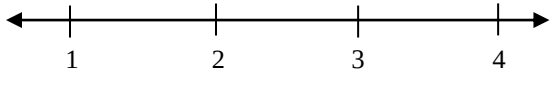
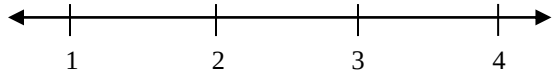
Students will:

Measurement and Data

Convert like measurement units within a given measurement system.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
18. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multistep, real-world problems. [5-MD1]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

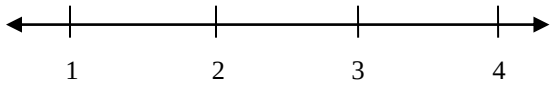
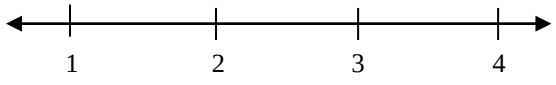
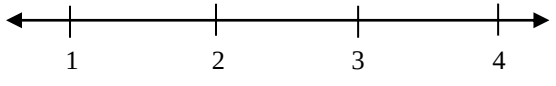
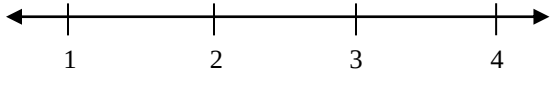
Students will:

Measurement and Data

Represent and interpret data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
19 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. [5-MD2] Example: Given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

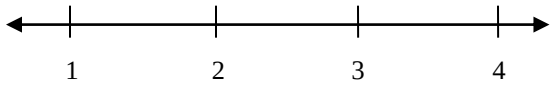
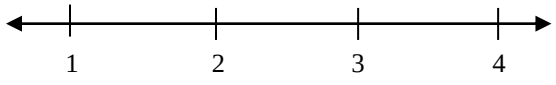
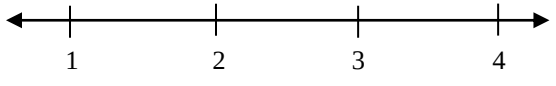
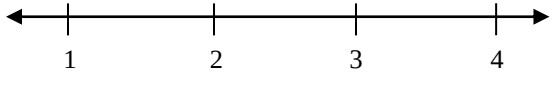
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
20. Recognize volume as an attribute of solid figures, and understand concepts of volume measurement. [5-MD3]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

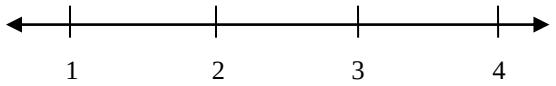
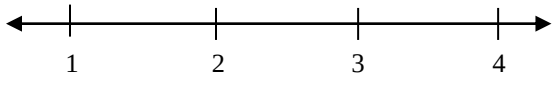
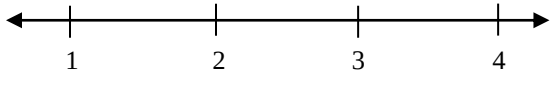
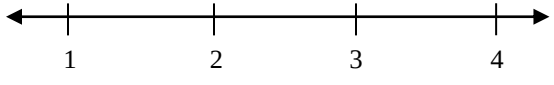
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. [5-MD3a]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

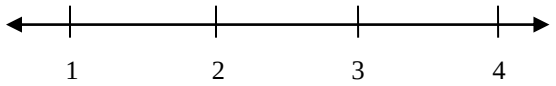
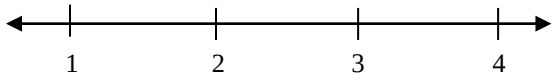
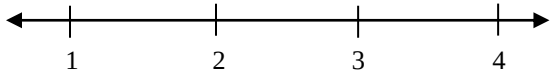
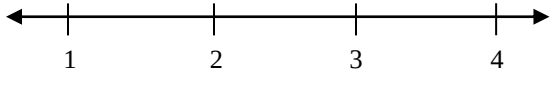
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. [5-MD3b]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

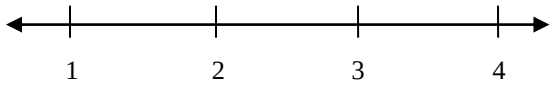
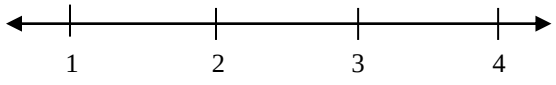
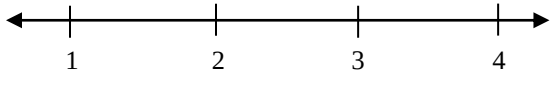
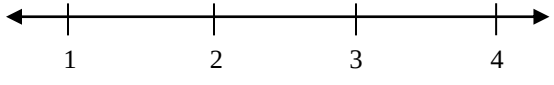
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
21. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. [5-MD4]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

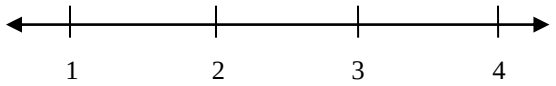
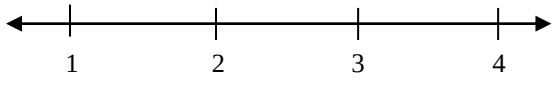
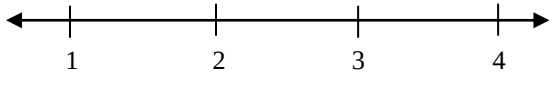
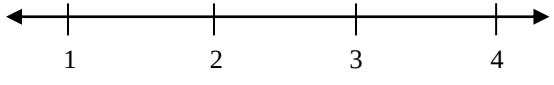
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
22. Relate volume to the operations of multiplication and addition, and solve real-world and mathematical problems involving volume. [5-MD5]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

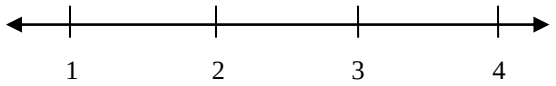
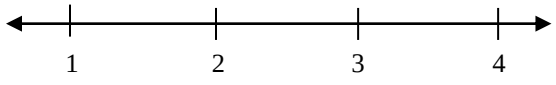
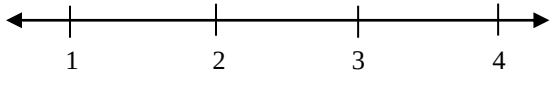
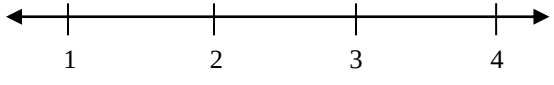
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. [5-MD5a]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Overall Rating** 

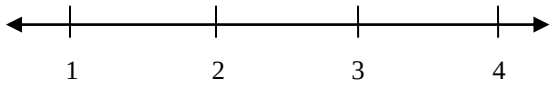
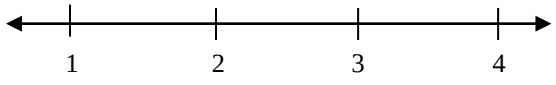
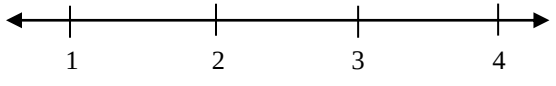
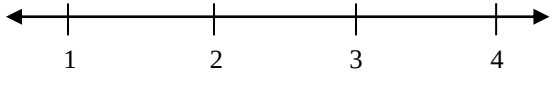
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
b. Apply the formulas V = l × w × h and V = b × h for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems. [5-MD5b]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

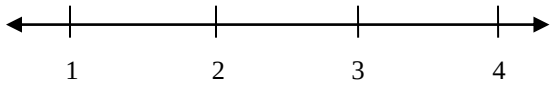
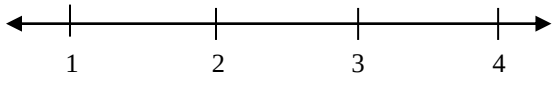
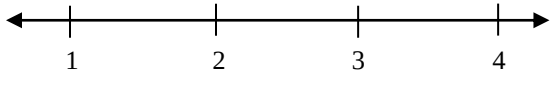
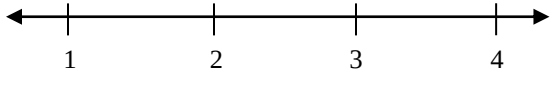
Students will:

Measurement and Data

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
c. Recognize volume as additive. Find volumes of solid figures composed of two nonoverlapping right rectangular prisms by adding the volumes of the nonoverlapping parts, applying this technique to solve real-world problems. [5-MD5c]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

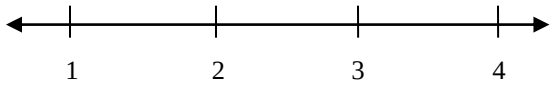
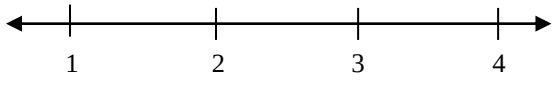
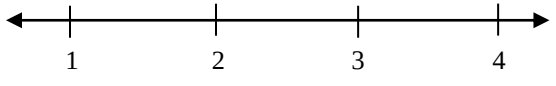
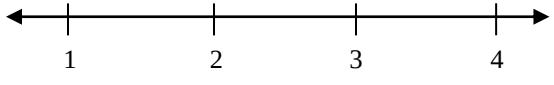
Students will:

Geometry

Graph points on the coordinate plane to solve real-world and mathematical problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
23. Use a pair of perpendicular number lines, called axes, to define a coordinate system with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). [5-G1]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

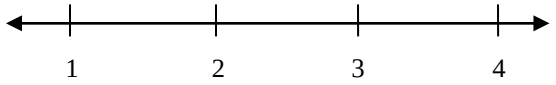
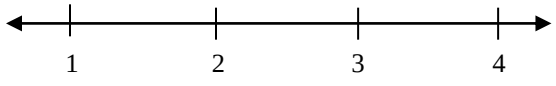
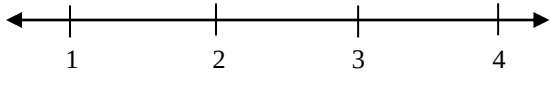
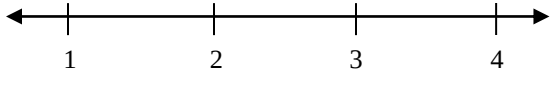
Students will:

Geometry

Graph points on the coordinate plane to solve real-world and mathematical problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
24. Represent real-world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. [5-G2] **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 

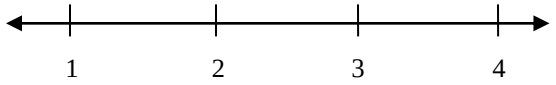
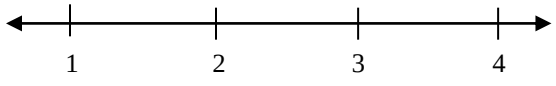
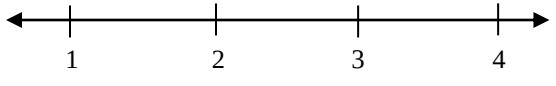
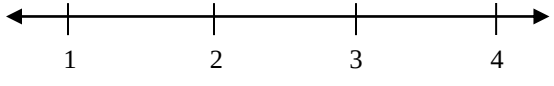
Students will:

Geometry

Classify two-dimensional figures into categories based on their properties.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
25. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. [5-G3] Example: All rectangles have four right angles, and squares are rectangles, so all squares have four right angles. **Indicate the chapter(s), sections, and/or page(s) reviewed.**	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence** **Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):** **Overall Rating** 

Students will:

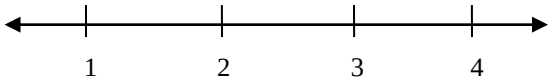
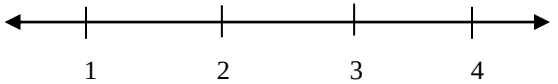
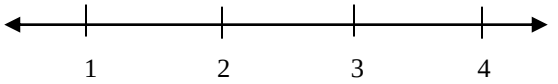
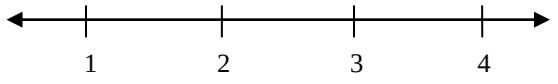
Geometry

Classify two-dimensional figures into categories based on their properties.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
26. Classify two-dimensional figures in a hierarchy based on properties. [5-G4]	Important Mathematical Ideas  Skills and Procedures  Mathematical Relationships  **Summary/Justification/Evidence**
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):**
	Overall Rating 

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITERIA AND INDICATORS – GRADES K-12

Documenting Alignment to
Additional Criteria and Indicators

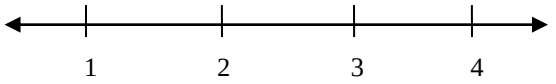
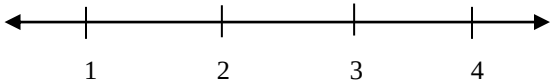
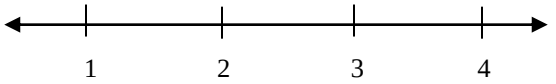
Content

Criteria and Indicators	**Summary and documentation of how the additional criteria and indicators are met. Cite examples from the materials.**
1. Content is designed for students of varied abilities and understanding. 2. Content is free of bias and/or controversial information. 3. Content includes strategies for vocabulary instruction and graphic organizers. 4. Content includes assignments that encourage integration of other content areas to support a math concept/skill.	**Overall Rating**  **Overall Rating**  **Overall Rating**  **Overall Rating** 
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITERIA AND INDICATORS – GRADES K-12

Documenting Alignment to
Additional Criteria and Indicators

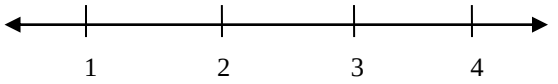
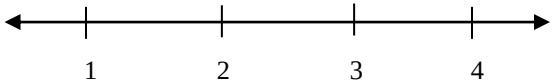
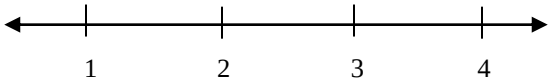
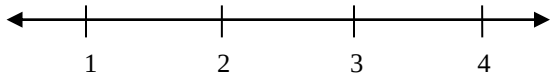
Technology

Criteria and Indicators	**Summary and documentation of how the additional criteria and indicators are met. Cite examples from the materials.**
1. Technology support and suggestions for appropriate use of multimedia resources are provided. 2. Technology is integrated with student activities so that students collect, organize, analyze, and present data. 3. Textbook and supplemental Contents are available online and/or on CD-ROM.	**Overall Rating**  **Overall Rating**  **Overall Rating** 
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITERIA AND INDICATORS – GRADES K-12

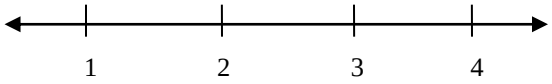
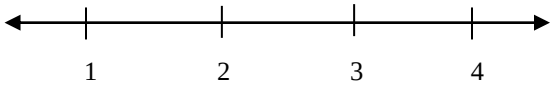
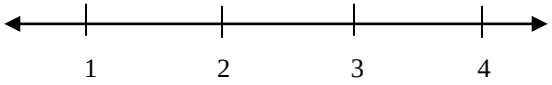
Documenting Alignment to
Additional Criteria and Indicators

Assessment

Criteria and Indicators	**Summary and documentation of how the additional criteria and indicators are met. Cite examples from the materials.**
1. Some assessments are designed to measure student understanding above the knowledge level. 2. Guidance is provided to teacher regarding how assessment information can be used to inform instruction. 3. Rubrics are provided for grading some assignments. 4. Some opportunities are provided for students to check their own understanding.	**Overall Rating**  **Overall Rating**  **Overall Rating**  **Overall Rating** 
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

Documenting Alignment to
Additional Criteria and Indicators

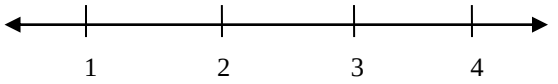
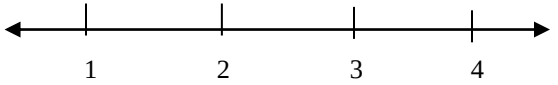
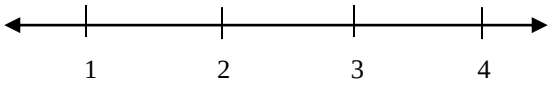
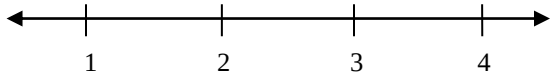
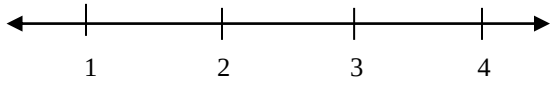
Assessment (Continued)

Criteria and Indicators	**Summary and documentation of how the additional criteria and indicators are met. Cite examples from the materials.**
5. Assessment activities examine the extent to which students can apply information to situations that require reasoning and creative thinking. 6. Multiple means of assessments are used, informal as well as formal. 7. Conceptual understanding and procedural knowledge are frequently assessed through tasks that ask students to apply information about a given concept in novel situations.	**Overall Rating**  **Overall Rating**  **Overall Rating** 
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITERIA AND INDICATORS – GRADES K-12

Documenting Alignment to
Additional Criteria and Indicators

Instruction

Criteria and Indicators	**Summary and documentation of how the additional criteria and indicators are met. Cite examples from the materials.**
1. Teacher guide provides suggestions for how to demonstrate/model skills or use of knowledge. 2. Teacher guide offers alternative instructional strategies for advanced learners, struggling learners, ELL and Sp. Ed. 3. Teacher guide suggests multiple opportunities for students to demonstrate understanding. 4. Teacher guide provides opportunities for guided practice and scaffolded support. 5. Teacher guide includes suggestions to diagnose student errors, explanations of how these errors may be corrected, and how to further develop student ideas.	**Overall Rating**  **Overall Rating**  **Overall Rating**  **Overall Rating**  **Overall Rating** 
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**