TEXTBOOK REVIEW FORM

MATHEMATICS

Grade 8 Accelerated Content Standards

Textbook/Series: ____

Edition: ___________ **Copyright: ____________** **Publisher: ____**

Reviewed by: ____

This form was based in part on:

A project of
The Charles A. Dana Center
At the University of Texas at Austin

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

Textbook/Series: ____

Edition: ___________ Copyright: ____________ Publisher: ____

<u>**OVERALL RATING**</u>: 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.

S**trong**: 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.

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

1 2 3 4

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

1 2 3 4

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.

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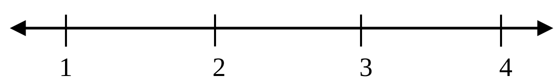

Documenting Alignment to the
Standards for Mathematical Practice

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.

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Summary/Justification/Evidence

Overall Rating

1 2 3 4

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.

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Overall Rating

1 2 3 4

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

1 2 3 4

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):

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1 2 3 4

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

1 2 3 4

TEXTBOOK REVIEW FORM – MATHEMATICS – OVERALL
MATHEMATICAL STANDARDS & OTHER CRITERIA – GRADE 8 ACCELERATED CONTENT STANDARDS

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)

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Number Systems and Operations

Together, irrational numbers and rational numbers complete the real number system, representing all points on the number line, while there exist numbers beyond the real numbers called complex numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
1. Explain how the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for an additional notation for radicals in terms of rational exponents. [*Algebra I with Probability, 1*]	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

Number Systems and Operations

Together, irrational numbers and rational numbers complete the real number system, representing all points on the number line, while there exist numbers beyond the real numbers called complex numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents. [*Algebra I with Probability, 2*] **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**
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Number Systems and Operations

Together, irrational numbers and rational numbers complete the real number system, representing all points on the number line, while there exist numbers beyond the real numbers called complex numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
3. Define the imaginary number i such that $i^2 = -1$. [*Algebra I with Probability, 3*] **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):
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Algebra and Functions

Expressions can be rewritten in equivalent forms by using algebraic properties, including properties of addition, multiplication, and exponentiation, to make different characteristics or features visible.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
4. Interpret linear, quadratic, and exponential expressions in terms of a context by viewing one or more of their parts as a single entity. [*Algebra I with Probability, 4*] *Example: Interpret the accrued amount of investment* $P(1 + r)^t$, *where* P *is the principal and* r *is the interest rate, as the product of* P *and a factor depending on time* t. **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**
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Algebra and Functions

Expressions can be rewritten in equivalent forms by using algebraic properties, including properties of addition, multiplication, and exponentiation, to make different characteristics or features visible.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
5. Use the structure of an expression to identify ways to rewrite it. [*Algebra I with Probability, 5*] *Example: See* $x^4 - y^4$ *as* $(x^2)^2 - (y^2)^2$, *thus recognizing it as a difference of squares that can be factored as* $(x^2 - y^2)(x^2 + y^2)$. **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**
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Algebra and Functions

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<tr><td>6. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
a. Factor quadratic expressions with leading coefficients of one, and use the factored form to reveal the zeros of the function it defines.
b. Use the vertex form of a quadratic expression to reveal the maximum or minimum value and the axis of symmetry of the function it defines; complete the square to find the vertex form of quadratics with a leading coefficient of one.
c. Use the properties of exponents to transform expressions for exponential functions. [Algebra I with Probability, 6]
Example: Identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, or $y = (1.2)^{t/10}$, and classify them as representing exponential growth or decay.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
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<tr><td rowspan="3">7. Add, subtract, and multiply polynomials, showing that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication.
[Algebra I with Probability, 7]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
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1 2 3 4</td></tr>
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Expressions can be rewritten in equivalent forms by using algebraic properties, including properties of addition, multiplication, and exponentiation, to make different characteristics or features visible.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
8. Analyze the relationship (increasing or decreasing, linear or non-linear) between two quantities represented in a graph. [*Grade 8, 17*] **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

Algebra and Functions

Analyze and solve linear equations and systems of two linear equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
9. Solve systems of two linear equations in two variables by graphing and substitution. a. Explain that the solution(s) of systems of two linear equations in two variables corresponds to points of intersection on their graphs because points of intersection satisfy both equations simultaneously. b. Interpret and justify the results of systems of two linear equations in two variables (one solution, no solution, or infinitely many solutions) when applied to real-world and mathematical problems. [*Grade 8, 12*] **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

Algebra and Functions

Finding solutions to an equation, inequality, or system of equations or inequalities requires the checking of candidate solutions, whether generated analytically or graphically, to ensure that solutions are found and that those found are not extraneous.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
10. Explain why extraneous solutions to an equation involving absolute values may arise and how to check to be sure that a candidate solution satisfies an equation. [*Algebra I with Probability, 8*] **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

Algebra and Functions

<table>
<tr><td>The structure of an equation or inequality (including, but not limited to, one-variable linear and quadratic equations, inequalities, and systems of linear equations in two variables) can be purposefully analyzed (with and without technology) to determine an efficient strategy to find a solution, if one exists, and then to justify the solution.</td><td>Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.</td></tr>
<tr><td rowspan="3">11. Select an appropriate method to solve a quadratic equation in one variable.
a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x – p)^2 = q$ that has the same solutions. Explain how the quadratic formula is derived from this form.
b. Solve quadratic equations by inspection (such as $x^2 = 49$), taking square roots, completing the square, the quadratic formula, and factoring, as appropriate to the initial form of the equation, and recognize that some solutions may not be real.
[Algebra I with Probability, 9]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4
Skills and Procedures 1 2 3 4
Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
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Algebra and Functions

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<tr><td>12. Select an appropriate method to solve a system of two linear equations in two variables.
a. Solve a system of two equations in two variables by using linear combinations; contrast situations in which use of linear combinations is more efficient with those in which substitution is more efficient.
b. Contrast solutions to a system of two linear equations in two variables produced by algebraic methods with graphical and tabular methods. [Algebra I with Probability, 10]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>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</td></tr>
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Algebra and Functions

Expressions, equations, and inequalities can be used to analyze and make predictions, both within mathematics and as mathematics is applied in different contexts – in particular, contexts that arise in relation to linear, quadratic, and exponential situations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
13. Create equations and inequalities in one variable and use them to solve problems in context, either exactly or approximately. **Extend from contexts arising from linear functions to those involving quadratic, exponential, and absolute value functions.** [*Algebra I with Probability, 11*] **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**
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Algebra and Functions

Expressions, equations, and inequalities can be used to analyze and make predictions, both within mathematics and as mathematics is applied in different contexts – in particular, contexts that arise in relation to linear, quadratic, and exponential situations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
14. Create equations in two or more variables to represent relationships between quantities in context; graph equations on coordinate axes with labels and scales and use them to make predictions. **Limit to contexts arising from linear, quadratic, exponential, absolute value, and linear piecewise functions.** [*Algebra Iwith Probability, 12*] **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**
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Algebra and Functions

Expressions, equations, and inequalities can be used to analyze and make predictions, both within mathematics and as mathematics is applied in different contexts – in particular, contexts that arise in relation to linear, quadratic, and exponential situations.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
15. Represent constraints by equations and/or inequalities, and solve systems of equations and/or inequalities, interpreting solutions as viable or nonviable options in a modeling context. **Limit to contexts arising from linear, quadratic, exponential, absolute value, and linear piecewise functions.** [*Algebra I with Probability, 13*] **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

Algebra and Functions

Functions shift the emphasis from a point-by-point relationship between two variables (input/output) to considering an entire set of ordered pairs (where each first element is paired with exactly one second element) as an entity with its own features and characteristics.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
16. Define a function as a mapping from one set (called the domain) to another set (called the range) that assigns to each element of the domain exactly one element of the range. [*Grade 8, 13, edited for added content*] a. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. [*Grade 8, 14, edited for added content*] *Note: If* f *is a function and* x *is an element of its domain, then* f(x) *denotes the output of* f *corresponding to the input* x. b. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. **Limit to linear, quadratic, exponential, and absolute value functions.** [*Algebra I with Probability, 15*] **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

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17. Given a relation defined by an equation in two variables, identify the graph of the relation as the set of all its solutions plotted in the coordinate plane. [*Algebra I with Probability, 14*] *Note: The graph of a relation often forms a curve (which could be a line).* **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**
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<tr><td rowspan="3">18. Compare and contrast relations and functions represented by equations, graphs, or tables that show related values; determine whether a relation is a function. Identify that a function f is a special kind of relation defined by the equation $y = f(x)$. [Algebra I with Probability, 16]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

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</table>

Algebra and Functions

Functions shift the emphasis from a point-by-point relationship between two variables (input/output) to considering an entire set of ordered pairs (where each first element is paired with exactly one second element) as an entity with its own features and characteristics.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
19. Combine different types of standard functions to write, evaluate, and interpret functions in context. **Limit to linear, quadratic, exponential, and absolute value functions.** a. Use arithmetic operations to combine different types of standard functions to write and evaluate functions. *Example: Given two functions, one representing flow rate of water and the other representing evaporation of that water, combine the two functions to determine the amount of water in the container at a given time.* b. Use function composition to combine different types of standard functions to write and evaluate functions.[*Algebra I with Probability, 17*] *Example: Given the following relationships, determine what the expression* S(T(t)) *represents.*	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

Function	Input	Output
G	Amount of studying: *s*	Grade in course: *G(s)*
S	Grade in course: *g*	Amount of screen time: *S(g)*
T	Amount of screen time: *t*	Number of followers: *T(t)*

Algebra and Functions

Graphs can be used to obtain exact or approximate solutions of equations, inequalities, and systems of equations and inequalities – including systems of linear equations in two variables and systems of linear and quadratic equations (given or obtained by using technology).	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
20. Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$. i. Find the approximate solutions of an equation graphically, using tables of values, or finding successive approximations, using technology where appropriate. [*Algebra I with Probability, 19*] *Note: Include cases where* f(x) *is linear, quadratic, exponential, or absolute value functions and* g(x) *is constant or linear.* **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):
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Algebra and Functions

<table>
<tr><td>Graphs can be used to obtain exact or approximate solutions of equations, inequalities, and systems of equations and inequalities – including systems of linear equations in two variables and systems of linear and quadratic equations (given or obtained by using technology).</td><td>Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.</td></tr>
<tr><td rowspan="3">21. Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes, using technology where appropriate. [Algebra I with Probability, 20]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4
Skills and Procedures 1 2 3 4
Mathematical Relationships 1 2 3 4
Summary/Justification/Evidence</td></tr>
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Algebra and Functions

Graphs can be used to obtain exact or approximate solutions of equations, inequalities, and systems of equations and inequalities – including systems of linear equations in two variables and systems of linear and quadratic equations (given or obtained by using technology).	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
22. Solve systems consisting of linear and/or quadratic equations in two variables graphically, using technology where appropriate. [*Algebra I with Probability, 18*] **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

Algebra and Functions

<table>
<tr><td>Functions can be described by using a variety of representations: mapping diagrams, function notation (e.g., $f(x) = x^2$), recursive definitions, tables, and graphs.</td><td>Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.</td></tr>
<tr><td rowspan="3">23. Compare properties of two functions, each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). Include linear, quadratic, exponential, absolute value, and linear piecewise. [Algebra I with Probability, 21, edited]
a. Distinguish between linear and non-linear functions. [Grade 8, 15a]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
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Algebra and Functions

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<tr><td>24. Define sequences as functions, including recursive definitions, whose domain is a subset of the integers.
a. Write explicit and recursive formulas for arithmetic and geometric sequences and connect them to linear and exponential functions. [Algebra I with Probability, 22]
Example: A sequence with constant growth will be a linear function, while a sequence with proportional growth will be an exponential function.

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>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</td></tr>
</table>

Algebra and Functions

Functions that are members of the same family have distinguishing attributes (structure) common to all functions within that family.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
25. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k \cdot f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and explain the effects on the graph, using technology as appropriate. **Extend from linear to quadratic, exponential, absolute value, and linear piecewise functions.** [*Algebra I with Probability, 23, edited*] **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):
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Algebra and Functions

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<tr><td>26. Distinguish between situations that can be modeled with linear functions and those that can be modeled with exponential functions.
a. Show that linear functions grow by equal differences over equal intervals, while exponential functions grow by equal factors over equal intervals.
b. Define linear functions to represent situations in which one quantity changes at a constant rate per unit interval relative to another.
c. Define exponential functions to represent situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another. [Algebra I with Probability, 24]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence

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Algebra and Functions

Functions that are members of the same family have distinguishing attributes (structure) common to all functions within that family.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
27. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). [*Algebra I with Probability*, 25] **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

Functions that are members of the same family have distinguishing attributes (structure) common to all functions within that family.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
28. Use graphs and tables to show that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically. [*Algebra I with Probability*, *26*] **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):
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Algebra and Functions

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<tr><td rowspan="3">29. Interpret the parameters of functions in terms of a context. Extend from linear functions, written in the form $mx + b$, to exponential functions, written in the form ab^x. [Algebra I with Probability, 27]

Example: If the function $V(t) = 19885(0.75)^t$ describes the value of a car after it has been owned for t years, 19885 represents the purchase price of the car when $t = 0$, and 0.75 represents the annual rate at which its value decreases.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
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Algebra and Functions

<table>
<tr><td>Functions can be represented graphically and key features of the graphs, including zeros, intercepts, and, when relevant, rate of change and maximum/minimum values, can be associated with and interpreted in terms of the equivalent symbolic representation.</td><td>Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.</td></tr>
<tr><td>30. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Note: Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; maximums and minimums; symmetries; and end behavior. Extend from relationships that can be represented by linear functions to quadratic, exponential, absolute value, and general piecewise functions. [Algebra I with Probability, 28]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence

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Algebra and Functions

Functions can be represented graphically and key features of the graphs, including zeros, intercepts, and, when relevant, rate of change and maximum/minimum values, can be associated with and interpreted in terms of the equivalent symbolic representation.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
31. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph**. Limit to linear, quadratic, exponential, and absolute value functions.** [*Algebra I with Probability, 29*] **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**
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Algebra and Functions

Functions can be represented graphically and key features of the graphs, including zeros, intercepts, and, when relevant, rate of change and maximum/minimum values, can be associated with and interpreted in terms of the equivalent symbolic representation.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
32. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. a. Graph linear and quadratic functions and show intercepts, maxima, and minima. b. Graph piecewise-defined functions, including step functions and absolute value functions. c. Graph exponential functions, showing intercepts and end behavior. [*Algebra I with Probability*, *30*] **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):
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Algebra and Functions

Functions model a wide variety of real situations and can help students understand the processes of making and changing assumptions, assigning variables, and finding solutions to contextual problems.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
33. Use the mathematical modeling cycle to solve real-world problems involving linear, quadratic, exponential, absolute value, and linear piecewise functions. [*Algebra I with Probability, 31*] **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

Data Analysis, Statistics, and Probability

Investigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
34. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities, describing patterns in terms of positive, negative, or no association, linear and non- linear association, clustering, and outliers. [*Grade 8, 18*] **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

Data Analysis, Statistics, and Probability

Investigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
35. Given a scatter plot that suggests a linear association, informally draw a line to fit the data, and assess the model fit by judging the closeness of the data points to the line. [*Grade 8, 19*] **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

Data Analysis, Statistics, and Probability

Investigate patterns of association in bivariate data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
36. Use a linear model of a real-world situation to solve problems and make predictions. a. Describe the rate of change and y-intercept in the context of a problem using a linear model of a real-world situation. [*Grade 8, 20*] **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**
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Data Analysis, Statistics, and Probability

<table>
<tr><td>Investigate patterns of association in bivariate data.</td><td>Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.</td></tr>
<tr><td rowspan="3">37. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects, using relative frequencies calculated for rows or columns to describe possible associations between the two variables. [Grade 8, 21]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4
Skills and Procedures 1 2 3 4
Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
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</table>

Data Analysis, Statistics, and Probability

Data arise from a context and come in two types: quantitative (continuous or discrete) and categorical. Technology can be used to "clean" and organize data, including very large data sets, into a useful and manageable structure – a first step in any analysis of data.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
38. Distinguish between quantitative and categorical data and between the techniques that may be used for analyzing data of these two types. [*Algebra I with Probability*, *34*] *Example: The color of cars is categorical and so is summarized by frequency and proportion for each color category, while the mileage on each car's odometer is quantitative and can be summarized by the mean.* **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

Data Analysis, Statistics, and Probability

The association between two categorical variables is typically represented by using two-way tables and segmented bar graphs.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
39. Analyze the possible association between two categorical variables. a. Summarize categorical data for two categories in two-way frequency tables and represent using segmented bar graphs. b. Interpret relative frequencies in the context of categorical data (including joint, marginal, and conditional relative frequencies). c. Identify possible associations and trends in categorical data. [*Algebra I with Probability, 35*] **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):
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Data Analysis, Statistics, and Probability

<table>
<tr><th>Data analysis techniques can be used to develop models of contextual situations and to generate and evaluate possible solutions to real problems involving those contexts.</th><th>Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.</th></tr>
<tr><td rowspan="3">40. Generate a two-way categorical table in order to find and evaluate solutions to real-world problems.
a. Aggregate data from several groups to find an overall association between two categorical variables.
b. Recognize and explore situations where the association between two categorical variables is reversed when a third variable is considered (Simpson's Paradox). [Algebra I with Probability, 36]
Example: In a certain city, Hospital 1 has a higher fatality rate than Hospital 2. But when considering mildly-injured patients and severely-injured patients as separate groups, Hospital 1 has a lower fatality rate among both groups than Hospital 2, since Hospital 1 is a Level 1 Trauma Center. Thus, Hospital 1 receives most of the severely-injured patients who are less likely to survive overall but have a better chance of surviving in Hospital 1 than they would in Hospital 2.

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4
Skills and Procedures 1 2 3 4
Mathematical Relationships 1 2 3 4

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Data Analysis, Statistics, and Probability

Mathematical and statistical reasoning about data can be used to evaluate conclusions and assess risks.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
41. Use mathematical and statistical reasoning with bivariate categorical data in order to draw conclusions and assess risk. [*Algebra I with Probability, 32*] *Example: In a clinical trial comparing the effectiveness of flu shots A and B, 21 subjects in treatment group A avoided getting the flu while 29 contracted it. In group B, 12 avoided the flu while 13 contracted it. Discuss which flu shot appears to be more effective in reducing the chances of contracting the flu. Possible answer: Even though more people in group A avoided the flu than in group B, the proportion of people avoiding the flu in group B is greater than the proportion in group A, which suggests that treatment B may be more effective in lowering the risk of getting the flu.*	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

	Contracted Flu	Did Not Contract Flu
Flu Shot A	29	21
Flu Shot B	13	12
Total	42	33

Data Analysis, Statistics, and Probability

Making and defending informed, data-based decisions is a characteristic of a quantitatively literate person.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
42. Design and carry out an investigation to determine whether there appears to be an association between two categorical variables, and write a persuasive argument based on the results of the investigation. [*Algebra I with Probability*, *33*] *Example: Investigate whether there appears to be an association between successfully completing a task in a given length of time and listening to music while attempting to complete the task. Randomly assign some students to listen to music while attempting to complete the task and others to complete the task without listening to music. Discuss whether students should listen to music while studying, based on that analysis.*	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

Data Analysis, Statistics, and Probability

<table>
<tr><td>Two events are independent if the occurrence of one event does not affect the probability of the other event. Determining whether two events are independent can be used for finding and understanding probabilities.</td><td>Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.</td></tr>
<tr><td rowspan="3">43. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").
[Algebra I with Probability, 37]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
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Data Analysis, Statistics, and Probability

Two events are independent if the occurrence of one event does not affect the probability of the other event. Determining whether two events are independent can be used for finding and understanding probabilities.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
44. Explain whether two events, A and B, are independent, using two-way tables or tree diagrams. [*Algebra I with Probability*, *38*] **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

Data Analysis, Statistics, and Probability

Conditional probabilities – that is, those probabilities that are "conditioned" by some known information – can be computed from data organized in contingency tables. Conditions or assumptions may affect the computation of a probability.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
45. Compute the conditional probability of event A given event B, using two-way tables or tree diagrams. [*Algebra I with Probability, 39*] **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

Data Analysis, Statistics, and Probability

Conditional probabilities – that is, those probabilities that are “conditioned” by some known information – can be computed from data organized in contingency tables. Conditions or assumptions may affect the computation of a probability.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
46. Recognize and describe the concepts of conditional probability and independence in everyday situations and explain them using everyday language. [*Algebra I with Probability*, *40*] *Example: Contrast the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.* **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**
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Conditional probabilities – that is, those probabilities that are “conditioned” by some known information – can be computed from data organized in contingency tables. Conditions or assumptions may affect the computation of a probability.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
47. Explain why the conditional probability of A given B is the fraction of B's outcomes that also belong to A, and interpret the answer in context. [*Algebra I with Probability*, *41*] *Example: the probability of drawing a king from a deck of cards, given that it is a face card, is* $\frac{4/52}{12/52}$, *which is* $\frac{1}{3}$. **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

Geometry and Measurement

Understand and apply the Pythagorean Theorem.	**Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.**
48. Informally justify the Pythagorean Theorem and its converse. [*Grade 8, 26*] **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):
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Geometry and Measurement

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<tr><td rowspan="3">49. Apply the Pythagorean Theorem to find the distance between two points in a coordinate plane. [Grade 8, 27]

Indicate the chapter(s), sections, and/or page(s) reviewed.</td><td>Important Mathematical Ideas 1 2 3 4

Skills and Procedures 1 2 3 4

Mathematical Relationships 1 2 3 4

Summary/Justification/Evidence</td></tr>
<tr><td>Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):</td></tr>
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</table>

Geometry and Measurement

Understand and apply the Pythagorean Theorem.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
50. Apply the Pythagorean Theorem to determine unknown side lengths of right triangles, including real-world applications. [*Grade 8, 28*] **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):
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TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITIERIA AND INDICATORS

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.	**Overall Rating** 1 2 3 4
2. Content is free of bias and/or controversial information.	**Overall Rating** 1 2 3 4
3. Content includes strategies for vocabulary instruction and graphic organizers.	**Overall Rating** 1 2 3 4
4. Content includes assignments that encourage integration of other content areas to support a math concept/skill.	**Overall Rating** 1 2 3 4
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITIERIA AND INDICATORS

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.	**Overall Rating** 1 2 3 4
2. Technology is integrated with student activities so that students collect, organize, analyze, and present data.	**Overall Rating** 1 2 3 4
3. Textbook and supplemental Contents are available online and/or on CD-ROM.	**Overall Rating** 1 2 3 4
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITIERIA AND INDICATORS

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.	**Overall Rating** 1 2 3 4
2. Guidance is provided to teacher regarding how assessment information can be used to inform instruction.	**Overall Rating** 1 2 3 4
3. Rubrics are provided for grading some assignments.	**Overall Rating** 1 2 3 4
4. Some opportunities are provided for students to check their own understanding.	**Overall Rating** 1 2 3 4
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITIERIA AND INDICATORS

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.	**Overall Rating** 1 2 3 4
6. Multiple means of assessments are used, informal as well as formal.	**Overall Rating** 1 2 3 4
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** 1 2 3 4
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**

TEXTBOOK REVIEW FORM – MATHEMATICS – ADDITIONAL CRITIERIA AND INDICATORS

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.	**Overall Rating** 1 2 3 4
2. Teacher guide offers alternative instructional strategies for advanced learners, struggling learners, ELL and Sp. Ed.	**Overall Rating** 1 2 3 4
3. Teacher guide suggests multiple opportunities for students to demonstrate understanding.	**Overall Rating** 1 2 3 4
4. Teacher guide provides opportunities for guided practice and scaffolded support.	**Overall Rating** 1 2 3 4
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** 1 2 3 4
Indicate the chapter(s), sections, and/or page(s) reviewed.	**Summary/Justification/Evidence:**