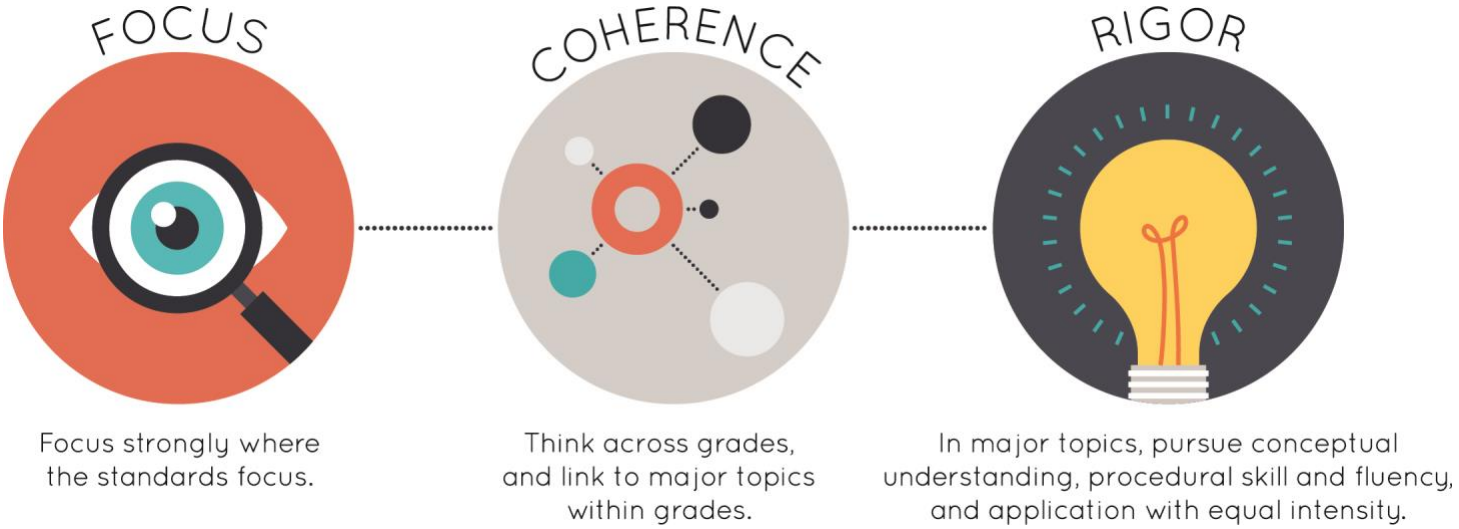
DEPARTMENT of EDUCATION
Louisiana Believes

Instructional Materials Evaluation Review for Alignment in Mathematics Grades K – 12 (IMET)

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Courses 1-3** Grades: **6-8**

Publisher: **Carnegie Learning, Inc.** Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

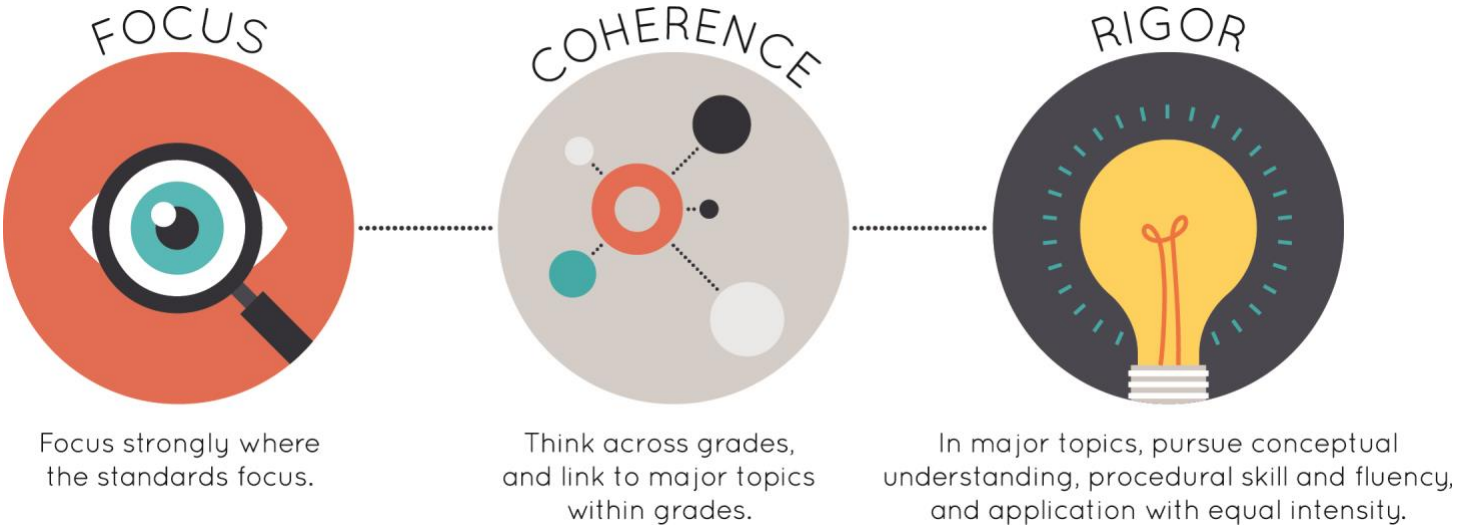
Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria, but at least one "No" for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

Click below for complete grade-level reviews:

Grade 6 (Tier 1) Grade 7 (Tier 1) Grade 8 (Tier 1)

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Course 1** Grade: **6**

Publisher: **Carnegie Learning, Inc.** Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.			
Non-Negotiable **1. FOCUS ON MAJOR WORK[1]:** Students and teachers using the materials as designed devote the large majority[2] of time to the major work of the grade/course. ☒ Yes ☐ No	**REQUIRED** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	**Yes**	The materials devote the large majority of class time to the major work of the grade. 70% of the instructional materials are directly aligned to the major Louisiana Student Standards for Math (LSSM) for Grade 6. 20% of the materials focus solely on additional work, 6% of the materials address both additional and supporting work, and 4% of the materials address only supporting work.
	REQUIRED **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	Instructional materials spend minimal time on content outside of the course requirements for Grade 6. Some lessons and assessment items go beyond the expectations of the LSSM for Grade 6; however, implementation suggestions are provided for Louisiana teachers for those lessons and assessment items. For example, in Module 3, Topic 1, Lesson 4, the implementation suggestions state, "Modify this assignment to address the limitations placed on LSSM standards 6.EE.A.3. Students are not required to use graphs as a method to determine or verify if two expressions are equal. In Activity 4.1, Questions 4, 8, 9c, and 10c are not required. Questions 9d and 10d can be modified to exclude an explanation about the graphs." In addition, Question 21 of

[1] For more on the major work of the grade, see Focus by Grade Level.
[2] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

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			the End of Topic Assessment, in both Form A and Form B, the assessment item provides Quadrant 1 of the coordinate plane and prompts students to "Determine whether the two expressions are equivalent by graphing each expression." Students are provided expressions that would require knowledge of graphing a linear equation and understanding that if they graph the same line, the expressions are equivalent. In this grade level, students are only responsible for applying "properties of operations to generate equivalent expressions" (LSSM 6.EE.A.3) and identifying "when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them)." Assessment Guidance suggests omitting this item. Additionally, the topic of mean absolute deviation, which is introduced in Grade 7 in LSSM 7.SP.B.3, is addressed and assessed in several of the Module 5 assessment materials. Module 5, Topic 2, Pre-Test and Post-Test materials both include questions that require students to calculate the mean absolute deviation, as well as, comparing interquartile range with the mean absolute deviation as the best measure of variability. The implementation guide suggests that Louisiana teachers omit Lesson 3, which addresses mean absolute deviation, as well as the assessment items that are above the grade-level standard. It is important to

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			note that removing the questions regarding mean absolute deviation and the comparison of mean absolute deviation to interquartile range does not impact the validity of the Module 5 Topic 2 material.
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	The materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. In many of the lessons that focus on supporting standards, the work is connected to major content. For example, in Module 1, Topic 1, Lesson 2, Activity 2.3, materials connect supporting LSSM 6.G.A.1 to major LSSM 6.EE.A.3, as students take apart and put together shapes to determine the formula for calculating the area of a trapezoid. Students work in a whole group to analyze three different approaches presented in Problems 2, 3, and 4 to determine the area of the given trapezoid. The teacher is instructed to "Record each numerical expression on the board and then label each part using b for base and h for height." This action and the discussion that follows facilitate student connections between determining the area of a trapezoid by decomposing the figure into triangles and other shapes (6.G.A.1) and using the properties of operations to create equivalent expressions (6.EE.A.3). In Module 2, Topic 2, Lesson 3, Activity 3.5 connects supporting LSSM 6.G.A.1, 6.G.A.2 and 6.G.A.4 to major LSSM 6.RP.A.3c as described by the initial statement of the

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			activity, “You can apply what you have learned about wholes, percents, and ratio reasoning to solve percent problems in geometry too.” The second problem in the lesson provides students with a right rectangular prism with labeled dimensions and the following prompt, “2. The tank shown is 75% full of water. a. What is the height of the tank? Explain how you solved the problem. b. Suppose the outside of the tank is covered with paper only up to the water level. What percent of the total surface area of the tank would be covered? Round to the nearest whole percent. Be sure to include the top of the tank in the total.” Students use rate reasoning to help solve a surface area problem. Additionally, in Module 4, Topic 2, Lesson 2, the materials connect LSSM 6.G.A.3, drawing polygons in the coordinate plane, to LSSM 6.NS.C.8, solving problems by graphing points in all four quadrants of the coordinate plane. In Activity 2.4, students find the volume of the fossil pit, the volume of sand required to fill the pit half-way, the number of sandbags needed for the pit, and how much the sand would cost for the pit. Students are given the coordinates of the pit, the depth of the pit, as well as other information regarding the size and cost of the sandbags. This work gives students purposeful practice using a real-world application when plotting points and drawing polygons in the coordinate plane.

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	REQUIRED **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important. For example, Module 3, Topic 1, Lesson 5: DVD and Songs, Using Algebraic Expressions to Analyze and Solve Problems facilitates the connection between Expressions and Equations Cluster A, "Apply and extend previous understandings of arithmetic to algebraic expressions" to Cluster B, "Reason about and solve one-variable equations and inequalities." This is evident in Activity 5.1 where students initially use reasoning to determine the number of DVDs each of four friends own in Problem 1 and 2. The following statements are used: "Haley says: "I have twice as many DVDs as Jaret." Dillan says: "I have four more DVDs than Haley." Kierstin says: "I have three times as many as Dillan." In Part A of Problems 3 through 6, students write algebraic expressions involving operations (LSSM 6.EE.A.2a) using variables to represent the unknown number of DVDs (LSSM 6.EE.B.6), as evidenced in the following prompt, "3. Let j represent the number of DVDs that Jaret has. a. Write an algebraic expression that represents the number of DVDs for each friend." In Part B of Problems 3 through 6, students evaluate the previously created algebraic expressions for a given value (LSSM 6.EE.A.2c). In Activity 5.2: More

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			Solving Problems with Expressions, students continue to form a solid connection between the aforementioned content standards and clusters as they solve similar problems with different contexts. The materials also connect the Geometry and Number System domains in Module 1, Topic 3, Lesson 3. In the lesson, students calculate the surface area of rectangular prisms that have measurements in decimals. Since calculating surface area requires students to understand how to multiply a variety of types of numbers, this lesson connects the number system to geometry in a way that strengthens the students' understanding of both domains.
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. Evidence of discussion techniques and engaging students in mathematical discourse is found throughout the teacher lesson plans for each lesson. For example, Module 2, Topic 1, Lesson 1: It's All Relative, Introduction to Ratio and Ratio Reasoning focuses on LSSM 6.RP.A.1, "Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities," which aligns solely to the conceptual understanding component of

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			rigor. The Getting Started section for this lesson prompts students to predict the final score of a basketball game given the score at the end of the first half. The teacher lesson plan for Lesson 1 provides guidance for observations and questions to provoke thinking such as, "What is an argument for using addition to predict the final score? What is an argument against using addition to predict the final score? What is an argument for using multiplication to predict the final score? What is an argument against using multiplication to predict the final score?" thus engaging students in conceptualization of the math used in their predictions. Activity 1.1: Additive and Multiplicative Reasoning provides scaffolded instruction to analyze student approaches and responses to the Getting Started problem, followed by defining additive and multiplicative reasoning as students are asked, "Which student used additive reasoning and which used multiplicative reasoning?" Additional evidence of the materials developing key conceptual understanding is seen in Module 3, Topic 1, Lesson 1 as students complete activities to develop conceptual understanding of numerical expressions with exponents (LSSM 6.EE.1). In this lesson, students are asked to identify the base and exponents of powers. This activity helps students build the understanding that exponents represent

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			the repeated multiplication of a base. A final example of how the materials build conceptual understanding of key concepts is seen in Module 2, Topic 3, Lesson 2 where unit rates are introduced. In this lesson, students are provided with models to help determine the best buy of laundry detergent. The activity encourages students to use modeling and estimation to help make sense of the problem to develop their understanding of unit rates (LSSM 6.RP.2). The lesson features problems that ask, "How did you calculate the unit rate?" and "How can unit rates help you compare two cars?" This activity helps connect the students' previous understanding of tape diagrams and develops their understanding that unit rates are used to compare two different quantities when one of the quantities has the value of "1."
	REQUIRED **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. In addition to the instructional lesson, the materials provide a paper-based Skills Practice workbook, as well as a digital workspace (MATHia) that tracks student progress to facilitate individual learning. As stated in the Teacher's Implementation Guide, Volume 1, "Learning Individually: Through MATHia, students receive 1-to-1 adaptive math coaching, providing a personalized learning path and ongoing formative assessment."

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			For teachers and students with limited technology, a Skills Practice book is provided that includes the targeted practice of each topic's skills and mathematical concepts. The first MATHia Workspace provided within Module 1, Topic 1 lays the foundation for LSSM 6.EE.A.3, "Apply the properties of operations to generate equivalent expressions," by addressing the commutative and associative properties. Initial guided instruction is provided using an example of each property followed by multiple practice problems for students to complete on their own with instructions such as, "Use the Commutative Property to rewrite each expression in order to add more efficiently. Then determine the sum." The student practice problems found in the MATHia Workspace are identical to the problems found in the Skills Practice Workbook for Module 1, Topic 1 allowing students to access the content in different ways. For example, within the Commutative and Associative Properties skills practice sheets and MATHia Workspace, there are 24 problems provided to build student fluency. There are multiple Workspaces and Skills Practice assignments within each module designed to reinforce foundational fluency skills and grade level procedural skill and fluency expectations. A second example of how the materials help students attain fluency and procedural skill is seen in Module 1,

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			Topic 1, Lessons 4 and 5. These lessons help students gain fluency in composing and decomposing pairs of numbers when using the greatest common factor and least common multiple as required by LSSM 6.NS.B.3. The materials build practice in helping students decompose numbers with prime factorization strategies and listing common multiples in tables. The materials also include additional skill practice problems to provide students more work with this concept.
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**Yes**	The materials are designed so that students spend sufficient time working with engaging applications. In Grade 6, students need ample practice working with application problems that include purposeful work creating algebraic equations resulting from real-life situations. Module 3, Topic 2, Lesson 4 provides multiple opportunities for students to work with single-step and multi-step contextual problems. In Activity 4.2, students solve problems that require more than one equation to solve, and, at times, have to interpret the solution. For example, “There are two routes Jasmine can take when she bikes home from school—the long way and the short way. The long way is 1 1/2 times as far as the short way. During one week, she biked a total of 30 miles from school to home. She took the short way three times. a. What is the distance of the short way? b. What is

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			the distance of the long way?" In this problem, students create multiple equations to solve for the answer. In addition, the curriculum addresses the application of mathematical concepts through the "Topic Performance Task" provided for each topic of each module. As stated in the Front Matter of the Teacher's Implementation Guide, Volume 1, "Each Performance Task provides a scenario with minimal scaffolding, clear instructions to the student regarding criteria for acceptable work, and a detailed rubric." An example is found in the Topic Performance Task in Module 3, Topic 2. This task is aligned to Major LSSM 6.EE.B.7, "Solve real-world and mathematical problems by writing and solving equations and inequalities of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers." In this task, students are provided information about a ski trip organized by the PTA at a school and are directed to, "Use this information to write and solve equations to determine the number of students going on the trip, the cost per student, the number of hotel rooms needed for the students, the number of buses needed, and the cost to rent snow boots for tubing."
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in

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			the materials. Not all lessons include opportunities to engage in all three components of rigor in the same lesson. For example, questions from Module 4, Topic 1, Lesson 3 align with conceptual understanding and procedural skill and fluency relating to rational numbers. Students complete problems that relate to identifying integers and rational numbers while also ordering rational numbers on the number line. In this lesson, only two levels of rigor are present. However, in Module 3, Topic 1, Lesson 3, the materials provide practice in identifying the parts of algebraic expressions, simplifying expressions using the Order of Operations, and evaluating expressions. This lesson primarily features work in procedural skill and fluency as required by LSSM 6.EE.A.2b, 6.EE.A.2c, and 6.EE.A.3.
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**Yes**	The materials address the mathematical practice standards (MP) in such a way as to enrich the content standards of Grade 6. The practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials. Course materials familiarize students with language and application of the practice standards called “Habits of Mind'' that is found in the Front Matter of the Teacher Implementation Guide and Student Editions. Students and teachers can easily identify which mathematical practice they should focus on since, as stated on FM-18, “Each activity is denoted

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			with an icon that represents a practice or pair of practices intentionally being developed." The Teacher's Implementation Guide explains how the mathematical practices are presented in each lesson and a list of questions/strategies are given to help teachers facilitate the use of the math practice standards in his or her classroom during lessons. For example, the Teacher's Implementation Guide suggests that teachers help students develop "I can" statements to help them become more reflective of their mathematical reasoning. Additionally, there is a list of suggested questions to use when MP.2 and MP.3 are embedded in the lesson (reason abstractly and quantitatively and critique the reasoning of others, respectively). An example of icons being used to denote which practice is intentionally developed is found in the student materials for Module 5, Topic 1, Lesson 3. Activity 3.1: Histograms which contains the icon of a fist holding a tool to ensure students ask themselves questions that assist them in modeling with mathematics (MP.4) and choosing strategic tools (MP.5) such as frequency tables to represent and identify key features of data, such as distribution and measures of center. Another example is found in Module 1, Topic 3 , Lesson 3, Activity 2.3., where a target icon is labeled at the top of the page to remind students to attend to precision (MP.6). The lesson emphasizes the use of mathematical

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			language to differentiate between prisms and pyramids and to determine specific names of the polyhedrons using terms such as base, faces, vertices, and edges.
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion **5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:** Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**REQUIRED** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	**Yes**	The materials provide extensive work with course-level problems that are consistent with the progressions in the standards. The materials contain few problems that are below grade level. Those below grade level are clearly identified as review material in the Module or Topic Overview. Each module overview provides a connection to prior and future learning by description. This is evidenced in the Module 1 Teacher's Implementation Guide Overview, within the sections titled, "What is the Mathematics of Composing and Decomposing?" "How is Composing and Decomposing connected to prior learning?" and "When will students use knowledge from Composing and Decomposing in future learning?" The Module 1 Overview explains that the materials provide a review of fraction multiplication (LSSM 5.NF.4). The Topic 1 Overview describes where fraction multiplication problems can be found (Module 1, Lesson 1.1 Spaced Review). Students are presented with appropriate grade-level tasks and problems throughout the materials via paper-based and computer-based tasks. The Skills Practice worksheets provide students with

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			extensive work to achieve mastery of the content standards. For example, the Module 3, Topic 1 Skills Practice sheet provides students with practice in algebraic expressions and in solving equations so that they can fully develop conceptual understanding and perform procedural skills fluently.
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Yes**	The materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The Topic Overview identifies which topics are related to topics learned in previous grades and describes the progression of learning in previous grades to arrive at the grade level standards. An example of how the materials relate the grade level concepts to previous learning is seen in the Module 1, Topic 2, Topic Overview. The materials explain that the overall learning objective for Topic 2 is fraction division. The materials explain that in order for students to have the proper understanding to divide fractions, students must understand and reason about the size of fractions, which is learned in Grade 3. Students must also have knowledge of how to divide fractions by whole numbers and divide whole numbers by fractions, which is learned in Grade 5. The materials further relate this prior knowledge to area models and understanding the inverse relationship of multiplication and division. Additionally, the Topic 1 Overview provided for Module 5, describes the following as the entry

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			point for students regarding the content focus of the topic, "Students have been engaged informally in the statistical problem-solving process throughout their elementary school years. In Grade 1, students were expected to organize, represent, and interpret data with up to three categories: ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another (1.MD.4). In Grades 2 and 3, students created picture graphs and bar graphs of categorical data (2.MD.10, 3.MD.3). In Grades 4 and 5, students made line plots to display data with fractions (4.MD.4, 5.MD.2). And in Grade 4, students developed conceptual understanding of angles and angle measurement, allowing them to create pie charts (4.MD.C)." Students build upon this understanding in Module 5 as they are introduced to the statistical problem-solving process.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	The materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. Learning objectives for Module 2, Topic 1, Lesson 4 are shaped by LSSM 6.RP.A.3 and state that students should be able to "Create and reason about tables of equivalent ratios," "Use known values in a table to determine equivalent ratios," and "Solve problems by reasoning about graphs, diagrams, and tables of equivalent ratios."

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			Learning objectives for Module 3, Topic 1, Lesson 3 are aligned to LSSM 6.EE.A.3 and state that students should be able to "Simplify algebraic expressions using the associative, commutative, and distributive properties," "Apply properties of operations to create equivalent expressions," and "Rewrite expressions as the product of two factors." Learning objectives for Module 3, Topic 1, Lesson 5 are clearly shaped by LSSM 6.EE.B.6, where students should be able to "Represent real-world problems with algebraic expressions" and "Use variables and write algebraic expressions to solve real-world and mathematical problems." The learning objectives in Module 5, Topic 1, Lesson 1 are shaped by Cluster A, to "Develop understanding of statistical variability, of the Statistics and Probability domain." The first learning objective of Lesson 1 states that students will be able to "Recognize and design statistical questions and anticipate variability in data related to the question."
Additional Criterion **6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:** Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach	**REQUIRED** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Yes**	The materials attend to the full meaning of each practice standard. The Topic Overview within each module includes a section that connects the lesson components to the practice standards. For example, in Topic 3 Overview, Module 1, the materials provide explicit connections under "How do the activities in Decimals and Volume promote student expertise in the math practice standards?" Another

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
which are not included in the Standards. ☒ Yes ☐ No			example is found in the Topic 1 Overview, Module 2, where connections are made between the content and practice standards under the section question, "How do the activities in Ratios promote student expertise in the mathematical practice standards?" These practice standards, which are described in the Topic Overview are developed within the activities as noted by the examples of "Habits of Mind" icons described in Indicator 4a of this rubric. The materials include MP.1, make sense of problems and persevere in solving them, in each lesson. All lessons in the materials provide opportunities for students to engage in productive thought regarding grade-level concepts and in determining how to solve problems. For example, in Module 2, Topic 3 Performance Task, students are expected to determine the best deal when given five different-sized bags of sunflower seeds. In order to determine which size of sunflower seeds would be the best buy, students find the unit price per pound of sunflower seeds. MP.1 is evident in solving this performance task because students have to determine what the performance task is asking them to solve. MP.2, reason abstractly and quantitatively, is present in this performance task, as well, because students are expected to determine which math formulas are needed to solve the task. MP.3 is evident throughout the materials as students are often asked to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			explain their reasoning or asked to explain the reasoning of a solved problem that is already given. For example, in the Post-Test of Module 3 Topic 1, a question asks, "Determine if the two expressions are equivalent. Choose 3 different values for x and complete the table. Explain your reasoning." MP.4 is used throughout the materials when students create models to explain their mathematical reasoning. For example, students use a balance model to explore and explain their math reasoning when solving addition and multiplication problems with variables in the MATHia lesson in Module 4.
	REQUIRED **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Yes**	The materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Throughout the materials, students engage in "Who's Correct" problems where they must determine who is correct and who is incorrect. Students are expected to develop a sound mathematical argument reasoning how the problems were correct or incorrect. As students figure out who is correct, they consider the strategy and/or reasoning used in each answer, if the reasoning or strategy makes sense, and what errors were made in the incorrect response. It is intended that these types of problems will help students analyze their own work for errors and correctness. For

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			example, in Module 3, Topic 3, Lesson 2, students are asked, “Nic reported that on Saturday morning he sold 13 pretzels and collected $16.25, and on Saturday afternoon he sold 42 pretzels and collected $55.00. Do you think he reported accurately? Explain your reasoning.” Another example is found in Module 2, Topic 3, Lesson 1 where students are asked, “Molly says that she is 1.5 meters tall. Shawna is 5 feet tall. Molly says that she is taller, but Shawna disagrees. Who is correct? Explain your reasoning.” These problems are noted with a thumbs up/thumbs down symbol throughout the materials. Another way the materials provide opportunities to engage with mathematical reasoning and constructing viable arguments is by providing thought-provoking questions during the lesson activities. For example, Question 2 in Module 5, Topic 2, Lesson 1, states, “Lamar says that the median is 10 for the data set 5, 6, 10, 4, and 9. Explain what Lamar did incorrectly to determine that the median was 10. Then determine the correct median.” Additionally, Question 1, parts A through E of Module 2, Topic 2, Activity 3.1 provides sample student responses with the following prompt, “Mr. Goodwin, the sixth grade math teacher, asked the class to determine 25% of 44. Five different student responses are shown.” For each part of Question 1, students analyze each method and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			determine when each method is most efficient to use, such as in Question 1 Part a, "When is Kendra's method most efficient to use?"
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**No**	There are no teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. The practice standards are presented as "Habits of Mind" at the beginning of the materials, with symbols used to denote which practice(s) each activity uses; however, the facilitation notes in the teacher materials do not explain how the practice standards should be used or how they help develop understanding within the activity. For example, within the Teacher's Implementation Guide, "Habits of Mind" states, "Each lesson provides opportunities for students to think, reason, and communicate their mathematical understanding. However, it is your responsibility as a teacher to recognize these opportunities and incorporate these practices into your daily rituals." Additionally, the icons used throughout the materials lack specific guidance for the particular lesson or activity. All of the symbols, with the exception of MP.6, represent more than one math practice standard, and specific practices are not always identified. As an example, the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			symbol with a head and puzzle piece references both MP.2 and MP.3. The symbol with a hand and a wrench references both MP.4 and MP.5. The box symbol references both MP.7 and MP.8. In Module 1, Topic 1, Lesson 5: Composing and Decomposing Numbers, Activity 5.2 and 5.3 are labeled with an icon that aligns to both MP.2 and MP.3, but there is no guidance for teachers at the lesson or activity level on the specific role of each of the math practice standards.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials attend to the specialized language of mathematics for Grade 6. The materials connect mathematical terminology and academic vocabulary and encourage students to use both with precision. Evidence of this is found in the Teacher's Implementation Guide which suggests that teachers facilitate the understanding of mathematical terminology and academic vocabulary. The materials suggest that teachers create a word wall of the key math terms used within the lesson materials so that students can build their academic vocabulary. Additionally, the materials feature a glossary that includes key mathematical terms, with examples, that students can access both in the printed books and in online materials. For example, in Module 4, Topic 1, Lesson 1: The Human Number Line, students are

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			introduced to negative numbers. Student lesson materials provide an explicit definition of the term “negative number” and include a graphic of a number line that illustrates where negative numbers are placed on a number line. Students are further supported to attend to the use of accurate mathematical terminology by answering questions in the lesson assignments that ask students to explain their understanding of the math term. For example, one question from the Lesson 1 Assignment asks students to, “Write a sentence to explain the relationship between opposites and negative numbers.” This provides students the opportunity to attend to the specialized language of math by conceptualizing the math term. Additionally, key mathematical terms are explained within the instructional materials. For example, Topic 1, Activity 2.1 states, “The magnitude, or absolute value, of a number is its distance from zero on a number line. The symbol for absolute value is | |. The expression |n| is read as the absolute value of a number n.” In addition to providing clarification of meaning, these mathematical terms are also used frequently in context and course problems where students are to further explain their understanding. Students respond to conceptual problems to convey understanding, followed by the opportunity to clarify that conceptual

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			understanding. For example, Problems 5 and 6 state, "5. Can two different numbers have the same absolute value? If so, provide examples," and "6. What can you say about the absolute value of… A. Any positive number? B. Any negative number? C. Zero?"
Additional Criterion **7. INDICATORS OF QUALITY:** Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☒ Yes ☐ No	**REQUIRED** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	**Yes**	There is variety in what students produce. Students are asked to produce answers to problems in writing, through charts and graphs, and by producing models as a way to fully attend to the content standards. The materials also contain an online component, MATHia, that allows students to use technology to engage with the content standards. In Module 4, Topic 2, students use the Mathia software to deepen their understanding of plotting ordered pairs in all quadrants of the coordinate plane. Students respond to questions using drag and drop, multiple choice, multiple responses, and fill-in-the-blank. In the Module 5, Topic 1 Performance task, students are expected to create written conclusions from each box plot given and create histograms from the data. This task allows students to interpret data in a variety of ways and create a different representation of the data already displayed. The Skills Practice Worksheet provided for Module 1, Topic 2 focuses on fraction division. In Section I, Part A and B, students create number sentences given a model of fraction division. Section II, Part A provides

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students with real-world problems involving division with fractions where they solve the problem and use models to explain their reasoning. Section III, Part A prompts students to, "Determine the fraction that makes each product 1," by providing fill in the blank problems. In Section III, Part B and Section IV, Part A students calculate the quotient to practice procedural skills. On the End of Topic Test Form A for Module 2, Topic 2, students provide numerical responses, such as in Question 4, where students write given fractions as percentages. Question 5 provides a number line and asks students to "Label each indicated mark on the number line as a fraction, decimal, and percent. Make sure your fractions are in lowest terms. Round to the nearest thousandth, if necessary." Question 6 asks students to complete a table to represent a given real world scenario using a fraction, decimal and percent. Question 7 provides students two different models and prompts students to, "determine the shaded part of each figure, and write it as a fraction, a decimal, and a percent. Make sure you write your fraction in lowest terms."
	REQUIRED **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student	**Yes**	There are separate teacher materials that support and reward teacher study. The materials provide explicit Module Overviews, Topic Overviews, Lesson Plan materials, and video tutorials to support teacher study of the content standards.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.		Teachers are provided extensive explanation of materials through the Teacher's Implementation Guide, as well as guidance for instruction in lesson plans provided for each lesson within topics and modules. In Module 3, Topic 1: Expressions provides a Topic Overview that provides guidance materials to support teacher understanding of the content, connections between concepts, and how to build student understanding. The following questions are explored and expanded on: "How is Expressions organized?" "What is the entry point for students?" "How does a student demonstrate understanding?" "Why is Expressions important?" and "How do the activities in Expressions promote student expertise in the mathematical practice standards?" The lesson materials also provide teacher guidance on how to support the instructional process. For example, Module 2, Topic 3, Lesson 3 provides notes that support teachers in implementing effective instruction to students towards mastery of LSSM 6.RPA.3.b. The teacher lesson materials also provide sample questions to ask students during the lesson, differentiation strategies, and icons denoting the math practice standards in use. The MyPL (Professional Learning) tutorial videos provide a detailed overview of specific activities teachers should help

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students pay special attention to and the importance of the activities to help students build mastery in the content standards. For example, the Module 2, Topic 3, Lesson 3, Activity 3 MyPL video tutorial helps teachers understand what students should be doing to connect unit conversion to a graphed representation on the coordinate grid. The MyPL App videos are aligned to each specific lesson to "discuss and model some facilitation ideas," as stated in the MyPL video for Module 5, Topic 1, Lesson 2: Get in Shape-Analyzing Numerical Data Displays. The video goes through the teacher materials of the lesson and provides activity exploration, such as suggestions for instructions on how to create dot plots using register tape, butcher paper or even a human dot plot.
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps all students meet the same standards. Teacher lesson plans include instructional supports such as differentiation strategies, grouping strategies, and additional lesson modifications to support ELLs, as well as struggling and advanced learners. These supports are introduced and explained in the Teacher's Implementation Guide. An example of modifications is found in Module 4, Topic 1, Lesson 2: Magnificent

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Magnitude-Absolute Value, where differentiation strategies for Question 1 in Activity 2.2 suggest that, "If students work in groups of four, students can switch between shoulder and across-table partners from Question 1 to Question 2. For students who struggle, they could do fewer examples in each question but both questions are essential for meeting the standards in this activity. To extend the activity and focus on meaning, ask students to generate more situations." In the teacher lesson plan for Module 4, Topic 2, Lesson 3, an ELL Tip states, "Several exercises in this lesson require students to infer the concept of continuity. Some English Language Learners may have difficulty grasping and articulating how a graph shows the continuity of the real-world situation it models. Have advanced English Language Learners engage in a Reciprocal Teaching exercise by explaining their answers to beginners. Beginners repeat back what they heard, and the advanced English Language Learner makes corrections to refine understanding." Another example of an ELL Tip in the teacher lesson plan for Module 5, Topic 1, Lesson 3 states, "The term grouped frequency table provides a perfect opportunity for English Language Learners to parse a compound phrase by looking at the definitions of each of the terms. Have students look up the definitions of group,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			frequency, and table, and write them in their journal. Check for understanding by looking for the proper mathematical definitions. Finally, have students put the three definitions together to write a definition for the compound phrase." In the teacher lesson plan for Module 2, Topic 1, Lesson 5, Activity 5.2, Graphing Equivalent Ratios, teachers are provided a differentiation strategy for advanced learners, "To extend the activity, introduce the Golden Rectangle." In the notes of the teacher lesson plan for Activity 5.3 of the same lesson, a differentiation strategy geared toward struggling students states, "To support students who struggle, make the technique of using the graph to solve problems explicit. Have students start at the axis where the value is given, draw a segment to the point on the graph, and then draw the perpendicular segment to the other axis."
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	**Yes**	The underlying design of the materials distinguishes between problems and exercises. The materials use proper tools to help students meet the expectations of the standards. Problems within the lesson activities help students learn new mathematics and through the exercises found in the assessments and performance tasks they can apply what they have learned. Problems are appropriately scaffolded and allow students to develop the key concepts of the standards. For example, Module 5, Topic 1, Lesson 3,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Activity 3.2, students are given three questions to help develop an understanding of comparing histograms. One question asks students to create and accurately label histograms based on a frequency table. Then, in the Lesson Assignment, students are expected to, "1. Create a frequency table and a histogram to display Jeremy's scores. Be sure to name your histogram. 2. Describe the distribution of the data. Include any specific graphical features or patterns. Explain what your answer means in terms of Jeremy's scores. 3. Create a second frequency table and histogram to provide a different view of the data distribution." Throughout the activities within each lesson, students are presented with problems to solve and discuss based on new mathematical content presented. Exercises follow at the end of each lesson to apply understanding and procedural skills in the Assignment section. For example, in Module 2, Topic 2, Lesson 3, Activity 3.2, students are provided a "Worked Example" using a double number line to represent money raised in a homeroom at school and how that correlates to the percentage of the goal set. The questions that follow ask students to analyze the worked example and create double number lines to represent other homeroom goals, which are all based on new learning using this mathematical model. Practice exercises 1 and 2 found at

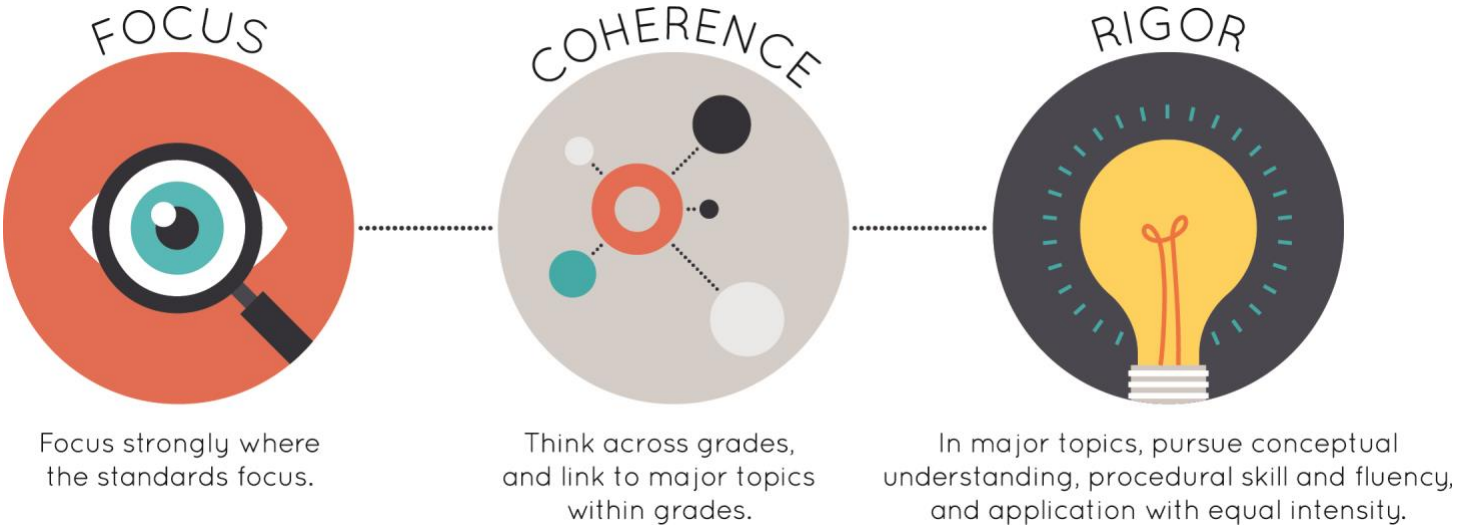
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the end of the lesson provide students with real-world examples and allows them freedom in choice of models used to get to the correct answer.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Prior knowledge is activated in the "Warm Up" and "Getting Started" sections of each lesson to appropriately scaffold student learning. Mathematical concepts found in the LSSM for Grade 6 are addressed in an order that supports student mastery of the content standards. For example, Module 2, Topic 1 addresses Major LSSM 6.RP.A.1 and Module 2, Topic 3 addresses Major LSSM 6.RP.A.2 (The LSSM Companion Document 2.0 for Grade 6 lists 6.RP.A.1 as a Grade 6 standard taught in advance of 6.RP.A.2.) Another example can be found in Module 3, Topic 1, Lesson 1, where the focus is on Major LSSM 6.EE.A.1 followed by Module 3, Topic 1, Lesson 2 focusing on Major LSSM 6.EE.A.2 (The LSSM Companion Document 2.0 for Grade 6 lists 6.EE.A.1 as a Grade 6 standard taught in advance of Major LSSM 6.EE.A.2.). This is also evident in Module 1: Composing and Decomposing. Students are expected to gain fluency in using the standard algorithms of division and operations with decimals. In the first lesson of the module, students' prior knowledge of number relationships and shapes is used and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			further exposes them to operations with multi-digit numbers, composing and decomposing numbers, and applications to finding areas.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	While there are no LSSM for Grade 6 that specifically call for the use of technology, the instructional materials provide MATHia software where students can manipulate models created through technology to further investigate the grade-level content. For example, in Module 4, Topic 1, MATHia Workspace - Representing Integers on Number Lines an "Explore Tool" for students allows them to plot integers and their opposites on a virtual number line so that they can respond to the prompt, "What do you notice about how each point and its opposite are labeled?" Another example can be found in Module 3, Topic 1, MATHia Workspace - Modeling Equivalent Algebraic Expressions, where an "Explore Tool" for students allows them to manipulate virtual algebra tiles to determine equivalent algebraic expressions. The problem states, "Sofia has 3 boxes of toys. Each box has the same number of toys. Drag and drop (x)-tiles to the top of the model to show Sofia's 3 boxes of toys." The MATHia activities provide students with ample practice in plotting points in the coordinate plane. Students have the opportunity to view graphs with varied intervals in all four quadrants to provide more fluency practice in finding ordered pairs using all

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			four quadrants of the coordinate plane. The materials also support the use of technology in Module 2, Topic 2, MATHia activity: Determining a Whole Given a Percent and a Part. In this activity, students use tape diagrams to model their understanding that percent and parts are partitions of a whole number. Students are allowed critical time in solving application problems involving percentages and parts of whole numbers.
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Yes/No**	
I: Non-Negotiables	1. Focus on Major Work	**Yes**	A majority of the lessons are devoted to the major work of the grade. Materials spend minimal time outside of the content standards and do not make students or teachers responsible for topics that are outside of the grade level. Some assessment items were found that assess students beyond the grade level; however, the implementation guide for Louisiana teachers includes guidance on omitting these items.
	2. Consistent, Coherent Content	**Yes**	The materials connect supporting standards to major content standards in a meaningful way to support focus and coherence. The materials include problems and activities that connect two or more clusters in a domain and/or two or more

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			domains in the grade level where these connections are natural and important.
	3. Rigor and Balance	**Yes**	The materials are designed to allow the conceptual development of Grade 6 topics, practice toward building fluency and procedural skills, and spend ample time with engaging applications. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials.
	4. Focus and Coherence via Practice Standards	**Yes**	The materials address the mathematical practice standards in such a way as to enrich the content standards of Grade 6.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The materials create coherence by linking topics from domains and clusters and through the progression of standards through grades/courses.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials provide practice standards that make meaningful and purposeful connections that enhance the content of the course. Practice standards are linked to each activity; however, teachers are not provided with an explanation of how each practice standard should be addressed within the activity.
	7. Indicators of Quality	**Yes**	The materials give teachers and students the tools they need to meet the expectation of the standards.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Course 2** Grade: **7**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.			
Non-Negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**REQUIRED** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	**Yes**	The materials devote the large majority of class time to major work of the grade. 67% of the instructional materials are directly aligned to the major Louisiana Student Standards for Math (LSSM) for Grade 7. 56.6% of the materials focus solely on major standards alone, 10.8% of the materials address a combination of major and supporting/additional standards, and 32.6% of the materials address supporting or additional standards.
	REQUIRED **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	Instructional materials spend minimal time on content outside of the Grade 7 course requirements. Some assessment items go beyond the expectations of the LSSM for Grade 7; however, implementation suggestions are provided for Louisiana teachers for those assessment items. For example, Questions 19 and 20 of Module 3, Topic 2 End of Topic Test Form A and Form B expect students to "Solve the literal equation for the indicated variable." This concept is outside the scope of the LSSM for Grade 7 and is addressed in LSSM A1: A-CED.A.4, "Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations." The implementation guide suggests omitting these items and states, "Students

[3] For more on the major work of the grade, see Focus by Grade Level.
[4] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			should not be held accountable for solving literal equations for an indicated variable. Additional assessment questions are available through Edulastic." Previous grade content is used only as review to assist with scaffolding of new content standards. For example, in Module 2, Topic 2, Lesson 4, there are two review questions that are based on LSSM 6.RP.A.3 but these are used to prepare students for work related to LSSM 7.RP.A.2. Previous grade content is used only as review to assist with scaffolding of new content standards.
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	The materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. For example, in Module 4, Topic 1, Lesson 3, the materials connect supporting LSSM 7.SP.C.7b (developing a probability model to predict the probability of events) to major LSSM 7.RP.A.3 (using proportional reasoning and percentages to solve multi-step problems) by promoting the use of proportions to help students predict the probability of future occurrences of an event. In Module 4, Topic 1, Lesson 3, Activity 3.3, a worked example is provided on how to complete this type of problem. Problem 1 asks students to "1. Suppose these are the probabilities for the symbols on the spinner. a. If you spin the spinner 40 times, predict the number of times the spinner would land on each symbol." In Module 4,

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			Topic 3, Lesson 2, the materials facilitate connections between supporting LSSM 7.SP.A.1 and 7.SP.A.2 and major LSSM 7.RP.A.3. In the lesson, students use proportional reasoning to estimate parameters for a population and compute percent error. In Activity 2.1, students select a sample of squares on a floor plan, calculate the area, and then represent the data on a dot plot. They use their sample and proportional reasoning to predict the total area of the squares. Students use the following ratio to estimate the total area, number of squares in the sample : total area of the sample squares. In Activity 2.2, they are given the actual total area and calculate the percent error for the statistics calculated in Activity 2.1 and the beginning of Activity 2.2. In Problem 9, students are given the actual area of the 40 numbered squares of 288 square feet. In 9c, students complete the following problem "Calculate the percent error for the parameter and your statistics from this activity and the previous activity for the total sum of the areas of the squares."
	REQUIRED **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important. For example, in Module 3, Topic 2, Lesson 2, the materials connect Clusters A and B of the Expressions and Equations (7.EE) domain. The focus of Cluster A, Expression

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and Equations domain, is for students to "use properties of operations to generate equivalent expressions." The focus of Cluster B is for students to "solve real-life and mathematical problems using numerical and algebraic expressions and equations." Students have multiple opportunities to generate equivalent expressions by completing questions that require expressions or equations such as in the following: "3. Rewrite your equation in the form ax+b=c. a. Name the strategies necessary to rewrite the equation you wrote. b. Rewrite the equation you wrote for Limousines by Lilly. Explain why the resulting equation is a two-step equation." This work is connected to solving real-life problems involving numerical and algebraic expressions and equations. Students are given real-life problems that use equations with variables. For example, where students are asked, "5. Consider the cost of renting a limousine from Transportation with Class. a. What does the first hour of a rental from Transportation with Class cost? b. What does each additional rental hour cost from Transportation with Class after the first hour? c. Write an equation for the total cost, t, of renting from Transportation with Class for any given number of rental hours, h." In Module 2, Topic 2, Lesson 3, the Number System (7.NS) and Ratio and Proportional Reasoning (7.RP) domains are

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			connected. In this lesson, students solve real-life problems with rational numbers involving all four operations to solve problems involving percent error. Students make the connection that proportional reasoning can be used to make sense of real-life mathematical problems, including those that involve rational numbers. For example, Question 1 of Activity 3.3 states, "An airline estimates that they will need an airplane that seats 224 passengers for the 6 A.M. flight from Washington, D.C., to Boston. Calculate the percent error for each number of actual passengers booked. Show your work. a. 186 booked tickets b. 250 booked tickets." When calculating for the 186 tickets in this problem, students determine that the answer results in a negative percent error and will have to reason what that means in a real-world context.
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. Students use a variety of strategies to evaluate expressions, equations, and inequalities. For example, in Module 3, Topic 1, Lesson 2, students develop the concept that the distributive property, along with rational coefficients, can be used to rewrite expressions and solve real-world problems (LSSM 7.EE.A.1).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Activity 2.3 demonstrates how area models can support students in using the distributive property when rewriting equivalent expressions. After direct instruction is facilitated to build understanding, the activity requires students to "Draw a model for each expression, and then rewrite the expression with no parentheses." In Module 1, Topic 1, Lesson 1, the materials develop conceptual understanding of the circumference, area, and diameter of a circle (LSSM 7.G.B.4). The students engage with activities that help develop the understanding that "pi" is a ratio that compares the circumference of a circle to its diameter. An example of this development is displayed in Activity 1.2. where questions build the understanding that all circles share the same circumference to diameter ratio of approximately 3.14. Question 3 of the activity requires students to "Average all of your classmates' answers to Question 3. Write the approximate ratio of circumference to the diameter as a fraction and as a decimal."
	REQUIRED **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. In addition to the instructional lesson, the materials provide a paper-based Skills Practice workbook, as well as a digital workspace (MATHia) that tracks student progress to facilitate individual

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.		learning. As stated in the Teacher's Implementation Guide, Volume 1, "Learning Individually: Through MATHia, students receive 1-to-1 adaptive math coaching, providing a personalized learning path and ongoing formative assessment." For teachers and students with limited technology, a Skills Practice book is provided that includes the targeted practice of each topic's skills and mathematical concepts. For example, in Module 3, Topic 2, students develop an understanding of solving two-step linear equations by connecting models and procedures. By the end of the Topic, students use this understanding to fluently solve two-step equations and inequalities (LSSM 7.EE.B.4). In Lesson 2.3 and 2.4, students practice solving two-step equations and inequalities through a variety of practice problems. Within the lessons, there are multiple exercises embedded in the activities and practice problems to build student procedural skill and fluency. Following the lessons, students can utilize the MATHia software to continue to build fluency as they solve a variety of two-step-equations and inequalities using formal strategies. The student practice problems found in the MATHia Workspace are identical to the problems found in the Skills Practice Workbook for Module 3, Topic 2, allowing students to access the content in different ways. Students have the opportunity to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			build fluency and procedural skills throughout the materials. For example, Module 1, Topic 3 provide the practice necessary to fluently recognize and represent proportional relationships (LSSM 7.RP.A.2). The lesson is dedicated to recognizing graphs, tables, and equations that represent proportional relationships. In Lessons 3 and 4, students complete tables, interpret graphs, and create equations to identify proportional relationships. The exercises in the Skills Practice sheets associated with these lessons provide ample opportunities for students to build fluency with this concept. Students have ample opportunities to build fluency and procedural skill toward operations with rational numbers (LSSM 7.NS.A.1 and 7.NS.A.2). In Module 2, Topics 1 and 2, the materials provide ample practice in building fluency toward these concepts. For example, in Topic 1, Activity 5.3 provides the overall practice of adding and subtracting rational numbers. Students also gain sufficient practice in multiplying and dividing rational numbers from the Topic 2 Skill Practice Worksheet.
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in	**Yes**	The materials are designed so that students spend sufficient time working with engaging applications. The instructional materials provide practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade. The problems present opportunities

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.		for practice and engage students in problem solving within lessons that are aligned to content standards focused on the application component of rigor. This is evident in Module 3, Topic 2, Lesson 3 as students learn strategies for solving two-step equations (LSSM 7.EE.B.4a). The lesson begins with students exploring different strategies used to solve two-step equations and then solving equations by applying the Properties of Equality. Students then apply this understanding by writing and solving two-step equations in order to solve real world, contextual problems. For example, Activity 3.2, problem 2 states, “Pete’s Garage charges $45 per hour for labor when performing auto repairs. The office manager must have the cost of parts and the hours of each job ticket to complete the bills for the customers. a. Define variables for the three quantities that are changing in the scenario. b. Write an equation that represents the total cost of auto repairs. c. Assume that for a given car, the cost of the parts is $101. Use your equation to determine how many hours the mechanic worked on the car if the total bill was $269.75.” Students also engage with multi-step contextual problems with the “Topic Performance Task” provided in each Topic. The Teacher’s Implementation Guide, Volume 1 states, “Each Performance Task provides a scenario with minimal scaffolding, clear instructions to the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			student regarding criteria for acceptable work, and a detailed rubric." This is evidenced in Module 2, Topic 1 "Topic Performance Task." Students are given the rational numbers, 6.4, $-2\frac{2}{5}$, $4\frac{3}{10}$, and -5.2. Students are instructed to "Represent each number as the sum of two rational numbers and as the difference of two rational numbers. Use a number line for each operation." Then students are tasked with writing a real world problem that could be modeled by each sum/difference. Assessments also provide the opportunity for students to work with engaging applications. For example, in Module 1, Topic 1, End of Topic Assessment, Form A, students are expected to apply their knowledge of LSSM 7.G.A.4 to solve single-step and multi-step problems. For example, in item 17, students first calculate the area of a wheel of cheese and then find the cost per square inch of a 9-inch wheel of cheese that costs $18.60.
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials. Not all lessons include opportunities to engage in all three components of rigor in the same lesson. For example, in Module 1, Topic 1, Lesson 2, only one level of rigor is present in the lesson activities. The lesson begins with having students complete an activity

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			decomposing a circle into equal portions to form a parallelogram. This activity will help students develop the understanding that the area of a circle can be described as ½ the measurement of the circumference times the radius. In the remaining parts of the lesson, students are provided questions to help decide whether circumference or area is needed to solve problems. On the whole, the problems in this lesson all meet the conceptual understanding level of rigor. Students often have the opportunity to engage with all three components of rigor during the Performance Tasks located at the end of each topic. In Module 3, Topic 1, the Performance Task reinforces all three components of rigor through a real-world scenario where students are presented with the following problem: "Weston is shopping for a new backpack. The backpack he wants costs $25.95. The sales tax in Weston's city is 6%. What are two different expressions that could be used to calculate the total cost of the backpack? Write two expressions to represent the price of the backpack, b, plus 6% of the cost: the first expression as a sum and the second as a product. Complete the table showing equivalent expressions and the total cost of different backpacks in places with a different sales tax. Explain what the simplified expression means in terms of the original cost of the backpack." Students must first understand how to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			write and simplify an algebraic expression in terms of the original cost (conceptual understanding) and then be able to perform the straight mathematical calculations (procedural). Students also provide an explanation about what the simplified algebraic expression means in terms of the original cost of the backpack. This problem provides students with an opportunity to apply both conceptual understanding and procedural skills in a real-world, multi-step problem.
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**Yes**	The materials address the mathematical practice standards (MP) in such a way as to enrich the content standards of the Grade 7. In the teacher materials, each lesson provides an icon for the mathematical practice being developed. The Teacher Implementation Guide explains how the Standards for Mathematical Practices (MP) are presented in each lesson and includes a list of questions and strategies to help teachers facilitate the use of them during the lesson. The Teacher Implementation Guide suggests that teachers help students develop “I can” statements to help them become more reflective of their mathematical reasoning. Additionally, there is a list of suggested questions to use when MP.2 and MP.3 are embedded in the lesson (reason abstractly and quantitatively and critique the reasoning of others, respectively). The student materials include the same icons found in the teacher materials that designates

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			which math practices are being used in each lesson. Students are guided to use the math practices with fidelity to develop the habits to become better mathematicians. For example in Module 1, Topic 4, Lesson 1, Activity 1.2 suggests that students should use proportions to solve part-to-whole ratio problems which aligns with MP.4 (model with mathematics). Developing understanding through modeling supports students in the process of solving problems with percentages.
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion **5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:** Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**REQUIRED** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	**Yes**	The materials provide extensive work with course-level problems that are consistent with the progressions in the standards. The materials contain very few problems that are below grade level. Those below grade-level are clearly identified as review material in the Topic Overview. For example, in Module 1, Overview, it is explained that the materials provide a review of ratios (LSSM 6.RP.A.3) and mean (LSSM 6.SP.A.5) and describes where these review problems can be found (e.g., Module 1, Topic 1, Lesson 1, Review). The materials also provide ample practice with grade level problems. For example, the activities within the lesson, the Skills Practice worksheets, and MATHia software provide students with extensive work to achieve mastery of the content standards. In Module 1, Topic 4, the Skills Practice sheets provide students with practice

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			finding the constant of proportionality and recognizing proportionality so that students can attend to the level of the rigor component called for in the content standards, procedural skill and fluency.
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Yes**	The materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The Topic Overview identifies which concepts connect to previously learned content and describe the progression of learning in previous grades to arrive at the grade level standards. For example, in Module 2, Topic 1: Adding and Subtracting Rational Numbers, the overview materials describe prior learning and the "entry point" for the topic as the Grade 6 Number System domain. The materials explain that students develop the understanding of adding and subtracting rational numbers from their work in Grade 6 of recognizing distance from zero on a number line. This foundational knowledge then prepares students to develop rules for adding and subtracting all rational numbers by using familiar tools, number lines, and understanding that the direction of movement can be described by using a negative or positive number sign. A second example of how the materials relate the grade-level concepts to previous learning is seen in the Module 3, Topic 2, Topic Overview. The materials explain that the overall learning objective for Topic 2 is solving two-step equations and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			inequalities. The materials explain that the conceptual understanding needed to solve algebraic equations involves learning about inverse operations and that in Grade 6, students solved one-step equations by applying inverse operations.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	The materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. For example, in Module 2, Topic 2, Lesson 1, the learning objectives reflect the language and intent of LSSM 7.NS.A.3. The learning objectives are to "multiply integers using models," "develop rules for multiplying integers," and "develop rules for dividing integers." The objectives include specific vocabulary terms taken directly from the LSSM which clearly describes what students are expected to learn. In Module 5, Topic 1, Lesson 2, the learning objectives are clearly shaped by Cluster B of the Geometry domain to "solve real-life and mathematical problems involving angle measure, area, surface area, and volume." The learning objectives for Lesson 1 explains that students will be able to "use facts about supplementary, complementary, vertical, and adjacent angles and linear pairs in multistep problems to write and solve simple equations for unknown angles." The lesson objectives were developed to meet the focus of Cluster B within this domain.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Additional Criterion **6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:** Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	**REQUIRED** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Yes**	The materials attend to the full meaning of each practice standard. All lessons provide opportunities for students to engage in productive thought regarding grade-level concepts and how to solve the problems. For example, in Module 3, Topic 2 Overview, it is explained that math practices are embedded in the materials and all lessons embed MP.1, MP.2, and MP.3. The lesson materials are designed so that learners can reason abstractly and quantitatively about math, can make sense of problems, and can develop arguments regarding solutions while critiquing the arguments of others. For example, the Topic 2 materials strive to help students develop deep conceptual understanding of two-step equations and inequalities by connecting math models (number lines or tape diagrams) to the standard algorithm for solving these types of problems. To do this, students must look for and make use of structure (MP.7) and use this reasoning to solve other problems of this type (MP.8). In Module 1, Topic 3, the Topic Overview explains how the math practice standards are to be used to help students develop deep understanding of the topic. In the Topic 3 materials, students learn how to model real-life scenarios on graphs (MP.4). Students then analyze the features of graphs to develop an understanding of proportionality and non-proportionality (MP.3, MP.6, and MP.7). With this reasoning, students are able to generalize

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			their understanding to solve other problems with standard algorithms (MP.1, MP.2, MP.8, and MP.5).
	REQUIRED **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Yes**	The materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. For example, in the "Thumbs Up/Thumbs Down" example problems, one problem is presented correctly and one problem is presented incorrectly. In Module 1, Topic 2, Lesson 1, two student strategies are presented using unit rates to compare recipes and students must respond to the following: "Compare Julio's and Emily's strategies. In what ways are they different? How did they arrive at the same answer?" Opportunities to engage with mathematical reasoning is also provided through thought-provoking questions asked during the lesson activities. Most of these questions are found in the facilitation notes in each Teacher Lesson Plan. An example of these thought-provoking questions, is found in Module 3, Topic 3, Lesson 3 Facilitation Notes. Teachers are urged to facilitate academic discourse in small groups by posing questions during the lesson activities or as a part of the whole group discussion such as: "What do the numbers in the table represent with respect to the problem situation?" and How did you decide the appropriate label for the x-axis

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			and y-axis? Is there another way to label the axes? Explain." In Module 2, Topic 2, Lesson 2, Activity 2.1, the Teacher Implementation Guide provides questions such as: "Is 0.33 a repeating decimal? Why or why not? Can you provide a counterexample to disprove that conjecture? Does that conjecture take into consideration that the divisor cannot be 0?"
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**No**	There are no teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. The practice standards are presented as "Habits of Mind" at the beginning of the materials, with symbols used to denote which practice(s) each activity uses; however, the facilitation notes in the teacher materials do not explain how the practice standards should be used or how they help develop understanding within the activity. For example, within the Teacher's Implementation Guide, "Habits of Mind'' states, "Each lesson provides opportunities for students to think, reason, and communicate their mathematical understanding. However, it is your responsibility as a teacher to recognize these opportunities and incorporate these practices into your daily rituals." Additionally, the icons used throughout

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			the materials lack specific guidance for the particular lesson or activity. All of the symbols, with the exception of MP.6, represent more than one math practice standard, and specific practices are not always identified. As an example, the symbol with a head and puzzle piece references MP.2 and MP.3. The symbol with a hand and a wrench references MP.4 and MP.5. The box symbol references MP.7 and MP.8. In Module 4, Topic 2, Lesson 1, Activity 1.1. is labeled with the icon of a hand holding a wrench which represents MP.4 (model with mathematics) and MP.5 (use tools strategically), but there is no guidance for teachers at the lesson or activity level on the specific role of each of the math practice standards.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials attend to the specialized language of mathematics for Grade 7. The materials connect mathematical terminology and academic vocabulary and encourage students to use both with precision. Evidence of this is found in the Teacher's Implementation Guide which suggests that teachers facilitate the understanding of mathematical terminology and academic vocabulary. The materials suggest that teachers create a word wall of the key math terms used within the lesson materials so that students can build their academic

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			vocabulary. Additionally, the materials feature a glossary that includes key mathematical terms, with examples, that students can access both in the printed books and online materials. For example, in Module 1, Topic 3, Lesson 1: How Does Your Garden Grow, students are introduced to direct variation. Student lessons provide an explicit definition of the term "proportional relationship" along with sample problems and representations. A connection is then made to this concept by defining "direct variation" and a worked example of a graph that illustrates direct variation. Students are to attend to the use of accurate mathematical terminology through questions that ask them to explain their understanding of the math term. For example, in Lesson Assignments students are asked to "Explain how the following terms are related: linear relationship, proportional relationship, equivalent ratios, and direct variation." This assignment allows students to describe their own understanding of the term while attending to precise math vocabulary.
Additional Criterion **7. INDICATORS OF QUALITY:** Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards.	**REQUIRED** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	**Yes**	There is variety in what students produce. Students are asked to produce answers to problems in writing, through charts and graphs, and by producing models as a way to fully attend to the content standards. The materials also contain an online component, MATHia, that allows students to use technology to engage with the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			content standards. In Module 2, Topic 1, students use the MATHia software to identify opposites, absolute value, and perform operations with integers. Students respond to questions using drag and drop, multiple choice, multiple responses, and fill-in-the-blank. In the Module 3, Topic 1 Performance task, students are expected to calculate the total cost, including sales tax, when given the original price of backpacks using two different methods. This task allows students to create algebraic expressions and explain their reasoning. The materials create opportunities for students to not only answer questions, but also to create their own equations to solve math exercises and justify their own reasoning with words.
	REQUIRED **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Yes**	There are separate teacher materials that support and reward teacher study. The materials provide explicit Module Overviews, Topic Overviews, Lesson Plan materials, and video tutorials to support teacher study of the content standards. Teachers are provided extensive explanation of materials through the Teacher's Implementation Guide, as well as guidance for instruction in lesson plans provided for each lesson within topics and modules. Each Module Overview explains the content standards that are included and how student learning will be developed.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			The Topic Overview of each module helps teachers understand the progression of learning and explains how students will interact with the materials. The entry point of learning for students is described, which helps teachers understand the prerequisite knowledge needed for them to be fully prepared for learning. The lesson materials include teacher guidance on how to support the instructional process. For example, in Module 3, Topic 2, Lesson 3, there are notes that support teachers in providing effective instruction to students towards mastery of LSSM 7.EE.B.4 (solving two-step equations by using the inverse operation), sample questions to ask during the lesson, differentiation strategies, and icons to indicate the math practice standards in use. The MyPL (Professional Learning) tutorial video provides a detailed overview of specific activities to pay special attention to that will help students and explains the importance of the activities in helping students build mastery in the content standards. For example, the Module 3, Topic 2, Lesson 3, the MyPL video tutorial helps teachers understand how to help students utilize inverse operations to isolate the variable in a two-step equation. The video also reminds teachers to use the formal math language and how to set the expectation for how students should attend to precision while working on problems.
	7c) Support for English Language Learners and other	**Yes**	The materials include support for English

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	special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.		Language Learners and other special populations. Support is thoughtful and helps all students meet the same standards. Teacher lesson plans include instructional supports such as differentiation strategies, grouping strategies, and additional lesson modifications to support ELLs, as well as struggling and advanced learners. These supports are introduced and explained in the Teacher's Implementation Guide. An example of an ELL tip is seen in Module 4, Topic 1, Lesson 1, for beginner English Language Learner students. In Activity 1.3, Question 5 asks students to determine the probability that a spinner lands on a vowel and to calculate P(vowel). The ELL Tip suggests that teachers should help students understand the term "vowel" since a beginning English Language Learner may not know what a vowel is. This tip helps teachers identify potential barriers to understanding concepts and to properly activate prior knowledge to minimize those barriers. The materials also include differentiation strategies to support other special populations, including struggling and advanced learners. In Module 3, Topic 1, Lesson 3, Activity 3.1 "Combining Like Terms in Linear Equations" provides teachers with a differentiation strategy to support struggling students in understanding how to combine like terms. In Activity 3.2, the materials provide a

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			differentiation strategy to help students extend their understanding of combining like terms with fractions and decimals. The strategy requires students to use their understanding of fractions and adding fraction parts to make a whole part to combine like terms. The materials also provide questions to help students conceptualize why the fractional coefficients would help the student determine what the whole amount may be.
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	**Yes**	The underlying design of the materials distinguishes between problems and exercises. The materials use the proper tools to help students meet the expectations of the standards. Problems within the lesson activities help students learn new mathematics and through the exercises found in the assessments and performance tasks they can apply what they have learned. Problems are appropriately scaffolded and allow students to develop the key concepts of the standards. For example, in Module 2, Topic 1, Lesson 1, “Talk the Talk” activity, students are given problems to help them develop an understanding of adding and subtracting integers. Students are given problems that establish the understanding that adding integers describes the movement of numbers along a number line. One problem asks students to determine the ending position of a number by adding and subtracting the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			indicated steps from each starting position. A second problem asks students to "write an equation to represent the movement indicated by the starting point, steps backward, and steps forward." These questions are linked in an order that helps students develop an understanding when operating with integers. In the Topic 1, Performance Task, students are asked to "Consider each rational number: 6.4, –2 2/5, 4 3/10 , –5.2. Represent each number as the sum of two rational numbers and as the difference of two rational numbers. Use a number line for each operation. Write a real-world problem that could be modeled by each sum/difference." In this exercise, students are given a task and expected to apply this new mathematical knowledge of how adding and subtracting integers may be modeled on a number line or in an equation to respond to the task properly.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. The materials present the lessons in a manner that builds on understanding developed in previous grades and appropriately supports the acquisition of new knowledge in the present grade. For example, in Module 1: Thinking Proportionally, students are expected to build fluency in using formulas to solve problems involving circles and use of "pi," which is a special ratio discussed in Topic

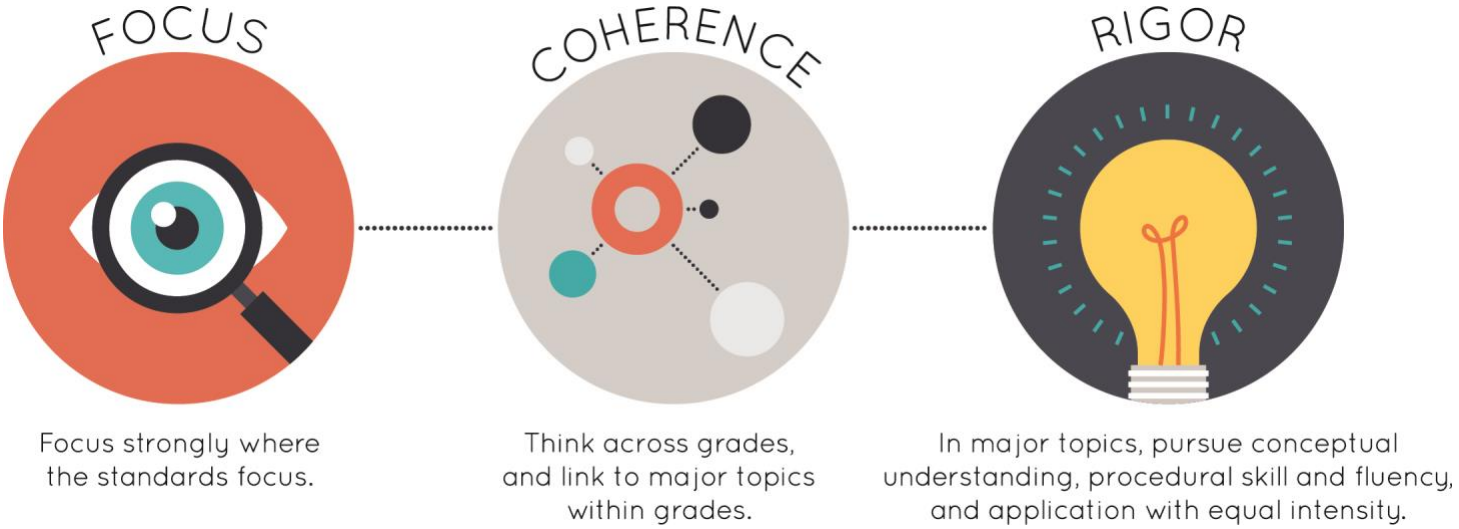
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			1. Students build fluency in solving problems that involve rates and unit rates that are fractions. In Topic 3, students build conceptual knowledge in identifying proportional and nonproportional relationships. In Topic 4, students use their knowledge of proportional relationships acquired in the previous topics to solve application problems involving scale drawings and multi-step percent problems. The topics in Module 1 are structured in a manner that students are able to achieve mastery in LSSM 7.RP.A.1, 7.RP.A.2, and 7.RP.A.3. Another example is seen in Module 2: Operating with Signed Numbers, where students are expected to gain mastery in procedural skill and fluency when operating with all positive and negative numbers. In Topic 1, students use models to develop conceptual knowledge when adding and subtracting all positive and negative rational numbers. This understanding is needed to fully attain mastery of the concepts presented in Topic 2, where students then develop their understanding regarding multiplying and dividing positive and negative rational numbers. Students are required to use their understanding of how to fluently add, subtract, multiply, and divide rational numbers to solve real-life equations and mathematical expressions in Lessons 3 and 4. The topics and lessons in Module 2

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			follow a logical order that supports students' mastery of LSSM 7.NS.A.1, 7.NS.A.2, and 7.NS.A.3.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The materials support the use of technology as called for in the Standards. The instructional materials provide MATHia software for students to manipulate models created through technology to further investigate the grade-level content. For example, in the MATHia Activity found in Module 5, Topic 2: Visualizing Cross-Sections of Three Dimensional Shapes, students watch a video that explains what happens when you take a cross section of 2D and 3D shapes. Students have additional interactive practice seeing cross-sections of these shapes and practice with describing the base and faces. The MATHia activities from Module 3, Topic 3 provide students with ample practice in analyzing graphs that represent real-life situations and solving for unknown values. Students have the opportunity to view graphs and explore the relationship of the independent and dependent values that also have a real-life context.
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Yes/No**	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
I: Non-Negotiables	1. Focus on Major Work	**Yes**	A majority of the lessons are devoted to the major work of the grade. Materials spend a minimal amount of time outside of the content standards and do not make students or teachers responsible for topics that are outside of the Grade 7 content standards.
	2. Consistent, Coherent Content	**Yes**	The materials connect supporting standards to content standards in a meaningful way to support focus and coherence. The materials include problems and activities that connect two or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important.
	3. Rigor and Balance	**Yes**	The materials are designed to allow for the conceptual development of Grade 7 topics, practice toward building fluency and procedural skills, and spend ample time with engaging applications. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials
	4. Focus and Coherence via Practice Standards	**Yes**	The materials address the mathematical practice standards in such a way as to enrich the content standards of Grade 7.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials create coherence by linking topics from domains and clusters and through the progression of standards through grades/courses.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials provide practice standards that make meaningful and purposeful connections to enhance the content of the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			course. Practice standards are linked to each activity, but teachers are not provided with an explanation as to how each practice standard should be addressed within the activity.
	7. Indicators of Quality	**Yes**	The materials give teachers and students the tools they need to meet the expectation of the standards.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Course 3** Grade: **8**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.			
Non-Negotiable **1. FOCUS ON MAJOR WORK[5]:** Students and teachers using the materials as designed devote the large majority[6] of time to the major work of the grade/course. ☒ Yes ☐ No	**REQUIRED** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	**Yes**	The materials devote the large majority of class time to the major work of the grade. 67% of the instructional materials are directly aligned to the major Louisiana Student Standards for Math (LSSM) for Grade 8. 7% of the instructional materials focus solely on additional work, and 26% of the materials address the supporting and/or additional standards.
	REQUIRED **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	Instructional materials spend minimal time on content outside of the course requirements for Grade 8. Some of the lessons and assessment items go beyond the expectations of the LSSM for Grade 8; however, implementation suggestions are provided for Louisiana teachers for those lessons and assessment items. For example, in Module 1, Topic 2, Lesson 2, implementation suggestions state, "Modify this lesson to address the limitations placed on the LSSM standards 8.G.3 and 8.G.4. In the lesson, skip Activity 3 and Activity 4. In Talk the Talk, expect responses that relate to when the center of the dilation is the origin only." Questions 1a, 2a, 12a and 13a of Module 1, End of Topic 2 Test Form A and B require students to dilate a figure with a center of dilation other than the origin. As stated in

[5] For more on the major work of the grade, see Focus by Grade Level.
[6] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the description for LSSM 8.G.A.3 in the Grade 8 Companion Document 2.0 provided by the LDOE, "dilations only use the origin as the center of dilation." Assessment guidance is provided that suggests omitting these items, and only using Q3-11, 14, and 16-18. In addition, in Module 1, Topic 1, Lesson 6, the implementation suggestions state, "Modify this lesson to address the limitations placed on LSSM standards 8.G.A.2 and 8.G.A.3. Implement this lesson as intended, except in Activity 2, eliminate Questions 4 and 5."
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	The materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. In Module 2, Topic 3, Lesson 4, students determine if relationships are linear or nonlinear from tables, equations and graphs and they identify the rate of change if the relationship is linear. Activity 4.1 provides the real-world problem, "You and your friends are rock climbing a vertical cliff that is 108 feet tall along a beach. You have been climbing for a while and are currently 36 feet above the beach when you stop on a ledge to have a snack. You then begin climbing again. You can climb about 12 feet in height each hour." The scaffolded questions then ask students to identify variables to represent key quantities, construct an equation, and sketch a graph to represent the given linear relationship

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			(supporting LSSM 8.F.B.4 and 8.F.B.5). Questions 2 and 3 provide clarification to students on what a linear function is and ask students to analyze relationships and write linear functions given a real-world scenario, a table, and a graph (major LSSM 8.F.A.3). Together, the activities connect supporting LSSM 8.F.B.4 and 8.F.B.5 to major LSSM 8.F.A.3. Another example is found in Module 4, Topic 1, Lesson 3 which connects supporting LSSM 8.NS.A.2 to major LSSM 8.EE.A.2. In Activity 3.2, Question 3, parts a-d, students solve square root algebraic equations (LSSM 8.EE.A.2) and approximate to the nearest tenth (LSSM 8.NS.A.2). In Activity 3.3, Question 7, parts a-c, students solve cube root algebraic equations (LSSM 8.EE.A.2) and approximate to the nearest tenth (LSSM 8.NS.A.2).
	REQUIRED **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important. For example, in Module 2, Topic 1, Activity 4.1 students graph linear equations, translate these lines vertically, and create equations to represent these translations. In Activity 4.2, students explore the effect of dilating a linear equation on a graph, and in Activity 4.3 students apply understanding of transformations to graph lines which connect LSSM 8.EE.B.6 and 8.G.A.1. In Module 4, Topic 2, Lesson 1, students are

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			introduced to Pythagorean Theorem and have the opportunity to solve for missing side lengths of right triangles using the theorem. In Question 5, Part A and B, students are given two right triangles and asked to determine the length of the hypotenuse in each, where they are to utilize the square root symbol in solving the Pythagorean Theorem, connecting LSSM 8.EE.A.2 and 8.G.B.7.
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. For example, in Module 5, Topic 1, Lesson 1, Activity 1.4, Problem 1 states, "Rewrite each expression as a product using expanded notation. Then identify the base or bases and record the number of times the base is used as a factor." Problem 2, states "Rewrite each of your answers from Question 1 as a power or a product of powers," followed by Problem 3 which states "What relationship do you notice between the exponents in the original expression and the number of factors?" This sequence of problems establishes the students' ability to develop the product of powers rule based on conceptual understanding (LSSM 8.EE.A.1). In Module 2, Topic 4, Lesson 3, the "Getting Started" exercise is used to activate prior understanding related to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			analyzing relationships through the prompt and questions, “Consider the relationship between Mia’s age and her weight. 1. What happens to Mia’s weight as she gets older? 2. Do you think she will continue growing at this rate? Why or why not?” This understanding is expanded in Activity 3.1 where the relationship between Mia’s age and weight is further analyzed by the students, followed by Activity 3.2 where the relationship between her age and height is analyzed. In Activity 3.3 all relationships discussed are connected to then make predictions (LSSM 8.SP.A.2 and 8.SP.A.3).
	REQUIRED **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. In addition to learning together, the materials provide a paper based Skills Practice workbook, as well as a digital workspace (MATHia) that tracks student progress to facilitate individual learning. As stated in the Teacher's Implementation Guide, Volume 1, "Learning Individually: Through MATHia, students receive 1-to-1 adaptive math coaching, providing a personalized learning path and ongoing formative assessment.” For teachers and students with limited technology, a Skills Practice book is provided that includes targeted practice of each topic’s skills and mathematical concepts. In the first MATHia Workspace provided within Module 1, Topic 2, Dilating Plane Figures,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students work to determine similarity between figures by identifying and using scale factors to dilate figures (LSSM 8.G.A.4). The student practice problems found in the MATHia Workspace are identical to the problems found in the Skills Practice Workbook for Module 1, Topic 2 allowing students to access the content in different ways. For example, within the Dilation of Plane Figures and Dilation of Plane Figures on the Coordinate Plane Skills Practice sheets, there are at least 12 practice problems to build student fluency. Additionally, within Lesson 1 and 2, there are multiple exercises embedded in the activities and practice problems at the end of the lesson to solidify student procedural skill and fluency. In addition to these skill components, an intentionally-designed assignment can be found at the end of each lesson where a "Write" "Remember" "Practice" "Stretch" and "Review" component can be found. As stated in the Teacher's Implementation Guide, Volume 1, "The Review section provides spaced practice of concepts from the previous lesson and topic and of the fluency skills important for the course." The problems within a given lesson may address different levels of rigor, but procedural skill and fluency is always addressed in at least one review problem. While these problems are present in all lessons, one example is evidenced in Module 5, Topic 2, Lesson 1, where

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Questions 1 and 2 focus on operations with numbers written in scientific notation (LSSM 8.EE.A.4) and Questions 3 and 4 require students to apply properties of integer exponents to generate equivalent expressions (LSSM 8.EE.A.1).
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**Yes**	The materials are designed so that teachers and students spend sufficient time working with engaging applications. One way the materials address the application of mathematical concepts is through the "Topic Performance Task." The Teacher's Implementation Guide, Volume 1 states, "Each Performance Task provides a scenario with minimal scaffolding, clear instructions to the student regarding criteria for acceptable work, and a detailed rubric." An example found in Module 2, Topic 2 "Topic Performance Task," shows where students apply Pythagorean Theorem to a real-world problem to determine unknown side lengths in two dimensions (LSSM 8.G.B.7). Students use a diagram to respond to the prompt, "The residents of Watson Avenue are decorating their houses for the upcoming holidays. They have decided to string lights around the roofs of their houses. How many feet of lighting does Sarina need if she wants to string lights along the roof?" The instructional materials provide practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade. The

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			problems present opportunities for practice and engage students in problem solving within lessons that are aligned to content standards focused on the application component of rigor. This is evident in Module 3, Topic 2 where all three practice problems presented at the end of the lesson require students to write a system of equations given a real-world scenario, solve the system using a method of their choice, and interpret the solution in context (LSSM 8.EE.C.8c).
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately. For example, major LSSM 8.EE.B.5, "Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways," is aligned to all three components of rigor. This content is addressed in Module 2, Topic 1, Lessons 1 and 2, where instructional and practice materials address all components of rigor individually and together. Students often perform calculations and provide an explanation of how an answer was derived. In Problem 2 of Activity 1.1, students complete a table given certain values in Part A and "Explain how you calculated each value" in Part B, showing conceptual understanding and ability to perform procedural skills. Activity 1.1 reviews and adds to student understanding of components of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			proportional relationships, including graphing, creating equations, completing tables and interpreting unit rate. Activity 1.2 builds on conceptualization and procedural skill by walking students through the process of analyzing and comparing two real-world proportional scenarios using a graph. In Activity 1.3, students analyze and compare two real-world proportional scenarios represented in a table and graph to compare speed. In Activity 1.4, students compare real world proportional relationships represented in an equation, table and graph. In Practice Exercise 1 and 2 at the end of Lesson 1, students determine the constant of proportionality (procedural). In Exercise 5, students understand conceptually proportional relationships and write equations, while in Exercise 3 and 4 students apply procedural skills and conceptual understanding to compare real world proportional relationships. The Topic Performance Task reinforces each of these components through a real world scenario from a carpentry class, where students respond to the following, “Use similar triangles to determine the rise at 15 feet and then at 30 feet. Explain your findings using a sketch. Write linear equations for each ramp and use the grid below to graph the lines. Explain whether the equations represent proportional relationships and identify any constants of proportionality.”

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**Yes**	The materials address the mathematical practice standards (MP) in such a way as to enrich the content standards of Grade 8. Course materials familiarize students with language and application of the practice standards called "Habits of Mind" that is found in the Front Matter of the Teacher Implementation Guide and Student Editions. Students and teachers can easily identify which mathematical practice they should focus on since "Each activity is denoted with an icon that represents a practice or pair of practices intentionally being developed." Students are often prompted to explain their reasoning throughout lessons and assignments in order to construct viable arguments and critique the reasoning of others (MP.3) in order to fully convey understanding of the content standards. Each topic provides opportunity for students to respond to "Who's Correct" problems, such as in Question 5 of the Module 2, Topic 3 student materials, where students are prompted to determine which student's method is best to determine the greatest rate of change given two linear functions, one in the form of a table and one in the form of an equation. An example of icons being used to denote which practice is being intentionally developed is found in all activities of Topic 4 in Module 2. Throughout these activities, students are prompted to model with mathematics (MP.4) and choose tools strategically

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			(MP.5) as they draw conclusions from and create two-way tables representing real-world scenarios.
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion **5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:** Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**REQUIRED** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	**Yes**	The materials provide extensive work with course-level problems that are consistent with the progressions in the standards. The activities within the lesson, the Skills Practice worksheets, and MATHia software provide students with extensive work to achieve mastery of the content standards. The materials contain few problems that are below grade level. Those below grade-level are clearly identified as review material in the Topic Overview. Each module overview provides a connection to prior and future learning by description. This is evident in the Module 1 Teacher's Implementation Guide Overview, within the sections titled "How is Transforming Geometric Objects connected to prior learning?" and "When will students use knowledge from Transforming Geometric Objects in future learning?" In addition, each Topic Overview includes connections that are made between progressions of understanding from prior grade levels in the "What is the entry point for students?" section of the document. For example, the Topic 1 Overview for Module 5 states, "Students have been working with exponents since Grade 5. They have learned to write and evaluate numeric and algebraic expressions with whole number

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			exponents. In this topic, students expand on this knowledge. To open Exponents and Scientific Notation, students review this prior knowledge by analyzing the number of ancestors a dog has over specific numbers of generations. Students continue searching for patterns in the answers when powers are multiplied, divided, or raised to another power. They then use number sense and numerical patterns to determine the value of a base raised to an exponent of 0 or a negative integer. Finally, students summarize the rules they learned so that they can apply the rules in the remainder of the topic." Students are presented with appropriate grade-level tasks and problems throughout the materials via paper-based and computer-based tasks. For example, in Module 5, Topic 1, in addition to the activities included in the instructional lessons that provide extensive course-level problems, the MATHia software and the Skills Practice also provide students with practice in simplifying mathematical expressions using the rules of exponents.
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Yes**	The materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. For example, the Topic 3 Overview provided for Module 2, describes the following as the entry point for students regarding the content focus of the topic, "Throughout elementary school, students described and explained features of patterns (e.g., 4.OA.5). They have also

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			formed ordered pairs with terms of two sequences and compared the terms (5.OA.3). Therefore, sequences are used as the entry point for Introduction to Functions. Students are introduced to term, a key vocabulary word that will later be used to connect sequences to functions. They analyze a variety of sequences, write the sequences, predict next terms, and describe the patterns. This may be a departure from prior experiences when students were given the pattern and determined the terms. Students then compare the types of patterns in the sequences analyzed, searching for similarities in the pattern descriptions. Later, students will connect the term numbers and term values as the inputs and outputs, respectively, of a function." Lessons include components labeled as "Warm Up" and "Getting Started" to activate prior knowledge and identify strategies students use to solve the given problems reviewing previously learned material. Descriptions of these components of the lesson can be found in the Teacher's Implementation Guide, Volume 1. While this component is present in all lessons, it must be noted there is no correlation to prior grade level standards for the problems presented. For example, the Warm Up for Module 1, Topic 3, Lesson 1 requests that students solve four equations. Warm Up 1 includes an equation in the form x + p = q (6.EE.B.7).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Warm Up 2 includes an equation in the form px + q = r (7.EE.B.4a). Warm Ups 3 and 4 include equations that would require students to apply properties of operations to add or subtract linear expressions (7.EE.A.1) found within an equation, followed by solving the equivalent in the form px + q = r (7.EE.B.4a). However, it is apparent that the Warm Up problems connect student understanding of solving equations to finding interior and exterior angles of triangles.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	The materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. Learning objectives for Module 3, Topic 1, Lesson 2 are explicitly shaped by LSSM 8.EE.C.7 and state that students should be able to "Write and solve linear equations in one variable," "Determine whether an equation has one solution, no solutions, or infinite solutions by successively transforming the equation into simpler forms," and "Interpret expressions in and solutions to equations in the context of problem situations." Learning objectives for Module 4, Topic 2, Lesson 2 reflect the language and intent of LSSM 8.G.B.7 and state student expectations as, "Apply the Pythagorean Theorem to determine unknown side lengths of right triangles in mathematical and real-world problems" and "Apply the Pythagorean Theorem to determine the lengths of diagonals of two- and three-dimensional figures."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Additional Criterion **6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:** Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	**REQUIRED** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Yes**	The materials attend to the full meaning of each practice standard. The Topic Overview within each module includes a section that connects the lesson components to the practice standards. For example, in Topic 1 Overview, Module 3, the materials provide explicit connections under "How do the activities in Solving Linear Equations promote student expertise in the mathematical practice standards?" Another example is found in the Topic 2 Overview of Module 5 where connections are made between the content and practice standards under the section question, "How do the activities in Volume of Curved Figures promote student expertise in the mathematical practice standards?" These practice standards, which are described in the Topic Overview are developed within the activities as noted by the examples of "Habits of Mind" icons described in Indicator 4a of this rubric. The materials include MP.1, make sense of problems and persevere in solving them, in each lesson. All lessons in the materials provide opportunities for students to engage in productive thought regarding grade-level concepts and in determining how to solve problems. The use of the practice standards is evidenced throughout the lessons and activities. For example, in Module 2, Topic 1, Lesson 3, Activity 3.1, student reason abstractly and quantitatively (MP.2) and look for and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			express regularity in repeated reasoning (MP.8) as they "examine the graph of the equation $y = \frac{3}{2}x$and create several pairs of similar triangles to compare the slopes between different sets of points. They rotate the triangle to notice that a 180° rotation preserves the slope of the line. Students conclude that all right angles formed on a given line are similar."
	REQUIRED **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Yes**	The materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Evidence of discussion techniques and engaging students in mathematical discourse is found throughout the teacher lesson plans for each lesson In the Teacher's Implementation Guide, Volume 1, "'Who's Correct" problems are an advanced form of correct vs. incorrect responses. In this problem type, students are not told who is correct. Students have to think more deeply about what the strategies really mean, and whether each of the solutions made sense. Students will determine what is correct and what is incorrect, and then explain their reasoning. These types of problems will help students analyze their own work for errors and correctness." For example, in Module 4, Topic 1, Lesson 1, students are provided a set of numbers and multiple ways other students have

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			grouped them followed by the prompt, "Zane and Tanya provided the same rationale for one of their groups of numbers. However, the numbers in their groups were different. Who is correct? Explain your reasoning." Another example can be found in Module 5, Topic 2, Lesson 3 where students are asked, "Young people often attempt to break world records. Jessica is no exception. Today her math class studied the volume of a sphere, and she had a great idea. After working out the math, Jessica told her best friend Molly that they could stuff 63 inflated regulation-size basketballs into a school locker. The rectangular locker is 6 feet high, 20 inches wide, and 20 inches deep. The radius of one basketball is 4.76 inches. Molly also did the math and said that only 28 basketballs would fit. How did Molly and Jessica compute their answers? Who's correct? Explain your reasoning." Additionally, the materials provide ample focus on MP.3 through embedded questions within the lessons where students analyze and respond to correct student work, noted with a "thumbs-up" icon , or incorrect student work, noted with a "thumbs-down" icon. An example where students are asked to respond to incorrect student work is Question 6 in Module 1, Topic 2, Lesson 1, which states, "Explain why Jed's reasoning is not correct. Draw examples to illustrate your explanation. Jed - I can dilate a rectangular

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			figure by adding the same value to its length and width." An example where students are asked to respond to correct student work is evidenced in Module 5, Topic 1, Lesson 3, Question 2, which states "Each student tried to write the number 0.00065 in scientific notation. Analyze each student's reasoning." This prompt is followed by two correct student responses and two incorrect student responses and additional items for students to respond. Part A says, "Explain what is wrong with Kanye's reasoning." Part B asks students to "Explain what is wrong with Daniel's method." Part C requests that students respond to, "Of the correct methods, which method do you prefer? Why?"
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**No**	There are no teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. The practice standards are presented as "Habits of Mind'' at the beginning of the materials, with symbols used to denote which practice(s) each activity uses; however, the facilitation notes in the teacher materials do not explain how the practice standards should be used or how they help develop understanding within the activity. For example, within the Teacher's Implementation Guide, "Habits of Mind'' states, "Each lesson provides opportunities for students to think, reason, and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			communicate their mathematical understanding. However, it is your responsibility as a teacher to recognize these opportunities and incorporate these practices into your daily rituals." Additionally, the icons used throughout the materials lack specific guidance for the particular lesson or activity. All of the symbols, with the exception of MP.6, represent more than one math practice standard, and specific practices are not always identified. As an example, the symbol with a head and puzzle piece references both MP.2 and MP.3. The symbol with a hand and a wrench references both MP.4 and MP.5. The box symbol references both MP.7 and MP.8. In Module 4, Topic 2, Lesson 4, Activity 4.1 is labeled with an icon that aligns to both MP.7 and MP.8, but there is no guidance for teachers at the lesson or activity level on the specific role of each of the math practice standards.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials attend to the specialized language of mathematics for Grade 8. The materials connect mathematical terminology and academic vocabulary and encourage students to use both with precision. Evidence of this is found in the Teacher's Implementation Guide which suggests that teachers facilitate the understanding of mathematical terminology and academic vocabulary.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			The materials suggest that teachers create a word wall of the key math terms used within the lesson materials so that students can build their academic vocabulary. Additionally, the materials feature a glossary that includes key mathematical terms, with examples, that students can access both in the printed books and online materials. For example, key mathematical terms are explained within the instructional materials, such as in Module 2, Topic 1, Activity 2.2, which defines slope relating it to prior understanding and relative terms, “In any linear relationship, slope describes the direction and steepness of a line and is usually represented by the variable m. Slope is another name for the rate of change. It represents the ratio of the change in vertical distance to the change in horizontal distance between any two points on the line. The slope of a line is constant between any two points on the line.” In addition to providing clarification of meaning, these mathematical terms are also used frequently in context and course problems where students are asked to further explain their understanding. In this activity, students respond to conceptual problems to convey understanding, followed by opportunity to clarify that conceptual understanding through problems, such as the “Talk the Talk” problem in Module 2, Topic 2 after Activity

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			2.4. Students are provided with a table of values and a graph, then asked to respond to the following questions, "1. Calculate the slope between each set of ordered pairs. Show your work. 2. Is the graph of the relationship linear? What does this mean in terms of the problem situation? 3. The ordered pairs from the table are represented on the given graph. Show how to use the graph to verify the slope you calculated from the table. 4. How is calculating the slope from a table similar to calculating the slope of a linear relationship from a graph?"
Additional Criterion **7. INDICATORS OF QUALITY:** Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☒ Yes ☐ No	**REQUIRED** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	**Yes**	Students are asked to produce answers in a variety of ways. The Practice section provided at the end of Lesson 2 in Module 3, Topic 2 provides a real-world problem followed by questions that ask students to create equations, use information to determine additional values, complete tables, create graphs of the equations, interpret the meaning of the slope and make predictions based on prior responses. Section I of the Skills Practice Worksheet for this topic provides 16 real-world scenarios where students are provided the opportunity to "Graph each system of linear equations. Use the graph to answer the questions." Section II provides 16 problems where students are asked to "Graph the equations in each system. Tell whether the system has one solution, no solutions, or infinite solutions. If the system has one solution, write the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			values of the variables that make the equations true." The End of Topic Test Form A for Module 4, Topic 2 allows students to identify specific numbers that fit within a specified rule given, convert between fractions and decimals, identify if square roots are rational or irrational, identify properties of operations, plot rational and irrational numbers on a number line, approximate values of irrational square roots, solve square root and cube root algebraic equations, draw a diagram to represent the real number system, explain relationships between identities and inverse properties, and write examples of numbers that represent terminating and repeating decimals.
	REQUIRED **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Yes**	There are separate teacher materials that support and reward teacher study. The materials provide explicit Module Overviews, Topic Overviews, Lesson Plan materials, and video tutorials to support teacher study of the content standards. Teachers are provided extensive explanation of materials through the Teacher's Implementation Guide, as well as guidance for instruction in lesson plans provided for each lesson within topics and modules. Each topic provides instructors with a Topic Overview, such as in Module 1, Topic 2: Similarity, where guidance material is provided to support teacher understanding of the content, connections

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			between concepts and how to build student understanding. The following questions are explored and expanded on, "How is Similarity organized?" "What is the entry point for students?" "How does a student demonstrate understanding?" "Why is Similarity important?" and "How do the activities in Similarity promote student expertise in the mathematical practice standards?" This content is then followed by suggested pacing of lessons, highlights, and spaced review focus in each lesson. Additionally, each lesson provides teacher guidance through a MyPL (Profession Learning) App video aligned to each specific lesson to "discuss and model some facilitation ideas," as stated in the MyPL video for Module 2, Topic 1, Lesson 3: Slippery Slopes-Exploring Slopes Using Similar Triangles. The video goes through the teacher materials of the lesson and provides activity exploration, such as suggestions for instruction on how to utilize ratios of vertical to horizontal distance (without the slope formula) and using patty paper to determine how to reason with points on a graph.
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps all students meet the same standards. Teacher lesson plans include instructional supports such as differentiation strategies, grouping strategies and additional lesson

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			modifications to support ELL students, as well as struggling and advanced learners. These supports are introduced and explained in the Teacher's Implementation Guide. An example of modifications is found in Module 2, Topic 1, Lesson 1, where differentiation strategies for Questions 1-4 in Activity 1.3 state, "To support students who struggle, suggest that they rewrite the table of values so that the time values (and their corresponding distances) are in order from smallest to largest. To extend the activity-Ask students for other ways the rate of 60 mph is evident in the table besides determining k from y/x. Have students graph lines to represent Daisa's trip and Alisha's trip." An explicit example of ELL support can be found in Module 1, Topic 3, Lesson 1 where ELL Tip of the teacher lesson plan states, "To help English Language Learners as they complete Question 1 of Activity 1.1, a word bank could be provided that shows the different classification of triangles for students to choose. Have the word bank printed on a small sheet of paper that can be easily placed on struggling students' desks."
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises,	**Yes**	The underlying design of the materials distinguishes between problems and exercises. Throughout the activities within each lesson, students are presented with

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	students apply what they have already learned to build mastery. Each problem or exercise has a purpose.		problems to solve and discuss based on new mathematical content presented. Exercises follow at the end of each lesson to apply understanding and procedural skills in the Assignment section. For example, in Module 4, Topic 1, Activity 3.2: Estimating with Square Roots students are provided a "Worked Example" showing students the mathematical justification used when estimating the square root of 10 to the nearest tenth. The question following asks students to "Calculate the square of 3.2 to determine if it is a good estimation of √10. Adjust the estimated value if necessary." Students are then provided a set of five numerical expressions that include square roots of non-perfect squares and asked to order them from least to greatest, locate the approximation on a number line, and explain strategies used to do so, followed by estimating the value of each to the nearest tenth based on the new learning. Practice Exercise 3 at the end of the lesson provides students the opportunity to demonstrate understanding in a similar format.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Prior knowledge is activated in the "Warm Up" and "Getting Started" sections of each lesson to appropriately scaffold student learning. Mathematical concepts found in the LSSM for Grade 8 are addressed in an order that supports student mastery of all

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			content standards. For example, Module 5, Topic 1, Lessons 1 and 2 address Major LSSM 8.EE.A.1 (The LSSM Companion Document 2.0 for Grade 8 lists 6.EE.A.1 as a previous grade level standard necessary to master 8.EE.A.1). Another example can be found in Activity 1.1, in Lesson 1, which focuses on the "Review of Powers and Exponents" and is directly aligned to the requirements for LSSM 6.EE.A.1 to scaffold an understanding of properties of exponents, as required by LSSM 8.EE.A.1. Also, in Module 2, Topic 2, all lessons focus on Supporting LSSM 8.F.B.4 by focusing on linear relationships (The LSSM Companion Document 2.0 for Grade 8 lists 7.RP.A.2, "Recognize and represent proportional relationships between quantities." as a previous grade level standard necessary to master 8.F.B.4). The "Getting Started" problem activates prior knowledge of proportional relationships by providing a real-world scenario where students analyze whether the relationship is proportional or non-proportional with an explanation. Students expand understanding by analyzing, creating tables and graphing real-world relationships that are proportional or non-proportional for comparison.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The materials support the use of technology as called for in the Standards. The instructional materials provide

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			MATHia software for students to manipulate models created through technology to further investigate the grade-level content. For example, the LDOE Companion Document 2.0 aligned to the LSSM for Grade 8 states that for Major LSSM 8.G.A.1, "Students use compasses, protractors and rulers, tracing paper and/or technology to explore figures created from translations, reflections and rotations." This standard is a focus within Module 1, Topic 1, Lessons 1 and 2, where the MATHia software lessons Experimenting with Rigid Motions, Translating Plane Figures, Reflecting Plane Figures, and Rotating Plane Figures, allow students to perform rigid transformations using various figures on a grid or in white space on the digital platform. Additionally, the MATHia Software Workspaces for Module 3, Topic 2: Systems of Linear Equations allows for students to graph systems of equations and determine solutions from the graph. LSSM 8.EE.A.4 specifically calls for technology use as students are expected to "interpret scientific notation that has been generated by technology." In Module 5, Topic 1, Lesson 3, Activity 3.1, students first analyze the display on a calculator to determine the total number of blinks for an entire class. Students interpret 2.4528e9 as 2,452,800,000. In the same Activity, Question 3, students use a graphing or scientific calculator to "explore

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			extremely large and extremely small numbers" as they practice writing numbers in scientific notation from the calculator displays.
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Yes/No**	
I: Non-Negotiables	1. Focus on Major Work	**Yes**	A majority of the lessons are devoted to the major work of the grade. Materials spend minimal time outside of the content standards and do not make students or teachers responsible for topics that are outside of the grade level. Some assessment items were found that assess students beyond the grade level; however, the implementation guide for Louisiana teachers includes guidance on omitting these items.
	2. Consistent, Coherent Content	**Yes**	The materials connect supporting standards to major content standards in a meaningful way to support focus and coherence. The materials include problems and activities that connect two or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important.
	3. Rigor and Balance	**Yes**	The materials are designed to allow the conceptual development of Grade 8 topics, practice toward building fluency and procedural skills, and spend ample time with engaging applications. It is evident in

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the materials that the three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials.
	4. Focus and Coherence via Practice Standards	**Yes**	The materials address the mathematical practice standards in such a way as to enrich the content standards of Grade 8.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The materials create coherence by linking topics from domains and clusters and through the progression of standards through grades/courses.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials provide practice standards that make meaningful and purposeful connections to enhance the content of the course. Practice standards are linked to each activity; however, teachers are not provided with an explanation of how each practice standard should be addressed within the activity.
	7. Indicators of Quality	**Yes**	The materials give teachers and students the tools they need to meet the expectation of the standards.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

Instructional materials are one of the most important tools educators use in the classroom to enhance student learning. It is critical that they fully align to state standards—what students are expected to learn and be able to do at the end of each grade level or course—and are high quality if they are to provide meaningful instructional support.

The Louisiana Department of Education is committed to ensuring that every student has access to high-quality instructional materials. In Louisiana all districts are able to purchase instructional materials that are best for their local communities since those closest to students are best positioned to decide which instructional materials are appropriate for their district and classrooms. To support local school districts in making their own local, high-quality decisions, the Louisiana Department of Education leads online reviews of instructional materials.

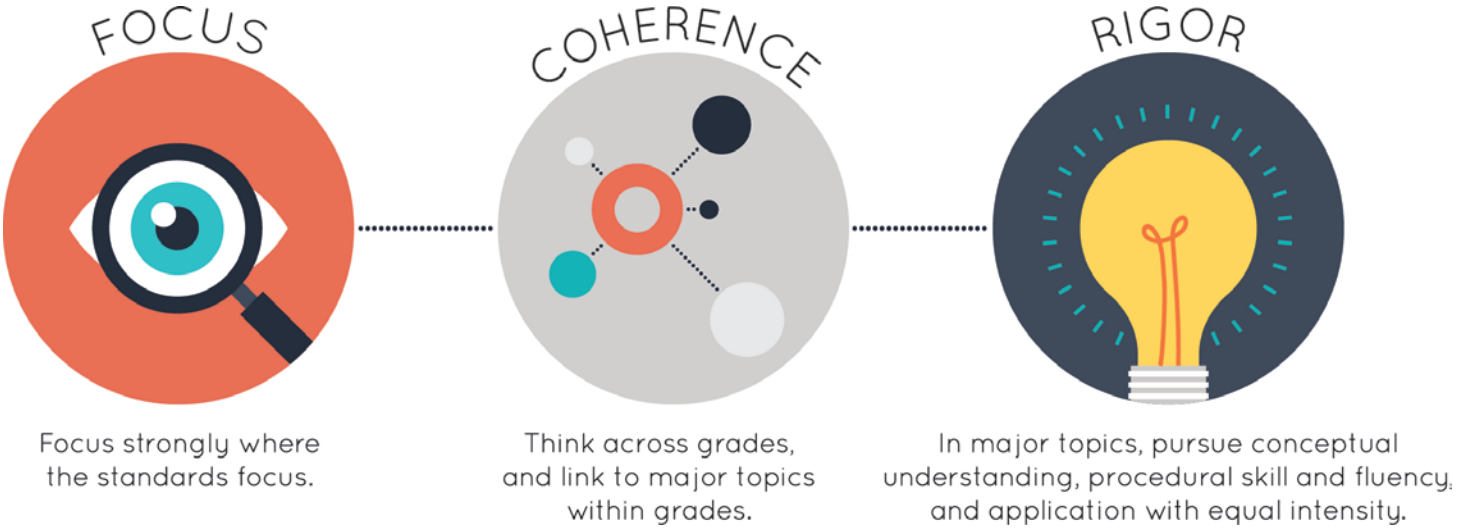
Instructional materials are reviewed by a committee of Louisiana educators. Teacher Leader Advisors (TLAs) are a group of exceptional educators from across Louisiana who play an influential role in raising expectations for students and supporting the success of teachers. Teacher Leader Advisors use their robust knowledge of teaching and learning to review instructional materials.

The 2019-2020 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Beauregard, Bossier, Caddo, Calcasieu, Caldwell, City of Monroe, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, Jefferson, Jefferson Davis, KIPP New Orleans, Lafayette, Lafourche, Lincoln, Livingston, LSU Lab School, Orleans, Orleans/Lusher Charter School, Ouachita, Plaquemines, Pointe Coupee, Rapides, Richland, RSD Choice Foundation, St. John the Baptist, St. Charles, St. James, St. Landry, St. Mary, St. Tammany, Tangipahoa, Vermillion, Vernon, West Baton Rouge, West Feliciana, and Zachary. This review represents the work of current classroom teachers with experience in grades 6-8.

Appendix I.

Publisher Response

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Courses 1-3** Grades: **6-8**

Publisher: **Carnegie Learning, Inc.** Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

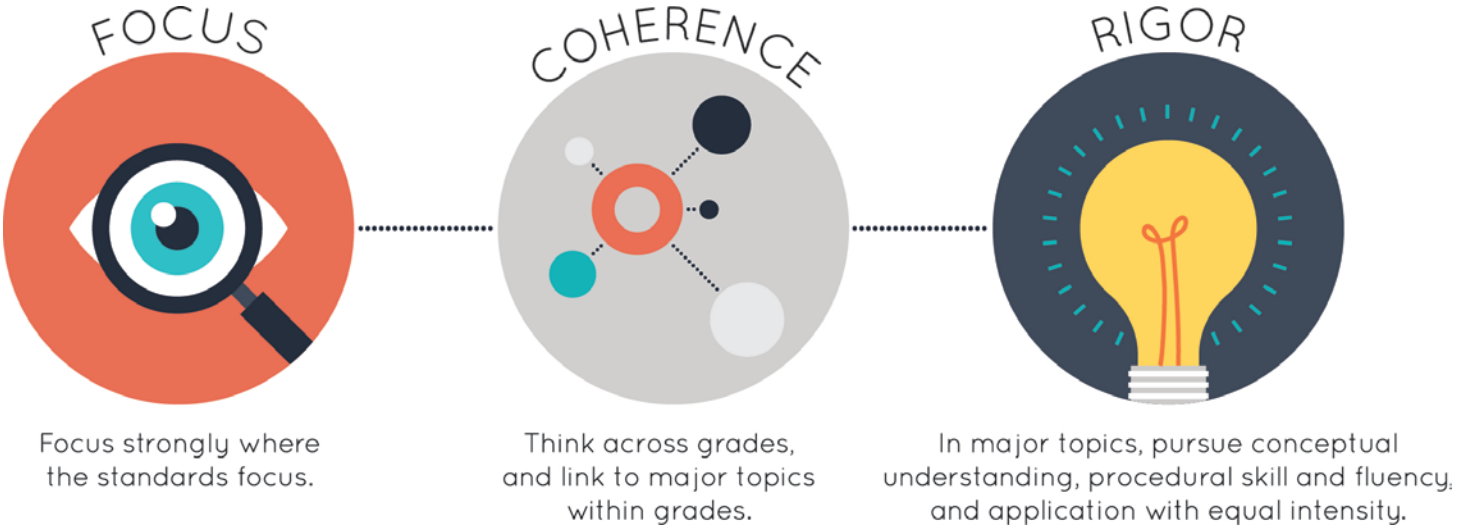
Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria, but at least one "No" for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

Click below for complete grade-level reviews:

Grade 6 (Tier 1) Grade 7 (Tier 1) Grade 8 (Tier 1)

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Course 1** Grade: **6**

Publisher: **Carnegie Learning, Inc.** Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[1]:** Students and teachers using the materials as designed devote the large majority[2] of time to the major work of the grade/course. ☒ Yes ☐ No	**REQUIRED** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	**Yes**	The materials devote the large majority of class time to the major work of the grade. 70% of the instructional materials are directly aligned to the major Louisiana Student Standards for Math (LSSM) for Grade 6. 20% of the materials focus solely on additional work, 6% of the materials address both additional and supporting work, and 4% of the materials address only supporting work.	
	REQUIRED **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	Instructional materials spend minimal time on content outside of the course requirements for Grade 6. Some lessons and assessment items go beyond the expectations of the LSSM for Grade 6; however, implementation suggestions are provided for Louisiana teachers for those lessons and assessment items. For example, in Module 3, Topic 1, Lesson 4, the implementation suggestions state, "Modify this assignment to address the limitations placed on LSSM standards 6.EE.A.3. Students are not required to use graphs as a method to determine or verify if two expressions are equal. In Activity 4.1, Questions 4, 8, 9c, and 10c are not required. Questions 9d and 10d can be modified to exclude an explanation about the graphs." In addition, Question 21 of	

[1] For more on the major work of the grade, see Focus by Grade Level.
[2] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			the End of Topic Assessment, in both Form A and Form B, the assessment item provides Quadrant 1 of the coordinate plane and prompts students to "Determine whether the two expressions are equivalent by graphing each expression." Students are provided expressions that would require knowledge of graphing a linear equation and understanding that if they graph the same line, the expressions are equivalent. In this grade level, students are only responsible for applying "properties of operations to generate equivalent expressions" (LSSM 6.EE.A.3) and identifying "when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them)." Assessment Guidance suggests omitting this item. Additionally, the topic of mean absolute deviation, which is introduced in Grade 7 in LSSM 7.SP.B.3, is addressed and assessed in several of the Module 5 assessment materials. Module 5, Topic 2, Pre-Test and Post-Test materials both include questions that require students to calculate the mean absolute deviation, as well as, comparing interquartile range with the mean absolute deviation as the best measure of variability. The implementation guide suggests that Louisiana teachers omit Lesson 3, which addresses mean absolute deviation, as well as the assessment items that are above the grade-level standard. It is important to	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			note that removing the questions regarding mean absolute deviation and the comparison of mean absolute deviation to interquartile range does not impact the validity of the Module 5 Topic 2 material.	
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	The materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. In many of the lessons that focus on supporting standards, the work is connected to major content. For example, in Module 1, Topic 1, Lesson 2, Activity 2.3, materials connect supporting LSSM 6.G.A.1 to major LSSM 6.EE.A.3, as students take apart and put together shapes to determine the formula for calculating the area of a trapezoid. Students work in a whole group to analyze three different approaches presented in Problems 2, 3, and 4 to determine the area of the given trapezoid. The teacher is instructed to "Record each numerical expression on the board and then label each part using b for base and h for height." This action and the discussion that follows facilitate student connections between determining the area of a trapezoid by decomposing the figure into triangles and other shapes (6.G.A.1) and using the properties of operations to create equivalent expressions (6.EE.A.3). In Module 2, Topic 2, Lesson 3, Activity 3.5 connects supporting LSSM 6.G.A.1, 6.G.A.2 and 6.G.A.4 to major LSSM 6.RP.A.3c as described by the initial statement of the	

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			activity, “You can apply what you have learned about wholes, percents, and ratio reasoning to solve percent problems in geometry too.” The second problem in the lesson provides students with a right rectangular prism with labeled dimensions and the following prompt, “2. The tank shown is 75% full of water. a. What is the height of the tank? Explain how you solved the problem. b. Suppose the outside of the tank is covered with paper only up to the water level. What percent of the total surface area of the tank would be covered? Round to the nearest whole percent. Be sure to include the top of the tank in the total.” Students use rate reasoning to help solve a surface area problem. Additionally, in Module 4, Topic 2, Lesson 2, the materials connect LSSM 6.G.A.3, drawing polygons in the coordinate plane, to LSSM 6.NS.C.8, solving problems by graphing points in all four quadrants of the coordinate plane. In Activity 2.4, students find the volume of the fossil pit, the volume of sand required to fill the pit half-way, the number of sandbags needed for the pit, and how much the sand would cost for the pit. Students are given the coordinates of the pit, the depth of the pit, as well as other information regarding the size and cost of the sandbags. This work gives students purposeful practice using a real-world application when plotting points and drawing polygons in the coordinate plane.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	REQUIRED **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important. For example, Module 3, Topic 1, Lesson 5: DVD and Songs, Using Algebraic Expressions to Analyze and Solve Problems facilitates the connection between Expressions and Equations Cluster A, “Apply and extend previous understandings of arithmetic to algebraic expressions” to Cluster B, “Reason about and solve one-variable equations and inequalities.” This is evident in Activity 5.1 where students initially use reasoning to determine the number of DVDs each of four friends own in Problem 1 and 2. The following statements are used: “Haley says: “I have twice as many DVDs as Jaret.” Dillan says: “I have four more DVDs than Haley.” Kierstin says: “I have three times as many as Dillan.” In Part A of Problems 3 through 6, students write algebraic expressions involving operations (LSSM 6.EE.A.2a) using variables to represent the unknown number of DVDs (LSSM 6.EE.B.6), as evidenced in the following prompt, “3. Let j represent the number of DVDs that Jaret has. a. Write an algebraic expression that represents the number of DVDs for each friend.” In Part B of Problems 3 through 6, students evaluate the previously created algebraic expressions for a given value (LSSM 6.EE.A.2c). In Activity 5.2: More	

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			Solving Problems with Expressions, students continue to form a solid connection between the aforementioned content standards and clusters as they solve similar problems with different contexts. The materials also connect the Geometry and Number System domains in Module 1, Topic 3, Lesson 3. In the lesson, students calculate the surface area of rectangular prisms that have measurements in decimals. Since calculating surface area requires students to understand how to multiply a variety of types of numbers, this lesson connects the number system to geometry in a way that strengthens the students' understanding of both domains.	
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. Evidence of discussion techniques and engaging students in mathematical discourse is found throughout the teacher lesson plans for each lesson. For example, Module 2, Topic 1, Lesson 1: It's All Relative, Introduction to Ratio and Ratio Reasoning focuses on LSSM 6.RP.A.1, "Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities," which aligns solely to the conceptual understanding component of	

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			rigor. The Getting Started section for this lesson prompts students to predict the final score of a basketball game given the score at the end of the first half. The teacher lesson plan for Lesson 1 provides guidance for observations and questions to provoke thinking such as, “What is an argument for using addition to predict the final score? What is an argument against using addition to predict the final score? What is an argument for using multiplication to predict the final score? What is an argument against using multiplication to predict the final score?” thus engaging students in conceptualization of the math used in their predictions. Activity 1.1: Additive and Multiplicative Reasoning provides scaffolded instruction to analyze student approaches and responses to the Getting Started problem, followed by defining additive and multiplicative reasoning as students are asked, “Which student used additive reasoning and which used multiplicative reasoning?” Additional evidence of the materials developing key conceptual understanding is seen in Module 3, Topic 1, Lesson 1 as students complete activities to develop conceptual understanding of numerical expressions with exponents (LSSM 6.EE.1). In this lesson, students are asked to identify the base and exponents of powers. This activity helps students build the understanding that exponents represent	

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			the repeated multiplication of a base. A final example of how the materials build conceptual understanding of key concepts is seen in Module 2, Topic 3, Lesson 2 where unit rates are introduced. In this lesson, students are provided with models to help determine the best buy of laundry detergent. The activity encourages students to use modeling and estimation to help make sense of the problem to develop their understanding of unit rates (LSSM 6.RP.2). The lesson features problems that ask, “How did you calculate the unit rate?” and “How can unit rates help you compare two cars?” This activity helps connect the students’ previous understanding of tape diagrams and develops their understanding that unit rates are used to compare two different quantities when one of the quantities has the value of “1.”	
	REQUIRED **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. In addition to the instructional lesson, the materials provide a paper-based Skills Practice workbook, as well as a digital workspace (MATHia) that tracks student progress to facilitate individual learning. As stated in the Teacher's Implementation Guide, Volume 1, "Learning Individually: Through MATHia, students receive 1-to-1 adaptive math coaching, providing a personalized learning path and ongoing formative assessment.”	

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			For teachers and students with limited technology, a Skills Practice book is provided that includes the targeted practice of each topic's skills and mathematical concepts. The first MATHia Workspace provided within Module 1, Topic 1 lays the foundation for LSSM 6.EE.A.3, "Apply the properties of operations to generate equivalent expressions," by addressing the commutative and associative properties. Initial guided instruction is provided using an example of each property followed by multiple practice problems for students to complete on their own with instructions such as, "Use the Commutative Property to rewrite each expression in order to add more efficiently. Then determine the sum." The student practice problems found in the MATHia Workspace are identical to the problems found in the Skills Practice Workbook for Module 1, Topic 1 allowing students to access the content in different ways. For example, within the Commutative and Associative Properties skills practice sheets and MATHia Workspace, there are 24 problems provided to build student fluency. There are multiple Workspaces and Skills Practice assignments within each module designed to reinforce foundational fluency skills and grade level procedural skill and fluency expectations. A second example of how the materials help students attain fluency and procedural skill is seen in Module 1,	

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			Topic 1, Lessons 4 and 5. These lessons help students gain fluency in composing and decomposing pairs of numbers when using the greatest common factor and least common multiple as required by LSSM 6.NS.B.3. The materials build practice in helping students decompose numbers with prime factorization strategies and listing common multiples in tables. The materials also include additional skill practice problems to provide students more work with this concept.	
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**Yes**	The materials are designed so that students spend sufficient time working with engaging applications. In Grade 6, students need ample practice working with application problems that include purposeful work creating algebraic equations resulting from real-life situations. Module 3, Topic 2, Lesson 4 provides multiple opportunities for students to work with single-step and multi-step contextual problems. In Activity 4.2, students solve problems that require more than one equation to solve, and, at times, have to interpret the solution. For example, “There are two routes Jasmine can take when she bikes home from school—the long way and the short way. The long way is 1 1/2 times as far as the short way. During one week, she biked a total of 30 miles from school to home. She took the short way three times. a. What is the distance of the short way? b. What is	

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			the distance of the long way?" In this problem, students create multiple equations to solve for the answer. In addition, the curriculum addresses the application of mathematical concepts through the "Topic Performance Task" provided for each topic of each module. As stated in the Front Matter of the Teacher's Implementation Guide, Volume 1, "Each Performance Task provides a scenario with minimal scaffolding, clear instructions to the student regarding criteria for acceptable work, and a detailed rubric." An example is found in the Topic Performance Task in Module 3, Topic 2. This task is aligned to Major LSSM 6.EE.B.7, "Solve real-world and mathematical problems by writing and solving equations and inequalities of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers." In this task, students are provided information about a ski trip organized by the PTA at a school and are directed to, "Use this information to write and solve equations to determine the number of students going on the trip, the cost per student, the number of hotel rooms needed for the students, the number of buses needed, and the cost to rent snow boots for tubing."	
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in	

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			the materials. Not all lessons include opportunities to engage in all three components of rigor in the same lesson. For example, questions from Module 4, Topic 1, Lesson 3 align with conceptual understanding and procedural skill and fluency relating to rational numbers. Students complete problems that relate to identifying integers and rational numbers while also ordering rational numbers on the number line. In this lesson, only two levels of rigor are present. However, in Module 3, Topic 1, Lesson 3, the materials provide practice in identifying the parts of algebraic expressions, simplifying expressions using the Order of Operations, and evaluating expressions. This lesson primarily features work in procedural skill and fluency as required by LSSM 6.EE.A.2b, 6.EE.A.2c, and 6.EE.A.3.	
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**Yes**	The materials address the mathematical practice standards (MP) in such a way as to enrich the content standards of Grade 6. The practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials. Course materials familiarize students with language and application of the practice standards called “Habits of Mind'' that is found in the Front Matter of the Teacher Implementation Guide and Student Editions. Students and teachers can easily identify which mathematical practice they should focus on since, as stated on FM-18, “Each activity is denoted	

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			with an icon that represents a practice or pair of practices intentionally being developed." The Teacher's Implementation Guide explains how the mathematical practices are presented in each lesson and a list of questions/strategies are given to help teachers facilitate the use of the math practice standards in his or her classroom during lessons. For example, the Teacher's Implementation Guide suggests that teachers help students develop "I can" statements to help them become more reflective of their mathematical reasoning. Additionally, there is a list of suggested questions to use when MP.2 and MP.3 are embedded in the lesson (reason abstractly and quantitatively and critique the reasoning of others, respectively). An example of icons being used to denote which practice is intentionally developed is found in the student materials for Module 5, Topic 1, Lesson 3. Activity 3.1: Histograms which contains the icon of a fist holding a tool to ensure students ask themselves questions that assist them in modeling with mathematics (MP.4) and choosing strategic tools (MP.5) such as frequency tables to represent and identify key features of data, such as distribution and measures of center. Another example is found in Module 1, Topic 3 , Lesson 3, Activity 2.3., where a target icon is labeled at the top of the page to remind students to attend to precision (MP.6). The lesson emphasizes the use of mathematical	

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			language to differentiate between prisms and pyramids and to determine specific names of the polyhedrons using terms such as base, faces, vertices, and edges.	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
Additional Criterion **5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:** Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**REQUIRED** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	**Yes**	The materials provide extensive work with course-level problems that are consistent with the progressions in the standards. The materials contain few problems that are below grade level. Those below grade level are clearly identified as review material in the Module or Topic Overview. Each module overview provides a connection to prior and future learning by description. This is evidenced in the Module 1 Teacher's Implementation Guide Overview, within the sections titled, "What is the Mathematics of Composing and Decomposing?" "How is Composing and Decomposing connected to prior learning?" and "When will students use knowledge from Composing and Decomposing in future learning?" The Module 1 Overview explains that the materials provide a review of fraction multiplication (LSSM 5.NF.4). The Topic 1 Overview describes where fraction multiplication problems can be found (Module 1, Lesson 1.1 Spaced Review). Students are presented with appropriate grade-level tasks and problems throughout the materials via paper-based and computer-based tasks. The Skills Practice worksheets provide students with	

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			extensive work to achieve mastery of the content standards. For example, the Module 3, Topic 1 Skills Practice sheet provides students with practice in algebraic expressions and in solving equations so that they can fully develop conceptual understanding and perform procedural skills fluently.	
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Yes**	The materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The Topic Overview identifies which topics are related to topics learned in previous grades and describes the progression of learning in previous grades to arrive at the grade level standards. An example of how the materials relate the grade level concepts to previous learning is seen in the Module 1, Topic 2, Topic Overview. The materials explain that the overall learning objective for Topic 2 is fraction division. The materials explain that in order for students to have the proper understanding to divide fractions, students must understand and reason about the size of fractions, which is learned in Grade 3. Students must also have knowledge of how to divide fractions by whole numbers and divide whole numbers by fractions, which is learned in Grade 5. The materials further relate this prior knowledge to area models and understanding the inverse relationship of multiplication and division. Additionally, the Topic 1 Overview provided for Module 5, describes the following as the entry	

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			point for students regarding the content focus of the topic, "Students have been engaged informally in the statistical problem-solving process throughout their elementary school years. In Grade 1, students were expected to organize, represent, and interpret data with up to three categories: ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another (1.MD.4). In Grades 2 and 3, students created picture graphs and bar graphs of categorical data (2.MD.10, 3.MD.3). In Grades 4 and 5, students made line plots to display data with fractions (4.MD.4, 5.MD.2). And in Grade 4, students developed conceptual understanding of angles and angle measurement, allowing them to create pie charts (4.MD.C)." Students build upon this understanding in Module 5 as they are introduced to the statistical problem-solving process.	
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	The materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. Learning objectives for Module 2, Topic 1, Lesson 4 are shaped by LSSM 6.RP.A.3 and state that students should be able to "Create and reason about tables of equivalent ratios," "Use known values in a table to determine equivalent ratios," and "Solve problems by reasoning about graphs, diagrams, and tables of equivalent ratios."	

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			Learning objectives for Module 3, Topic 1, Lesson 3 are aligned to LSSM 6.EE.A.3 and state that students should be able to "Simplify algebraic expressions using the associative, commutative, and distributive properties," "Apply properties of operations to create equivalent expressions," and "Rewrite expressions as the product of two factors." Learning objectives for Module 3, Topic 1, Lesson 5 are clearly shaped by LSSM 6.EE.B.6, where students should be able to "Represent real-world problems with algebraic expressions" and "Use variables and write algebraic expressions to solve real-world and mathematical problems." The learning objectives in Module 5, Topic 1, Lesson 1 are shaped by Cluster A, to "Develop understanding of statistical variability, of the Statistics and Probability domain." The first learning objective of Lesson 1 states that students will be able to "Recognize and design statistical questions and anticipate variability in data related to the question."	
Additional Criterion **6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:** Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach	**REQUIRED** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Yes**	The materials attend to the full meaning of each practice standard. The Topic Overview within each module includes a section that connects the lesson components to the practice standards. For example, in Topic 3 Overview, Module 1, the materials provide explicit connections under "How do the activities in Decimals and Volume promote student expertise in the math practice standards?" Another	

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which are not included in the Standards. ☒ Yes ☐ No			example is found in the Topic 1 Overview, Module 2, where connections are made between the content and practice standards under the section question, "How do the activities in Ratios promote student expertise in the mathematical practice standards?" These practice standards, which are described in the Topic Overview are developed within the activities as noted by the examples of "Habits of Mind" icons described in Indicator 4a of this rubric. The materials include MP.1, make sense of problems and persevere in solving them, in each lesson. All lessons in the materials provide opportunities for students to engage in productive thought regarding grade-level concepts and in determining how to solve problems. For example, in Module 2, Topic 3 Performance Task, students are expected to determine the best deal when given five different-sized bags of sunflower seeds. In order to determine which size of sunflower seeds would be the best buy, students find the unit price per pound of sunflower seeds. MP.1 is evident in solving this performance task because students have to determine what the performance task is asking them to solve. MP.2, reason abstractly and quantitatively, is present in this performance task, as well, because students are expected to determine which math formulas are needed to solve the task. MP.3 is evident throughout the materials as students are often asked to	

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			explain their reasoning or asked to explain the reasoning of a solved problem that is already given. For example, in the Post-Test of Module 3 Topic 1, a question asks, "Determine if the two expressions are equivalent. Choose 3 different values for x and complete the table. Explain your reasoning." MP.4 is used throughout the materials when students create models to explain their mathematical reasoning. For example, students use a balance model to explore and explain their math reasoning when solving addition and multiplication problems with variables in the MATHia lesson in Module 4.	
	REQUIRED **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Yes**	The materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Throughout the materials, students engage in "Who's Correct" problems where they must determine who is correct and who is incorrect. Students are expected to develop a sound mathematical argument reasoning how the problems were correct or incorrect. As students figure out who is correct, they consider the strategy and/or reasoning used in each answer, if the reasoning or strategy makes sense, and what errors were made in the incorrect response. It is intended that these types of problems will help students analyze their own work for errors and correctness. For	

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			example, in Module 3, Topic 3, Lesson 2, students are asked, “Nic reported that on Saturday morning he sold 13 pretzels and collected $16.25, and on Saturday afternoon he sold 42 pretzels and collected $55.00. Do you think he reported accurately? Explain your reasoning.” Another example is found in Module 2, Topic 3, Lesson 1 where students are asked, “Molly says that she is 1.5 meters tall. Shawna is 5 feet tall. Molly says that she is taller, but Shawna disagrees. Who is correct? Explain your reasoning.” These problems are noted with a thumbs up/thumbs down symbol throughout the materials. Another way the materials provide opportunities to engage with mathematical reasoning and constructing viable arguments is by providing thought-provoking questions during the lesson activities. For example, Question 2 in Module 5, Topic 2, Lesson 1, states, “Lamar says that the median is 10 for the data set 5, 6, 10, 4, and 9. Explain what Lamar did incorrectly to determine that the median was 10. Then determine the correct median.” Additionally, Question 1, parts A through E of Module 2, Topic 2, Activity 3.1 provides sample student responses with the following prompt, “Mr. Goodwin, the sixth grade math teacher, asked the class to determine 25% of 44. Five different student responses are shown.” For each part of Question 1, students analyze each method and	

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			determine when each method is most efficient to use, such as in Question 1 Part a, “When is Kendra’s method most efficient to use?”	
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical development.	**No**	There are no teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical development. The practice standards are presented as “Habits of Mind” at the beginning of the materials, with symbols used to denote which practice(s) each activity uses; however, the facilitation notes in the teacher materials do not explain how the practice standards should be used or how they help develop understanding within the activity. For example, within the Teacher's Implementation Guide, “Habits of Mind” states, “Each lesson provides opportunities for students to think, reason, and communicate their mathematical understanding. However, it is your responsibility as a teacher to recognize these opportunities and incorporate these practices into your daily rituals.” Additionally, the icons used throughout the materials lack specific guidance for the particular lesson or activity. All of the symbols, with the exception of MP.6, represent more than one math practice standard, and specific practices are not always identified. As an example, the	Carnegie Learning's Middle School Math Solution explicitly connects content standards and practice standards. Materials address the practice standards in such a way as to enrich the major work of the grade -- strengthening the focus rather than detracting from it. Each lesson provides opportunities for students to think, reason, and communicate their mathematical understanding. Each activity denotes the habit of mind highlighted with an icon representing the mathematical practice or pair of practices intentionally being developed. In the front matter of the Student Edition (FM-18) and the Teacher's Implementation Guide (FM-30), we explain the practices with their corresponding icon. There are four icons: one represents a single practice, while the other three represent pairs of practices. No icon is used for Math Practice 1 (Make sense of problems and persevere in solving them.) because this practice is evident every day in every lesson. Teacher-directed materials that explain the role of the practice standards: • In the TIG front matter, we explain how to integrate the practices into daily instruction. For example, "When you are facilitating each lesson, listen carefully and

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			symbol with a head and puzzle piece references both MP.2 and MP.3. The symbol with a hand and a wrench references both MP.4 and MP.5. The box symbol references both MP.7 and MP.8. In Module 1, Topic 1, Lesson 5: Composing and Decomposing Numbers, Activity 5.2 and 5.3 are labeled with an icon that aligns to both MP.2 and MP.3, but there is no guidance for teachers at the lesson or activity level on the specific role of each of the math practice standards.	value diversity of thought, redirect students' questions with guiding questions, provide additional support with those struggling with a task, and hold students accountable for an end product. When students share their work, make your expectations clear, require that students defend and talk about their solutions, and monitor student progress by checking for understanding. Consider having students create "I can" statements for each practice or pair of practices. This strategy can help students become reflective about their work." • The Topic Overview in the Teacher's Implementation Guide identifies how students develop proficiency in the habits of mind in that Topic. For example, in Course 3 Topic 1, Rigid Motion Transformations, "How do the activities in Rigid Motion Transformations promote student expertise in the mathematical practice standards? All Carnegie Learning topics are written with the goal of creating mathematical thinkers who are active participants in class discourse, so elements of habits of mind should be evident in all lessons. Students are expected to make sense of problems and work towards solutions, reason using concrete and abstract ideas, and communicate their thinking while providing a critical ear to the thinking of others. The standards of this topic link directly to the process standards of reasoning about

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				mathematics, making and testing conjectures, generalizing patterns, using tools, and practicing precision. By reasoning about their explorations with tools, students make and test conjectures about the relationships between corresponding sides and angles after applying transformations. After sufficient work with a transformation on the coordinate plane, students make generalizations about the coordinates of the images of the transformation. They use patty paper to make, test, and verify conjectures about congruent figures. Students must apply their knowledge of transformations as they determine specific sequences and order of transformations that map images onto each other. • The icon also appears within each lesson's facilitation notes with questions listed to facilitate the learning where they occur. The Facilitation Notes provide teachers with resources for supporting students as they develop proficiencies in the habits of mind. • In the example provided, Course 1, Module 1, Topic 1, Lesson 5, Activity 5.2 Using GCF and LCM to Solve Problems, students reason quantitatively and critique others' reasoning, as denoted by the puzzle icon. In addition to the Student Edition questions that require students to make sense of quantities and their relationships in problem situations, the Questions to ask in the TIG support

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				teachers as they interact with students developing proficiency in this practice. For example, "Is calculating multiples or factors helpful in this situation? Which will help in this situation, identifying the GCF or identifying the LCM? What information will the GCF give you in this situation? What information will the LCM give you in this situation? Does the situation involve dividing things into equal parts, or does it involve common multiples where things have different cycles but happen at the same time?" • In the second example provided, Course 1, Module 1, Topic 1, Lesson 5, Activity 5.3 Making Connections, students are working on creating coherent representations of the problems at hand. The SE provides questions requiring students to analyze two quantities and recognize different relationships between their LCM and GCF. Again, the Questions to ask in the Teacher's Implementation Guide provide teachers with the tools to foreground this practice in their instruction. For example, "How was the product of the two numbers determined? How was the GCF determined? How was the LCM determined? What is the product of the GCF and the LCM? What is the product of the two numbers? How does the product of the two numbers relate to the product of the GCF and the LCM? Is the product of the two numbers less than, equal to, or greater than the product of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				the GCF and the LCM?" • Going beyond merely explaining each practice's role, the Middle School Math Solution provides teachers with point-of-use resources.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials attend to the specialized language of mathematics for Grade 6. The materials connect mathematical terminology and academic vocabulary and encourage students to use both with precision. Evidence of this is found in the Teacher's Implementation Guide which suggests that teachers facilitate the understanding of mathematical terminology and academic vocabulary. The materials suggest that teachers create a word wall of the key math terms used within the lesson materials so that students can build their academic vocabulary. Additionally, the materials feature a glossary that includes key mathematical terms, with examples, that students can access both in the printed books and in online materials. For example, in Module 4, Topic 1, Lesson 1: The Human Number Line, students are introduced to negative numbers. Student lesson materials provide an explicit definition of the term “negative number” and include a graphic of a number line that illustrates where negative numbers are placed on a number line. Students are further supported to attend to the use of accurate mathematical terminology by	

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			answering questions in the lesson assignments that ask students to explain their understanding of the math term. For example, one question from the Lesson 1 Assignment asks students to, “Write a sentence to explain the relationship between opposites and negative numbers.” This provides students the opportunity to attend to the specialized language of math by conceptualizing the math term. Additionally, key mathematical terms are explained within the instructional materials. For example, Topic 1, Activity 2.1 states, “The magnitude, or absolute value, of a number is its distance from zero on a number line. The symbol for absolute value is | |. The expression |n| is read as the absolute value of a number n.” In addition to providing clarification of meaning, these mathematical terms are also used frequently in context and course problems where students are to further explain their understanding. Students respond to conceptual problems to convey understanding, followed by the opportunity to clarify that conceptual understanding. For example, Problems 5 and 6 state, “5. Can two different numbers have the same absolute value? If so, provide examples,” and “6. What can you say about the absolute value of… A. Any positive number? B. Any negative number? C. Zero?”	
Additional Criterion	**REQUIRED**	**Yes**	There is variety in what students produce.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☒ Yes ☐ No	**7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		Students are asked to produce answers to problems in writing, through charts and graphs, and by producing models as a way to fully attend to the content standards. The materials also contain an online component, MATHia, that allows students to use technology to engage with the content standards. In Module 4, Topic 2, students use the Mathia software to deepen their understanding of plotting ordered pairs in all quadrants of the coordinate plane. Students respond to questions using drag and drop, multiple choice, multiple responses, and fill-in-the-blank. In the Module 5, Topic 1 Performance task, students are expected to create written conclusions from each box plot given and create histograms from the data. This task allows students to interpret data in a variety of ways and create a different representation of the data already displayed. The Skills Practice Worksheet provided for Module 1, Topic 2 focuses on fraction division. In Section I, Part A and B, students create number sentences given a model of fraction division. Section II, Part A provides students with real-world problems involving division with fractions where they solve the problem and use models to explain their reasoning. Section III, Part A prompts students to, “Determine the fraction that makes each product 1,” by providing fill in the blank problems. In Section III, Part B and Section IV, Part A	

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			students calculate the quotient to practice procedural skills. On the End of Topic Test Form A for Module 2, Topic 2, students provide numerical responses, such as in Question 4, where students write given fractions as percentages. Question 5 provides a number line and asks students to "Label each indicated mark on the number line as a fraction, decimal, and percent. Make sure your fractions are in lowest terms. Round to the nearest thousandth, if necessary." Question 6 asks students to complete a table to represent a given real world scenario using a fraction, decimal and percent. Question 7 provides students two different models and prompts students to, "determine the shaded part of each figure, and write it as a fraction, a decimal, and a percent. Make sure you write your fraction in lowest terms."	
	REQUIRED **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Yes**	There are separate teacher materials that support and reward teacher study. The materials provide explicit Module Overviews, Topic Overviews, Lesson Plan materials, and video tutorials to support teacher study of the content standards. Teachers are provided extensive explanation of materials through the Teacher's Implementation Guide, as well as guidance for instruction in lesson plans provided for each lesson within topics and modules. In Module 3, Topic 1: Expressions provides	

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			a Topic Overview that provides guidance materials to support teacher understanding of the content, connections between concepts, and how to build student understanding. The following questions are explored and expanded on: "How is Expressions organized?" "What is the entry point for students?" "How does a student demonstrate understanding?" "Why is Expressions important?" and "How do the activities in Expressions promote student expertise in the mathematical practice standards?" The lesson materials also provide teacher guidance on how to support the instructional process. For example, Module 2, Topic 3, Lesson 3 provides notes that support teachers in implementing effective instruction to students towards mastery of LSSM 6.RPA.3.b. The teacher lesson materials also provide sample questions to ask students during the lesson, differentiation strategies, and icons denoting the math practice standards in use. The MyPL (Professional Learning) tutorial videos provide a detailed overview of specific activities teachers should help students pay special attention to and the importance of the activities to help students build mastery in the content standards. For example, the Module 2, Topic 3, Lesson 3, Activity 3 MyPL video tutorial helps teachers understand what students should be doing to connect unit conversion to a graphed representation on	

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			the coordinate grid. The MyPL App videos are aligned to each specific lesson to "discuss and model some facilitation ideas," as stated in the MyPL video for Module 5, Topic 1, Lesson 2: Get in Shape-Analyzing Numerical Data Displays. The video goes through the teacher materials of the lesson and provides activity exploration, such as suggestions for instructions on how to create dot plots using register tape, butcher paper or even a human dot plot.	
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps all students meet the same standards. Teacher lesson plans include instructional supports such as differentiation strategies, grouping strategies, and additional lesson modifications to support ELLs, as well as struggling and advanced learners. These supports are introduced and explained in the Teacher's Implementation Guide. An example of modifications is found in Module 4, Topic 1, Lesson 2: Magnificent Magnitude-Absolute Value, where differentiation strategies for Question 1 in Activity 2.2 suggest that, "If students work in groups of four, students can switch between shoulder and across-table partners from Question 1 to Question 2. For students who struggle, they could do fewer examples in each question but both	

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			questions are essential for meeting the standards in this activity. To extend the activity and focus on meaning, ask students to generate more situations." In the teacher lesson plan for Module 4, Topic 2, Lesson 3, an ELL Tip states, "Several exercises in this lesson require students to infer the concept of continuity. Some English Language Learners may have difficulty grasping and articulating how a graph shows the continuity of the real-world situation it models. Have advanced English Language Learners engage in a Reciprocal Teaching exercise by explaining their answers to beginners. Beginners repeat back what they heard, and the advanced English Language Learner makes corrections to refine understanding." Another example of an ELL Tip in the teacher lesson plan for Module 5, Topic 1, Lesson 3 states, "The term grouped frequency table provides a perfect opportunity for English Language Learners to parse a compound phrase by looking at the definitions of each of the terms. Have students look up the definitions of group, frequency, and table, and write them in their journal. Check for understanding by looking for the proper mathematical definitions. Finally, have students put the three definitions together to write a definition for the compound phrase." In the teacher lesson plan for Module 2, Topic 1, Lesson 5, Activity 5.2, Graphing	

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			Equivalent Ratios, teachers are provided a differentiation strategy for advanced learners, “To extend the activity, introduce the Golden Rectangle.” In the notes of the teacher lesson plan for Activity 5.3 of the same lesson, a differentiation strategy geared toward struggling students states, “To support students who struggle, make the technique of using the graph to solve problems explicit. Have students start at the axis where the value is given, draw a segment to the point on the graph, and then draw the perpendicular segment to the other axis.”	
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	**Yes**	The underlying design of the materials distinguishes between problems and exercises. The materials use proper tools to help students meet the expectations of the standards. Problems within the lesson activities help students learn new mathematics and through the exercises found in the assessments and performance tasks they can apply what they have learned. Problems are appropriately scaffolded and allow students to develop the key concepts of the standards. For example, Module 5, Topic 1, Lesson 3, Activity 3.2, students are given three questions to help develop an understanding of comparing histograms. One question asks students to create and accurately label histograms based on a frequency table. Then, in the Lesson Assignment, students are expected to, “1. Create a frequency table and a histogram	

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			to display Jeremy's scores. Be sure to name your histogram. 2. Describe the distribution of the data. Include any specific graphical features or patterns. Explain what your answer means in terms of Jeremy's scores. 3. Create a second frequency table and histogram to provide a different view of the data distribution." Throughout the activities within each lesson, students are presented with problems to solve and discuss based on new mathematical content presented. Exercises follow at the end of each lesson to apply understanding and procedural skills in the Assignment section. For example, in Module 2, Topic 2, Lesson 3, Activity 3.2, students are provided a "Worked Example" using a double number line to represent money raised in a homeroom at school and how that correlates to the percentage of the goal set. The questions that follow ask students to analyze the worked example and create double number lines to represent other homeroom goals, which are all based on new learning using this mathematical model. Practice exercises 1 and 2 found at the end of the lesson provide students with real-world examples and allows them freedom in choice of models used to get to the correct answer.	
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Prior knowledge is activated in the "Warm Up" and "Getting Started" sections of each	

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			lesson to appropriately scaffold student learning. Mathematical concepts found in the LSSM for Grade 6 are addressed in an order that supports student mastery of the content standards. For example, Module 2, Topic 1 addresses Major LSSM 6.RP.A.1 and Module 2, Topic 3 addresses Major LSSM 6.RP.A.2 (The LSSM Companion Document 2.0 for Grade 6 lists 6.RP.A.1 as a Grade 6 standard taught in advance of 6.RP.A.2.) Another example can be found in Module 3, Topic 1, Lesson 1, where the focus is on Major LSSM 6.EE.A.1 followed by Module 3, Topic 1, Lesson 2 focusing on Major LSSM 6.EE.A.2 (The LSSM Companion Document 2.0 for Grade 6 lists 6.EE.A.1 as a Grade 6 standard taught in advance of Major LSSM 6.EE.A.2.). This is also evident in Module 1: Composing and Decomposing. Students are expected to gain fluency in using the standard algorithms of division and operations with decimals. In the first lesson of the module, students' prior knowledge of number relationships and shapes is used and further exposes them to operations with multi-digit numbers, composing and decomposing numbers, and applications to finding areas.	
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	While there are no LSSM for Grade 6 that specifically call for the use of technology, the instructional materials provide MATHia software where students can manipulate	

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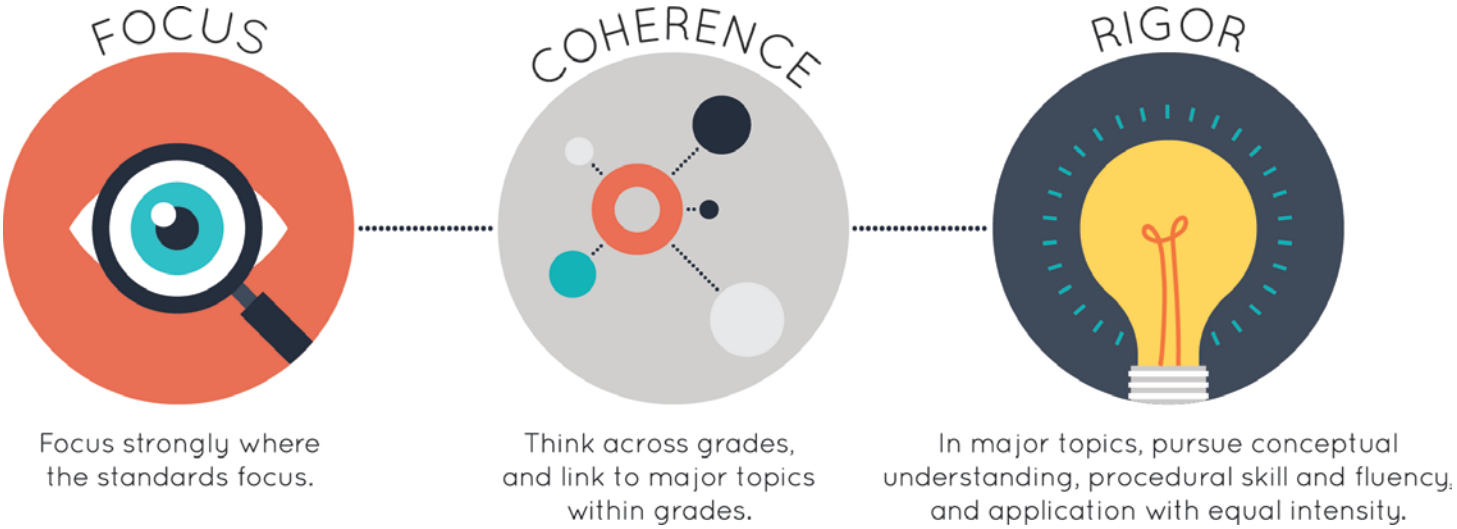
			models created through technology to further investigate the grade-level content. For example, in Module 4, Topic 1, MATHia Workspace - Representing Integers on Number Lines an “Explore Tool” for students allows them to plot integers and their opposites on a virtual number line so that they can respond to the prompt, “What do you notice about how each point and its opposite are labeled?” Another example can be found in Module 3, Topic 1, MATHia Workspace - Modeling Equivalent Algebraic Expressions, where an “Explore Tool” for students allows them to manipulate virtual algebra tiles to determine equivalent algebraic expressions. The problem states, “Sofia has 3 boxes of toys. Each box has the same number of toys. Drag and drop (x)-tiles to the top of the model to show Sofia’s 3 boxes of toys.” The MATHia activities provide students with ample practice in plotting points in the coordinate plane. Students have the opportunity to view graphs with varied intervals in all four quadrants to provide more fluency practice in finding ordered pairs using all four quadrants of the coordinate plane. The materials also support the use of technology in Module 2, Topic 2, MATHia activity: Determining a Whole Given a Percent and a Part. In this activity, students use tape diagrams to model their understanding that percent and parts are partitions of a whole number. Students are	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			allowed critical time in solving application problems involving percentages and parts of whole numbers.	
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	**Criteria**	**Yes/No**		
I: Non-Negotiables	1. Focus on Major Work	**Yes**	A majority of the lessons are devoted to the major work of the grade. Materials spend minimal time outside of the content standards and do not make students or teachers responsible for topics that are outside of the grade level. Some assessment items were found that assess students beyond the grade level; however, the implementation guide for Louisiana teachers includes guidance on omitting these items.	
	2. Consistent, Coherent Content	**Yes**	The materials connect supporting standards to major content standards in a meaningful way to support focus and coherence. The materials include problems and activities that connect two or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important.	
	3. Rigor and Balance	**Yes**	The materials are designed to allow the conceptual development of Grade 6 topics, practice toward building fluency and procedural skills, and spend ample time with engaging applications. It is evident in the materials that the three aspects of	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials.	
	4. Focus and Coherence via Practice Standards	**Yes**	The materials address the mathematical practice standards in such a way as to enrich the content standards of Grade 6.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The materials create coherence by linking topics from domains and clusters and through the progression of standards through grades/courses.	
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials provide practice standards that make meaningful and purposeful connections that enhance the content of the course. Practice standards are linked to each activity; however, teachers are not provided with an explanation of how each practice standard should be addressed within the activity.	
	7. Indicators of Quality	**Yes**	The materials give teachers and students the tools they need to meet the expectation of the standards.	
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**				

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Course 2** Grade: **7**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

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SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**REQUIRED** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	**Yes**	The materials devote the large majority of class time to major work of the grade. 67% of the instructional materials are directly aligned to the major Louisiana Student Standards for Math (LSSM) for Grade 7. 56.6% of the materials focus solely on major standards alone, 10.8% of the materials address a combination of major and supporting/additional standards, and 32.6% of the materials address supporting or additional standards.	
	REQUIRED **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	Instructional materials spend minimal time on content outside of the Grade 7 course requirements. Some assessment items go beyond the expectations of the LSSM for Grade 7; however, implementation suggestions are provided for Louisiana teachers for those assessment items. For example, Questions 19 and 20 of Module 3, Topic 2 End of Topic Test Form A and Form B expect students to "Solve the literal equation for the indicated variable." This concept is outside the scope of the LSSM for Grade 7 and is addressed in LSSM A1: A-CED.A.4, "Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations." The implementation guide suggests omitting these items and states, "Students	

[3] For more on the major work of the grade, see Focus by Grade Level.
[4] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			should not be held accountable for solving literal equations for an indicated variable. Additional assessment questions are available through Edulastic." Previous grade content is used only as review to assist with scaffolding of new content standards. For example, in Module 2, Topic 2, Lesson 4, there are two review questions that are based on LSSM 6.RP.A.3 but these are used to prepare students for work related to LSSM 7.RP.A.2. Previous grade content is used only as review to assist with scaffolding of new content standards.	
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	The materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. For example, in Module 4, Topic 1, Lesson 3, the materials connect supporting LSSM 7.SP.C.7b (developing a probability model to predict the probability of events) to major LSSM 7.RP.A.3 (using proportional reasoning and percentages to solve multi-step problems) by promoting the use of proportions to help students predict the probability of future occurrences of an event. In Module 4, Topic 1, Lesson 3, Activity 3.3, a worked example is provided on how to complete this type of problem. Problem 1 asks students to "1. Suppose these are the probabilities for the symbols on the spinner. a. If you spin the spinner 40 times, predict the number of times the spinner would land on each symbol." In Module 4,	

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			Topic 3, Lesson 2, the materials facilitate connections between supporting LSSM 7.SP.A.1 and 7.SP.A.2 and major LSSM 7.RP.A.3. In the lesson, students use proportional reasoning to estimate parameters for a population and compute percent error. In Activity 2.1, students select a sample of squares on a floor plan, calculate the area, and then represent the data on a dot plot. They use their sample and proportional reasoning to predict the total area of the squares. Students use the following ratio to estimate the total area, number of squares in the sample : total area of the sample squares. In Activity 2.2, they are given the actual total area and calculate the percent error for the statistics calculated in Activity 2.1 and the beginning of Activity 2.2. In Problem 9, students are given the actual area of the 40 numbered squares of 288 square feet. In 9c, students complete the following problem "Calculate the percent error for the parameter and your statistics from this activity and the previous activity for the total sum of the areas of the squares."	
	REQUIRED **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important. For example, in Module 3, Topic 2, Lesson 2, the materials connect Clusters A and B of the Expressions and Equations (7.EE) domain. The focus of Cluster A, Expression	

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			and Equations domain, is for students to "use properties of operations to generate equivalent expressions." The focus of Cluster B is for students to "solve real-life and mathematical problems using numerical and algebraic expressions and equations." Students have multiple opportunities to generate equivalent expressions by completing questions that require expressions or equations such as in the following: "3. Rewrite your equation in the form ax+b=c. a. Name the strategies necessary to rewrite the equation you wrote. b. Rewrite the equation you wrote for Limousines by Lilly. Explain why the resulting equation is a two-step equation." This work is connected to solving real-life problems involving numerical and algebraic expressions and equations. Students are given real-life problems that use equations with variables. For example, where students are asked, "5. Consider the cost of renting a limousine from Transportation with Class. a. What does the first hour of a rental from Transportation with Class cost? b. What does each additional rental hour cost from Transportation with Class after the first hour? c. Write an equation for the total cost, t, of renting from Transportation with Class for any given number of rental hours, h." In Module 2, Topic 2, Lesson 3, the Number System (7.NS) and Ratio and Proportional Reasoning (7.RP) domains are	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			connected. In this lesson, students solve real-life problems with rational numbers involving all four operations to solve problems involving percent error. Students make the connection that proportional reasoning can be used to make sense of real-life mathematical problems, including those that involve rational numbers. For example, Question 1 of Activity 3.3 states, "An airline estimates that they will need an airplane that seats 224 passengers for the 6 A.M. flight from Washington, D.C., to Boston. Calculate the percent error for each number of actual passengers booked. Show your work. a. 186 booked tickets b. 250 booked tickets." When calculating for the 186 tickets in this problem, students determine that the answer results in a negative percent error and will have to reason what that means in a real-world context.	
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. Students use a variety of strategies to evaluate expressions, equations, and inequalities. For example, in Module 3, Topic 1, Lesson 2, students develop the concept that the distributive property, along with rational coefficients, can be used to rewrite expressions and solve real-world problems (LSSM 7.EE.A.1).	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			Activity 2.3 demonstrates how area models can support students in using the distributive property when rewriting equivalent expressions. After direct instruction is facilitated to build understanding, the activity requires students to “Draw a model for each expression, and then rewrite the expression with no parentheses.” In Module 1, Topic 1, Lesson 1, the materials develop conceptual understanding of the circumference, area, and diameter of a circle (LSSM 7.G.B.4). The students engage with activities that help develop the understanding that “pi” is a ratio that compares the circumference of a circle to its diameter. An example of this development is displayed in Activity 1.2. where questions build the understanding that all circles share the same circumference to diameter ratio of approximately 3.14. Question 3 of the activity requires students to ”Average all of your classmates’ answers to Question 3. Write the approximate ratio of circumference to the diameter as a fraction and as a decimal.”	
	REQUIRED **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. In addition to the instructional lesson, the materials provide a paper-based Skills Practice workbook, as well as a digital workspace (MATHia) that tracks student progress to facilitate individual	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.		learning. As stated in the Teacher's Implementation Guide, Volume 1, "Learning Individually: Through MATHia, students receive 1-to-1 adaptive math coaching, providing a personalized learning path and ongoing formative assessment." For teachers and students with limited technology, a Skills Practice book is provided that includes the targeted practice of each topic's skills and mathematical concepts. For example, in Module 3, Topic 2, students develop an understanding of solving two-step linear equations by connecting models and procedures. By the end of the Topic, students use this understanding to fluently solve two-step equations and inequalities (LSSM 7.EE.B.4). In Lesson 2.3 and 2.4, students practice solving two-step equations and inequalities through a variety of practice problems. Within the lessons, there are multiple exercises embedded in the activities and practice problems to build student procedural skill and fluency. Following the lessons, students can utilize the MATHia software to continue to build fluency as they solve a variety of two-step-equations and inequalities using formal strategies. The student practice problems found in the MATHia Workspace are identical to the problems found in the Skills Practice Workbook for Module 3, Topic 2, allowing students to access the content in different ways. Students have the opportunity to	

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			build fluency and procedural skills throughout the materials. For example, Module 1, Topic 3 provide the practice necessary to fluently recognize and represent proportional relationships (LSSM 7.RP.A.2). The lesson is dedicated to recognizing graphs, tables, and equations that represent proportional relationships. In Lessons 3 and 4, students complete tables, interpret graphs, and create equations to identify proportional relationships. The exercises in the Skills Practice sheets associated with these lessons provide ample opportunities for students to build fluency with this concept. Students have ample opportunities to build fluency and procedural skill toward operations with rational numbers (LSSM 7.NS.A.1 and 7.NS.A.2). In Module 2, Topics 1 and 2, the materials provide ample practice in building fluency toward these concepts. For example, in Topic 1, Activity 5.3 provides the overall practice of adding and subtracting rational numbers. Students also gain sufficient practice in multiplying and dividing rational numbers from the Topic 2 Skill Practice Worksheet.	
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in	**Yes**	The materials are designed so that students spend sufficient time working with engaging applications. The instructional materials provide practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade. The problems present opportunities	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.		for practice and engage students in problem solving within lessons that are aligned to content standards focused on the application component of rigor. This is evident in Module 3, Topic 2, Lesson 3 as students learn strategies for solving two-step equations (LSSM 7.EE.B.4a). The lesson begins with students exploring different strategies used to solve two-step equations and then solving equations by applying the Properties of Equality. Students then apply this understanding by writing and solving two-step equations in order to solve real world, contextual problems. For example, Activity 3.2, problem 2 states, “Pete’s Garage charges $45 per hour for labor when performing auto repairs. The office manager must have the cost of parts and the hours of each job ticket to complete the bills for the customers. a. Define variables for the three quantities that are changing in the scenario. b. Write an equation that represents the total cost of auto repairs. c. Assume that for a given car, the cost of the parts is $101. Use your equation to determine how many hours the mechanic worked on the car if the total bill was $269.75.” Students also engage with multi-step contextual problems with the “Topic Performance Task” provided in each Topic. The Teacher’s Implementation Guide, Volume 1 states, “Each Performance Task provides a scenario with minimal scaffolding, clear instructions to the	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			student regarding criteria for acceptable work, and a detailed rubric." This is evidenced in Module 2, Topic 1 "Topic Performance Task." Students are given the rational numbers, 6.4, $-2\frac{2}{5}$, $4\frac{3}{10}$, and -5.2. Students are instructed to "Represent each number as the sum of two rational numbers and as the difference of two rational numbers. Use a number line for each operation." Then students are tasked with writing a real world problem that could be modeled by each sum/difference. Assessments also provide the opportunity for students to work with engaging applications. For example, in Module 1, Topic 1, End of Topic Assessment, Form A, students are expected to apply their knowledge of LSSM 7.G.A.4 to solve single-step and multi-step problems. For example, in item 17, students first calculate the area of a wheel of cheese and then find the cost per square inch of a 9-inch wheel of cheese that costs $18.60.	
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials. Not all lessons include opportunities to engage in all three components of rigor in the same lesson. For example, in Module 1, Topic 1, Lesson 2, only one level of rigor is present in the lesson activities. The lesson begins with having students complete an activity	

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			decomposing a circle into equal portions to form a parallelogram. This activity will help students develop the understanding that the area of a circle can be described as ½ the measurement of the circumference times the radius. In the remaining parts of the lesson, students are provided questions to help decide whether circumference or area is needed to solve problems. On the whole, the problems in this lesson all meet the conceptual understanding level of rigor. Students often have the opportunity to engage with all three components of rigor during the Performance Tasks located at the end of each topic. In Module 3, Topic 1, the Performance Task reinforces all three components of rigor through a real-world scenario where students are presented with the following problem: "Weston is shopping for a new backpack. The backpack he wants costs $25.95. The sales tax in Weston's city is 6%. What are two different expressions that could be used to calculate the total cost of the backpack? Write two expressions to represent the price of the backpack, b, plus 6% of the cost: the first expression as a sum and the second as a product. Complete the table showing equivalent expressions and the total cost of different backpacks in places with a different sales tax. Explain what the simplified expression means in terms of the original cost of the backpack." Students must first understand how to	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			write and simplify an algebraic expression in terms of the original cost (conceptual understanding) and then be able to perform the straight mathematical calculations (procedural). Students also provide an explanation about what the simplified algebraic expression means in terms of the original cost of the backpack. This problem provides students with an opportunity to apply both conceptual understanding and procedural skills in a real-world, multi-step problem.	
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**Yes**	The materials address the mathematical practice standards (MP) in such a way as to enrich the content standards of the Grade 7. In the teacher materials, each lesson provides an icon for the mathematical practice being developed. The Teacher Implementation Guide explains how the Standards for Mathematical Practices (MP) are presented in each lesson and includes a list of questions and strategies to help teachers facilitate the use of them during the lesson. The Teacher Implementation Guide suggests that teachers help students develop “I can” statements to help them become more reflective of their mathematical reasoning. Additionally, there is a list of suggested questions to use when MP.2 and MP.3 are embedded in the lesson (reason abstractly and quantitatively and critique the reasoning of others, respectively). The student materials include the same icons found in the teacher materials that designates	

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			which math practices are being used in each lesson. Students are guided to use the math practices with fidelity to develop the habits to become better mathematicians. For example in Module 1, Topic 4, Lesson 1, Activity 1.2 suggests that students should use proportions to solve part-to-whole ratio problems which aligns with MP.4 (model with mathematics). Developing understanding through modeling supports students in the process of solving problems with percentages.	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
Additional Criterion **5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:** Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**REQUIRED** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	**Yes**	The materials provide extensive work with course-level problems that are consistent with the progressions in the standards. The materials contain very few problems that are below grade level. Those below grade-level are clearly identified as review material in the Topic Overview. For example, in Module 1, Overview, it is explained that the materials provide a review of ratios (LSSM 6.RP.A.3) and mean (LSSM 6.SP.A.5) and describes where these review problems can be found (e.g., Module 1, Topic 1, Lesson 1, Review). The materials also provide ample practice with grade level problems. For example, the activities within the lesson, the Skills Practice worksheets, and MATHia software provide students with extensive work to achieve mastery of the content standards. In Module 1, Topic 4, the Skills Practice sheets provide students with practice	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			finding the constant of proportionality and recognizing proportionality so that students can attend to the level of the rigor component called for in the content standards, procedural skill and fluency.	
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Yes**	The materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The Topic Overview identifies which concepts connect to previously learned content and describe the progression of learning in previous grades to arrive at the grade level standards. For example, in Module 2, Topic 1: Adding and Subtracting Rational Numbers, the overview materials describe prior learning and the "entry point" for the topic as the Grade 6 Number System domain. The materials explain that students develop the understanding of adding and subtracting rational numbers from their work in Grade 6 of recognizing distance from zero on a number line. This foundational knowledge then prepares students to develop rules for adding and subtracting all rational numbers by using familiar tools, number lines, and understanding that the direction of movement can be described by using a negative or positive number sign. A second example of how the materials relate the grade-level concepts to previous learning is seen in the Module 3, Topic 2, Topic Overview. The materials explain that the overall learning objective for Topic 2 is solving two-step equations and	

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			inequalities. The materials explain that the conceptual understanding needed to solve algebraic equations involves learning about inverse operations and that in Grade 6, students solved one-step equations by applying inverse operations.	
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	The materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. For example, in Module 2, Topic 2, Lesson 1, the learning objectives reflect the language and intent of LSSM 7.NS.A.3. The learning objectives are to “multiply integers using models,” “develop rules for multiplying integers,” and “develop rules for dividing integers.” The objectives include specific vocabulary terms taken directly from the LSSM which clearly describes what students are expected to learn. In Module 5, Topic 1, Lesson 2, the learning objectives are clearly shaped by Cluster B of the Geometry domain to “solve real-life and mathematical problems involving angle measure, area, surface area, and volume.” The learning objectives for Lesson 1 explains that students will be able to “use facts about supplementary, complementary, vertical, and adjacent angles and linear pairs in multistep problems to write and solve simple equations for unknown angles.” The lesson objectives were developed to meet the focus of Cluster B within this domain.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Additional Criterion **6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:** Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	**REQUIRED** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Yes**	The materials attend to the full meaning of each practice standard. All lessons provide opportunities for students to engage in productive thought regarding grade-level concepts and how to solve the problems. For example, in Module 3, Topic 2 Overview, it is explained that math practices are embedded in the materials and all lessons embed MP.1, MP.2, and MP.3. The lesson materials are designed so that learners can reason abstractly and quantitatively about math, can make sense of problems, and can develop arguments regarding solutions while critiquing the arguments of others. For example, the Topic 2 materials strive to help students develop deep conceptual understanding of two-step equations and inequalities by connecting math models (number lines or tape diagrams) to the standard algorithm for solving these types of problems. To do this, students must look for and make use of structure (MP.7) and use this reasoning to solve other problems of this type (MP.8). In Module 1, Topic 3, the Topic Overview explains how the math practice standards are to be used to help students develop deep understanding of the topic. In the Topic 3 materials, students learn how to model real-life scenarios on graphs (MP.4). Students then analyze the features of graphs to develop an understanding of proportionality and non-proportionality (MP.3, MP.6, and MP.7). With this reasoning, students are able to generalize	

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			their understanding to solve other problems with standard algorithms (MP.1, MP.2, MP.8, and MP.5).	
	REQUIRED **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Yes**	The materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. For example, in the "Thumbs Up/Thumbs Down" example problems, one problem is presented correctly and one problem is presented incorrectly. In Module 1, Topic 2, Lesson 1, two student strategies are presented using unit rates to compare recipes and students must respond to the following: "Compare Julio's and Emily's strategies. In what ways are they different? How did they arrive at the same answer?" Opportunities to engage with mathematical reasoning is also provided through thought-provoking questions asked during the lesson activities. Most of these questions are found in the facilitation notes in each Teacher Lesson Plan. An example of these thought-provoking questions, is found in Module 3, Topic 3, Lesson 3 Facilitation Notes. Teachers are urged to facilitate academic discourse in small groups by posing questions during the lesson activities or as a part of the whole group discussion such as: "What do the numbers in the table represent with respect to the problem situation?" and How did you decide the appropriate label for the x-axis	

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			and y-axis? Is there another way to label the axes? Explain." In Module 2, Topic 2, Lesson 2, Activity 2.1, the Teacher Implementation Guide provides questions such as: "Is 0.33 a repeating decimal? Why or why not? Can you provide a counterexample to disprove that conjecture? Does that conjecture take into consideration that the divisor cannot be 0?"	
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**No**	There are no teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. The practice standards are presented as "Habits of Mind" at the beginning of the materials, with symbols used to denote which practice(s) each activity uses; however, the facilitation notes in the teacher materials do not explain how the practice standards should be used or how they help develop understanding within the activity. For example, within the Teacher's Implementation Guide, "Habits of Mind'' states, "Each lesson provides opportunities for students to think, reason, and communicate their mathematical understanding. However, it is your responsibility as a teacher to recognize these opportunities and incorporate these practices into your daily rituals." Additionally, the icons used throughout	Carnegie Learning's Middle School Math Solution explicitly connects content standards and practice standards. Materials address the practice standards in such a way as to enrich the major work of the grade -- strengthening the focus rather than detracting from it. Each lesson provides opportunities for students to think, reason, and communicate their mathematical understanding. Each activity denotes the habit of mind highlighted with an icon representing the mathematical practice or pair of practices intentionally being developed. In the front matter of the Student Edition (FM-18) and the Teacher's Implementation Guide (FM-30), we explain the practices with their corresponding icon. There are four icons: one represents a single practice, while the other three represent pairs of practices. No icon is used for Math Practice 1 (Make sense of problems and persevere in solving them.) because this practice is evident every day in every lesson.

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			the materials lack specific guidance for the particular lesson or activity. All of the symbols, with the exception of MP.6, represent more than one math practice standard, and specific practices are not always identified. As an example, the symbol with a head and puzzle piece references MP.2 and MP.3. The symbol with a hand and a wrench references MP.4 and MP.5. The box symbol references MP.7 and MP.8. In Module 4, Topic 2, Lesson 1, Activity 1.1. is labeled with the icon of a hand holding a wrench which represents MP.4 (model with mathematics) and MP.5 (use tools strategically), but there is no guidance for teachers at the lesson or activity level on the specific role of each of the math practice standards.	Teacher-directed materials that explain the role of the practice standards: • In the TIG front matter, we explain how to integrate the practices into daily instruction. For example, "When you are facilitating each lesson, listen carefully and value diversity of thought, redirect students' questions with guiding questions, provide additional support with those struggling with a task, and hold students accountable for an end product. When students share their work, make your expectations clear, require that students defend and talk about their solutions, and monitor student progress by checking for understanding. Consider having students create "I can" statements for each practice or pair of practices. This strategy can help students become reflective about their work." • The Topic Overview in the Teacher's Implementation Guide identifies how students develop proficiency in the habits of mind in that Topic. For example, in Course 3 Topic 1, Rigid Motion Transformations, "How do the activities in Rigid Motion Transformations promote student expertise in the mathematical practice standards? All Carnegie Learning topics are written with the goal of creating mathematical thinkers who are active participants in class discourse, so elements of habits of mind should be evident in all lessons. Students are expected to make sense of problems and work towards

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				solutions, reason using concrete and abstract ideas, and communicate their thinking while providing a critical ear to the thinking of others. The standards of this topic link directly to the process standards of reasoning about mathematics, making and testing conjectures, generalizing patterns, using tools, and practicing precision. By reasoning about their explorations with tools, students make and test conjectures about the relationships between corresponding sides and angles after applying transformations. After sufficient work with a transformation on the coordinate plane, students make generalizations about the coordinates of the images of the transformation. They use patty paper to make, test, and verify conjectures about congruent figures. Students must apply their knowledge of transformations as they determine specific sequences and order of transformations that map images onto each other. • The icon also appears within each lesson's facilitation notes with questions listed to facilitate the learning where they occur. The Facilitation Notes provide teachers with resources for supporting students as they develop proficiencies in the habits of mind. • In the example provided, Course 1, Module 1, Topic 1, Lesson 5, Activity 5.2 Using GCF and LCM to Solve Problems, students reason quantitatively and critique

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				others' reasoning, as denoted by the puzzle icon. In addition to the Student Edition questions that require students to make sense of quantities and their relationships in problem situations, the Questions to ask in the TIG support teachers as they interact with students developing proficiency in this practice. For example, "Is calculating multiples or factors helpful in this situation? Which will help in this situation, identifying the GCF or identifying the LCM? What information will the GCF give you in this situation? What information will the LCM give you in this situation? Does the situation involve dividing things into equal parts, or does it involve common multiples where things have different cycles but happen at the same time?" • In the second example provided, Course 1, Module 1, Topic 1, Lesson 5, Activity 5.3 Making Connections, students are working on creating coherent representations of the problems at hand. The SE provides questions requiring students to analyze two quantities and recognize different relationships between their LCM and GCF. Again, the Questions to ask in the Teacher's Implementation Guide provide teachers with the tools to foreground this practice in their instruction. For example, "How was the product of the two numbers determined? How was the GCF determined? How was the LCM determined? What is the product

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				of the GCF and the LCM? What is the product of the two numbers? How does the product of the two numbers relate to the product of the GCF and the LCM? Is the product of the two numbers less than, equal to, or greater than the product of the GCF and the LCM?" • Going beyond merely explaining each practice's role, the Middle School Math Solution provides teachers with point-of-use resources.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials attend to the specialized language of mathematics for Grade 7. The materials connect mathematical terminology and academic vocabulary and encourage students to use both with precision. Evidence of this is found in the Teacher's Implementation Guide which suggests that teachers facilitate the understanding of mathematical terminology and academic vocabulary. The materials suggest that teachers create a word wall of the key math terms used within the lesson materials so that students can build their academic vocabulary. Additionally, the materials feature a glossary that includes key mathematical terms, with examples, that students can access both in the printed books and online materials. For example, in Module 1, Topic 3, Lesson 1: How Does Your Garden Grow, students are introduced to direct variation. Student lessons provide an explicit definition of the	

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			term “proportional relationship” along with sample problems and representations. A connection is then made to this concept by defining “direct variation” and a worked example of a graph that illustrates direct variation. Students are to attend to the use of accurate mathematical terminology through questions that ask them to explain their understanding of the math term. For example, in Lesson Assignments students are asked to “Explain how the following terms are related: linear relationship, proportional relationship, equivalent ratios, and direct variation.” This assignment allows students to describe their own understanding of the term while attending to precise math vocabulary.	
Additional Criterion **7. INDICATORS OF QUALITY:** Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☒ Yes ☐ No	**REQUIRED** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	**Yes**	There is variety in what students produce. Students are asked to produce answers to problems in writing, through charts and graphs, and by producing models as a way to fully attend to the content standards. The materials also contain an online component, MATHia, that allows students to use technology to engage with the content standards. In Module 2, Topic 1, students use the MATHia software to identify opposites, absolute value, and perform operations with integers. Students respond to questions using drag and drop, multiple choice, multiple responses, and fill-in-the-blank. In the Module 3, Topic 1 Performance task, students are expected to calculate the	

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			total cost, including sales tax, when given the original price of backpacks using two different methods. This task allows students to create algebraic expressions and explain their reasoning. The materials create opportunities for students to not only answer questions, but also to create their own equations to solve math exercises and justify their own reasoning with words.	
	REQUIRED **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Yes**	There are separate teacher materials that support and reward teacher study. The materials provide explicit Module Overviews, Topic Overviews, Lesson Plan materials, and video tutorials to support teacher study of the content standards. Teachers are provided extensive explanation of materials through the Teacher's Implementation Guide, as well as guidance for instruction in lesson plans provided for each lesson within topics and modules. Each Module Overview explains the content standards that are included and how student learning will be developed. The Topic Overview of each module helps teachers understand the progression of learning and explains how students will interact with the materials. The entry point of learning for students is described, which helps teachers understand the prerequisite knowledge needed for them to be fully prepared for learning. The lesson materials include teacher guidance on how to	

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			support the instructional process. For example, in Module 3, Topic 2, Lesson 3, there are notes that support teachers in providing effective instruction to students towards mastery of LSSM 7.EE.B.4 (solving two-step equations by using the inverse operation), sample questions to ask during the lesson, differentiation strategies, and icons to indicate the math practice standards in use. The MyPL (Professional Learning) tutorial video provides a detailed overview of specific activities to pay special attention to that will help students and explains the importance of the activities in helping students build mastery in the content standards. For example, the Module 3, Topic 2, Lesson 3, the MyPL video tutorial helps teachers understand how to help students utilize inverse operations to isolate the variable in a two-step equation. The video also reminds teachers to use the formal math language and how to set the expectation for how students should attend to precision while working on problems.	
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps all students meet the same standards. Teacher lesson plans include instructional supports such as differentiation strategies, grouping strategies, and additional lesson modifications to support ELLs, as well as struggling and advanced learners. These	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			supports are introduced and explained in the Teacher's Implementation Guide. An example of an ELL tip is seen in Module 4, Topic 1, Lesson 1, for beginner English Language Learner students. In Activity 1.3, Question 5 asks students to determine the probability that a spinner lands on a vowel and to calculate P(vowel). The ELL Tip suggests that teachers should help students understand the term "vowel" since a beginning English Language Learner may not know what a vowel is. This tip helps teachers identify potential barriers to understanding concepts and to properly activate prior knowledge to minimize those barriers. The materials also include differentiation strategies to support other special populations, including struggling and advanced learners. In Module 3, Topic 1, Lesson 3, Activity 3.1 "Combining Like Terms in Linear Equations" provides teachers with a differentiation strategy to support struggling students in understanding how to combine like terms. In Activity 3.2, the materials provide a differentiation strategy to help students extend their understanding of combining like terms with fractions and decimals. The strategy requires students to use their understanding of fractions and adding fraction parts to make a whole part to combine like terms. The materials also provide questions to help students conceptualize why the fractional	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			coefficients would help the student determine what the whole amount may be.	
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	**Yes**	The underlying design of the materials distinguishes between problems and exercises. The materials use the proper tools to help students meet the expectations of the standards. Problems within the lesson activities help students learn new mathematics and through the exercises found in the assessments and performance tasks they can apply what they have learned. Problems are appropriately scaffolded and allow students to develop the key concepts of the standards. For example, in Module 2, Topic 1, Lesson 1, "Talk the Talk" activity, students are given problems to help them develop an understanding of adding and subtracting integers. Students are given problems that establish the understanding that adding integers describes the movement of numbers along a number line. One problem asks students to determine the ending position of a number by adding and subtracting the indicated steps from each starting position. A second problem asks students to "write an equation to represent the movement indicated by the starting point, steps backward, and steps forward." These questions are linked in an order that helps students develop an understanding when operating with integers. In the Topic 1, Performance Task, students are asked to	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			"Consider each rational number: 6.4, –2 2/5, 4 3/10 , –5.2. Represent each number as the sum of two rational numbers and as the difference of two rational numbers. Use a number line for each operation. Write a real-world problem that could be modeled by each sum/difference." In this exercise, students are given a task and expected to apply this new mathematical knowledge of how adding and subtracting integers may be modeled on a number line or in an equation to respond to the task properly.	
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. The materials present the lessons in a manner that builds on understanding developed in previous grades and appropriately supports the acquisition of new knowledge in the present grade. For example, in Module 1: Thinking Proportionally, students are expected to build fluency in using formulas to solve problems involving circles and use of "pi," which is a special ratio discussed in Topic 1. Students build fluency in solving problems that involve rates and unit rates that are fractions. In Topic 3, students build conceptual knowledge in identifying proportional and nonproportional relationships. In Topic 4, students use their knowledge of proportional relationships acquired in the previous topics to solve application problems involving scale	

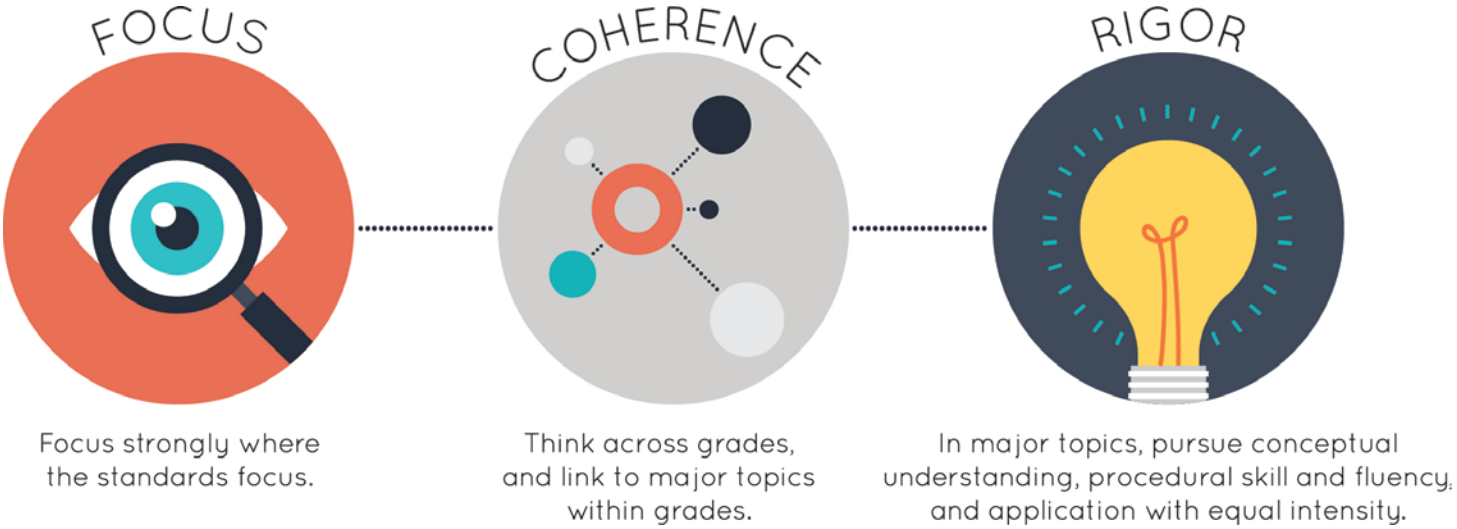
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			drawings and multi-step percent problems. The topics in Module 1 are structured in a manner that students are able to achieve mastery in LSSM 7.RP.A.1, 7.RP.A.2, and 7.RP.A.3. Another example is seen in Module 2: Operating with Signed Numbers, where students are expected to gain mastery in procedural skill and fluency when operating with all positive and negative numbers. In Topic 1, students use models to develop conceptual knowledge when adding and subtracting all positive and negative rational numbers. This understanding is needed to fully attain mastery of the concepts presented in Topic 2, where students then develop their understanding regarding multiplying and dividing positive and negative rational numbers. Students are required to use their understanding of how to fluently add, subtract, multiply, and divide rational numbers to solve real-life equations and mathematical expressions in Lessons 3 and 4. The topics and lessons in Module 2 follow a logical order that supports students' mastery of LSSM 7.NS.A.1, 7.NS.A.2, and 7.NS.A.3.	
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The materials support the use of technology as called for in the Standards. The instructional materials provide MATHia software for students to manipulate models created through technology to further investigate the	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			grade-level content. For example, in the MATHia Activity found in Module 5, Topic 2: Visualizing Cross-Sections of Three Dimensional Shapes, students watch a video that explains what happens when you take a cross section of 2D and 3D shapes. Students have additional interactive practice seeing cross-sections of these shapes and practice with describing the base and faces. The MATHia activities from Module 3, Topic 3 provide students with ample practice in analyzing graphs that represent real-life situations and solving for unknown values. Students have the opportunity to view graphs and explore the relationship of the independent and dependent values that also have a real-life context.	
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	**Criteria**	**Yes/No**		
I: Non-Negotiables	1. Focus on Major Work	**Yes**	A majority of the lessons are devoted to the major work of the grade. Materials spend a minimal amount of time outside of the content standards and do not make students or teachers responsible for topics that are outside of the Grade 7 content standards.	
	2. Consistent, Coherent Content	**Yes**	The materials connect supporting standards to content standards in a meaningful way to support focus and	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			coherence. The materials include problems and activities that connect two or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important.	
	3. Rigor and Balance	**Yes**	The materials are designed to allow for the conceptual development of Grade 7 topics, practice toward building fluency and procedural skills, and spend ample time with engaging applications. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials	
	4. Focus and Coherence via Practice Standards	**Yes**	The materials address the mathematical practice standards in such a way as to enrich the content standards of Grade 7.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials create coherence by linking topics from domains and clusters and through the progression of standards through grades/courses.	
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials provide practice standards that make meaningful and purposeful connections to enhance the content of the course. Practice standards are linked to each activity, but teachers are not provided with an explanation as to how each practice standard should be addressed within the activity.	
	7. Indicators of Quality	**Yes**	The materials give teachers and students the tools they need to meet the expectation of the standards.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**				

Strong mathematics instruction contains the following elements:



Title: **Middle School Math Learning Solutions Course 3** Grade: **8**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-Negotiable)	
2. Consistent, Coherent Content (Non-Negotiable)	
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (Non-Negotiable)	
5. Alignment Criteria for Stnds. for Math Content	
6. Alignment Criteria for Stnds. for Math Practice	
7. Indicators of Quality	

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[5]:** Students and teachers using the materials as designed devote the large majority[6] of time to the major work of the grade/course. ☒ Yes ☐ No	**REQUIRED** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	**Yes**	The materials devote the large majority of class time to the major work of the grade. 67% of the instructional materials are directly aligned to the major Louisiana Student Standards for Math (LSSM) for Grade 8. 7% of the instructional materials focus solely on additional work, and 26% of the materials address the supporting and/or additional standards.	
	REQUIRED **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	Instructional materials spend minimal time on content outside of the course requirements for Grade 8. Some of the lessons and assessment items go beyond the expectations of the LSSM for Grade 8; however, implementation suggestions are provided for Louisiana teachers for those lessons and assessment items. For example, in Module 1, Topic 2, Lesson 2, implementation suggestions state, "Modify this lesson to address the limitations placed on the LSSM standards 8.G.3 and 8.G.4. In the lesson, skip Activity 3 and Activity 4. In Talk the Talk, expect responses that relate to when the center of the dilation is the origin only." Questions 1a, 2a, 12a and 13a of Module 1, End of Topic 2 Test Form A and B require students to dilate a figure with a center of dilation other than the origin. As stated in	

[5] For more on the major work of the grade, see Focus by Grade Level.
[6] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			the description for LSSM 8.G.A.3 in the Grade 8 Companion Document 2.0 provided by the LDOE, "dilations only use the origin as the center of dilation." Assessment guidance is provided that suggests omitting these items, and only using Q3-11, 14, and 16-18. In addition, in Module 1, Topic 1, Lesson 6, the implementation suggestions state, "Modify this lesson to address the limitations placed on LSSM standards 8.G.A.2 and 8.G.A.3. Implement this lesson as intended, except in Activity 2, eliminate Questions 4 and 5."	
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	The materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. In Module 2, Topic 3, Lesson 4, students determine if relationships are linear or nonlinear from tables, equations and graphs and they identify the rate of change if the relationship is linear. Activity 4.1 provides the real-world problem, "You and your friends are rock climbing a vertical cliff that is 108 feet tall along a beach. You have been climbing for a while and are currently 36 feet above the beach when you stop on a ledge to have a snack. You then begin climbing again. You can climb about 12 feet in height each hour." The scaffolded questions then ask students to identify variables to represent key quantities, construct an equation, and sketch a graph to represent the given linear relationship	

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			(supporting LSSM 8.F.B.4 and 8.F.B.5). Questions 2 and 3 provide clarification to students on what a linear function is and ask students to analyze relationships and write linear functions given a real-world scenario, a table, and a graph (major LSSM 8.F.A.3). Together, the activities connect supporting LSSM 8.F.B.4 and 8.F.B.5 to major LSSM 8.F.A.3. Another example is found in Module 4, Topic 1, Lesson 3 which connects supporting LSSM 8.NS.A.2 to major LSSM 8.EE.A.2. In Activity 3.2, Question 3, parts a-d, students solve square root algebraic equations (LSSM 8.EE.A.2) and approximate to the nearest tenth (LSSM 8.NS.A.2). In Activity 3.3, Question 7, parts a-c, students solve cube root algebraic equations (LSSM 8.EE.A.2) and approximate to the nearest tenth (LSSM 8.NS.A.2).	
	REQUIRED **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important. For example, in Module 2, Topic 1, Activity 4.1 students graph linear equations, translate these lines vertically, and create equations to represent these translations. In Activity 4.2, students explore the effect of dilating a linear equation on a graph, and in Activity 4.3 students apply understanding of transformations to graph lines which connect LSSM 8.EE.B.6 and 8.G.A.1. In Module 4, Topic 2, Lesson 1, students are	

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			introduced to Pythagorean Theorem and have the opportunity to solve for missing side lengths of right triangles using the theorem. In Question 5, Part A and B, students are given two right triangles and asked to determine the length of the hypotenuse in each, where they are to utilize the square root symbol in solving the Pythagorean Theorem, connecting LSSM 8.EE.A.2 and 8.G.B.7.	
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. For example, in Module 5, Topic 1, Lesson 1, Activity 1.4, Problem 1 states, "Rewrite each expression as a product using expanded notation. Then identify the base or bases and record the number of times the base is used as a factor." Problem 2, states "Rewrite each of your answers from Question 1 as a power or a product of powers," followed by Problem 3 which states "What relationship do you notice between the exponents in the original expression and the number of factors?" This sequence of problems establishes the students' ability to develop the product of powers rule based on conceptual understanding (LSSM 8.EE.A.1). In Module 2, Topic 4, Lesson 3, the "Getting Started" exercise is used to activate prior understanding related to	

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			analyzing relationships through the prompt and questions, “Consider the relationship between Mia’s age and her weight. 1. What happens to Mia’s weight as she gets older? 2. Do you think she will continue growing at this rate? Why or why not?” This understanding is expanded in Activity 3.1 where the relationship between Mia’s age and weight is further analyzed by the students, followed by Activity 3.2 where the relationship between her age and height is analyzed. In Activity 3.3 all relationships discussed are connected to then make predictions (LSSM 8.SP.A.2 and 8.SP.A.3).	
	REQUIRED **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. In addition to learning together, the materials provide a paper based Skills Practice workbook, as well as a digital workspace (MATHia) that tracks student progress to facilitate individual learning. As stated in the Teacher's Implementation Guide, Volume 1, "Learning Individually: Through MATHia, students receive 1-to-1 adaptive math coaching, providing a personalized learning path and ongoing formative assessment.” For teachers and students with limited technology, a Skills Practice book is provided that includes targeted practice of each topic’s skills and mathematical concepts. In the first MATHia Workspace provided within Module 1, Topic 2, Dilating Plane Figures,	

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			students work to determine similarity between figures by identifying and using scale factors to dilate figures (LSSM 8.G.A.4). The student practice problems found in the MATHia Workspace are identical to the problems found in the Skills Practice Workbook for Module 1, Topic 2 allowing students to access the content in different ways. For example, within the Dilation of Plane Figures and Dilation of Plane Figures on the Coordinate Plane Skills Practice sheets, there are at least 12 practice problems to build student fluency. Additionally, within Lesson 1 and 2, there are multiple exercises embedded in the activities and practice problems at the end of the lesson to solidify student procedural skill and fluency. In addition to these skill components, an intentionally-designed assignment can be found at the end of each lesson where a "Write" "Remember" "Practice" "Stretch" and "Review" component can be found. As stated in the Teacher's Implementation Guide, Volume 1, "The Review section provides spaced practice of concepts from the previous lesson and topic and of the fluency skills important for the course." The problems within a given lesson may address different levels of rigor, but procedural skill and fluency is always addressed in at least one review problem. While these problems are present in all lessons, one example is evidenced in Module 5, Topic 2, Lesson 1, where	

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			Questions 1 and 2 focus on operations with numbers written in scientific notation (LSSM 8.EE.A.4) and Questions 3 and 4 require students to apply properties of integer exponents to generate equivalent expressions (LSSM 8.EE.A.1).	
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**Yes**	The materials are designed so that teachers and students spend sufficient time working with engaging applications. One way the materials address the application of mathematical concepts is through the "Topic Performance Task." The Teacher's Implementation Guide, Volume 1 states, "Each Performance Task provides a scenario with minimal scaffolding, clear instructions to the student regarding criteria for acceptable work, and a detailed rubric." An example found in Module 2, Topic 2 "Topic Performance Task," shows where students apply Pythagorean Theorem to a real-world problem to determine unknown side lengths in two dimensions (LSSM 8.G.B.7). Students use a diagram to respond to the prompt, "The residents of Watson Avenue are decorating their houses for the upcoming holidays. They have decided to string lights around the roofs of their houses. How many feet of lighting does Sarina need if she wants to string lights along the roof?" The instructional materials provide practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade. The	

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			problems present opportunities for practice and engage students in problem solving within lessons that are aligned to content standards focused on the application component of rigor. This is evident in Module 3, Topic 2 where all three practice problems presented at the end of the lesson require students to write a system of equations given a real-world scenario, solve the system using a method of their choice, and interpret the solution in context (LSSM 8.EE.C.8c).	
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately. For example, major LSSM 8.EE.B.5, "Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways," is aligned to all three components of rigor. This content is addressed in Module 2, Topic 1, Lessons 1 and 2, where instructional and practice materials address all components of rigor individually and together. Students often perform calculations and provide an explanation of how an answer was derived. In Problem 2 of Activity 1.1, students complete a table given certain values in Part A and "Explain how you calculated each value" in Part B, showing conceptual understanding and ability to perform procedural skills. Activity 1.1 reviews and adds to student understanding of components of	

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			proportional relationships, including graphing, creating equations, completing tables and interpreting unit rate. Activity 1.2 builds on conceptualization and procedural skill by walking students through the process of analyzing and comparing two real-world proportional scenarios using a graph. In Activity 1.3, students analyze and compare two real-world proportional scenarios represented in a table and graph to compare speed. In Activity 1.4, students compare real world proportional relationships represented in an equation, table and graph. In Practice Exercise 1 and 2 at the end of Lesson 1, students determine the constant of proportionality (procedural). In Exercise 5, students understand conceptually proportional relationships and write equations, while in Exercise 3 and 4 students apply procedural skills and conceptual understanding to compare real world proportional relationships. The Topic Performance Task reinforces each of these components through a real world scenario from a carpentry class, where students respond to the following, “Use similar triangles to determine the rise at 15 feet and then at 30 feet. Explain your findings using a sketch. Write linear equations for each ramp and use the grid below to graph the lines. Explain whether the equations represent proportional relationships and identify any constants of proportionality.”	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**Yes**	The materials address the mathematical practice standards (MP) in such a way as to enrich the content standards of Grade 8. Course materials familiarize students with language and application of the practice standards called “Habits of Mind” that is found in the Front Matter of the Teacher Implementation Guide and Student Editions. Students and teachers can easily identify which mathematical practice they should focus on since “Each activity is denoted with an icon that represents a practice or pair of practices intentionally being developed.” Students are often prompted to explain their reasoning throughout lessons and assignments in order to construct viable arguments and critique the reasoning of others (MP.3) in order to fully convey understanding of the content standards. Each topic provides opportunity for students to respond to “Who’s Correct” problems, such as in Question 5 of the Module 2, Topic 3 student materials, where students are prompted to determine which student’s method is best to determine the greatest rate of change given two linear functions, one in the form of a table and one in the form of an equation. An example of icons being used to denote which practice is being intentionally developed is found in all activities of Topic 4 in Module 2. Throughout these activities, students are prompted to model with mathematics (MP.4) and choose tools strategically	

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			(MP.5) as they draw conclusions from and create two-way tables representing real-world scenarios.	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
Additional Criterion **5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:** Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**REQUIRED** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	**Yes**	The materials provide extensive work with course-level problems that are consistent with the progressions in the standards. The activities within the lesson, the Skills Practice worksheets, and MATHia software provide students with extensive work to achieve mastery of the content standards. The materials contain few problems that are below grade level. Those below grade-level are clearly identified as review material in the Topic Overview. Each module overview provides a connection to prior and future learning by description. This is evident in the Module 1 Teacher's Implementation Guide Overview, within the sections titled "How is Transforming Geometric Objects connected to prior learning?" and "When will students use knowledge from Transforming Geometric Objects in future learning?" In addition, each Topic Overview includes connections that are made between progressions of understanding from prior grade levels in the "What is the entry point for students?" section of the document. For example, the Topic 1 Overview for Module 5 states, "Students have been working with exponents since Grade 5. They have learned to write and evaluate numeric and algebraic expressions with whole number	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			exponents. In this topic, students expand on this knowledge. To open Exponents and Scientific Notation, students review this prior knowledge by analyzing the number of ancestors a dog has over specific numbers of generations. Students continue searching for patterns in the answers when powers are multiplied, divided, or raised to another power. They then use number sense and numerical patterns to determine the value of a base raised to an exponent of 0 or a negative integer. Finally, students summarize the rules they learned so that they can apply the rules in the remainder of the topic." Students are presented with appropriate grade-level tasks and problems throughout the materials via paper-based and computer-based tasks. For example, in Module 5, Topic 1, in addition to the activities included in the instructional lessons that provide extensive course-level problems, the MATHia software and the Skills Practice also provide students with practice in simplifying mathematical expressions using the rules of exponents.	
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Yes**	The materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. For example, the Topic 3 Overview provided for Module 2, describes the following as the entry point for students regarding the content focus of the topic, "Throughout elementary school, students described and explained features of patterns (e.g., 4.OA.5). They have also	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			formed ordered pairs with terms of two sequences and compared the terms (5.OA.3). Therefore, sequences are used as the entry point for Introduction to Functions. Students are introduced to term, a key vocabulary word that will later be used to connect sequences to functions. They analyze a variety of sequences, write the sequences, predict next terms, and describe the patterns. This may be a departure from prior experiences when students were given the pattern and determined the terms. Students then compare the types of patterns in the sequences analyzed, searching for similarities in the pattern descriptions. Later, students will connect the term numbers and term values as the inputs and outputs, respectively, of a function." Lessons include components labeled as "Warm Up" and "Getting Started" to activate prior knowledge and identify strategies students use to solve the given problems reviewing previously learned material. Descriptions of these components of the lesson can be found in the Teacher's Implementation Guide, Volume 1. While this component is present in all lessons, it must be noted there is no correlation to prior grade level standards for the problems presented. For example, the Warm Up for Module 1, Topic 3, Lesson 1 requests that students solve four equations. Warm Up 1 includes an equation in the form x + p = q (6.EE.B.7).	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			Warm Up 2 includes an equation in the form px + q = r (7.EE.B.4a). Warm Ups 3 and 4 include equations that would require students to apply properties of operations to add or subtract linear expressions (7.EE.A.1) found within an equation, followed by solving the equivalent in the form px + q = r (7.EE.B.4a). However, it is apparent that the Warm Up problems connect student understanding of solving equations to finding interior and exterior angles of triangles.	
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	The materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. Learning objectives for Module 3, Topic 1, Lesson 2 are explicitly shaped by LSSM 8.EE.C.7 and state that students should be able to "Write and solve linear equations in one variable," "Determine whether an equation has one solution, no solutions, or infinite solutions by successively transforming the equation into simpler forms," and "Interpret expressions in and solutions to equations in the context of problem situations." Learning objectives for Module 4, Topic 2, Lesson 2 reflect the language and intent of LSSM 8.G.B.7 and state student expectations as, "Apply the Pythagorean Theorem to determine unknown side lengths of right triangles in mathematical and real-world problems" and "Apply the Pythagorean Theorem to determine the lengths of diagonals of two- and three-dimensional figures."	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Additional Criterion **6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:** Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	**REQUIRED** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Yes**	The materials attend to the full meaning of each practice standard. The Topic Overview within each module includes a section that connects the lesson components to the practice standards. For example, in Topic 1 Overview, Module 3, the materials provide explicit connections under "How do the activities in Solving Linear Equations promote student expertise in the mathematical practice standards?" Another example is found in the Topic 2 Overview of Module 5 where connections are made between the content and practice standards under the section question, "How do the activities in Volume of Curved Figures promote student expertise in the mathematical practice standards?" These practice standards, which are described in the Topic Overview are developed within the activities as noted by the examples of "Habits of Mind" icons described in Indicator 4a of this rubric. The materials include MP.1, make sense of problems and persevere in solving them, in each lesson. All lessons in the materials provide opportunities for students to engage in productive thought regarding grade-level concepts and in determining how to solve problems. The use of the practice standards is evidenced throughout the lessons and activities. For example, in Module 2, Topic 1, Lesson 3, Activity 3.1, student reason abstractly and quantitatively (MP.2) and look for and	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			express regularity in repeated reasoning (MP.8) as they "examine the graph of the equation $y = \frac{3}{2}x$and create several pairs of similar triangles to compare the slopes between different sets of points. They rotate the triangle to notice that a 180° rotation preserves the slope of the line. Students conclude that all right angles formed on a given line are similar."	
	REQUIRED **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Yes**	The materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Evidence of discussion techniques and engaging students in mathematical discourse is found throughout the teacher lesson plans for each lesson In the Teacher's Implementation Guide, Volume 1, "'Who's Correct" problems are an advanced form of correct vs. incorrect responses. In this problem type, students are not told who is correct. Students have to think more deeply about what the strategies really mean, and whether each of the solutions made sense. Students will determine what is correct and what is incorrect, and then explain their reasoning. These types of problems will help students analyze their own work for errors and correctness." For example, in Module 4, Topic 1, Lesson 1, students are provided a set of numbers and multiple ways other students have	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			grouped them followed by the prompt, "Zane and Tanya provided the same rationale for one of their groups of numbers. However, the numbers in their groups were different. Who is correct? Explain your reasoning." Another example can be found in Module 5, Topic 2, Lesson 3 where students are asked, "Young people often attempt to break world records. Jessica is no exception. Today her math class studied the volume of a sphere, and she had a great idea. After working out the math, Jessica told her best friend Molly that they could stuff 63 inflated regulation-size basketballs into a school locker. The rectangular locker is 6 feet high, 20 inches wide, and 20 inches deep. The radius of one basketball is 4.76 inches. Molly also did the math and said that only 28 basketballs would fit. How did Molly and Jessica compute their answers? Who's correct? Explain your reasoning." Additionally, the materials provide ample focus on MP.3 through embedded questions within the lessons where students analyze and respond to correct student work, noted with a "thumbs-up" icon , or incorrect student work, noted with a "thumbs-down" icon. An example where students are asked to respond to incorrect student work is Question 6 in Module 1, Topic 2, Lesson 1, which states, "Explain why Jed's reasoning is not correct. Draw examples to illustrate your explanation. Jed - I can dilate a rectangular	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			figure by adding the same value to its length and width." An example where students are asked to respond to correct student work is evidenced in Module 5, Topic 1, Lesson 3, Question 2, which states "Each student tried to write the number 0.00065 in scientific notation. Analyze each student's reasoning." This prompt is followed by two correct student responses and two incorrect student responses and additional items for students to respond. Part A says, "Explain what is wrong with Kanye's reasoning." Part B asks students to "Explain what is wrong with Daniel's method." Part C requests that students respond to, "Of the correct methods, which method do you prefer? Why?"	
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**No**	There are no teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. The practice standards are presented as "Habits of Mind'' at the beginning of the materials, with symbols used to denote which practice(s) each activity uses; however, the facilitation notes in the teacher materials do not explain how the practice standards should be used or how they help develop understanding within the activity. For example, within the Teacher's Implementation Guide, "Habits of Mind'' states, "Each lesson provides opportunities for students to think, reason, and	Teacher-directed materials that explain the role of the practice standards: • In the TIG front matter, we explain how to integrate the practices into daily instruction. For example, "When you are facilitating each lesson, listen carefully and value diversity of thought, redirect students' questions with guiding questions, provide additional support with those struggling with a task, and hold students accountable for an end product. When students share their work, make your expectations clear, require that students defend and talk about their solutions, and monitor student progress by checking for understanding. Consider having students create "I can" statements for each practice or pair of practices. This

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			communicate their mathematical understanding. However, it is your responsibility as a teacher to recognize these opportunities and incorporate these practices into your daily rituals." Additionally, the icons used throughout the materials lack specific guidance for the particular lesson or activity. All of the symbols, with the exception of MP.6, represent more than one math practice standard, and specific practices are not always identified. As an example, the symbol with a head and puzzle piece references both MP.2 and MP.3. The symbol with a hand and a wrench references both MP.4 and MP.5. The box symbol references both MP.7 and MP.8. In Module 4, Topic 2, Lesson 4, Activity 4.1 is labeled with an icon that aligns to both MP.7 and MP.8, but there is no guidance for teachers at the lesson or activity level on the specific role of each of the math practice standards.	strategy can help students become reflective about their work." • The Topic Overview in the Teacher's Implementation Guide identifies how students develop proficiency in the habits of mind in that Topic. For example, in Course 3 Topic 1, Rigid Motion Transformations, "How do the activities in Rigid Motion Transformations promote student expertise in the mathematical practice standards? All Carnegie Learning topics are written with the goal of creating mathematical thinkers who are active participants in class discourse, so elements of habits of mind should be evident in all lessons. Students are expected to make sense of problems and work towards solutions, reason using concrete and abstract ideas, and communicate their thinking while providing a critical ear to the thinking of others. The standards of this topic link directly to the process standards of reasoning about mathematics, making and testing conjectures, generalizing patterns, using tools, and practicing precision. By reasoning about their explorations with tools, students make and test conjectures about the relationships between corresponding sides and angles after applying transformations. After sufficient work with a transformation on the coordinate plane, students make generalizations about the coordinates of the images of the transformation. They use

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				patty paper to make, test, and verify conjectures about congruent figures. Students must apply their knowledge of transformations as they determine specific sequences and order of transformations that map images onto each other. • The icon also appears within each lesson's facilitation notes with questions listed to facilitate the learning where they occur. The Facilitation Notes provide teachers with resources for supporting students as they develop proficiencies in the habits of mind. • In the example provided, Course 1, Module 1, Topic 1, Lesson 5, Activity 5.2 Using GCF and LCM to Solve Problems, students reason quantitatively and critique others' reasoning, as denoted by the puzzle icon. In addition to the Student Edition questions that require students to make sense of quantities and their relationships in problem situations, the Questions to ask in the TIG support teachers as they interact with students developing proficiency in this practice. For example, "Is calculating multiples or factors helpful in this situation? Which will help in this situation, identifying the GCF or identifying the LCM? What information will the GCF give you in this situation? What information will the LCM give you in this situation? Does the situation involve dividing things into equal parts, or does it involve common multiples where things have different cycles but happen at the

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				same time?" • In the second example provided, Course 1, Module 1, Topic 1, Lesson 5, Activity 5.3 Making Connections, students are working on creating coherent representations of the problems at hand. The SE provides questions requiring students to analyze two quantities and recognize different relationships between their LCM and GCF. Again, the Questions to ask in the Teacher's Implementation Guide provide teachers with the tools to foreground this practice in their instruction. For example, "How was the product of the two numbers determined? How was the GCF determined? How was the LCM determined? What is the product of the GCF and the LCM? What is the product of the two numbers? How does the product of the two numbers relate to the product of the GCF and the LCM? Is the product of the two numbers less than, equal to, or greater than the product of the GCF and the LCM?" • Going beyond merely explaining each practice's role, the Middle School Math Solution provides teachers with point-of-use resources.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials attend to the specialized language of mathematics for Grade 8. The materials connect mathematical terminology and academic vocabulary and encourage students to use both with precision. Evidence of this is found in the Teacher's Implementation Guide which	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			suggests that teachers facilitate the understanding of mathematical terminology and academic vocabulary. The materials suggest that teachers create a word wall of the key math terms used within the lesson materials so that students can build their academic vocabulary. Additionally, the materials feature a glossary that includes key mathematical terms, with examples, that students can access both in the printed books and online materials. For example, key mathematical terms are explained within the instructional materials, such as in Module 2, Topic 1, Activity 2.2, which defines slope relating it to prior understanding and relative terms, “In any linear relationship, slope describes the direction and steepness of a line and is usually represented by the variable m. Slope is another name for the rate of change. It represents the ratio of the change in vertical distance to the change in horizontal distance between any two points on the line. The slope of a line is constant between any two points on the line.” In addition to providing clarification of meaning, these mathematical terms are also used frequently in context and course problems where students are asked to further explain their understanding. In this activity, students respond to conceptual problems to convey understanding, followed by opportunity to clarify that	

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			conceptual understanding through problems, such as the “Talk the Talk” problem in Module 2, Topic 2 after Activity 2.4. Students are provided with a table of values and a graph, then asked to respond to the following questions, “1. Calculate the slope between each set of ordered pairs. Show your work. 2. Is the graph of the relationship linear? What does this mean in terms of the problem situation? 3. The ordered pairs from the table are represented on the given graph. Show how to use the graph to verify the slope you calculated from the table. 4. How is calculating the slope from a table similar to calculating the slope of a linear relationship from a graph?”	
Additional Criterion **7. INDICATORS OF QUALITY:** Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☒ Yes ☐ No	**REQUIRED** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	**Yes**	Students are asked to produce answers in a variety of ways. The Practice section provided at the end of Lesson 2 in Module 3, Topic 2 provides a real-world problem followed by questions that ask students to create equations, use information to determine additional values, complete tables, create graphs of the equations, interpret the meaning of the slope and make predictions based on prior responses. Section I of the Skills Practice Worksheet for this topic provides 16 real-world scenarios where students are provided the opportunity to “Graph each system of linear equations. Use the graph to answer the questions.” Section II provides 16 problems where students are asked to “Graph the equations in each	

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			system. Tell whether the system has one solution, no solutions, or infinite solutions. If the system has one solution, write the values of the variables that make the equations true." The End of Topic Test Form A for Module 4, Topic 2 allows students to identify specific numbers that fit within a specified rule given, convert between fractions and decimals, identify if square roots are rational or irrational, identify properties of operations, plot rational and irrational numbers on a number line, approximate values of irrational square roots, solve square root and cube root algebraic equations, draw a diagram to represent the real number system, explain relationships between identities and inverse properties, and write examples of numbers that represent terminating and repeating decimals.	
	REQUIRED **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Yes**	There are separate teacher materials that support and reward teacher study. The materials provide explicit Module Overviews, Topic Overviews, Lesson Plan materials, and video tutorials to support teacher study of the content standards. Teachers are provided extensive explanation of materials through the Teacher's Implementation Guide, as well as guidance for instruction in lesson plans provided for each lesson within topics and modules. Each topic provides instructors with a Topic Overview, such as in Module 1, Topic	

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			2: Similarity, where guidance material is provided to support teacher understanding of the content, connections between concepts and how to build student understanding. The following questions are explored and expanded on, "How is Similarity organized?" "What is the entry point for students?" "How does a student demonstrate understanding?" "Why is Similarity important?" and "How do the activities in Similarity promote student expertise in the mathematical practice standards?" This content is then followed by suggested pacing of lessons, highlights, and spaced review focus in each lesson. Additionally, each lesson provides teacher guidance through a MyPL (Profession Learning) App video aligned to each specific lesson to "discuss and model some facilitation ideas," as stated in the MyPL video for Module 2, Topic 1, Lesson 3: Slippery Slopes-Exploring Slopes Using Similar Triangles. The video goes through the teacher materials of the lesson and provides activity exploration, such as suggestions for instruction on how to utilize ratios of vertical to horizontal distance (without the slope formula) and using patty paper to determine how to reason with points on a graph.	
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps all students meet the same standards. Teacher lesson plans include	

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			instructional supports such as differentiation strategies, grouping strategies and additional lesson modifications to support ELL students, as well as struggling and advanced learners. These supports are introduced and explained in the Teacher's Implementation Guide. An example of modifications is found in Module 2, Topic 1, Lesson 1, where differentiation strategies for Questions 1-4 in Activity 1.3 state, "To support students who struggle, suggest that they rewrite the table of values so that the time values (and their corresponding distances) are in order from smallest to largest. To extend the activity-Ask students for other ways the rate of 60 mph is evident in the table besides determining k from y/x. Have students graph lines to represent Daisa's trip and Alisha's trip." An explicit example of ELL support can be found in Module 1, Topic 3, Lesson 1 where ELL Tip of the teacher lesson plan states, "To help English Language Learners as they complete Question 1 of Activity 1.1, a word bank could be provided that shows the different classification of triangles for students to choose. Have the word bank printed on a small sheet of paper that can be easily placed on struggling students' desks."	
	7d) The underlying design of the materials distinguishes	**Yes**	The underlying design of the materials	

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	between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.		distinguishes between problems and exercises. Throughout the activities within each lesson, students are presented with problems to solve and discuss based on new mathematical content presented. Exercises follow at the end of each lesson to apply understanding and procedural skills in the Assignment section. For example, in Module 4, Topic 1, Activity 3.2: Estimating with Square Roots students are provided a "Worked Example" showing students the mathematical justification used when estimating the square root of 10 to the nearest tenth. The question following asks students to "Calculate the square of 3.2 to determine if it is a good estimation of √10. Adjust the estimated value if necessary." Students are then provided a set of five numerical expressions that include square roots of non-perfect squares and asked to order them from least to greatest, locate the approximation on a number line, and explain strategies used to do so, followed by estimating the value of each to the nearest tenth based on the new learning. Practice Exercise 3 at the end of the lesson provides students the opportunity to demonstrate understanding in a similar format.	
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Prior knowledge is activated in the "Warm Up" and "Getting Started" sections of each lesson to appropriately scaffold student	

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			learning. Mathematical concepts found in the LSSM for Grade 8 are addressed in an order that supports student mastery of all content standards. For example, Module 5, Topic 1, Lessons 1 and 2 address Major LSSM 8.EE.A.1 (The LSSM Companion Document 2.0 for Grade 8 lists 6.EE.A.1 as a previous grade level standard necessary to master 8.EE.A.1). Another example can be found in Activity 1.1, in Lesson 1, which focuses on the "Review of Powers and Exponents" and is directly aligned to the requirements for LSSM 6.EE.A.1 to scaffold an understanding of properties of exponents, as required by LSSM 8.EE.A.1. Also, in Module 2, Topic 2, all lessons focus on Supporting LSSM 8.F.B.4 by focusing on linear relationships (The LSSM Companion Document 2.0 for Grade 8 lists 7.RP.A.2, "Recognize and represent proportional relationships between quantities." as a previous grade level standard necessary to master 8.F.B.4). The "Getting Started" problem activates prior knowledge of proportional relationships by providing a real-world scenario where students analyze whether the relationship is proportional or non-proportional with an explanation. Students expand understanding by analyzing, creating tables and graphing real-world relationships that are proportional or non-proportional for comparison.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The materials support the use of technology as called for in the Standards. The instructional materials provide MATHia software for students to manipulate models created through technology to further investigate the grade-level content. For example, the LDOE Companion Document 2.0 aligned to the LSSM for Grade 8 states that for Major LSSM 8.G.A.1, "Students use compasses, protractors and rulers, tracing paper and/or technology to explore figures created from translations, reflections and rotations." This standard is a focus within Module 1, Topic 1, Lessons 1 and 2, where the MATHia software lessons Experimenting with Rigid Motions, Translating Plane Figures, Reflecting Plane Figures, and Rotating Plane Figures, allow students to perform rigid transformations using various figures on a grid or in white space on the digital platform. Additionally, the MATHia Software Workspaces for Module 3, Topic 2: Systems of Linear Equations allows for students to graph systems of equations and determine solutions from the graph. LSSM 8.EE.A.4 specifically calls for technology use as students are expected to "interpret scientific notation that has been generated by technology." In Module 5, Topic 1, Lesson 3, Activity 3.1, students first analyze the display on a calculator to determine the total number of blinks for an entire class. Students interpret	

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			2.4528e9 as 2,452,800,000. In the same Activity, Question 3, students use a graphing or scientific calculator to "explore extremely large and extremely small numbers" as they practice writing numbers in scientific notation from the calculator displays.	
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	**Criteria**	**Yes/No**		
I: Non-Negotiables	1. Focus on Major Work	**Yes**	A majority of the lessons are devoted to the major work of the grade. Materials spend minimal time outside of the content standards and do not make students or teachers responsible for topics that are outside of the grade level. Some assessment items were found that assess students beyond the grade level; however, the implementation guide for Louisiana teachers includes guidance on omitting these items.	
	2. Consistent, Coherent Content	**Yes**	The materials connect supporting standards to major content standards in a meaningful way to support focus and coherence. The materials include problems and activities that connect two or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important.	
	3. Rigor and Balance	**Yes**	The materials are designed to allow the conceptual development of Grade 8 topics,	

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			practice toward building fluency and procedural skills, and spend ample time with engaging applications. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately. There is balance in the presentation of activities and problems in the materials.	
	4. Focus and Coherence via Practice Standards	**Yes**	The materials address the mathematical practice standards in such a way as to enrich the content standards of Grade 8.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The materials create coherence by linking topics from domains and clusters and through the progression of standards through grades/courses.	
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials provide practice standards that make meaningful and purposeful connections to enhance the content of the course. Practice standards are linked to each activity; however, teachers are not provided with an explanation of how each practice standard should be addressed within the activity.	
	7. Indicators of Quality	**Yes**	The materials give teachers and students the tools they need to meet the expectation of the standards.	
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**				

Instructional materials are one of the most important tools educators use in the classroom to enhance student learning. It is critical that they fully align to state standards—what students are expected to learn and be able to do at the end of each grade level or course—and are high quality if they are to provide meaningful instructional support.

The Louisiana Department of Education is committed to ensuring that every student has access to high-quality instructional materials. In Louisiana all districts are able to purchase instructional materials that are best for their local communities since those closest to students are best positioned to decide which instructional materials are appropriate for their district and classrooms. To support local school districts in making their own local, high-quality decisions, the Louisiana Department of Education leads online reviews of instructional materials.

Instructional materials are reviewed by a committee of Louisiana educators. Teacher Leader Advisors (TLAs) are a group of exceptional educators from across Louisiana who play an influential role in raising expectations for students and supporting the success of teachers. Teacher Leader Advisors use their robust knowledge of teaching and learning to review instructional materials.

The 2019-2020 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Beauregard, Bossier, Caddo, Calcasieu, Caldwell, City of Monroe, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, Jefferson, Jefferson Davis, KIPP New Orleans, Lafayette, Lafourche, Lincoln, Livingston, LSU Lab School, Orleans, Orleans/Lusher Charter School, Ouachita, Plaquemines, Pointe Coupee, Rapides, Richland, RSD Choice Foundation, St. John the Baptist, St. Charles, St. James, St. Landry, St. Mary, St. Tammany, Tangipahoa, Vermillion, Vernon, West Baton Rouge, West Feliciana, and Zachary. This review represents the work of current classroom teachers with experience in grades 6-8.

Appendix II.

Public Comments

There were no public comments submitted.