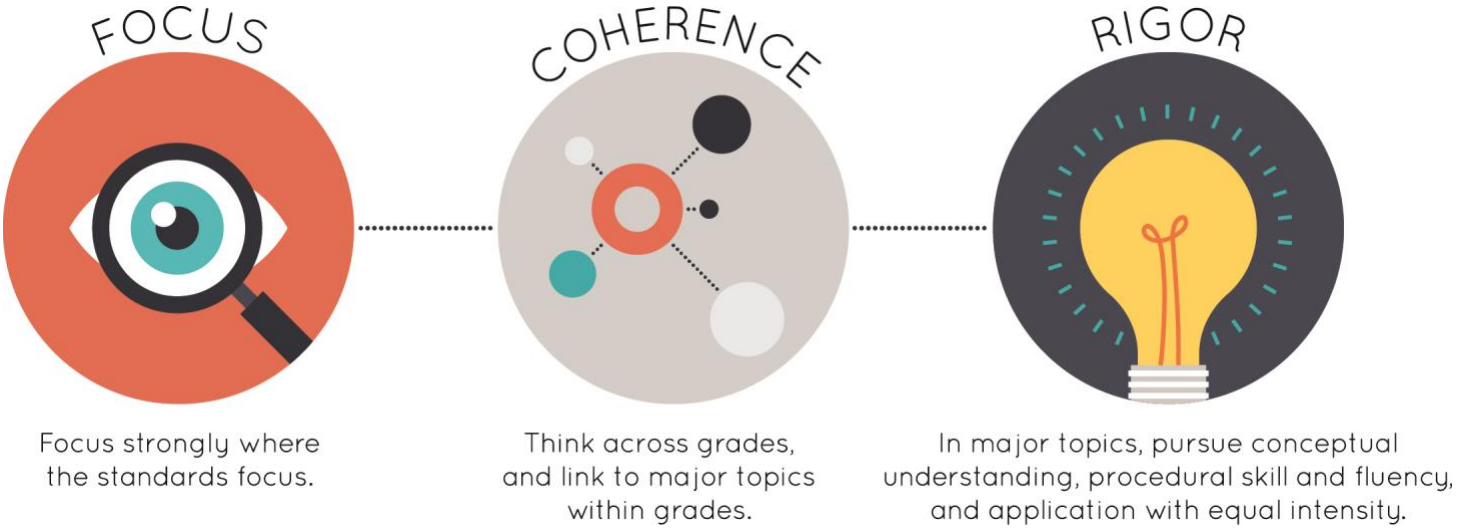
DEPARTMENT of EDUCATION
Louisiana Believes

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:



Title: **Ready Louisiana Math**

Grade/Course: **6-8**

Publisher: **Curriculum Associates, LLC**

Copyright: **2017**

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)

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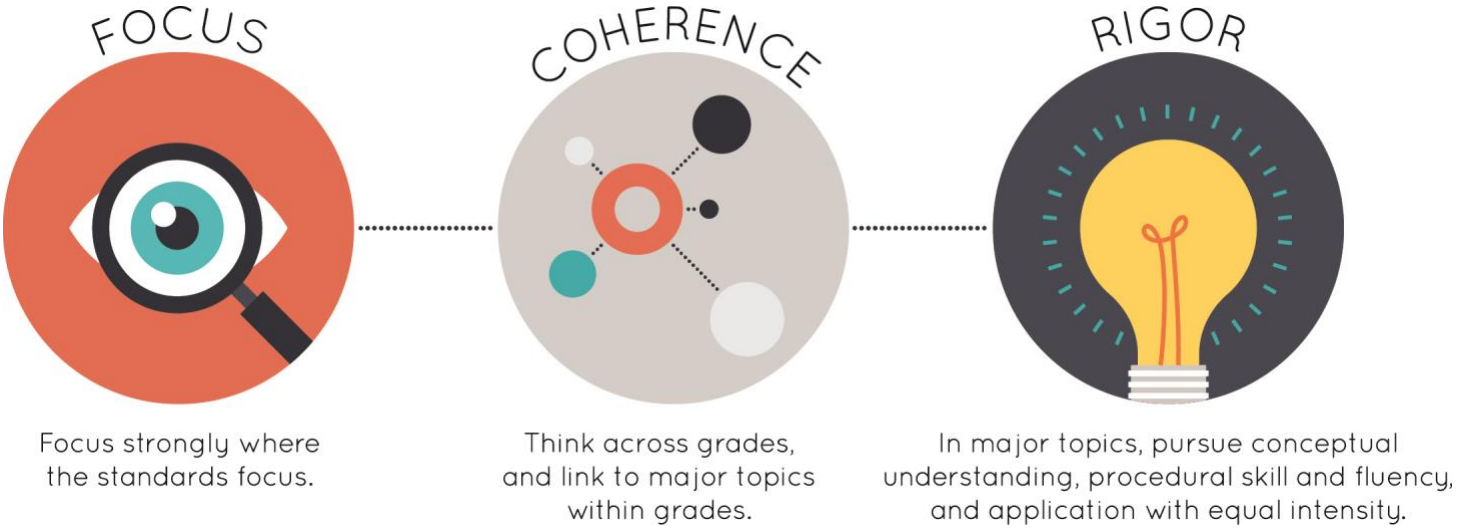

Title: **Ready Louisiana Mathematics** Grade/Course: **6**

Publisher: **Curriculum Associates, LLC** Copyright: **2017**

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

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

STRONG	WEAK
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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 majority of class time to the major work of Grade 6 as defined by the Louisiana State Standards for Mathematics. The materials include 29 instructional lessons, where each lesson spans several days. Of the 29 total lessons, 17 instructional lessons (58.6%) are devoted to the major work of the grade. Supporting content standards are the focus of 4 out of 29 lessons (13.8%) and the additional content standards are the focus of 8 out of 29 lessons (27.6%). The supporting content is connected to the major work of the grade. There are instructional lessons devoted to supporting, and additional content standards that include, the major work of the grade. Thus, students engage with major work of the grade in approximately 21 of the 29 total lessons (72.4%).
	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**	The instructional materials spend minimal time on content outside of the LSSM for Grade 6. Assessments assess the intention of Grade 6 standards. Appropriate models and mathematical representations for Grade 6 are present, such as seen in the Unit 1 Unit Assessment, where students analyze double number lines, write ratios in multiple ways, and interpret points found within the first quadrant of the coordinate plane. In addition, Form A of the Unit 2 Assessment includes a question regarding reflections of points on the coordinate plane (LSSM 6.NS.C.6.b). Question 1 states, "This coordinate grid shows where Alberto's school is located. Each unit represents one block. Alberto's house is at (3, 4). The library is located at the reflection of (3, 4) across the y-axis. What are the coordinates of the library?" The Unit 5 Assessments assess student mastery of the Statistics and

[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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			Probability domain. Assessment items are on grade level and assess the intention of the standards. For example, Form A of the Unit 5 Assessment includes an item (see Question 5) in which students analyze a dot plot by describing the cluster of data, identify the outlier, calculate the mean and median, and then decide which measure of center to use. This item reflects expectations of LSSM 6.SP.B.5 which calls for students to summarize numerical data sets in relation to their context.
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 Unit 4, Lesson 22, which focuses on supporting standard 6.G.A.1, students find and apply the area of triangles and quadrilaterals by composing and decomposing figures. Students use area formulas to solve the problems. Using variables to represent numbers and evaluate those expressions for given values connects the supporting standard (6.G.A.1) to major standards 6.EE.A.2c and 6.EE.B.6. Additionally, in Unit 4, Lesson 23, which focuses on supporting standard 6.G.A.3, students find side lengths of polygons on a coordinate plane. This lesson connects to, and supports, major standard 6.NS.C.8 in which students find the distances between points on a coordinate plane.
	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**	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, Unit 3, Lesson 21 connects two clusters within the Expressions and Equations domain. The focus standard of the lesson is 6.EE.C.9 with the additional standard 6.EE.B.6. In order for students to master the lesson objective, as outlined in 6.EE.C.9, recognize that a change in the independent variable creates a change in the dependent variable, students must apply prior knowledge and skills gained from 6.EE.B.6, understanding the use of variables to represent unknown numbers or a number in a specified set.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Unit 4, Lesson 25 connects the Geometry and Expressions & Equations domains in Grade 6 by extending the use of variables and formulas in solving real-life mathematical problems. The focus standard of the lesson is 6.G.A.2 with the additional standard 6.EE.A.2c. In order for students to master the lesson objective, as outlined in 6.G.A.2, find the volume of right rectangular prisms with fractional edges by applying volume formulas, students must apply prior knowledge and skills gained from 6.EE.A.2c, evaluating expressions at specific values of their variables through the use of formulas. Throughout the lesson, students use expressions and equations to solve real-life mathematical situations, specifically being able to read, write and evaluate equations (LSSM 6.EE.A.2) in order to find the volume of a rectangular prism (6.G.A.2), once again, connecting these two domains. Another example of connecting domains can be found in Unit 3, Lesson 20, where the focus standards of the lesson are 6.EE.B.5 and 6 with the additional standard 6.NS.C.7a. The lesson objective is to write and solve inequalities and then represent the inequalities on a number line. Students need to apply concepts learned from 6.NS.C.7a, where students interpret inequalities in terms of their position on a number line.
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.	**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 instructional materials are designed to develop conceptual understanding of grade level content through scaffolding and ample conceptual problems and discussion questions throughout each lesson. In Unit 1, Lesson 1, students are introduced to the concept of a ratio as a method of comparing two different quantities. Lesson objectives clearly state that students will learn ratio language (for every, for each) and will use three different methods to represent ratios. These objectives are developed by providing visual models and tables that clearly define part to part, part to whole, and whole to part ratio comparisons. Teacher materials also provide

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			guidance on leading a discussion about this comparison. For example, the teachers are directed to ask, "Consider the ways ratios are used in the real-world. What might people mean when they say part-to whole or part-to-part?" This type of questioning allows students to make sense of the different types of ratios. Additionally, the Unit 2 instructional materials relate elevation, temperature, and a card game to ordering and comparing integers (LSSM 6.NS.C.5 and 6.NS.C.7) to build conceptual understanding relative to concepts students can relate to and understand. In this lesson, students explain reasoning when responding to given prompts and critique the reasoning of others during guided instruction.
	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 Grade 6 LSSM. For example, in Major LSSM 6.NS.A.1 students interpret and compute quotients of fractions. In addition to Lessons 6 and 7 in Unit 2, this standard is addressed later in Unit 4, Lesson 24 and 25 when calculating surface area and volume of prisms (LSSM 6.G.A.2 and 6.G.A.4). Additionally, in Unit 2, Lesson 8 students demonstrate fluency in dividing multi-digit whole numbers using the standard algorithm (LSSM 6.NS.B.2), which is a required fluency for Grade 6. The teacher materials provide necessary scaffolding by way of visual models and discussion to build students toward solving multi-digit division problems with fluency.
	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	**Yes**	The materials are designed to spend sufficient time working with engaging, non-routine real-world application tasks that require multi-step solutions. Each unit includes Modeled and Guided Instruction where the teacher provides the opportunity for students to picture, model, connect, and try explicit application of mathematical concepts. Performance tasks are embedded in the units that allow for students to determine specific solution routes by applying mathematical concepts learned. The instructional materials give students ample opportunity to solve unit rate problems that are

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	expectations for multi-step and real-world problems are explicit.		multi-step and non-routine. Unit 1, Lesson 4 "Solve Problems with Unit Rate", aligns to LSSM 6.RP.A.3b and provides independent practice where the students respond to the question, "Ivan and Jeff buy a package of 8 pens for $4.00. Ivan wants 5 of the pens and Jeff wants 3. How much should each student pay?" In Unit 1, Lesson 4, there are several questions that allow students purposeful practice in application problems. Also, teachers can assign additional practice from the student practice and problem-solving book on pages 43 and 44. The problems given are developed to help students reason about the unit rate of the scenario by using a graphic representation, such as a table or double number-line, and use multiplicative reasoning to solve the problems. In the Unit 1 Performance Task, students use ratio and rate reasoning to convert measurements and apply their understanding of unit rates to meet specific requirements of a recipe.
	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 or separately in the Grade 6 curriculum. The materials are designed to provide the proper support to help students develop the necessary mathematical understanding to master the major content of the grade. For example, Unit 1, Lesson 5 begins by activating prior knowledge of ratio conceptual understanding by connecting a ratio out of 100 to a percent. Students respond to questions where they describe relationships between quantities out of 100 and interpret information from given models and diagrams already discussed to represent given percentages. Students then perform procedural skills by calculating the percent of a number. Finally, students complete a performance task in the Student Practicing and Problem Solving Book that requires them to apply their understanding of rates and percentages to help a science club effectively spend money from a $2000 grant received. Additionally, Unit 2, Lesson 7, "Divide with Fractions," provides six parts that allow for each level of rigor to be addressed individually and together. In this lesson, students develop

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			conceptual understanding of the meaning of division (partitive or quotative) and are provided ample practice dividing by fractions, followed by real-world application of this concept. The balance of rigor also exists in Unit 3. For example, Unit 3, Lesson 16, focuses on LSSM 6.EE.A.2 where students write, read, and evaluate numerical expressions. At the beginning of the lesson, students describe expressions using mathematical terms without calculating the expression. The students then practice writing expressions, which reflects conceptual understanding as outlined in LSSM.6.EE.2a. The objective of the first part of the lesson is to build conceptual understanding about expressions (LSSM 6.EE.A.2a-b) before applying these concepts and developing the procedural skill and fluency part of the standard where students evaluate the expressions (LSSM.6.EE.2c).
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 practice standards in such a way as to enrich and strengthen the focus of the content standards of Grade 6. Teacher understanding of the mathematical practice standards and the role they play in the curriculum are explicitly addressed in the Teacher Resource Book. The Student Instruction Book provides a student-friendly understanding of the practice standards and questions students should ask themselves related to each mathematical practice standard throughout the curriculum. There is ample opportunity to address and utilize each practice standard in the instructional materials, as well as, the assessments provided. This is evidenced in Unit 1, Lesson 2, as students are encouraged to use precise language (MP 6) when describing ratios, rates, or unit rates to ensure they are able to reason with the correct abstract concepts. This math practice standard is naturally embedded into this lesson to set the expectation for accurately describing the quantity in question in order to not misrepresent the quantities in a given ratio. The application of the math practice standards is also evident in Unit 3, Lesson 20. In this lesson, the

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			students learn to write and solve inequalities. Students are encouraged to apply MP 1 and think about the reasonableness of their answers to help them make sense of the problems. Throughout the lesson, students have the opportunity to also apply MP 4 in which they model with mathematics as they represent inequalities on a number line. This is explicitly stated in the lesson (See page 200).
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 all students extensive work with course-level problems in each lesson introduction, modeled and guided instruction, guided practice, and independent practice. In the Teacher Resource Book, a learning progression is provided at the beginning of each unit, as well as at the beginning of each lesson, in more detail. At the beginning of each Unit, the materials provide lessons and standards that the current lesson is building upon (before and within the grade level), that are addressed during the unit. At the beginning of each lesson, the "Learning Progression" section instructs teachers on the progression of standards from lower grade levels, to Grade 6, and beyond, as applicable, with a focus more on the skills and concepts as opposed to specific standards. For example, Unit 5, Lesson 27, "Measures of Center and Variability," explains the learning progression as follows, "In Grade 5 students created and interpreted different data displays. Earlier in Grade 6 students learned that statistical data can vary. In this lesson students will learn to explain variability and measures of spread in data. In Grade 7 students will use mean and mean absolute deviation to compare data." Additionally, according to the Correlations Chart on page B1 in the Teacher Resource Book, there are no lessons explicitly aligned to prerequisite skills or standards. Each lesson is fully aligned to the LSSM for Grade 6.
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The	**Yes**	The materials relate course-level concepts explicitly to prior knowledge. According to the Teacher Resource Book on page A18, "In each Ready lesson, Use What You Know introduces a new skill by

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	materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.		guiding students to solve a new problem by applying prior knowledge." This is evident in Unit 2, Lesson 14,"The Coordinate Plane," where the Use What You Know section states, "You learned how to graph points on a coordinate plane when the coordinates were positive. You know how to locate negative numbers on a number line. Now we'll put these skills together." Students then proceed to learn how to graph coordinate pairs in all four quadrants of the coordinate plane by using this prior knowledge (LSSM 6.NS.C.6 and 6.NS.C.8). This is also evident in Unit 5, Lesson 25, "Volume." In the introduction of the lesson, students are instructed to use prior knowledge of finding the volume of a prism with whole number dimensions in order to find the volume of a prism with fractional dimensions using the same concept, and then extends to using the formula for volume, V=l·w·h (5.MD.C.5b) for either whole or fractional decimals. Later in the lesson, this knowledge is extended by instructing students to find the volume of a rectangular prism when only a base area and height are given. Here, it is intended for students to understand that a base is the product of the length and width of a prism. This knowledge is needed to solve real-life math problems that involve prisms that have fractional lengths (6.G.A.2). Students are also required to use previous knowledge of multiplying fractions (5.NF.B.4b) instead of only using whole numbers to find the volume of three-dimensional solids.
	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 standards. The learning objectives are clearly aligned to the Grade 6 LSSM. They also reflect the language of the standards. For example, in Unit 1, Lesson 1, "Ratios," the lesson objectives state that students should be able to "understand the concept of a ratio as a way for expressing relationships between quantities," "write a ratio to describe the relationship between two quantities," "write a ratio using three different formats," and "use ratio language." This directly aligns to the language of

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			Major LSSM 6.RP.A.1, "Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities." This is also evident in Unit 5, Lesson 27, "Measures of Center and Variability." This lesson includes objectives that are clearly aligned to Grade 6 Statistics and Probability Cluster A - "Developing understanding of statistical variability." One objective states that "students will understand that a data distribution can be viewed by its spread, shape, and center, and it can be analyzed by its distribution." This objective is clearly shaped by LSSM 6.SP.A.2, which states that students should "understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape."
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. Over the course of instruction, each mathematical practice standard is meaningfully present. Reference and explanation of connection to applicable math practices within the lesson can be found in the Teacher Resource Book, where each lesson lists the Standards for Mathematical Practice (SMP) of focus before the lesson begins. For example, Unit 1, Lesson 3, "Equivalent Ratios," lists SMPs 1, 2, 4, 5, 7, and 8 as applicable within the lesson structure. There are also "SMP TIPS" found in the teacher guidance within each lesson to assist teachers in applying these practices during instruction. While the SMPs are listed, some lessons include teacher tips for implementation of specific practice standards. For example, Unit 3, Lesson 19, "Solving Equations," for real-world situations, students are expected to use MP 1, make sense of problems. To do this, it is recommended that teachers use a familiar tool, a tape diagram, and a sentence to help students decide what is needed to solve the problem. This tip helps students focus on the type of thinking needed to solve rigorous problems in math.
	REQUIRED **6b)** Materials provide sufficient opportunities for	**Yes**	The materials provide sufficient opportunities for students to construct viable arguments and critique

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	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.		the arguments of others concerning key grade-level mathematics that is detailed in the content standards. First, each lesson provides teachers with Mathematical Discourse questions that further advance student thinking of key mathematical concepts. These questions encourage students to think more critically and encourage conversations regarding the content. Second, the Pair/Share questions in the practice section of each lesson help students develop reasoning to support their problem-solving approaches while critiquing the techniques of their peers. For example, Unit 2, Lesson 9, "Adding and Subtracting Decimals" includes a Pair/Share question that asks, "What would happen if we did not align the decimal points?" This question requires that the students understand that the misalignment of a decimal point will change the value of a number, leading to incorrect computation. Additional opportunities to critique reasoning can be found within the Guided Practice sections of each lesson. Unit 2, Lesson 11, "Common Factors and Multiples," includes a question that prompts students to describe how a student determined the incorrect expression using the greatest common factor and distributive property. Additionally, Unit 3, Lesson 20, "Solving Inequalities," Guided Practice problem 17 has students identify another student's misconception in determining an incorrect inequality to represent a real-world situation.
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Yes**	The materials include teacher-directed materials that explain the role of the practice standards in the classroom and in the students' mathematical development. The math practice standards are explained in detail on pages A-16 & A-19 of the Teacher Resource Book. A description of how each math practice standard is embedded into the instructional materials is provided along with an explanation of how each standard will impact the students' understanding of Grade 6 content standards. For example, MP 5 (use appropriate tools strategically) is described as being integrated into

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			the curriculum in order to provide lessons that "model the use of a variety of tools" and include "problems that may be solved with a variety of strategies that involve the use of tools." Additionally, the materials include "SMP Tips" in each lesson where a specific math practice standard is included in a problem. For instance, in Unit 2, Lesson 11, "Common Factors and Multiples," a SMP Tip for MP 7 (look for and make use of structure) is included to ensure teachers are helping students to gain the ability to explain why the distributive property can be used to rewrite the sum of two numbers with the greatest common factor between the two numbers.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials explicitly attend to the specialized language of mathematics. This is evident in Unit 1, Lesson 3, "Equivalent Ratios," which is aligned to 6.RP.A.3. In the introduction of the lesson, the teacher leads the students in introducing the concept of equivalent ratios, or ratios that share related rates and unit rates. The lesson uses mathematical language beyond the intended vocabulary for the lesson, such as proportional relationships and ratio tables. The students are provided more practice defining lesson terms (for example, ratio, rate, unit rate, and equivalent ratios) in the Student Practice and Problem Solving book on page 56 where examples of the vocabulary terms and definitions, in the student's own words, can be created. Each lesson specifies a vocabulary term that will be introduced while the unit review materials in the student booklet provides a place where students can identify examples of the word in context. Additionally, Unit 4, Lesson 24, "Nets and Surface Area," aligned to LSSM 6.G.A.4, provides specific vocabulary connected to the content within the lesson, such as base, net, surface area, triangular prism, and pyramid. These are also expanded on within the lesson, where teacher guidance assists students in interpreting and applying the concept and knowledge of these words in context. The lesson uses mathematical language beyond the

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			intended vocabulary for the lesson such as, "composing," "decomposing," and "three-dimensional."
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**	The materials provide an opportunity for students to produce a variety of responses. Students are expected to produce written responses to questions, oral explanations, tables, diagrams, and other math models as solutions to problems. This is evident in Unit 2, Lesson 14, "Graphing on the Coordinate Plane," where students use the directions listed in a table to plot the location of buildings on a coordinate grid followed by written responses to given questions. This is also evident in the Unit 3, Lesson 18, Student Practice and Problem Solving, page 197, where students identify what the variables and variable expressions represent in context, write and solve equations, model equations, and interpret solutions in context.
	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**	The materials provide separate teacher materials that support and reward teacher study. Each unit includes a progression document that explains which math topics precedes and follows the current math topics. After the initial guidance, the Teacher Resource Book provides tips to encourage mathematical discourse, demonstrate modeling techniques, use hands-on activities, integrate math practices, make real-world connections, and apply multiple strategies to teach, remediate, and accelerate instruction of related topics. For example, real-world connections are evident in Unit 5, Lesson 26, "Statistics and Probability." In the Mathematical Discourse section, the questions help students think about using statistical questions in a career. Answer explanations are provided throughout, for both immediate feedback and to further teacher understanding of the material. For example, Unit 5, Lesson 29, "Using Interquartile Range to Describe Data," in the Modeled and Guided Instruction, problem 5 asks students, "Within this context, explain what the median and IQR tell you about the data." The explanation includes a specific response that the teacher can look for in student responses.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Additionally, the materials provide an Online Teacher Toolbox where differentiated instructional tools can be found to provide instruction on prerequisite skills needed to master the current grade-level standards, or remediate grade level content.
	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 material include support specific to English Language Learners and other special populations with the intention of helping them meet the same standards as all students. As stated in the Teacher Resource Book, "Ready lessons use many approaches to help teachers support ELL students. Point-of-use ELL Support tips for teachers are found throughout the Teacher Resource Book to be appropriate. Language objectives are included in the Teacher Resource Book for all lessons." For example, in Unit 1, Lesson 2, the Teacher Resource Book provides tips to help teachers explain how to correctly use rate and ratio language for English Language Learners. The explanation helps teachers instruct how students should use precise language when discussing ratios or rates. Teachers are encouraged to make a table of ways to talk about ratios and then encourage students to look for the words in the problems. In Unit 1, Lesson 4, "Solve Problems with Unit Rate," specific methods are listed to support English Language Learners with instructions to "Write How Long or How Far on the board. Discuss what it means to measure length or distance. Underneath, write units of length such as feet, inches, miles, meters, and kilometers," as well as to "Write how heavy on the board," and "Write how much on the board," followed by detailed instructions for discussion and application.
	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 problems, where students are learning new math skills, are introduced in the Guided Instruction and Guided Practice portions of each lesson. Each lesson includes a section called Try It where students apply understanding and procedural skills of content learned during the Modeled and Guided Instruction

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			portion of the lesson. This section provides students with one or two problems that summarize the learned concepts. Alternately, exercises aligned to the focus skills are located in the Student Practice and Problem-Solving book. An example of this is seen in Unit 2, Lesson 6. The Teacher Resource Book and Student Instruction Book provide problems in the Guided Instruction and Guided Practice sections for students when dividing fractions by fractions. Exercises are provided in the Independent Practice Section. Exercises are also provided in a separate resource, the Student Practice and Problem-Solving booklet. All of the exercises are additional practice of the problems solved during instruction.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery, as evidenced by the overall structure of each unit. According to the Teacher Resource Book, each lesson provides approximately one week of instruction, and each daily lesson includes 45-60 minutes of math instruction. The lessons are broken into the following sections: an Introduction, Modeling and Guided Practice, Guided Practice, and Independent Practice. These activities allow a gradual release of responsibility with the Introduction, Modeled Practice, and Guided Practice being teacher-led. The Independent Practice portion of the lesson is student-led. For Example, Unit 1, Lesson 5, "Percent of a Number," begins with Use What You Know and Find Out More sections that connect prior knowledge, ratio reasoning, to the lesson content of percentages. The lesson lasts over a six-day period that moves through different cycles including sections such as Picture It, Model It, Connect It, and Try It that focus on different representations of percentages and using that knowledge on their own to answer questions. The Independent Practice section includes scaffolded exercises with increasing Depth of Knowledge questions. Some of the problems here and in the student Practice and Problem Solving book require students to show and/or explain their work which can be a helpful

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			indicator of student mastery. Another example can be found in Unit 4, Lesson 22, "Area of Polygons," where the objectives of the lesson build upon one another leading up to the overall standard 6.G.A.1 of decomposing and composing polygons into rectangles and triangles to find the area.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The materials support the use of technology. For example, the Fluency Practice App provides an additional 30-45 minutes of computational fluency practice per week (page A11).

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.

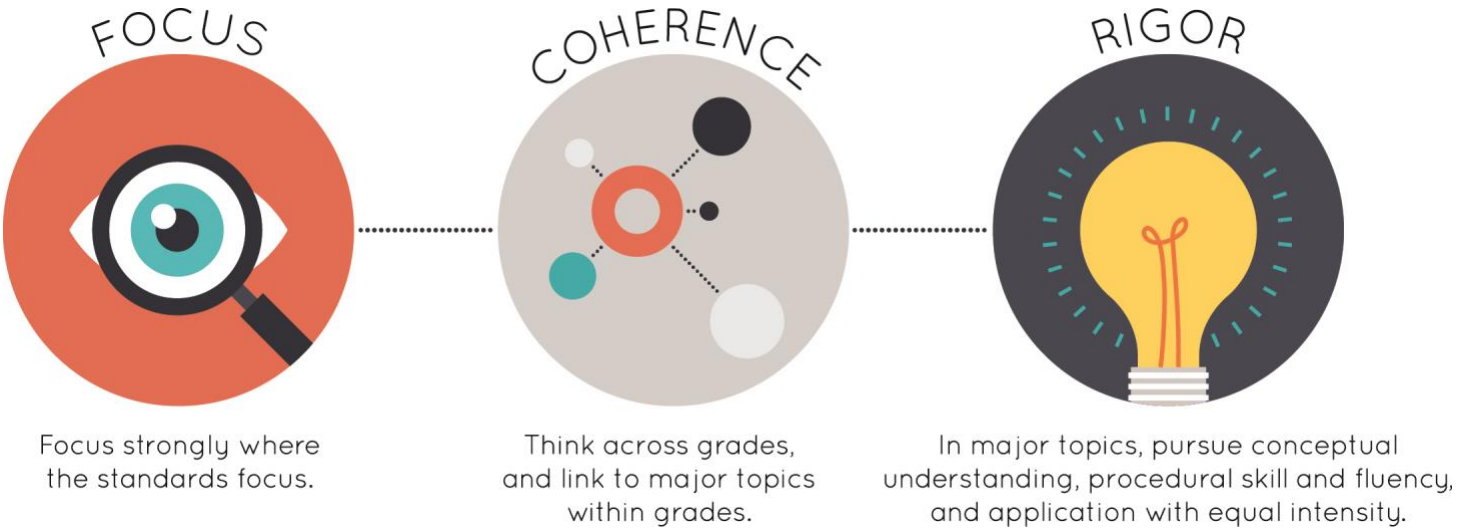
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

Compile the results for Sections I and II to make a final decision for the material under review.

Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus on Major Work	**Yes**	Materials devote the large majority of time to the major work of the grade with minimal time spent on content outside of the grade level curriculum.
	2. Consistent, Coherent Content	**Yes**	Focus and coherence are enhanced through meaningful connections between supporting and major content, as well as in connections between two or more clusters within a domain, or two or more domains in the grade.
	3. Rigor and Balance	**Yes**	The three aspects of rigor are addressed in balance throughout the curriculum materials.
	4. Focus and Coherence via Practice Standards	**Yes**	Materials use the practice standards to enrich and strengthen the focus of the content standards.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials provide extensive work with course-level problems, learning objectives directly align to the language of the LSSM, and prerequisite knowledge is clearly identified and scaffolded into instruction.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	Materials attend to the full meaning of each practice standard, there are teacher-directed materials that explain the role of the practice standards, and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			materials explicitly attend to the specialized language of mathematics.
	7. Indicators of Quality	**Yes**	Students produce a variety of responses, provide additional support for special populations, utilize technology where appropriate, and lessons are scaffolded while identifying difference between problems and exercises.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

Strong mathematics instruction contains the following elements:



Title: **Ready Louisiana Mathematics** Grade/Course: **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[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 majority of class time to the major work of Grade 7 as defined by the Louisiana State Standards for Mathematics. The materials include 33 instructional lessons, where each lesson spans several days. Of the 33 total lessons, 17 instructional lessons (51.52%) are devoted explicitly to the major work of the grade. Supporting and major content standards are the focus of 7 out of 33 lessons (21.21%) and 9 of the 33 lessons (27.27%) contain no major work for the grade. The supporting content is connected to the major work of the grade. There are instructional lessons devoted to supporting, and additional content standards that include, the major work of the grade. Thus, students engage with the major work of the grade in approximately 24 of the 33 total lessons (72.73%).
	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**	The instructional materials spend minimal time on content outside the requirements of the LSSM for Grade 7. There are no lessons that focus on content above the grade level expectations, but scaffolding is provided initially in lessons where activating prior knowledge is essential to mastery. This is evident in Unit 1, Lesson 1, "Addition of Positive and Negative Numbers," where prior knowledge of comparing rational numbers and the meaning of absolute value (LSSM 6.NS.C.7) is the initial focus to build towards mastery of adding and subtracting rational numbers (LSSM 7.NS.1). Assessment items make students responsible only for topics appropriate to the requirements for the grade. Evidence of this is found in the Unit 2 Interim Assessment where each question aligns directly to LSSM 7.RP.A taught in

[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
			Unit 2. For example, Question 5 of the assessment asks students to "Identify if there is a proportional relationship between the number of hours worked and money earned on a coordinate grid and to provide an explanation of why or why not. If so, what is the constant of proportionality?" This question fully aligns with LSSM 7.RP.A.2, which explains that students must be able to "recognize and represent proportional relationships between quantities."
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 Lesson 18, "Problem Solving with Angles" students utilize knowledge of angle measurements to solve for an unknown angle in a figure (LSSM 7.G.A.1) while using variables to represent unknown values in equations (LSSM 7.EE.B.4). Additionally, Lesson 22 focuses on computing actual dimensions, such as the length and area of scale drawings (LSSM 7.G.A.1) through reasoning with fractional unit rates (LSSM 7.RP.A.1).
	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**	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 Lesson 8 of Unit 1, the problems include computation involving all four operations and rational numbers (LSSM 7.NS.A.3) including integers, and using multi-step equations to solve problems (LSSM 7.EE.A.3). The Lesson 8 assessment includes problems that seamlessly connect the Number System and Expressions and Equations. For example, Question 2 states, "A scientist measures the change in the temperature of a chemical solution. At the start of the experiment, the solution is at a temperature of -14.96°C. The temperature decreases 2.9°C each hour. Write an expression that can be used to find the temperature of the solution after 3 hours. What is the temperature of the solution after 3 hours, rounded to the nearest whole degree? Estimate to show your answer is

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			reasonable." Another example of the connection between domains within the curriculum is found in Lesson 20 where the focus is on calculating the area of composite figures, as required by Major LSSM 7.G.B.6. Students solve multi-step real-world and mathematical problems (7.EE.B.3) through the use of properties of operations (LSSM 7.EE.A.1) with rational numbers (LSSM 7.NS.A.1d and 7.NS.A.2c).
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 instructional materials are designed to develop conceptual understanding of key mathematical concepts, especially where called for explicitly such as LSSM 7.EE.A.2, "Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related." In Unit 3, Lessons 14 and 15, this concept is addressed by providing introductory instructions that require students to write expressions to represent real-world situations. Students then simplify to determine equivalency between expressions to determine numerical values such as perimeter. However, pieces are missing in the curriculum related to LSSM 7.RP.A.2d, "Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate." Lesson 11 begins by activating prior knowledge of reasoning with unit rates, followed by instruction focused on graphing and identifying equations of proportional relationships. Other than one hands-on activity, there are no explicit requirements in the instructional materials that require students to identify the meaning of (0, 0) and (1, r) in context.
	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	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the Grade 7 LSSM. For example, students work with operations involving all rational numbers, as defined by LSSM 7.NS.A.1, 7.NS.A.2 and 7.NS.A.3. In Unit 1, students learn to perform all operations with rational numbers and continue this work in Unit 2, Lesson 1, where they are to determine unit rates of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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.		complex numbers. In Unit 3 students must solve multi-step equations in lessons that focus specifically on integers, fractions, and decimals. In Unit 4, the lesson components require students to solve for missing angles and calculate volume and surface area of three-dimensional solids that include computation with all rational numbers. In addition, during Unit 1, students are given multiple problems performing all operations with integers and other rational numbers. The Student Practice Book provides additional fluency practice for LSSM 7.NS.A.1, 7.NS.A.2, and 7.NS.A.3 in Lessons 1 to 4. In Unit 3, Lesson 16, there is sufficient practice to attain fluency of solving multi-step equations that have variables through the ample practice found on pages 161-170 of the Student Practice Book.
	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 to spend sufficient time working with engaging, non-routine real-world application tasks that require multi-step solutions. Each unit includes Modeled and Guided Instruction where the teacher provides the opportunity for students to picture, model, connect, and try explicit applications of mathematical concepts. Practice with single- and multi-step problems, as in Lesson 20, demonstrates student work with multi-step problems when determining the area of composite figures. On page 196 of the Student Instruction Book, students decompose figures to solve for the area of more familiar shapes (e.g., rectangles and right triangles). Additionally, performance tasks are embedded within the units, which allows students to determine specific solution routes through the application of mathematical concepts. For example, as shown in the Unit 2 Interim Assessment Performance Task, where students complete a task solving problems using percentages and “analyze the information provided, explain the error in the solution provided, and develop a plan for correctly solving the problem.”
	REQUIRED	**Yes**	The three aspects of rigor are not always treated

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	3d) ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.		together or separately in the curriculum. For example, the focus of Unit 1 is on the number system, where Lessons 1 and 2 focus on conceptual understanding of integer operations and Lessons 3 through 7 focus on student mastery of procedural skill with all rational numbers (LSSM 7.NS.A.1-2), while reinforcing the conceptual understanding previously established. These skills are then later utilized in Lesson 8 where students apply operations of rational numbers to solving real-world problems (LSSM 7.NS.A.3). Additionally, Lesson 21 establishes the conceptual understanding of area and circumference of circles (LSSM 7.G.B.4) and allows students the opportunity to solve basic problems involving area and circumference. In later lessons, students solve more rigorous application problems such as, "Scott wants to buy fencing to place around a semicircular rock garden. The diameter of the semicircle is 16 feet. Using 3.14 for pi, he calculates that he needs to buy about 25.12 feet of fencing. The fencing is sold by the foot, so he plans to buy 26 feet of fencing. Explain why Scott's reasoning is incorrect, and find the correct amount of fencing he should buy." Each component of rigor is given equal treatment so that students can attain full mastery of the standard.
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 practice standards in such a way as to enrich the content standards for the grade level. Teacher understanding of the mathematical practice standards and the role they play in the curriculum are explicitly addressed in the Teacher Resource Book. In addition, the Student Instruction Book provides student-friendly understanding of the practice standards and questions that are related to each mathematical practice standard in the curriculum. There is ample opportunity to address and utilize each practice standard in the curriculum and assessments. Evidence of the math practice standards embedded within the instructional materials can be found in Lesson 16, "Solving Problems with Equations."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Lesson components provide an opportunity for students to explain what they already know, determine what is needed to solve the problem, and persevere in solving the problem (MP.1). Additional opportunities for students to model with mathematics (MP.4) and use appropriate tools strategically (MP.5) are present in the Unit 3 Interim Assessment where students create and solve inequalities.
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 all students extensive work with course-level problems in each lesson introduction, modeled and guided instruction, guided practice, and independent practice. In the Teacher Resource Book, a learning progression is provided at the beginning of each unit as a whole, as well as at the beginning of each lesson in more detail. At the beginning of each Unit, the materials provide lessons and standards that the current lesson is building upon (before and within the grade level), that are addressed during the unit. At the beginning of each lesson, the "Learning Progression" section, instructs teachers on the progression of standards from lower grade levels, to Grade 7, and beyond, as applicable, with a focus more on the skills and concepts as opposed to specific standards. For example, page 44a of the Teacher Resource Book, Unit 1, Lesson 6, "Multiplying and Dividing Rational Numbers" states, "In Grade 6 students learned about numbers on both sides of 0 on a number line. They developed an understanding that, for example, -5 is the opposite of 5. Earlier in Grade 7 students learned addition subtraction, multiplication, and division with integers. In this lesson students learn how to multiply and divide signed fractions; and the term "rational number" is introduced." The progression goes on to state that the expectation will be student understanding and procedural skill in the lesson and the upcoming focus on addition and subtraction with all rational numbers.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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. According to the Teacher Resource Book on page A18, "In each Ready lesson, Use What You Know introduces a new skill by guiding students to solve a new problem by applying prior knowledge." This is evident in Unit 3, Lesson 17, when students write and solve inequalities to represent real-world scenarios (LSSM 7.EE.B.4b). In the lesson introduction, prior knowledge of using two step equations is activated when students use what they know to connect the content to two step inequalities in a real-world context. This is identified as part of the learning progression in the Teacher Resource Book. In Unit 2, Lesson 12, students access their prior knowledge of percentages as part of a whole and use a tape diagram to represent the ratio and understand how to identify a regular and discounted price. This lesson extends knowledge from finding the percentage of a whole, to using percentages to calculate a sales price and the amount of a discount.
	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 standards. The learning objectives are clearly aligned to the Grade 7 LSSM. They also reflect the language of the standards. For example, Unit 2, Lesson 9, "Ratios Involving Complex Fractions" includes the lesson objective "Compute unit rates involving ratios with fractions in the denominator." This directly aligns to the language of LSSM 7.RP.A.1, "Compute unit rates associated with ratios of fractions." In Lesson 10, students "Determine whether two quantities are in a proportional relationship by looking at a table, a line in a coordinate plane, and an equation" and "Identify the constant of proportionality (unit rate) in a table and represented by an equation." Each of these objectives include language that directly aligns to LSSM 7.RP.A.2. Additionally, in Unit 2, Lesson 13, "Proportional Relationships," the lesson objectives visibly mirror LSSM 7.RP.A.3, which states that students should be able to solve multi-step ratio and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			percentage problems involving tax, markups, and percent error. The objective for this lesson states, "set up and solve multi-step problems involving percent error."
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. Over the course of instruction, each mathematical practice standard is meaningfully present. Reference and explanation of connection to applicable math practices within the lesson can be found in the Teacher Resource Book, where each lesson lists the Standards for Mathematical Practice (SMP) of focus before the lesson begins. For example, in Unit 4, Lesson 21, "Area and Circumference of a Circle" the "SMP Tip," on page 198 of the Teacher Resource Book states, "This exercise provides an opportunity for students to specify a measure as precisely as possible given the tools they are using. Emphasize to students that it is important to measure as accurately as possible using the tools they have (SMP 6)." In the same lesson, on page 201 it is clarified that "As students explain their thinking to others and respond to the thinking of others, they are constructing viable arguments (SMP 3)." Throughout this lesson, students continue to model and connect concepts to make sense of problems.
	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. First, each lesson provides teachers with Mathematical Discourse questions that further advance student thinking of key mathematical concepts. These questions encourage students to think more critically and encourage conversations regarding the content. Second, the Pair/Share questions in the practice section of each lesson helps students develop reasoning to support their problem-solving approaches while critiquing the techniques of their peers.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			For example, in Unit 1, Lesson 3, Exercise 19, on page 21 of the Student Instruction Book, students determine how an answer was derived in a problem involving operations with integers while also being prompted to respond to the following, "Does Siri's answer make sense? Why or why not?" An additional example can be found in the Unit 1 Mid-Unit Assessment, Question 2, Part B when students determine if a student-created model is accurate with evidence through an explanation.
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Yes**	The materials include teacher-directed materials that explain the role of the practice standards in the classroom and in the students' mathematical development. The math practice standards are explained in detail on pg. A-16 & A-19 of the Teacher Resource Book. A description of how each math practice standard is embedded into the instructional materials is provided along with an explanation of how each standard will impact the students' understanding of Grade 7 content standards. For example, MP 7 (look for and make use of structure) is described as being integrated into the curriculum in order to provide lessons that "build understanding of new concepts by explicitly reviewing prior knowledge of mathematical structure." Additionally, the materials include "SMP Tips" in each lesson where a specific math practice standard is included in a problem. For instance, in Unit 5, Lesson 33, "Representing Sample Spaces and Identifying Outcomes," an SMP Tip for MP 2 (reason abstractly and quantitatively) explains that, "Asking students to grasp a situation without experiencing it requires a high level of abstract thinking. In order to help students reason 'abstractly and quantitatively,' continue to make frequent connections between the problem scenarios and the mathematical representations."
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials explicitly attend to the specialized language of mathematics. For example, Unit 3, Lesson 14, "Equivalent Linear Expressions" highlights

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			math vocabulary that students will need to learn. The term, "equivalent linear expression" is defined at the beginning of the lesson and used in context within the introduction portion of the lesson. In Unit 4, Lesson 18, "Problem Solving with Angles" information is presented in a way where the new terms are defined with models and pictures to supplement understanding. The "Use What You Know" section of the lesson activates prior understanding of angle relationships, followed by "Find Out More" where the vocabulary terms "complementary angles," "supplementary angles," and "vertical angles" are introduced, defined, and connected to a model of the relationship on page 173 of the Student Instruction Book.
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**	The materials provide an opportunity for students to produce a variety of responses. Students are expected to produce written responses to questions, provide oral explanations, tables, diagrams, and other math models as solutions to problems. For example, in Unit 2, Lesson 10 students use information obtained from a written scenario to construct a table and a graph. This is also evident in the Unit 1 Assessment where question types include open response, multiple choice, multiple select, modeling on a number line, writing and solving equations, fill in the blank, and computation problems related to operations with rational numbers.
	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**	The materials provide separate teacher materials that support and reward teacher study. Each unit includes a progression document that explains which math topics precedes and follows the current math topics. After the initial guidance, the Teacher Resource Book provides tips to encourage mathematical discourse, demonstrate modeling techniques, use hands-on activities, integrate math practices, make real-world connections, and apply multiple strategies to teach, remediate and accelerate instruction of related topics. For example, in Unit 1, Lesson 6, "Multiply and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Divide Rational Numbers, one prompt in the Mathematical Discourse section asks, "How can you explain that a negative number multiplied by a positive number equals a negative number?" Answer explanations are provided to aid feedback and further teacher understanding of the material. Additionally, the materials provide an Online Teacher Toolbox where differentiated instructional tools can be found to provide instruction on prerequisite skills needed to master the current grade-level standards, or remediate grade level content.
	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 material include support specific to English Language Learners and other special populations with the intention of helping those students meet the same standards as all students. As stated in the Teacher Resource Book, "Ready lessons use many approaches to help teachers support ELL students. Point-of-use ELL Support tips for teachers are found throughout the Teacher Resource Book as appropriate. Language Objectives are included in the Teacher Resource Book for all lessons." For example, Unit 1, Lesson 1, "Addition of Integers" provides teachers guidance on how to teach the meaning of mathematical terms such as "integer" and "distance from 0" on page 2. Guidance is also provided on how to provide differentiated instruction for below level and above level learners. Suggested activities on page 6 encourage teachers to help all students learn how to calculate the sum of a positive and negative integers. Additional teacher support for English Language Learners is shown in Unit 4, Lesson 23, "Volume of Solids," on page 221 of the Teacher Resource Book where the focus is on conceptual language, such as the meaning of the word "base" in context of the problem.
	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. The problems, where students are learning new math skills, are introduced in the Guided Instruction and Guided

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.		Practice portions of each lesson. Each lesson includes a section called Try It where students apply understanding and procedural skills of content learned during the Modeled and Guided Instruction portion of the lesson. This section provides students with one or two problems that summarize the learned concepts. Alternately, exercises aligned to the focus skills are located in the Student Practice and Problem-Solving book. For example, on page 139 of Unit 3, Lesson 15, "Writing Linear Expressions" students apply what they have learned by writing expressions to find a garden's perimeter in three different ways to show that they produce the same measurement (LSSM 7.EE.A.2).
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery, as evidenced by the overall structure of each unit. According to the Teacher Resource Book, each lesson provides approximately one week of instruction, and each daily lesson includes 45-60 minutes of math instruction. The lessons are broken into the following sections: an Introduction, Modeling and Guided Practice, Guided Practice, and Independent Practice. These activities allow a gradual release of responsibility with the Introduction, Modeled Practice, and Guided Practice being teacher-led. The Independent Practice portion of the lesson is student-led. For example, Unit 2, Lesson 13, "Proportional Relationships" focuses on solving multi-step problems involving percentage increase and decrease. Prior knowledge is addressed through the section introduction, Use What You Know, where students engage in problems related to calculating percentages, followed by a set of problems within the Find Out More section where this concept is extended to percentage change and percentage error. Students are then guided through instruction where the concept of percentage change and error

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			is addressed through pictures and mathematical models to build conceptual understanding. Students connect concepts and try to solve problems in the Connect It and Try It portions of the lesson.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The materials support the use of technology. For example, the Fluency Practice App provides an additional 30-45 minutes of computational fluency practice per week (page A11).

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.

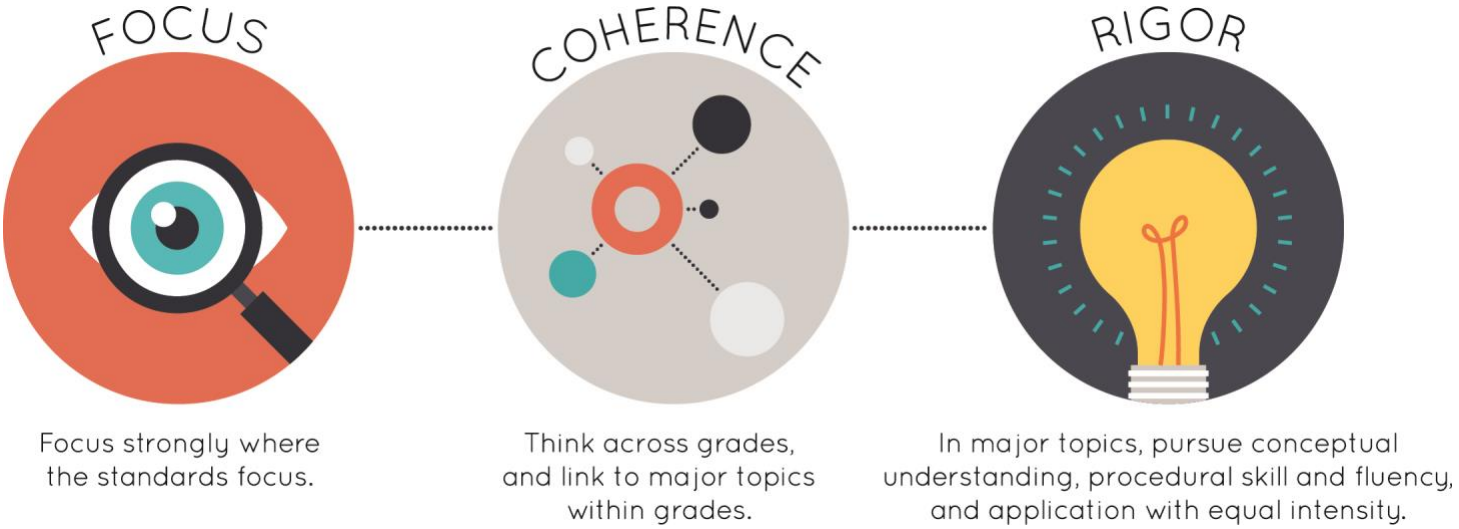
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

Compile the results for Sections I and II to make a final decision for the material under review.

Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus on Major Work	**Yes**	Materials devote the large majority of time to the major work of the grade with minimal time spent on content outside of the grade level curriculum.
	2. Consistent, Coherent Content	**Yes**	Focus and coherence are enhanced through meaningful connections between supporting and major content, as well as in connections between two or more clusters within a domain, or two or more domains in the grade.
	3. Rigor and Balance	**Yes**	The three aspects of rigor are addressed in balance throughout the curriculum materials.
	4. Focus and Coherence via Practice Standards	**Yes**	Materials use the practice standards to enrich and strengthen the focus of the content standards.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials provide extensive work with course-level problems, learning objectives directly align to the language of the LSSM, and prerequisite knowledge is clearly identified and scaffolded into instruction.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	Materials attend to the full meaning of each practice standard, there are teacher-directed materials that explain the role of the practice standards, and materials explicitly attend to the specialized language of mathematics.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	7. Indicators of Quality	**Yes**	Students produce a variety of responses, provide additional support for special populations, utilize technology where appropriate, and lessons are scaffolded while identifying difference between problems and exercises.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

Strong mathematics instruction contains the following elements:



Title: **Ready Louisiana Mathematics** Grade/Course: **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[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 majority of class time to the major work of Grade 8 as defined by the Louisiana State Standards for Mathematics. The materials include 31 instructional lessons, where each lesson spans several days. Of the 31 total lessons, 19 instructional lessons (61.29%) are devoted explicitly to the major work of the grade. Supporting and major content standards are the focus of 7 out of 31 lessons (22.58%) and 5 of the 31 lessons (27.6%) contain no major work for the grade. The supporting content is connected to the major work of the grade. There are instructional lessons devoted to supporting, and additional content standards that include, the major work of the grade. Thus, students engage with the major work of the grade in approximately 26 of the 31 total lessons (83.87%).
	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**	The instructional materials spend minimal time on content outside the requirements of the LSSM for Grade 8. There are no lessons that focus on content above the grade level expectations, but scaffolding is provided initially in lessons where activating prior knowledge is essential to mastery. There are no assessment items that make students responsible for content outside of the grade level. For example, all of the lesson quizzes and the Interim Assessment aligned to Unit 4, "Geometry" contain items that require dilations and rotations of two dimensional figures only about the origin and reflections of two dimensional figures only across the x-axis and y-axis.

[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
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 to major content in meaningful ways so that the focus and coherence are enhanced throughout the year. For example, in Lesson 7 of Unit 2 students compare functions in context (LSSM 8.F.A.2) while analyzing the rate of change and initial value given in various representations (LSSM 8.F.B.4). This is also seen in Lesson 24 when students calculate missing lengths of right triangles using the Pythagorean Theorem (LSSM 8.G.B.7) while using approximations of irrational numbers (LSSM 8.NS.A.2) to estimate a side length or the length of the hypotenuse.
	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**	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, Clusters A and B within the Function domain are connected in Unit 2, Lesson 9, where students gain a formal understanding of slope by making connections to the concept of functional relationships covered in earlier lessons. Additionally, in Unit 3, Lesson 11 "Represent Proportional Relationships" on page 104, students are required to compare a table and equation that represents two different printers that print pages at differing rates. In this "Modeled and Guided Instruction" problem, students construct proportional functions to model linear relationships (LSSM 8.F.B.4) and compare the properties of proportional relationships (LSSM 8.EE.B.5) to determine which printer prints faster and the difference between their rates.
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	**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 instructional materials are designed to develop conceptual understanding of key mathematical concepts, especially where called for explicitly such as LSSM 8.F.A.1, "Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output." Unit 2, Lesson 16 establishes an understanding of what a function is using the "Think it Through" strategy. The Student Instruction Book gives examples of relationships that are and are not

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
application. ☒ Yes ☐ No			functions. Students are then given the opportunity to further explore and identify functional relationships in multiple representations. In Lesson 18, students are introduced to geometric transformations. Questions in the lesson enhance student understanding of translations, reflections, and rotations by requiring justifications using mathematical evidence. For example, Question 12 of the Guided Practice asks students, "Explain if the blue figure is a reflection of the red figure. Explain why or why not?"
	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 Grade 8 LSSM. For example, in Unit 3, Lesson 13, the focus is on LSSM 8.EE.C.7b, where students are required to fluently "solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms." This content standard is reinforced in Lessons 14, 16 and 17 through both guided instruction and independent practice. In addition, the materials provide the practice necessary for students to fluently "solve systems of two linear equations in two variables algebraically…" as required by LSSM 8.EE.C.8b. Lesson 16 provides students with multiple opportunities to build procedural skill and fluency to solve systems of linear equations by substitution and elimination. The questions within the lesson provide students with practice in determining whether there are none, one, or infinite solutions after solving a given system of equations. Additional practice with LSSM 8.EE.C.8b is also provided in the Student Practice Book.
	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	**Yes**	The materials are designed to spend sufficient time working with engaging, non-routine real-world application tasks that require multi-step solutions. Each unit includes Modeled and Guided Instruction where the teacher provides the opportunity for students to picture, model, connect, and try explicit application of mathematical concepts. For example,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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.		question 5 in Lesson 24, Independent Practice, requires that students understand how to use the Pythagorean Theorem to solve a real-life math problem. Students must determine the amount of banner rope needed to connect a fence pole and rooftop of a building. The performance tasks are embedded within the units, which allows students to determine specific solution routes through the application of mathematical concepts. For example, as shown in the Unit 4 Interim Assessment Performance Task, where students determine how changing the dimensions of a cone changes its volume in a real-world context (LSSM 8.G.C.9). Students apply their conceptual understanding of the relationship between variables and procedural skill and fluency utilizing the formula for the volume of a cone.
	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 or separately in the curriculum. For example, LSSM 8.F.A.1 requires students to identify functions as a relationship of one output for each input. This standard is only assessed at the conceptual understanding level of rigor with practice provided for identifying functions from tables, the coordinate grid, and a mapping diagram. However, when the content standard requires additional components of rigor, the materials also provide the appropriate questions to ensure students are mastering the standards relative to each component of rigor. In Lesson 7 students compare functions from separate graphs (LSSM 8.F.A.2) for both application and conceptual understanding. The problems involve student comparison of the functions from tables and graphs to determine which rate of change is greater. Additionally, in Unit 4, Lesson 23, students explore the proof of the Pythagorean Theorem using diagrams and analyzing relationships (LSSM 8.G.B.6) while extending to the formula to calculate the missing side lengths of a right triangle. In Lesson 24,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students practice solving for missing side lengths of right triangles and extend this fluency and understanding to solving problems in three dimensions (LSSM 8.G.B.7). The Teacher Resource Book provides a suggested hands-on activity where students create a three-dimensional representation of the problem (page 206). Students are also presented with real-world situations in which the Pythagorean Theorem is utilized to find dimensions, such as determining the width of a television, calculating whether a closet is large enough to fit in a 12 foot pipe, and calculating the length of a walkway.
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 practice standards in such a way as to enrich the content standards for the grade level. Teacher understanding of the mathematical practice standards and the role they play in the curriculum are explicitly addressed in the Teacher Resource Book. In addition, the Student Instruction Book provides student-friendly understanding of the practice standards and questions related to each mathematical practice standard in the curriculum. There is ample opportunity to address and utilize each practice standard in the curriculum and assessments. Teachers are given “SMP Tips” throughout each lesson where the math practice standards are most applicable to the content. For example, in the Teacher Resource Book, Lesson 24, Math Practice 4, “model with mathematics” is highlighted to explain how to model finding distance in the coordinate plane by drawing a right triangle and using the Pythagorean Theorem. Additionally, in the Unit 1 Interim Assessment Performance Task students construct viable arguments (MP.3) and look for and make use of structure (MP.7) while writing and evaluating expressions to consider safety risks when designing toys for toddlers.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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 all students extensive work with course-level problems in each lesson introduction, modeled and guided instruction, guided practice, and independent practice. In the Teacher Resource Book, a learning progression is provided at the beginning of each unit as a whole, as well as at the beginning of each lesson in more detail. At the beginning of each Unit, the materials provide lessons and standards that the current lesson is building upon (before and within the grade level), that are addressed during the unit. At the beginning of each lesson, the "Learning Progression" section, instructs teachers on the progression of standards from lower grade levels, to Grade 8, and beyond, as applicable, with a focus more on the skills and concepts as opposed to specific standards. For example, Unit 2, Lesson 6, "Understand Functions" explains the progression of skills as follows, "In Grade 6 students plotted ordered pairs on a coordinate plane and studied the relationship between dependent and independent variables in equations, graphs, and tables. In Grade 7 students extended their understanding of dependent and independent variables by determining whether two quantities are in a proportional relationship." The progression goes on to list the focus of the lesson and how the content will be extended in later lessons of the unit.
	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. According to the Teacher Resource Book on page A18, "In each Ready lesson, Use What You Know introduces a new skill by guiding students to solve a new problem by applying prior knowledge." This is evident in Unit 3, Lesson 11, "Represent Proportional Relationships" which begins by having students identify the unit rate and interpret coordinate pairs in context given a proportional graph (LSSM 7.RP.A.2b). The lesson then relates the unit rate of a proportional relationship to the slope of a linear graph (LSSM

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			8.EE.B.5). Unit 4, Lesson 21, "Understand Angle Relationships" builds on prior knowledge learned in Grade 7 regarding supplementary, vertical, and complementary angles. In the Grade 8, the concept of angle measurement is advanced to include what happens when parallel vertical angles are intersected with a transversal. Students build on their understanding of supplementary, complimentary, vertical, and adjacent angles to include alternate interior and corresponding angle measurements.
	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 standards. The learning objectives are clearly aligned to the Grade 8 LSSM. They also reflect the language of the standards. For example, Unit 1, Lesson 1, "Properties of Integer Exponents" lists the lesson objectives as "Understand the properties of integer exponents," "Use the properties of integer exponents to evaluate expressions with exponents," and "Generate equivalent expressions." These objectives directly align to the language of LSSM 8.EE.A.1 to "Know and apply the properties of integer exponents to generate equivalent numerical expressions." Another example in Unit 4, Lesson 20, "Transformations and Similarity" includes a lesson objective that students will "Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translation, and dilations." This objective is clearly shaped by LSSM 8.G.A.4 which states that students should explain that a two dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations.

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. Over the course of instruction, each mathematical practice standard is meaningfully present. Reference and explanation of connection to applicable math practices within the lesson can be found in the Teacher Resource Book, where each lesson lists the Standards for Mathematical Practice (SMP) of focus before the lesson begins. This is evident in Unit 2, Lesson 6, "Understand Functions" where students identify and model functions through the use of graphs, tables, and equations (SMP 4) as guided by the "SMP Tip" found in the Teacher Resource Book on page 55. Also, in Unit 4, Lesson 18, "Understand Properties of Transformations" the "SMP Tip" recommends encouraging students to use "clear and precise language" when referring to the type of transformation instead of terms such as "flip, turn, or slide." This helps students use specific math language when referring to transformations (SMP 6).
	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. First, each lesson provides teachers with Mathematical Discourse questions that further advance student thinking of key mathematical concepts. These questions encourage students to think more critically and encourage conversations regarding the content. Second, the Pair/Share questions in the practice section of each lesson helps students develop reasoning to support their problem-solving approaches while critiquing the techniques of their peers. For example, in Unit 3, Lesson 12, "Understand the Slope-Intercept Equation for a Line," Question 17, students analyze and explain why they agree or disagree with another students' calculation of slope

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			from a table. There are prompts in the Teacher Resource Book for discussion of methods found in student work, such as the second "Solve It" problem in Unit 3, Lesson 13, "Solve Linear Equations with Rational Coefficients," where the teacher is directed to "Discuss how multiplying both sides of the equation by 2 results in a simpler form" (page 118).
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Yes**	The materials include teacher-directed materials that explain the role of the practice standards in the classroom and in the students' mathematical development. The math practice standards are explained in detail on pg. A-16 & A-19 of the Teacher Resource Book. A description of how each math practice standard is embedded into the instructional materials is provided along with an explanation of how each standard will impact the students' understanding of Grade 8 content standards. For example, MP2 (reason abstractly and quantitatively) is described as being integrated into the curriculum in order to provide lessons that "lead students to see mathematical relationships connecting equations, visual representations, and problem situations. Each lesson challenges students to analyze the connection between an abstract representation and pictorial or real-world situations." Additionally, the materials include "SMP Tips" in each lesson where a specific math practice standard is included in a problem. For instance, in Unit 5, Lesson 30, "Using an Equation for the Line of Best Fit," an SMP Tip for MP 4 (Model with Mathematics) states, "A scatter plot, table, and equation are all mathematical models that can be used to solve problems arising in everyday life."
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	The materials explicitly attend to the specialized language of mathematics. Each lesson specifies a vocabulary term that will be introduced while the unit review materials in the student booklet provides a place where students can identify

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			examples of the word in context. This is evident in Unit 1, Lesson 3, "Understand Rational and Irrational Numbers." In the introduction of the lesson, the teacher leads the students in introducing the concept of irrational numbers, or a number that cannot be expressed as a fraction. The students have practice defining the term in the student practice and problem solving book. In Unit 3, Lesson 15, "Understand Systems of Equations" the instructions directly relate to the meaning of a solution as it relates to a system of equations. Methods for determining if a system has one, no, or infinite solutions are introduced on page 132 and 133. Visual models and descriptions are used to provide concrete examples of the concept of a solution to a system of equations.
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**	The materials provide an opportunity for students to produce a variety of responses. Students are expected to produce written responses to questions, provide oral explanations, tables, diagrams, and other math models as solutions to problems. For example, in Unit 2, Lesson 7, "Interpreting and Comparing Rates of Change" students create graphs, complete tables, write explanations, and provide numerical responses. This is also evident in the Unit 5 Assessment where question types include open response, multiple choice, multiple select, true/false, multi-part constructed response, and modeling data by creating a scatter plot.
	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**	The materials provide separate teacher materials that support and reward teacher study. Each unit includes a progression document that explains which math topics precedes and follows the current math topics. After the initial guidance, the Teacher Resource Book provides tips to encourage mathematical discourse, demonstrate modeling techniques, use hands-on activities, integrate math practices, make real-world connections, and apply multiple strategies to teach, remediate and accelerate instruction of related topics. For example, in Unit 1, Lesson 4, "Scientific

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			Notation," one suggestion for Mathematical Discourse is to, "Remind students that when comparing numbers using scientific notation, they must compare each part separately and then combine the results." A prompt for Mathematical Discussion asks, "Why would you divide to see how many times as great 4,500,000,000 is than 150,000,000?" Answer explanations are provided to aid feedback and further teacher understanding of the material. Additionally, the materials provide an Online Teacher Toolbox where differentiated instructional tools can be found to provide instruction on prerequisite skills needed to master the current grade-level standards, or remediate grade level content.
	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 material include support specific to English Language Learners and other special populations with the intention of helping those students meet the same standards as all students. As stated in the Teacher Resource Book, "Ready lessons use many approaches to help teachers support ELL students. Point-of-use ELL Support tips for teachers are found throughout the Teacher Resource Book as appropriate. Language Objectives are included in the Teacher Resource Book for all lessons." For example, Unit 1, Lesson 2, "Square Roots and Cube Roots" supports English Language Learners by providing the teacher with guided instruction to provide intervention on page 13. This instruction provides proper presentation of the inverse relationship of terms "square" and "square root," as well as how to model, read, and write expressions involving these key terms.
	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	**Yes**	The underlying design of the materials distinguishes between problems and exercises. The problems, where students are learning new math skills, are introduced in the Guided Instruction and Guided Practice portions of each lesson. Each lesson includes a section called Try It where students apply

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	mastery. Each problem or exercise has a purpose.		understanding and procedural skills of content learned during the Modeled and Guided Instruction portion of the lesson. This section provides students with one or two problems that summarize the learned concepts. Alternately, exercises aligned to the focus skills are located in the Student Practice and Problem-Solving book. For example, in the Guided Practice for Unit 4, Lesson 22, "Angles in a Triangle," Question 13 requires students to complete equations for known angle relationships, Question 14 requires they explain their understanding of similar triangles, and Question 15 requires students to apply their understanding to a real-world scenario.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery, as evidenced by the overall structure of each unit. According to the Teacher Resource Book, each lesson provides approximately one week of instruction, and each daily lesson includes 45-60 minutes of math instruction. The lessons are broken into the following sections: an Introduction, Modeling and Guided Practice, Guided Practice, and Independent Practice. These activities allow a gradual release of responsibility with the Introduction, Modeled Practice, and Guided Practice being teacher-led. The Independent Practice portion of the lesson is student-led. For example, Unit 2, Lesson 9, "Analyze Linear Functions" begins with Use What You Know and Find Out More sections that connect prior knowledge of functions to a more formal definition for functions. The lesson lasts six days and moves through different cycles including sections such as Picture It, Model It, Connect It, and Try It. The Independent Practice section includes problems where students find and interpret the slope and y-intercepts of functions.

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	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The materials support the use of technology. For example, the Fluency Practice App provides an additional 30-45 minutes of computational fluency practice per week (page A11).

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	Final Justification/Comments
I: Non-Negotiables	1. Focus on Major Work	**Yes**	Materials devote the large majority of time to the major work of the grade with minimal time spent on content outside of the grade level curriculum.
	2. Consistent, Coherent Content	**Yes**	Focus and coherence are enhanced through meaningful connections between supporting and major content, as well as in connections between two or more clusters within a domain, or two or more domains in the grade.
	3. Rigor and Balance	**Yes**	The three aspects of rigor are addressed in balance throughout the curriculum materials.
	4. Focus and Coherence via Practice Standards	**Yes**	Materials use the practice standards to enrich and strengthen the focus of the content standards.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials provide extensive work with course-level problems, learning objectives directly align to the language of the LSSM, and prerequisite knowledge is clearly identified and scaffolded into instruction.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	Materials attend to the full meaning of each practice standard, there are teacher-directed materials that explain the role of the practice standards, and materials explicitly attend to the specialized language of mathematics.
	7. Indicators of Quality	**Yes**	Students produce a variety of responses, provide additional support for special populations, utilize technology where appropriate, and lessons are scaffolded while identifying difference between problems and exercises.

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 2018-2019 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Bossier, Caddo, Central, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, InspireNOLA, Jefferson, KDHSA (Jefferson Parish Charter), Lafayette, Lincoln, Livingston, Orleans, Ouachita, Pointe Coupee, Rapides, Recovery School District, RSD - Choice Foundation, RSD – FirstLine, RSD – NOCP, St. Charles, St. Mary, St. Tammany, Tangipahoa, Vermilion, West Baton Rouge, West Feliciana, Zachary. This review represents the work of current classroom teachers with experience in grades 3-12.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

Public Comments

There were no public comments submitted.