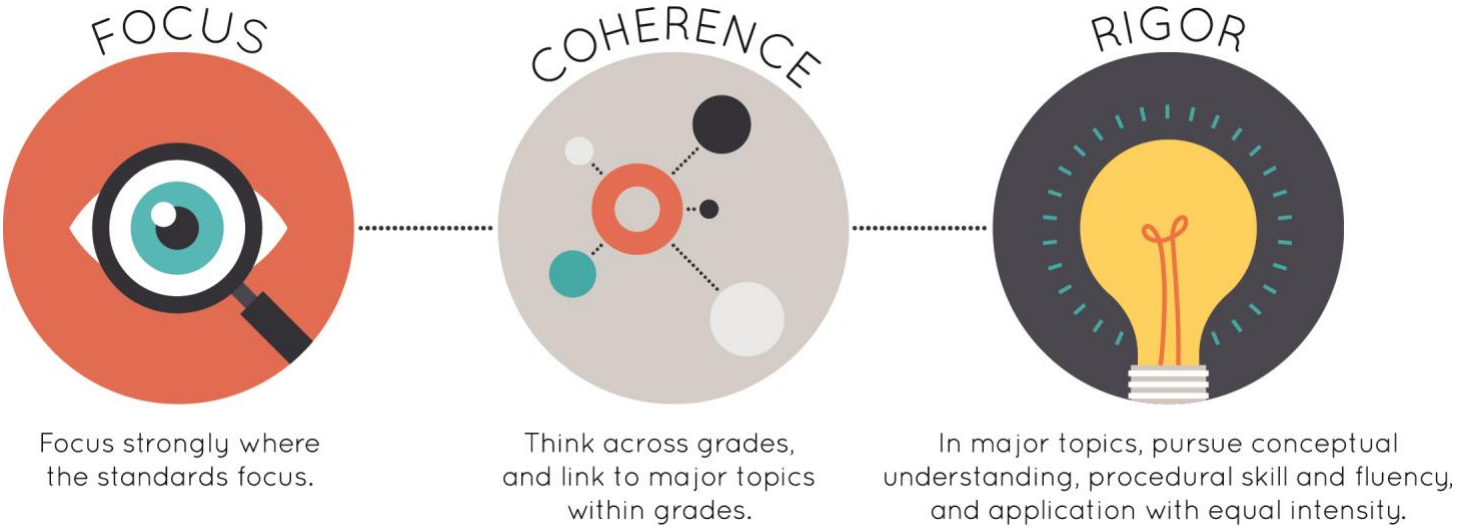
DEPARTMENT of EDUCATION
Louisiana Believes

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:



Title: **enVision**

Grade/Course: **Algebra I, Geometry, Algebra II**

Publisher: **Pearson Education**

Copyright: **2018**

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

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

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

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

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

Click below for complete grade-level reviews:

Algebra I (Tier 1) Geometry (Tier 1) Algebra II (Tier 1)

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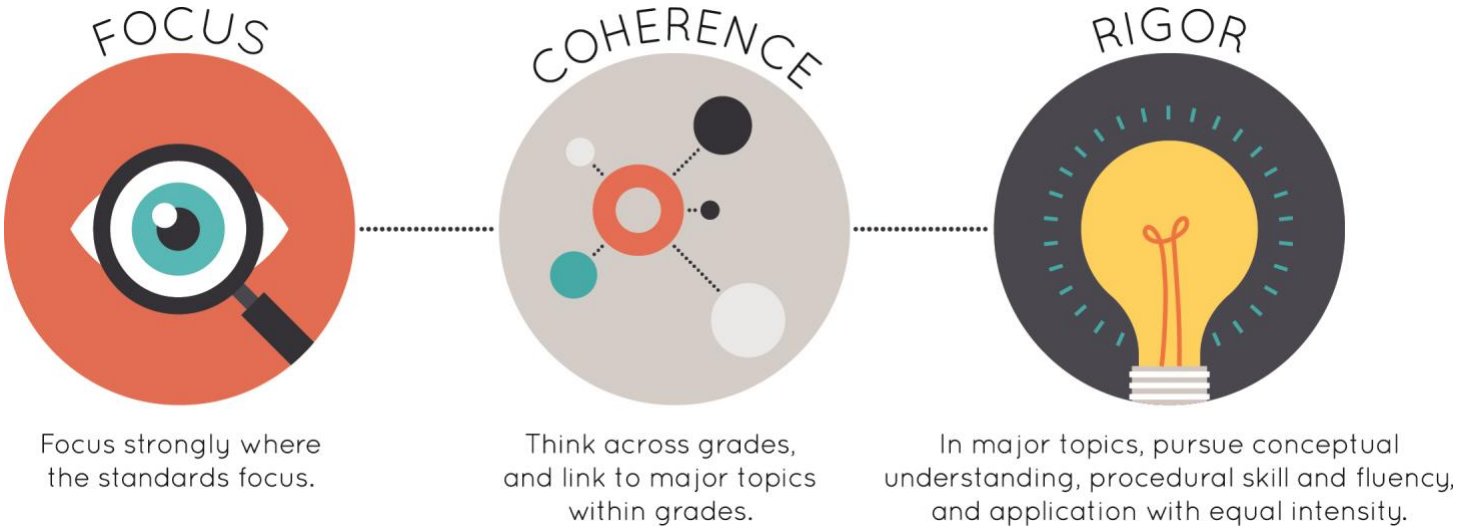

Title: **enVision**

Grade/Course: **Algebra I**

Publisher: **Pearson Education**

Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-negotiable)	
2. Consistent, Coherent Content (Non-negotiable)	
3. Rigor and Balance (Non-negotiable)	
4. Focus and Coherence via Practice Standards (Non-negotiable)	
5. Alignment Criteria for Standards for Mathematical Content	
6. Alignment Criteria for Standards for Mathematical Practice	
7. Indicators of Quality	

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

- Review the **required**[1] Indicators of Superior Quality for each **Non-negotiable** criterion.
- If there is a "Yes" for all **required** Indicators of Superior Quality, materials receive a "Yes" for that **Non-negotiable** Criterion.
- If there is a "No" for any of the **required** Indicators of Superior Quality, materials receive a "No" for that **Non-negotiable** Criterion.
- Materials must meet **Non-negotiable** Criterion 1 and 2 for the review to continue to **Non-negotiable** Criteria 3 and 4. Materials must meet all of the **Non-negotiable** Criteria 1-4 in order for the review to continue to Section II.
- If materials receive a "No" for any **Non-negotiable** Criterion, a rating of Tier 3 is assigned and the review does not continue.

If all Non-negotiable Criteria are met, then continue to **Section II: Additional Criteria of Superior Quality.**

- Review the **required** Indicators of Superior Quality for each criterion.
- If there is a "Yes" for all **required** Indicators of Superior Quality, then the materials receive a "Yes" for the additional criteria.
- If there is a "No" for any **required** Indicator of Superior Quality, then the materials receive a "No" for the additional criteria.

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

[1] **Required Indicators of Superior Quality** are labeled "**Required**" and shaded yellow. Remaining indicators that are shaded white are included to provide additional information to aid in material selection and do not affect tiered rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] 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 a large majority of class time to the major work of the grade. Overall, 67% of the lessons address the Major Standards with 43% focused on Major Standards and 24% focused on a combination of Major and Supporting/Additional Standards. There were 33% of the lessons focused on Supporting/Additional Standards and standards that are outside of the Algebra I Louisiana Student Standards for Math (LSSM). There were three lessons that addressed standards outside of the LSSM for Algebra I, including Topic 2, Lesson 4, which focuses on G-GPE.B.5; Topic 5, Lesson 3, which focuses on F-IF.B.7; and Topic 10, Lesson 7, which focuses on F-BF.B.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 appropriate course. Although some items assess standards outside of Algebra I, implementation suggestions for Louisiana teachers are provided for each item. These suggestions are found in the Correlation of Algebra I Assessment Items to the Louisiana Student Standards Mathematics document. Assessment guidance includes notes for

[2] For more on the major work of the grade, see Focus by Grade Level.

[3] 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
			items that "prepare" students for course-level standards and for items that assess beyond the grade level. Items that assess above grade level are noted as, "This assessment item aligns to Louisiana Algebra Standard 2" and includes the aligned Algebra 2 standard. For example, Question 1 of Benchmark Test 1, listed as aligned to LSSM A1: N-RN.B.3, asks students to determine the elements of a set. The correlation document provides a note for this item, states that the item "Prepares for A1: N-RN.B.3." The same guidance is provided for Question 2 of the same test, as well as Question 1 and 2 of the Topic 1 Test. Question 2 of Topic 6, Assessment A, asks students to "Solve the equation (3^x/2)(3^x/4)=3^6." However, the concept of solving equations with rational exponents is not addressed until Algebra 2 in LSSM A2: N-RN.A.2. The correlation document provides a note for this item stating, "This assessment item aligns to Louisiana Algebra 2 Standard A2: N-RN.A.2." The same guidance is provided for Questions 1, 3, 4, and 5 of the same assessment. Other examples can be found in the correlation document, such as Questions 27, 31, and 32 of the Mid-Year Assessment. Question 14 of Benchmark 1, Question 5 of Benchmark 2, and Question 5 of the Mid-Year Assessment are listed as

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			aligned to A1: A.CED.A.1 and asks students to solve an algebraic equation involving absolute value. This standard for Algebra 1 requires students to "Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear, quadratic, and exponential functions" per the Louisiana Student Standards: Companion Document for Teachers 2.0. Although they do not align with the standard, the assessment items do not assess beyond the course-level.
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. This is evident in Topic 3, Lesson 3-4, where lesson components connect Supporting LSSM F-LE.A.2 (constructing linear functions defining an arithmetic sequence given a graph, a description of a relationship, or input-output pairs) to Major LSSM F-IF.A.3 (the relationship between arithmetic sequences and linear functions). This is also seen in Topic 9 where Supporting LSSM A-APR.B.3 (identifying zeros of quadratic formulas) is connected to Major LSSM A-REI.B.4 (solving quadratic equations in one variable). Students understand that the x-intercepts of the quadratic equation are the zeros of the function, which are ultimately the solution for the equation. In Topic 9, Lesson 9-1, Example 1, students answer, "Why are the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			x-intercepts of the graph of a quadratic function important to the solution of a related equation?" This question, and its related graph, help build an understanding that wherever the function of the quadratic equation intercepts the x-axis, the point is a solution of the equation. Another example of a purposeful connection between supporting and major standards is seen in Topic 9, Lesson 9-2. Supporting LSSM A-SSE.B.3 is connected to Major LSSM A-SSE.A.2 to show that the solutions to quadratic equations can be found by factoring when the structure of the equation is understood. Example 2, asks students, "How can you use factoring to solve $x^2+9x=-20$?"
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a course, in cases where these connections are natural and important. This is evident in Topic 1, Lessons 1-2 and 1-3, where students solve linear equations and explain each step through reasoning about equality of numbers (LSSM A-REI.B.3) and create equations and inequalities in one variable and use them to solve problems (LSSM A-CED.A.1). Lesson 2 provides instruction related to conceptual understanding of equality of numbers and procedural skill in solving equations. In Example 4, students create and use linear equations to solve problems by providing a real-world example of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students purchasing concert tickets online. Students are given the order details and are asked to determine the cost of each ticket without the given discount. The structure of Lesson 3 is similar but includes problems where a variable term exists on both sides of the equation. In Topic 3, Lesson 3-2, the materials connect clusters A and B of the Interpreting Functions (IF) domain. The materials connect the concept of functions and using function notation to interpret the use of function in context during application. In Lesson 3-2, students are given problems where they learn how to write linear functions then apply that learning to write and evaluate functions after solving a real-life problem. Example 4 states, "A chairlift starts 0.5 miles above the base of a mountain and travels up the mountain at a constant speed. How far from the base of the mountain is the chairlift after 10 minutes?" For this question, students create a function, evaluate the function, and then interpret the function in the context of the problem. Another example of connecting two domains is evidenced in Topic 6, Lesson 6-3, where students build functions and construct function models to represent real-life situations. In Lesson 6-3, students determine whether exponential decay or exponential growth is described in problems and model this relationship graphically. Example 5 states, "Rich is comparing the cost of maintaining his car

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			with the depreciating value of the car. When will the cost and value be the same? Value starts at $20,000 and decreases by 15% each year. Maintenance costs $500 the first year and increases by 28% per year." This problem combines the work of building functions and constructing applicable models to represent the situation accurately.
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**Required** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop a conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards. For example, the essential questions for Topic 3, Lessons 3-11 are "What is a function?" and "Why are domain and range important in defining a function?" Students "Explore and Learn" through an initial situation where they determine a reasonable number of desks and rows required for study hall, connecting the concept to a simple real-life situation. Prior knowledge of domain and range is activated and extended in the lesson examples, where students identify these values in a table and in context. The lesson concept is summarized, followed by an opportunity to demonstrate understanding by responding to questions presented in the "Do You UNDERSTAND?" and "Do You KNOW HOW?" portions of the lesson. This lesson is dedicated to establishing a strong conceptual understanding of functions before application to linear, quadratic and exponential relationships. In Topic 7,

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			Lesson 7-1, students are introduced to the concept of polynomials (LSSM A-APR.A.1). In Example 3 of the lesson, students answer, "How can you use properties of operations to combine like terms to write the expression $3x^2 + 4x + 2x + x^2 + 5$ in standard form?" The teacher materials also provide discussion questions that elicit student reasoning about new content. For example, in the "Explore and Reason" activity of Lesson 7-3, students complete a table to understand the patterns when two binomials are multiplied. Teacher and lesson questions used to facilitate mathematical discourse include, "What patterns did you notice?" and "How is the table helpful?" These questions develop a conceptual understanding of how multiplying special cases of binomials result in a difference in the squares.
	Required **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the Standards. This is seen throughout the materials, especially with the standards that call for procedural skill and fluency in rigor. The materials provide sufficient practice so that students build on the skill of using properties of equality to find the value of variables. An example is seen in Topic 1, Lesson 1-4 which attends to procedural skill in rearranging formulas to highlight variables of interest, (LSSM A-CED.A.4). Example 2 states, "In a half hour,

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			Sarah is meeting her friends at the lake, 6 mi from her house. At what average speed must she ride her bike to get there on time?" Students use the distance formula (d=rt) and properties of equality to solve for the missing value, r. A second example of attending to procedural skill and fluency is seen in Lesson 1-2 Solving Linear Equations in Example 1, which states, "What is the value of x in 2(x+4)/3 - 8 = 32?" This question develops fluency in using properties of equality to isolate the variable to solve for its value. The Standards Practice for Week 17, 18, and 19 align to Topic 7: Polynomials and Factoring. Week 18 Standards Practice has students respond to a selected response question identifying the factored form of a polynomial (question 1), a constructed response where they multiply a binomial by itself and identify its degree (question 2), and an extended response where students utilize polynomial operations to model area of given figures (question 3). These items reflect the procedural skill and fluency required of A-APR.A.1. The curriculum also offers online Additional Practice. Topic 7: Topic Review allows students to practice the skill of performing operations of addition, subtraction, and multiplication (LSSM A-APR.A.1) with polynomials in Problem 7.8.3 through 7.8.15, followed by practice problems 7.8.16 through 7.8.19 and 7.8.22 through 7.8.35 where students determine the

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			greatest common factor of polynomial terms and factor polynomial expressions (LSSM A-SSE.A.2).
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**Yes**	The materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the course, afford opportunities for practice, and engage students in problem-solving. Each topic provides two different forms of a Performance Assessment that is aligned to content. For example, Topic 4: Systems of Linear Equations and Inequalities provides a Performance Assessment where students must demonstrate their understanding through a series of non-routine application problems. While planning a student dinner dance, students create and graph a system of equations to represent a fixed cost, and a rate per student cost, for two bands that will be charged by the caterer. They also graph and solve an inequality that represents the cost of photography services given certain constraints (LSSM A-CED.A.3). Embedded STEM activities provide students with an opportunity to make real-world connections, such as in the STEM activity, Topic 8: Quadratic Equations, where students use functions to model supply and demand that is related to researched companies. In Topic 8: Modeling in 3-Acts, students develop a

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			mathematical model that will help them determine if six basketball shots will actually make it in a basket. Students use their knowledge of quadratic functions to test and validate whether each shot will go in the basket. In another example, Topic 9, Lesson 9-4: Solving Quadratic Equations with Square Roots, the problem states "A cell phone tower has a guy-wire for support as shown. The height of the tower and the distance from the tower to where the guy-wire is secured on the ground are the same distance. What is the height of the tower?" Students use multiple steps in order to solve for missing distance. The materials include engaging application problems to enhance understanding of the topics presented.
	Required **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately in the materials. At the beginning of each Topic, a section entitled "Math Background: Rigor" highlights the three aspects of rigor that the students will encounter within the topic. In the Teacher Edition, each topic is broken into four steps: Step 1-Explore, Step 2-Understand and Apply, Step 3-Practice and Problem Solving, and Step 4-Assess and Differentiate. Step 1 allows the teacher to guide mathematical discourse, Step 2 provides examples of where conceptual understanding is built, Step 3 provides examples that focus on each component of rigor, and Step 4 provides assessment,

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			followed by differentiated interventions and extensions. This structure is evident in Topic 8: Quadratic Functions, as the initial lesson allows students to explore and reason about transformations of functions from a given parent function, identify relationships between functions, understand the parent function $f(x) = ax^2$ and how changing the value of *a* affects the graph, and application of quadratic functions, such as the "Flooring Sale" problem provided in Example 4 of Lesson 1. When a content standard is comprised of all three levels of rigor, as in Topic 1, Lesson 1-5: Solving Inequalities in One Variable (LSSM A-CED.A.1), the materials attend to it. Although the lesson emphasizes a blend of conceptual understanding and application, procedural skill is necessary to solve inequalities. In the Model and Discuss section of the lesson, students are instructed to "Rewrite your equation as an inequality to represent the situation where Skyler breaks the district record. How is the value of x in the inequality related to the value of x in the equation?" This question requires that students understand that rewriting the situation as an inequality would result in a minimum amount needed to satisfy the situation, but would not exclude other values. Further in the lesson, students apply their knowledge of solving inequalities in one variable in the context of a real-life problem. For

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			example, “Derek wants to order some roses online. For what number of roses is it less expensive to order from Florist A? From Florist B?” Students solve for x and interpret what the value of x represents in this real-world context.
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 and enrich the content standards of the course. Each topic addresses the math practices in the lessons. For example, the Teacher Edition Program Overview (page 56) states that the Math Practices and Processes provide “Descriptions of what mathematically proficient students can do with regard to two highlighted math practices and guiding questions to help students develop proficiency with the two highlighted practices.” Additionally, each topic presents students with Mathematical Modeling in 3-Acts. The Teacher Edition Program Overview document states, “These tasks present to students interesting, real-world situations and asks them to come up with a question to answer. They work in groups to determine what assumptions they can make, what information they need, and what mathematics can model the situation” (page 54). With an extra emphasis on Modeling with Mathematics (MP.4), the Modeling in 3-Acts provides the opportunity for students to engage in each of the Math Practices as they work through the task. Another example is in

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			the Topic 8 Teacher Overview, where MP.4, Model with Mathematics, and MP.7, Look For and Make Use of Structure, are identified. The materials state that "mathematically proficient students" are able to "use quadratic functions to model the trajectory of projectiles," and "apply what they have learned about the overall structure of linear and absolute value functions to the structure of quadratic functions."
Section II: Additional Criteria of Superior Quality			
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**	Materials provide all students extensive work with course-level problems. The review of materials from previous grades and course are clearly identified. At the start of the lesson, students work through several Example problems with the teacher who asks several questions along the way to help building new understanding. Previous math concepts are built upon and extended during this portion of the lesson. Two end-of-lesson formative assessments are given at the close of instruction, including Do You UNDERSTAND? which checks for conceptual understanding, along with Do You KNOW HOW? which checks for procedural skill and fluency. Students then complete the Practice & Problem Solving section independently. This section includes several problems that allow students to demonstrate understanding and application of skills and concepts. Students have the opportunity to utilize several interactive

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			learning aids including Help Me Solve This, View an Example, Videos links to Virtual Nerd Tutorials, and a Glossary. The teacher then has the option to assign a digital, auto-graded Lesson Quiz that differentiates the student assignment based on their performance. The Differentiation Library includes Reteach to Build Understanding, Enrichment, Additional Practice, Mathematical Literacy and Vocabulary, and Virtual Nerd Tutorials. All tools support course-level problems.
	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**	Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. Every topic includes a Math Background Coherence section that explains how concepts are connected to prior learning. For example, in Topic 11, Statistics, the Looking Back section explains how statistical displays, such as dot plots, box plots, and histograms, were used in middle school math to display data and how these displays will be used within the topic to interpret and compare data. It also mentions how students calculated measures of center and spread during middle school math and how these measures will be used to make inferences based on data within the topic. Lesson 11-1 begins with a review of statistical displays and then moves towards course-level standards within the Statistics and Probability domain throughout the rest of the topic. In Topic 1, Solving Equations and Inequalities, Lesson 1-3, students use 8th

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			grade concepts of using properties of equality to generate equivalent equations as they solve equations with variables on both sides. Within the same topic, in Lessons 1-5 and 1-6, students use 7th grade concepts of solving problems with inequalities to solve and graph compound and absolute value inequalities.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. For example, Topic 4, Systems of Linear Equations and Inequalities reflects clusters A-REI.C (Solve Systems of Equations) and A-REI.D (Represent and Solve Equations and Inequalities Graphically). More specifically, the Lesson Objective of Topic 4, Lesson 4-3 is "Solve systems of linear equations and prove that the sum of one equation and a multiple of the other produces a system with the same solutions as the original system." This learning objective reflects the language and intent of LSSM A-REI.C.5. In Topic 3, the learning objective for Lesson 3-1 is to "Understand that a relation is a function if each element of the domain is assigned to exactly one element in the range." This learning objective reflects the language and intent of LSSM F-IF.A.1. Within the same topic, in Lesson 3-5, Scatter Plots and Lines of Fit, the lesson objective is to "Fit a function to linear data in a scatter plot and use fitted functions to solve problems in the context of data." This learning objective reflects the language and

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			intent of LSSM. S.ID.B.6.
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**	Materials attend to the full meaning of each practice standard. The Math Practice Standards (MP) are meaningfully present throughout the materials in the form of assignments, activities, projects, classroom discussions, and problems/exercises, and are utilized to their full depth. Students have the opportunity to apply these practices throughout each lesson. Every lesson begins with an Explore section that supports conceptual understanding through problem solving. This Explore section contains one of three types of problems: Explore and Reason, Critique and Explain, and Model and Discuss. These problems support the continued use of the Math Practices throughout the materials. For example, Topic 2, Lesson 2-1 opens with a Model and Discuss section where students are given the following scenario: “Alani wants to buy a $360 bicycle. She is considering two payment options. The image shows Option A, which consists of making an initial down payment then smaller, equal-sized payments. Option B consists of making 6 equal payments over 6 weeks.” Students then answer the questions, “What factors should Alani take into consideration before deciding between Option A and Option B?” “Suppose Alani could modify Option A and still pay off the bike in 5 weeks. Describe the relationship

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			between the down payment and the weekly payment?" and "What do you notice about the relationship among the amount of the payment, the number of payments, and the time it takes to pay off the loan?" During this problem, student precisely communicate (MP.6) the relationships (MP.7) among the amount of the down payment, the number of payments, and the time it takes to pay off the loan. In addition, each lesson highlights specific Math Practices that are utilized within the lesson. For example, in Topic 2, Lesson 2-3, the highlighted Math Practices are Reason Abstractly and Quantitatively (MP.2) and Construct Viable Arguments (MP.3). In the lesson, students "attend to the meaning of quantities in the problem when they determine what the sign of the slope means about the quantities in mixture problems" (MP.2) as evidenced in Example 1. Students have the opportunity to utilize various practice standards in the Practice and Problem Solving portion of the lessons, beyond the highlighted Math Practice Standards of the lesson. The practices are highlighted in the student problems. For example, in Topic 5, Lesson 5-1, problem 4, students use MP.3 as they explain the error Janice made in the following problem, "Janice says that the vertex of the graph of g(x) = a|x| always represents the minimum value of the function g." In addition, in the Mathematical Modeling in 3 Acts sections of the materials, students have the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			opportunity to determine what resources and tools are needed in order to develop a solution to the problems (MP.5).
	Required **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Yes**	Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Throughout the lessons, the teacher prompts student thinking with several questions that help build conceptual understanding. As students apply the newly learned skills and concepts, students defend their solutions and strategies as they work through both the Example and Practice problems. For example, in Topic 6, Lesson 6-1, students are to "justify conclusions using math when they construct an argument explaining why the Quotient of Powers Property works with rational exponents." This is evidenced in Example 5 of the lesson as they solve the following problem: "Terrarium A and Terrarium B are cubes. The side length of Terrarium A is twice the length of Terrarium B. What is the value of x?" In solving this problem, students explain why it is helpful to set up the problem using a proportion, and then justify how the Quotient of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Powers Property helps simplify the equation. Additionally, in the Critique and Explain activity of the Student Companion of this same lesson, students solve the following problem: "Students are asked to write an equivalent expression for 3^{-3}. Casey and Jacinta each write an expression on the board. Casey $3^{-3} = -27$. Jacinta $3^{-3} = 1/27$." Students have to decide who is correct and explain why. Then they have to use reasoning skills to explain what is most likely the error that was made. In the Critique and Explain activity in Topic 4, Lesson 4-3, students are given two different methods to solve systems of equations. Students first discuss how the approaches are similar and how they are different. Then they discuss and explain an instance when it is more convenient to use one method over the other. Students also have several opportunities to conduct an error analysis in the Practice and Problem Solving Section of the Lessons. For example, in Topic 7, Lesson 7-6, practice problem 17, students "describe and correct the error a student made in factoring $2x^2 + 11x + 15$."
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Yes**	Materials include teacher-directed materials that explain the role of the Math Practice Standards (MP) in the classroom and in students' mathematical development. The Math Practices are described on a broad perspective at the start of the Teacher's Edition. They are described in terms of Algebra 1 and also include suggestions on how to help

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students develop proficiency with the standards. For example, to help students develop proficiency in MP. 8, Look For and Make Use of Structure, the materials suggest that teachers "encourage students to engage in mathematical discourse about solutions to find and express regularity in reasoning about concepts," and to "ask students to propose shortcuts or generalized methods for solving similar types of problems" as they uncover regularity within the mathematics. The Topic Overview for each topic includes a Math Practices and Processes section. This section highlights two Math Practices within the topic and provides specific examples of how the Math Practices are utilized within the Topic. For example, Topic 2 highlights MP. 3, Construct Viable Arguments and MP. 7, Look for and Make Use of Structure. Within the topic, students "construct viable arguments to explain how linear equations written in different forms can be equivalent." Students look for and make use of structure by connecting "the concept of finding the opposite reciprocal to their previous understandings of opposites and reciprocals," as well as making "observations about the relationship between a linear equation in point-slope form and a linear equation in slope-intercept form." Math practices are also noted in the margins of the example problems, as well as within the problems in the Practice and Problem Solving section in

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			both the Teacher and Student Editions. For example, in Topic 8, Lesson 8-1, Practice and Problem Solving, Question 12, "Use Structure" is bolded, followed by the problem "Use the table shown below to describe the intervals over which $f(x) = 15x^2$ is increasing and decreasing." Teachers are also given guidance on the use of the Math Practices within each lesson. For example, Topic 10, Lesson 10-3 includes a section Applying Math Practices and highlights MP. 4, Modeling with Mathematics and MP.6, Attend to Precision. This section further explains the use of the practices specifically to the skills and concepts within the lesson.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout the materials, teachers guidance is provided to help students gain proficiency in MP.6, Attending to Precision by encouraging clear and precise mathematical discourse, asking students to correctly identify symbols used in mathematical models, and asking students to describe alternative strategies used to find and check solutions. Specific guidance is also provided at the lesson level. For example, in Topic 10, Lesson 10-1, students apply MP.6 as they "communicate precisely when explaining the steps for calculating the value of a square root function for a specific value of x." Although this example is given, several other examples of MP.6 are present throughout the lesson, as well, as students use and are encouraged to use precise math language

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			when explaining concepts and defending solutions. For example, in the first problem, students are first introduced to the square root function f(x) = x. When asked why the x-values are 0, 1, 4, 9, and 16, the students are expected to use precise language. An example answer is given that states "They are perfect squares, so their square roots are integers." In the second example, students must use precise language as they describe translations of a graph. Examples include "it would shift the graph down, the domain remains unchanged, the minimum value of y is changed by the value of the constant." Evidence of MP.6 is also found in the Practice and Problem Solving Section of the lessons. For example, in Topic 7, Lesson 7-5, Do You UNDERSTAND, problem 4, students are prompted to communicate precisely as they answer and provide an explanation for the question, "To factor a trinomial $x^2 + bx + c$, why do you find the factors of c and not b?"
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**	In the materials, students are asked to produce answers in a variety of ways. At the start of each lesson, students complete the Explore section. Students produce various answers during this activity, such as solutions, equations, explanations, and graphs. Students are expected to produce a wide variety of answers during the lesson, as well. Students not only find solutions to problems, but often model their answers through use of graphs and equations. In the Practice and Problem Solving portion of the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			lesson, students answer several types of questions resulting in a variety of answers. Within the first section, titled Understand, students demonstrate an understanding of the math skills and concepts learned through multiple ways, such as by writing equations, constructing arguments, conducting error analyses, and using higher order thinking skills to explain relationships. In the next section, titled Practice, students demonstrate their ability to apply concepts and skills by finding solutions. Finally, in the Apply section, students apply skills and concepts to real world situations and multi-step problems. For example, in Topic 2, Lesson 2-3, in the Understand portion of the Practice and Problem Solving section, students work through a variety of problems. In problem 10, students write the standard form for each equation. In problem 11, students make an argument to show how two different forms of an equation are equivalent. In problem 12, students describe and correct an error a student made when finding the intercepts of the graph of a line. In the Practice section that follows, students identify the x and y intercepts, sketch the graph of equations, match lines to equations, and write equations in standard form. In the following Apply section, students are presented with real world context and solve multistep problems that involve modeling with mathematics, writing equations, and explaining answers.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			In addition, students participate in several Mathematical Modeling in 3 Acts activities throughout the materials. Students are presented with a video Hook. Students identify a problem and then write down the main question the student will answer about what they saw in the video. Students determine what resources are needed to develop a solution to answer the question. Finally, students watch a final video which reveals the answer. Student then analyze the results. For example, in Topic 5, students complete The Mad Runner. They are shown a video of a person running on uneven ground. A graph is shown to represent the relationship between speed and time, but does not match the scenario in the video. Students brainstorm some questions and then are asked, "What should the graph really look like?" Students gather the necessary information by watching the video again and by connecting concepts they have learned about functions, and then sketch a graph to correctly match the situation. The final video is played with the correct graph. The main question is discussed, along with how their graphs could possibly be correct even if it didn't exactly match the one from the video.
	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	**Yes**	Materials provide separate teacher materials that support and reward teacher study. At the start of each topic, in the Topic Overview, teachers are provided with several sections that support the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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.		instructional process. The Math Background Focus section provides the focus of the lesson with explanations and examples of concepts and skills within the topic. The Math Background Coherence section explains how the concepts are connected throughout the curriculum and across grade/course levels. This section includes a Looking Back section that explains how the topic connects to what students learned in earlier grades, an In This Topic section that explains how content is connected within the topic, and a Looking Ahead section that explains how the topic is connected to what students will learn later in the materials and beyond the course level. The Math Background Rigor section details the conceptual understanding, procedural skill and fluency, and applications emphasized in the topic. The Math Practices and Processes section that highlights Math Practices within the topic. A lesson Planner is also provided along with Topic Resources including Digital Lesson Coursewhere, Teaching Resources, and Digital Topic Support for Teachers. Instructional Suggestions for English Language Learners, Advanced Students, and Struggling Students are provided throughout the materials and specific to the math content within the lessons. Teacher questions are provided to help elicit student thinking and to promote the use of the Math Practice Standards. The materials also provide Professional Development Videos that emphasize

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			important mathematical skills and concepts in the topics.
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps those students meet the same standards as all other students. Teacher guidance for supporting English Language Learners is included throughout the lessons and provides instructional suggestions and questions tied to specific examples within the lesson. For example, Topic 2, Lesson 1, Example 4, teachers are given 3 pieces of instructional suggestions based on the level of the student. Writing suggestions are given for students at a "Beginning" level, Speaking suggestions are given for students at an "Intermediate" level, and Reading suggestions are given for students at an "Advanced" level. For Speaking, materials suggest that teachers challenge students to stand on one leg in order to define balance and then relate it to a mathematical equation. A similar example is found in Topic 6, Lesson 6-1. The materials suggest that students share answers to questions about the word base, relating it back to the side of a polygon in Geometry and the base-10 system, to how base is used to describe the power of a number. Support is also provided for advanced students, as well as struggling students. For example, in Topic 2, Lesson 2-3, as students are writing and graphing linear equations in standard form, instructional suggestions are given for both

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			advanced and struggling learners. For advanced learners, materials suggest that teachers challenge these students to write two given equations (involving fractions and decimals) in standard form, graph the equations using the x and y intercepts, and then explain the steps they took to put the equations in standard form. For struggling students, the materials suggest having these students practice writing the equation for a line in standard form, given in specific context so students can make sense of the numbers. Digital tools are also provided to assess student learning to determine the need for intervention. Through these assessments, students are auto-assigned differentiated options, including Remediation, Additional Practice, and Enrichment. Students can also be placed on individualized study plans based off of each Topic Readiness Assessment administered at the start of a Topic.
	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. Each lesson is broken into 4 sections, including Explore, Understand and Apply, Practice and Problem Solving, and Assess and Remediate. The lesson opens with the Explore section that allows students the opportunity to apply conceptual understanding in problem solving. The teacher sets up the problem by asking questions to promote reasoning and problem solving. Students persevere through and solve the problem on their

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			own, and then, as a class, they discuss the problem and the solution through mathematical discourse. This section is followed by the Understand and Apply section where new concepts and skills are learned through several Example problems. As the students work through this section, the teacher asks several questions with the intent of deepening understanding of the new math. Additional examples are provided for students who need more practice before attempting the work independently. Students then complete the Practice and Problem Solving section. In this section, students apply the newly learned skills and concepts as they complete problems independently. The problems provide the opportunity for students to demonstrate understanding of the newly learned math and their ability to find and explain solutions.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Beginning with Topic 1, and included in every Topic thereafter, a Math Background Coherence section shows the connections from previous grade levels, connections within the topic, and connections made in future learning, both within the course and beyond. The breakdown of the coherence that exists within the materials reflects the natural coherence within the standards. The materials build on and extend student understanding from middle school math. This is evidenced in Topic I, Solving

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Equations and Inequalities, Lesson 1-1, as students use 8th grade concepts about rational and irrational numbers and extend this concept to compare and order rational and irrational numbers. Within Topic 1, students build upon and extend their ability of solving equations with rational numbers to include all real numbers. As students move through the topic, the materials are structured and scaffolded to support a cohesive learning progression from one lesson to the next. In Lesson 1-2 and Lesson 1-3, students create and solve linear equations. In Lesson 1-4, students use the properties of equality to solve literal equations. In Lessons 1-5 and 1-6, students connect the process of solving equations to solving inequalities. Moving forward within the materials, students build upon and extend this understanding from Topic to Topic as they write linear functions in Topic 2, solve systems of linear equations in Topic 4, and then, in Topic 9, students apply what they learned about solving systems of linear equations to solve nonlinear systems of equations with substitution.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	Materials support the uses of technology as called for in the Standards. Technology is utilized throughout the materials with Embedded Interactives, Additional Practice problems, Online Practice powered by MathXL for School, an English/Spanish Glossary, Digital Math Tools, and the Mathematical Modeling in 3 Acts. Students also complete a Topic Readiness

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Assessment online which is auto-scored to develop an Individualized Study Plan based on student performance and is designed to support students' specific learning needs. Digital interactives provided by Desmos are used within the materials. This tool is embedded within the Student Realize Reader as needed within the lesson. This is evidenced in Topic 9. In the STEM Project, students utilize the embedded digital tools to combine the horizontal and vertical velocities of a projectile to determine its path. Students also used technology where called for in the standards. For example, in Lesson 9-1, students "use a graphing calculator to make a table of values to approximate or solve a quadratic equation," which reflects LSSM F-IF.C.7.

FINAL EVALUATION

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" 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-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	**Yes**	The materials devote a large majority of class time to major work of the grade. Although some of the assignment items include standards outside of Algebra I, implementation suggestions for Louisiana teachers are provided for these assessments items.

[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	2. Consistent, Coherent Content	**Yes**	Focus and coherence are enhanced through meaningful connections between supporting and major content, as well as through the 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.
	4. Focus and Coherence via Practice Standards	**Yes**	The materials use practice standards to enrich and strengthen the focus of the content standards.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The materials foster focus and coherence by linking topics across domains and clusters and across grades/courses, staying consistent with the progressions within the Standards.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards.
	7. Indicators of Quality	**Yes**	The materials provide teachers and students with a variety of tools needed to meet the expectations of the Standards.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

[5] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier I rating.

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

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

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

The 2019-2020 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Beauregard, Bossier, Caddo, Calcasieu, Caldwell, City of Monroe, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, Jefferson, Jefferson Davis, KIPP New Orleans, Lafayette, Lafourche, Lincoln, Livingston, LSU Lab School, Orleans, Orleans/Lusher Charter School, Ouachita, Plaquemines, Pointe Coupee, Rapides, Richland, RSD Choice Foundation, St. John the Baptist, St. Charles, St. James, St. Landry, St. Mary, St. Tammany, Tangipahoa, Vermillion, Vernon, West Baton Rouge, West Feliciana, and Zachary. This review represents the work of current classroom teachers with experience in grades 6-12.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

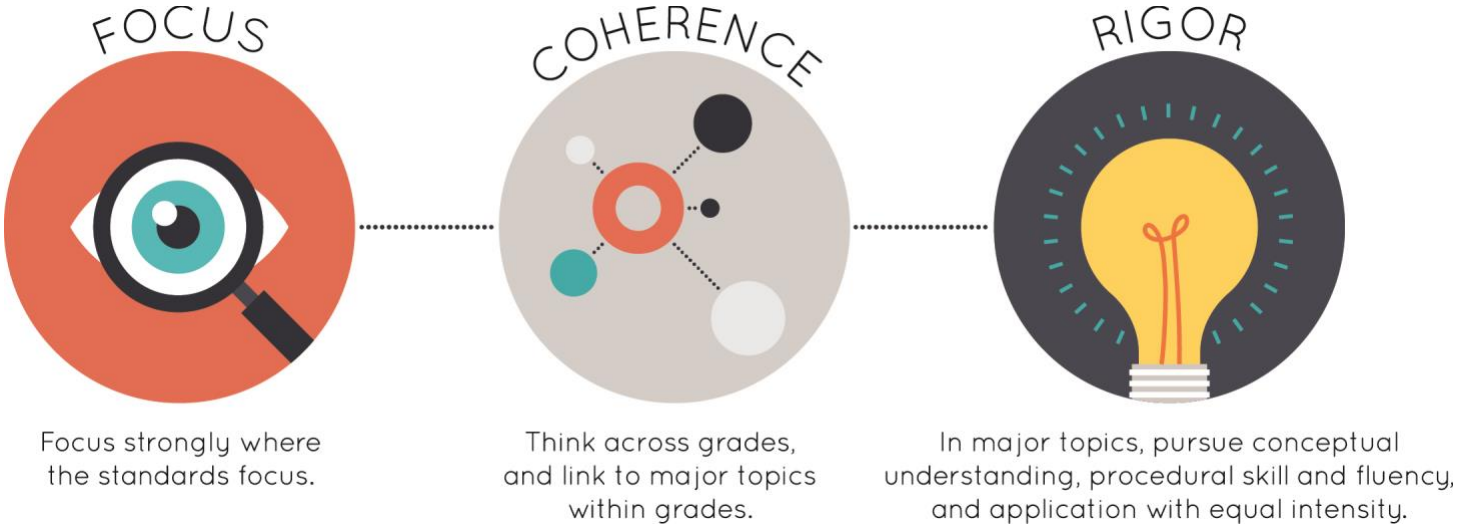
Public Comments

There were no public comments submitted.

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:



Title: **enVision**

Grade/Course: **Geometry**

Publisher: **Pearson Education**

Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-negotiable)	
2. Consistent, Coherent Content (Non-negotiable)	
3. Rigor and Balance (Non-negotiable)	
4. Focus and Coherence via Practice Standards (Non-negotiable)	
5. Alignment Criteria for Standards for Mathematical Content	
6. Alignment Criteria for Standards for Mathematical Practice	
7. Indicators of Quality	

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

- Review the **required**[1] Indicators of Superior Quality for each **Non-negotiable** criterion.
- If there is a "Yes" for all **required** Indicators of Superior Quality, materials receive a "Yes" for that **Non-negotiable** Criterion.
- If there is a "No" for any of the **required** Indicators of Superior Quality, materials receive a "No" for that **Non-negotiable** Criterion.
- Materials must meet **Non-negotiable** Criterion 1 and 2 for the review to continue to **Non-negotiable** Criteria 3 and 4. Materials must meet all of the **Non-negotiable** Criteria 1-4 in order for the review to continue to Section II.
- If materials receive a "No" for any **Non-negotiable** Criterion, a rating of Tier 3 is assigned and the review does not continue.

If all Non-negotiable Criteria are met, then continue to **Section II: Additional Criteria of Superior Quality.**

- Review the **required** Indicators of Superior Quality for each criterion.
- If there is a "Yes" for all **required** Indicators of Superior Quality, then the materials receive a "Yes" for the additional criteria.
- If there is a "No" for any **required** Indicator of Superior Quality, then the materials receive a "No" for the additional criteria.

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

[1] **Required Indicators of Superior Quality** are labeled "**Required**" and shaded yellow. Remaining indicators that are shaded white are included to provide additional information to aid in material selection and do not affect tiered rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] 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 a large majority of class time to the major work of the grade. Overall, 77% of the instructional days are spent on the major work of the grade for Geometry with 48% of the instructional days spent on Major Standards, 29% on a combination of Major and Supporting/Additional standards, and 24% on Supporting/Additional standards.
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	The instructional materials spend minimal time on content outside of the appropriate course. In assessment materials, assessment components do not make students/teachers responsible for any topics before the course in which they are introduced. Although some items assess standards outside of Geometry, implementation suggestions for Louisiana teachers are provided for each item. These suggestions are found in the Correlation of Geometry Assessment Items to the Louisiana Student Standards Mathematics document. Items that assess standards that are outside of the Louisiana Student Standards for Mathematics (LSSM) for Geometry include notes that convey, “This item does not assess a Louisiana Content Standard for Geometry.” For example, in

[2] For more on the major work of the grade, see Focus by Grade Level.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the Topic 8 Assessment, Items 9-16 are labeled, "This item does not assess a Louisiana Content Standard for Geometry." In the Topic 2 Assessment, Item 1 is labeled, "Reviews A1: A-CED.A.2." In Benchmark Test 1, Item 9 is labeled, "Prepares for A2: F-BF.A.2." In the Topic 4 Assessment, Items 3 and 4 are labeled, "Extends A2: A.CED.A.1." Additionally, the following lessons are not aligned to LSSM for Geometry and therefore do not have an aligned standard attached to the lesson: Topic 1, Lessons 4-6, Topic 5, Lessons 4, Topic 6, Lessons 1-2, Topic 8, Lessons 3-4, and Topic 12, Lessons 3-6.
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. This is evident in Topic 3, Transformations, Lessons 1 through 3, where lesson components connect Supporting LSSM G-CO.A.2,4,5 (transformations, rotations, reflections) with Major LSSM G-CO.B6 (rigid motions). For example, in Lesson 3-1, students develop an understanding of rigid motions as they define a reflection as a transformation that reflects each point in the preimage across a line of reflection and learn that a reflection is a type of rigid motion because the length and angle measurement are preserved. Students apply this same understanding of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			translations and rotations in Lessons 2 and 3. This is also evidenced in Topic 4, Lesson 1 where Supporting LSSM G-CO.A.5 (specify a sequence of transformations that will carry a given figure onto another) is connected to Major LSSM G-CO.B6 (use descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure, use the definition of congruence in terms of rigid motions to decide). For example, in Additional Example 3, "Students explore using rigid motion to determine if figures are congruent." Students look at two figures to determine if they are congruent and then provide a composition of rigid motions that map the first figure, ABCDE, to the second figure, A' B' C' D' E'. A sample response is given, "reflection over the y-axis, translation down 5 units."
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a course, in cases where these connections are natural and important. This is evident in Topic 6, Quadrilaterals and Other Polygons, Lesson 6-5, Properties of Special Parallelograms. Beginning in Lesson 6-1, The Polygon Angle-Sum Theorems, students develop an understanding that the sum of the interior angles in a convex polygon is determined by the number of sides of the polygon (LSSM G-CO.C.11).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			This concept is used and extended upon throughout the topic as students build an understanding of the properties of various types of quadrilaterals. In Lesson 6-5, students explore and apply the properties of special parallelograms, rhombuses, rectangles and squares to solve problems (LSSM G-SRT.B.5) connecting the Congruence (G-CO) and Similarity, Right Triangles, and Trigonometry (G-SRT) domains. For example, students solve the following problem, “A volunteer group is planting a butterfly garden in a portion of the rectangular park. What is the perimeter of the butterfly garden?” Students use diagonals to help solve the problem. This is also evidenced in Topic 2, Parallel and Perpendicular Lines, Lesson 2-1, Parallel Lines. In the lesson, students first define angle pairs formed by parallel lines and a transversal (LSSM G-CO.A.1) then learn and apply theorems to find the measures of angles formed by parallel lines and a transversal (LSSM G-CO.C.9), connecting two clusters (A. Experiment with transformations on the plane and C. Prove and apply geometric theorems) of the same domain (Congruence). Students begin the lesson by identifying angle relationships created when parallel lines are intersected by a transversal and then find angle measurements based upon those angle relationships (corresponding angles, alternate interior angles, alternate

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			exterior angles). After students explore the various angle theorems, students prove these theorems by providing proofs involving statements and reasoning.
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**Required** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop a conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards. For example, in Topic 1, Foundations of Geometry, Lesson 1-1, Measuring Segments and Angles, students work to answer the Essential Question, "How are the properties of segments and angles used to determine their measure?" In the Understand and Apply section of the lesson, students first discuss the undefined terms, "point," "line," and "plane," then use their understanding of these terms to understand new terms such as "segment," "ray," "opposite rays," and "angle," aligning to the conceptual understanding expectation of LSSM G-CO.A.1. Students use the definitions of these terms to help understand and find segment lengths. This standard is further built upon in Topic 2, Parallel and Perpendicular Lines, Lesson 2-1, Parallel Lines, where students define parallel lines using the terms "point" and "line" and then prove theorems about lines and angles, and use theorems to find the measures of angles formed by parallel lines and a transversal (LSSM G-CO.C.9). Another example is evidenced in Topic 7, Similarity, Lesson 7-1, Dilations, where

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students develop the conceptual understanding that similar figures have congruent angles and proportional sides, and are the result of a similarity transformation, such as in dilations (LSSM G-SRT.A.1). The Essential Question states, "How does a dilation affect the side lengths and angle measures of a figure?" Students begin the lesson by comparing different sized decal stickers of the same image, considering the shape and angle measures of the stickers. As students move through the lesson, they learn that when a figure is dilated, angle measures are preserved but lengths change according to the scale factor. The teacher is prompted to ask questions to help build this concept. For example, as students complete the following problem: "Rectangle W' X' Y' Z' is a dilation with center P of WXYZ. How are the side lengths and angle measures of the two figures related?" During the problem, the teacher asks, "What does the ratio of the image side length to the corresponding preimage side length represent? How can you see this in the diagram?" and "Why does it make sense that you divide an image side length by the corresponding preimage side length to find the scale factor and not the other way around?"
	Required **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the Standards. This is seen throughout the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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.		materials, especially with the standards that call for procedural skill and fluency in rigor. The materials provide sufficient practice so that students build on fluency skills as shown in the practice section at the end of the lesson. Topic 9, Coordinate Geometry, Lesson 9-1, Polygons in the Coordinate Plane, attends to procedural skill and fluency as students use a coordinate plane and the properties of geometric figures to classify triangles and quadrilaterals (LSSM G-GPE.B.4) and use the midpoint, distance, and slope formulas to find the length of segments of polygons drawn on the coordinate plane (LSSM G-GPE.B.7). The activities reflect the procedural expectation in both of the standards. In Example 4, students determine if quadrilateral ABCD is a trapezoid by using the slope formula to determine if only one pair of opposite sides is parallel. Students find the slope of all four sides to determine that since only one pair of opposite sides are parallel, quadrilateral ABCD is a trapezoid. Students continue to build fluency and procedural skill as expected of the standard using the Practice and Problem Solving section of the lesson as students determine lengths of lines, if given polygons are scalene, isosceles, or equilateral triangles and types of parallelograms when given coordinates and figures on a coordinate plane. In Topic 5, Relationships in Triangles, Lesson

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			5-2, Bisectors in Triangles, students find the circumcenter and incenter of triangles, and then graph the inscribed and circumscribed circles of the triangle (LSSM G-GO.D.13). In Example 5, students use the figure of a triangle shown to answer the following questions: “a. If m∠BAF=15° and m∠CBF=52°, what is m∠ACF?” and “b. If EF=3y-5 and DF=2y+4, what is the distance from F to AB?” Students continue practicing similar problems in the Practice section at the end of the lesson.
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**Yes**	The materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the course, afford opportunities for practice, and engage students in problem-solving. In Topic 11, Two and Three Dimensional Models, Lesson 11-3, Pyramids and Cones, students use cones and pyramids to model real-world problems (LSSM G-GMD.A.1). In Example 4, students complete the following problem: “A restaurant sells smoothies in two sizes. Which size is a better deal?” Students are given the dimensions and prices of both smoothies. The volume of each smoothie is approximated as the volume of a cone. Students first calculate the height of each cone using the Pythagorean Theorem,

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			then calculate the volume of each cone, and finally calculate the cost per cubic centimeter for each size. Students interpret the answer to find that the large smoothie costs less per cubic centimeters, making it the better deal. Students continue to use volume formulas to solve more real-world, non-routine problems at the end of the lesson in the Apply section in problems 25-28. In Topic 8, Right Triangles and Trigonometry, Lesson 8-1, students use the Pythagorean Theorem and its converse (LSSM G-SRT.C.8). In Example 2, students solve the following problem: "a. To satisfy safety regulations, the distance from the wall to the base of a ladder should be at least one-fourth the length of the ladder. Did Drew set up the ladder correctly? The floor, the wall, and the ladder form a right triangle." To solve this problem, students first find the length of the ladder using Pythagorean Theorem. Students then find ¼ the length of the ladder and determine that Drew set up the ladder correctly. Students continue working with contextual, multi-step problems 23-25 in the Apply section found at the end of the lesson.
	Required **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately in the materials. At the beginning of each Topic, a section entitled "Math Background: Rigor" highlights the three aspects of rigor that the students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			will encounter within the topic. In the Teacher Edition, each topic is broken into four steps: Step 1-Explore, Step 2-Understand and Apply, Step 3-Practice and Problem Solving, and Step 4-Assess and Differentiate. Step 1 allows the teacher to guide mathematical discourse, Step 2 provides examples of where conceptual understanding is built, Step 3 provides examples that focus on each component of rigor, and Step 4 provides assessment, followed by differentiated interventions and extensions. Teacher guidance also provides information about the components of rigor that are highlighted within each lesson. For example, Topic 9, Coordinate Geometry, Lesson 9-2, Proofs Using Coordinate Geometry, emphasizes conceptual understanding and procedural skill and fluency. In the lesson, students use concepts from algebra to plan and complete proofs using coordinate geometry to find lengths and slope (LSSM G-GPE.B4). The lesson begins with a Critique and Explain problem as students evaluate two methods that prove two segments meet at right angles which prepares students for using algebraic methods as they complete coordinate geometry proofs in the lesson. By the end of the lesson, students are able to plan and write a coordinate proof. For example, in the practice section of the lesson, students write a plan for

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			coordinate proof for the following problems, "18. The diagonals of a parallelogram that is not rectangle are not congruent." and "25. The length of the median to the hypotenuse of a right triangle is half the length of the hypotenuse." When content standards are comprised of all three levels of rigor, as in Topic 12, Probability, Lesson 12-2, Conditional Probability, the materials attend to it. Although the lesson emphasizes a blend of conceptual understanding and application as students relate understanding of conditional probability to understanding of independence of events in real world situations, procedural skills are necessary to calculate the conditional probability using the formula P(A and B)P(B)(LSSM S-CP.A.3-6).
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 and enrich the content standards of the course. Each topic addresses the Math Practices (MP) in the lessons. For example, the Teacher Edition Program Overview states that the Math Practices and Processes provide "Descriptions of what mathematically proficient students can do with regard to two highlighted math practices and guiding questions to help students develop proficiency with the two highlighted practices." Additionally, each topic presents students with Mathematical Modeling in 3 Acts. The

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			Teacher Edition Program Overview document states, “These tasks present to students interesting, real-world situations and ask them to come up with a question to answer. They work in groups to determine what assumptions they can make, what information they need, and what mathematics can model the situation.” With an extra emphasis on Modeling with Mathematics (MP.4), the Modeling in 3 Acts provides the opportunity for students to engage in each of the Math Practices as they work through the task. Another example is evidenced in the Topic 3, Transformations, Teacher Overview, where MP.4, Model with Mathematics, and MP.7, Look for and Make Use of Structure, are identified. The materials state that “mathematically proficient students” are able to “interpret and apply transformations by creating real-world context that requires transformations, and use geometric transformations to solve problems such as design problems,” and “identify transformations in order to devise a plan for finding missing information, such as vertices, and recognize the significance of lines of symmetry in order to draw transformations,” supporting content standards such as LSSM G-CO.A.2-6.
Section II: Additional Criteria of Superior Quality			

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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**	Materials provide all students extensive work with course-level problems. The review of materials from previous grades and courses are clearly identified. At the start of the lesson, students work through several Example problems with the teacher who asks several questions along the way to help build new understanding. Previous math concepts are built upon and extended during this portion of the lesson. Two end-of-lesson formative assessments are given at the close of instruction, including Do You UNDERSTAND? which checks for conceptual understanding, along with Do You KNOW HOW? which checks for procedural skill and fluency. Students then complete the Practice & Problem Solving section independently. This section includes several problems that allow students to demonstrate understanding and application of skills and concepts. Students have the opportunity to utilize several interactive learning aids including Help Me Solve This, View an Example, Videos links to Virtual Nerd Tutorials, and a Glossary. The teacher then has the option to assign a digital, auto-graded Lesson Quiz that differentiates the student assignment based on their performance. The Differentiation Library includes Reteach to Build Understanding, Enrichment, Additional Practice, Mathematical Literacy and Vocabulary, and Virtual Nerd

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			Tutorials. All tools support course-level problems.
	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**	Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. Every topic includes a Math Background Coherence section that explains how concepts are connected to prior learning. For example, in Topic I, Foundations of Geometry, the Looking Back section explains how students developed the definitions of terms such as lines, segments, rays, and angles in previous grade levels that will be used in the topic as they write proofs. It also mentions how students previously identified patterns in sequences which will help them use "inductive reasoning to form and test conjectures about patterns." Additionally, in Topic 1, students "use properties of real numbers to analyze conditional statements," extending upon their understanding of relationships among sets of numbers examined in Algebra I. Another example is evidenced in Topic 11, Two- and Three-Dimensional Models, as students use volume formulas learned in earlier grades for figures such as prisms, cylinders, pyramids, cones, and spheres, and extend their learning to understand oblique figures and apply the volume formulas in problem solving.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. For example,

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			objectives in Topic 2, Parallel and Perpendicular Lines reflect clusters G-CO.A (Experiment with transformations in the plane) and G-CO.A (Prove and apply geometric theorems). More specifically, the learning objectives of Topic 2, Lesson 2-1 include, "Define parallel lines using the undefined terms point and line," "Prove theorems about lines and angles," and "Use theorems to find the measures of angles formed by parallel lines and a transversal." These learning objectives reflect the language and intent of LSSM G-CO.A.1 and G-CO.C.9. Another example is found in Topic 7, Similarity, Lesson 7-2, Similarity Transformations. The learning objectives state, "Understand that two figures are similar if there is a similarity transformation that maps one figure to the other," "Identify a combination of rigid motions and dilation that maps one figure to a similar figure," and "Identify the coordinates of an image under a similarity transformation." These learning objectives reflect the language and intent of LSSM G-SRT.A.1 and G-SRT.A.2.
6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach	**Required** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Yes**	Materials attend to the full meaning of each practice standard. The Math Practice Standards (MP) are meaningfully present throughout the materials in the form of assignments, activities, projects, classroom discussions, and problems/exercises, and are utilized to their full depth. Students have the opportunity to apply these practices

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
which are not included in the Standards. ☒ Yes ☐ No			throughout each lesson. Every lesson begins with an Explore section that supports conceptual understanding through problem solving. This Explore section contains one of three types of problems: Explore and Reason, Critique and Explain, and Model and Discuss. These problems support the continued use of the Math Practices throughout the materials. For example, in Topic 7, Similarity, Lesson 7-2, Similarity Transformations, students reason abstractly and quantitatively (MP.2) as they explain how they would decide which transformations are used to create an image from a preimage in the Critique and Explain Section of the lesson. In each topic, students engage in Mathematical Modeling in 3 Acts in which they "develop a mathematical model to represent and propose a solution to a problem situation." For example, in Topic 12, Probability, students use mathematical modeling to represent and solve a problem situation involving probability as they determine who will win a competition involving coins and number cubes (MP.4, Model with mathematics). In Topic 6, Quadrilaterals and Other Polygons, Lesson 6-1, The Polygon Angle-Sum Theorems, students use appropriate tools strategically (MP.5), as they consider drawing a diagram or using a formula in finding the interior angle sum of an n-gon with more than 10 sides. A

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			sample student response includes, "It would be easier to use the formula than to draw all of the triangles in a many-sided polygon." In Topic 1, Foundations of Geometry, Lesson 1-3, Midpoint and Distance, students look for and make use of structure (MP.7) as they find the length of a segment, its midpoint, and other partitions by using the structure of the coordinate plane. In Topic 2, Parallel and Perpendicular Lines, Lesson 2-4, students look for and express regularity in repeated reasoning (MP.8) as they explain how they can use slope to determine if two lines are perpendicular, parallel, or neither. The following sample student response is included, "Find the slope of both lines. If the slopes are equal, the lines are parallel. If the product of the slopes is -1, the lines are perpendicular. If neither is true, the lines are neither parallel nor perpendicular."
	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**	Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Throughout the lessons, the teacher prompts student thinking with several questions that help build conceptual understanding. As students apply the newly learned skills and concepts, students defend their solutions and strategies as they work through both the Example and Practice

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			problems. For example, Topic 8, Right Triangles and Trigonometry, Lesson 8-2, Trigonometric Ratios, opens with a Critique and Explain section where students are given the following scenario: "A teacher asked students to write a proportion using the lengths of the legs of the two right triangles" along with the two triangles and two student responses. Students then answer the following questions, "A. Do you think that the proportion that Diego wrote is correct? Explain. B. Do you think the proportion that Rebecca wrote is correct. Explain." Students use precise terminology as they construct viable arguments as they determine whether each student is correct and provide reasoning for their determination. Constructing viable arguments and critiquing the arguments of others is also evident throughout Topic 6, Quadrilaterals and Other Polygons. As stated in the Teacher Overview, "Mathematically proficient students use assumptions, definitions, and previously learned theorems in constructing proofs about polygons, make conjectures about properties of quadrilaterals and reason logically to explore the truth of the conjectures, determine whether an argument about a quadrilateral makes sense, and justify solutions for angle measures or segments in quadrilaterals with mathematical ideas." More specifically, in Lesson 6-1, The Polygon

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			Angle-Sum Theorems, students engage in an error analysis as they complete the following problem, "Jayesh makes the calculation shown to find the measure of each interior angle of a regular nonagon. What is his error?" Additionally, in Lesson 6-6, Conditions for Special Parallelograms, Example 4, students construct arguments about whether each parallelogram is a rhombus, a square, or a rectangle.
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Yes**	Materials include teacher-directed materials that explain the role of the Math Practice Standards (MP) in the classroom and in students' mathematical development. The Math Practices are described on a broad perspective at the start of the Teacher's Edition. They are described in terms of Geometry and also include suggestions on how to help students develop proficiency with the standards. For example, to help students develop proficiency in MP.5, Use appropriate tools strategically, the material suggest that teachers "encourage student to think about the tools that might be used to solve a given problem and then justify their selection of a tool" and "encourage students to estimate a solutions before they begin to solve the problem to help them monitor whether their solution path is helping them reach an accurate solutions." The Topic Overview for each topic includes a Math Practices and Processes section. This section highlights two Math Practices

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			within the topic and provides specific examples of how the Math Practices are utilized within the Topic. For example, Topic 6, Quadrilaterals and Other Polygons, highlights, MP.1, Make sense of problems and persevere in solving them, and MP.3, Construct viable arguments and critique the arguments of others. Within the topic, students "plan a solution pathway when finding missing angle measures or segment lengths in polygons," (MP.1) and "Determine whether an argument about a quadrilateral makes sense" (MP.3). Math practices are identified at the start of each lesson within the topic. For example, in Topic 10, Circles, Lesson 10-1, Arcs and Sectors, MP.2, Reason abstractly and quantitatively, and MP.6, Attend to precision, are emphasized in the lesson. Within the lesson, "students understand the relationships between arc length and circumference and between sector area and circle area," (MP.2) and "use precise terminology when discussing arcs, sectors, segments, and central angles" (MP.6). Math Practices are also noted in the margins of the example problems, as well as within the Practice and Problem Solving sections. In Topic 10, Lesson 10-3, Chords, in the Explore and Reason section, guidance is provided for teachers to encourage students to use structure when identifying and explaining what is true about the radii of both structures

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			(MP.7). In Topic 5, Relationships in Triangles, Lesson 5-3, Medians and Altitudes, Practice section, students reason abstractly and quantitatively as they "Draw several different types of triangles and compare the locations of the centroid and the circumcenter of each triangle," and then answer the question, "What conjecture can you make about the type of triangle that has a common centroid and circumcenter. Explain." (MP.2)
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout the materials, teachers guidance is provided to help students gain proficiency in MP.6, Attending to precision, by encouraging clear and precise mathematical discourse, asking students to correctly identify symbols used in mathematical models, and asking students to describe alternative strategies used to find and check solutions. Specific guidance is also provided at the lesson level. For example, in Topic 3, Transformations, Lesson 3-1, Reflections, students apply MP.6 as they "learn to correctly use mathematical notation to describe reflections and lines of reflections." In the same Topic Lesson 3-4, Classification of Rigid Motions, Understand and Apply section, students answer the question, "What two rigid motions are used to illustrate Theorem 3-3? How can you restate Theorem 3-3

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			using these rigid motions?" Students are expected to respond, using precise terminology, such as "A reflection across a vertical line, followed by a 90° rotation; The composition of a reflection and a rotation is a rigid motion." At the start of each lesson, a Vocabulary Builder is provided that includes a review of vocabulary, as well as new vocabulary. A vocabulary activity is also provided to help students understand the concept behind the vocabulary. For example, In Topic 2, Parallel and Perpendicular Lines, Lesson 2-2, Proving Lines Parallel, students review vocabulary terms such as alternate exterior angles, alternate interior angles, corresponding angles, same-side exterior angles, same-side interior angles, and transversal. Students are then introduced to a new vocabulary term, flow proof. Students are expected to use this language throughout the lesson as they write proofs and solve problems involving two parallel lines cut by a transversal.
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**	In the materials, students are asked to produce answers in a variety of ways. At the start of each lesson, students complete the Explore section. Students produce various answers during this activity, such as solutions, equations, explanations, and graphs. Students are expected to produce a wide variety of answers during the lesson, as well. Students not only find solutions to

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			problems, but often model their answers through use of coordinate planes, charts, and equations. In the Practice and Problem Solving portion of the lesson, students answer several types of questions resulting in a variety of answers. Within the first section, titled Understand, students demonstrate an understanding of the math skills and concepts learned through multiple ways, such as by writing equations, constructing arguments, conducting error analyses, and using higher order thinking skills to explain relationships. In the next section, titled Practice, students demonstrate their ability to apply concepts and skills by finding solutions. Finally, in the Apply section, students apply skills and concepts to real world situations and multi-step problems. Throughout the materials students write proofs to justify statements and solutions with definitions, postulates, theorems, and properties. For example, in Topic 4, Lesson 4-3, Proving and Applying the SAS and SSS Congruence Criteria, Explore and Reason section, students make 5 triangles that have a 5-inch side, a 6 inch side, and one 40 degree angle, then answer two questions, “A. How many unique triangles can you make? B. How are the unique triangles different from the triangles you found that were not unique?” In the same lesson, students find the value of x in Additional Example 3, and then answer

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			the question "Can the two triangles be proven congruent? How?" in Additional Example 5. This kind of variety can also be found at the end of each lesson in the Practice & Problem Solving section. For example, In Topic 6 Quadrilaterals and Other Polygons, Lesson 6-3, Properties of Parallelograms, Practice section, students write proofs of Theorem 6-7 in question 13, explain a student's error in questions 14, draw a picture to explain their answer in question 16, and find the perimeter of a parallelogram in question 22.
	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**	Materials provide separate teacher materials that support and reward teacher study. At the start of each topic, in the Topic Overview, teachers are provided with several sections that support the instructional process. The Math Background Focus section provides the focus of the lesson with explanations and examples of concepts and skills within the topic. The Math Background Coherence section explains how the concepts are connected throughout the curriculum and across grade/course levels. This section includes a Looking Back section that explains how the topic connects to what students learned in earlier grades/courses, an In This Topic section that explains how content is connected within the topic, and a Looking Ahead section that explains how the topic is connected to what students will learn later in the materials and beyond the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			course level. The Math Background Rigor section details the conceptual understanding, procedural skill and fluency, and applications emphasized in the topic. The Math Practices and Processes section that highlights Math Practices within the topic. A lesson Planner is also provided along with Topic Resources including Digital Lesson Coursewhere, Teaching Resources, and Digital Topic Support for Teachers. Instructional Suggestions for English Language Learners, Advanced Students, and Struggling Students are provided throughout the materials and are specific to the math content within the lessons. Teacher questions are provided to help elicit student thinking and to promote the use of the Math Practice Standards. The materials also provide Professional Development Videos that emphasize important mathematical skills and concepts in the topics.
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps those students meet the same standards as all other students. Teacher guidance for supporting English Language Learners is included throughout the lessons and provides instructional suggestions and questions tied to specific examples within the lesson. For example, in Topic 12, Probability, Lesson 12-1, Probability Events, Example 3, teachers

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			are given 3 pieces of instructional suggestions based on the level of the students. Reading suggestions are given for students at a "Beginning" level, Writing suggestions are given for students at an "Intermediate" level, and Speaking suggestions are given for students at an "Advanced" level. For Reading, materials suggest that the teacher write the phrases chosen at random, replaced, and not replaced on the board and then have students find these words in the problem statements for part A and B. For Writing, materials suggest the teacher give the students the starter sentence to complete, "If the first marble is ____ then the probability that the second marble will be ____ is ____." For Speaking, materials suggest that the teacher explains to the students that "independent can mean does not depend on someone or something," and then asks questions using the same terminology. Support is also provided for advanced students, as well as struggling students. For example, in Topic 11, Two- and Three-Dimensional Models, Lesson 11-4, Spheres, instructional support is provided for struggling and advanced learners for Example 1, "What is the volume of a sphere? Why does the volume formula for a sphere make sense?" For advanced students, the materials suggest having students relate the area of an annulus to its longest chord, and provides additional

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			questions to help with this concept. For struggling students, materials suggest having students consider and compare the top and bottom cross sections, and provide questions to help with this concept.
	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. Each lesson is broken into 4 sections, including Explore, Understand and Apply, Practice and Problem Solving, and Assess and Remediate. The lesson opens with the Explore section that allows students the opportunity to apply conceptual understanding in problem solving. The teacher sets up the problem by asking questions to promote reasoning and problem solving. Students persevere through and solve the problem on their own, and then, as a class, they discuss the problem and the solution through mathematical discourse. This section is followed by the Understand and Apply section where new concepts and skills are learned through several Example problems. As the students work through this section, the teacher asks several questions with the intent of deepening understanding of the new math. Additional examples are provided for students who need more practice before attempting the work independently. Students then complete the Practice and Problem Solving section. In this section, students apply the newly learned skills

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and concepts as they complete problems independently. The problems provide the opportunity for students to demonstrate understanding of the newly learned math and their ability to find and explain solutions.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Beginning with Topic 1, and included in every Topic thereafter, a Math Background Coherence section shows the connections from previous grade levels, connections within the topic, and connections made in future learning, both within the course and beyond. The breakdown of the coherence that exists within the materials reflects the natural coherence within the standards. The materials build on and extend student understanding from Algebra I. This is evidenced in Topic 2, Parallel and Perpendicular Lines: Topic Overview, Coherence. This section connects previous student learning to current learning, and then to future learning within the course. In Topic 1, students found the lengths of segments and will use the slope formula to find the ratio of the vertical change over the horizontal change. They also learned that vertical angles are congruent in the first topic. Students use this understanding to find congruent angles when parallel lines are cut by a transversal. In Topic 2, the lessons are structured to build student

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			understanding about parallel and perpendicular lines as they first explore the angle relationships in parallel lines, then build upon this concept to prove the Triangle Angle-Sum Theorem and find missing measurements in triangles. Students end the lesson by exploring the relationship between the slopes of parallel and perpendicular lines. Learning in Topic 2 is connected to future learning. In Topic 6, students work with parallel lines when solving problems about trapezoids. In Topic 9, students use slope to describe geometric relationships. In Topic 10, students discover that the radius of a circle is perpendicular to the tangent of the circle where the radius intersects the circle. This guidance is provided at the start of every Topic and supports coherence throughout the materials.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	Materials support the uses of technology as called for in the Standards. Technology is utilized throughout the materials with Embedded Interactives, Additional Practice problems, Online Practice powered by MathXL for School, an English/Spanish Glossary, Digital Math Tools, and the Mathematical Modeling in 3 Acts. Students also complete a Topic Readiness Assessment online which is auto-scored to develop an Individualized Study Plan based on student performance and is designed to support students' specific learning needs. Digital

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			interactives provided by Desmos are used within the materials. This tool is embedded within the Student Realize Reader as needed within the lesson. Students complete a STEM Project in Topic 3, Transformations, and "use transformations to simulate an animation" by coding transformations using the Digital Math Tool. Students use their Student Realize Reader in Topic 4, Triangle Congruence, Lesson 4-2, Isosceles and Equilateral Triangles, as they use the digital tool to transform a triangle in various ways to determine how many different ways they can translate it to fit exactly in a given outline.

FINAL EVALUATION

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" 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-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	**Yes**	The materials devote a large majority of class time to major work of the grade. Although some of the assignment items include standards outside of Geometry, implementation suggestions for Louisiana teachers are provided for these assessments items.
	2. Consistent, Coherent Content	**Yes**	Focus and coherence are enhanced through meaningful connections between supporting and major content, as well as

[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			through the 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.
	4. Focus and Coherence via Practice Standards	**Yes**	The materials use practice standards to enrich and strengthen the focus of the content standards.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The materials foster focus and coherence by linking topics across domains and clusters and across grades/courses, staying consistent with the progressions within the Standards.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards.
	7. Indicators of Quality	**Yes**	The materials provide teachers and students with a variety of tools needed to meet the expectations of the Standards.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

[5] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier I rating.

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

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

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

The 2019-2020 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Beauregard, Bossier, Caddo, Calcasieu, Caldwell, City of Monroe, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, Jefferson, Jefferson Davis, KIPP New Orleans, Lafayette, Lafourche, Lincoln, Livingston, LSU Lab School, Orleans, Orleans/Lusher Charter School, Ouachita, Plaquemines, Pointe Coupee, Rapides, Richland, RSD Choice Foundation, St. John the Baptist, St. Charles, St. James, St. Landry, St. Mary, St. Tammany, Tangipahoa, Vermillion, Vernon, West Baton Rouge, West Feliciana, and Zachary. This review represents the work of current classroom teachers with experience in grades 6-12.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

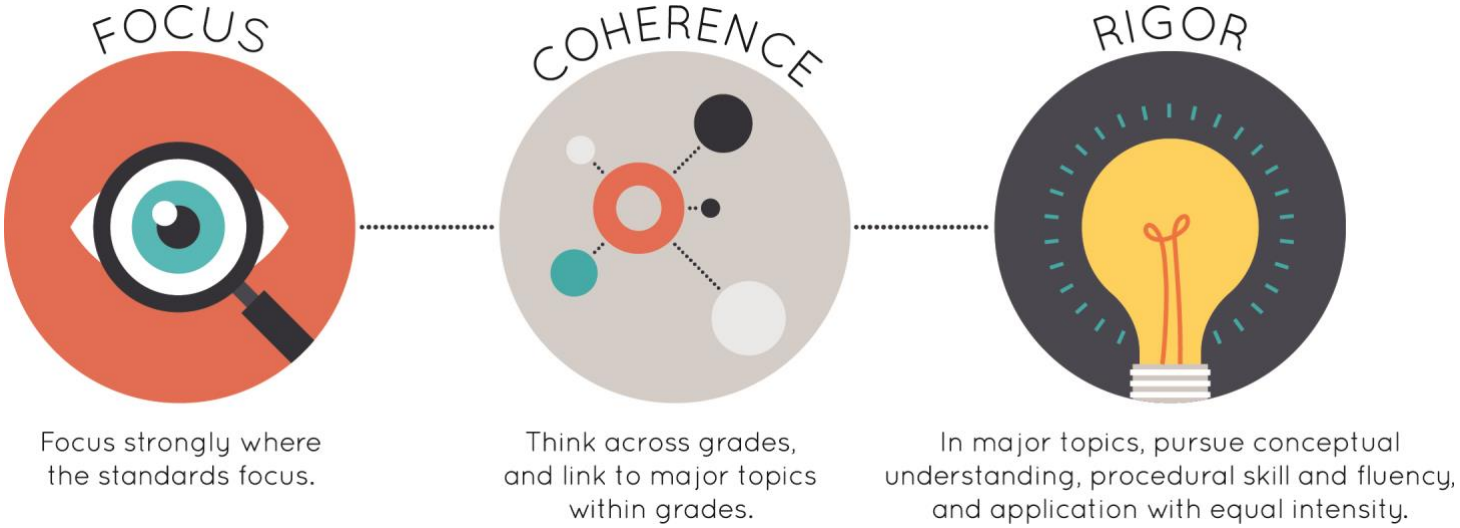
Public Comments

There were no public comments submitted.

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:



Title: **enVision**

Grade/Course: **Algebra II**

Publisher: **Pearson Education**

Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-negotiable)	
2. Consistent, Coherent Content (Non-negotiable)	
3. Rigor and Balance (Non-negotiable)	
4. Focus and Coherence via Practice Standards (Non-negotiable)	
5. Alignment Criteria for Standards for Mathematical Content	
6. Alignment Criteria for Standards for Mathematical Practice	
7. Indicators of Quality	

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

- Review the **required**[1] Indicators of Superior Quality for each **Non-negotiable** criterion.
- If there is a "Yes" for all **required** Indicators of Superior Quality, materials receive a "Yes" for that **Non-negotiable** Criterion.
- If there is a "No" for any of the **required** Indicators of Superior Quality, materials receive a "No" for that **Non-negotiable** Criterion.
- Materials must meet **Non-negotiable** Criterion 1 and 2 for the review to continue to **Non-negotiable** Criteria 3 and 4. Materials must meet all of the **Non-negotiable** Criteria 1-4 in order for the review to continue to Section II.
- If materials receive a "No" for any **Non-negotiable** Criterion, a rating of Tier 3 is assigned and the review does not continue.

If all Non-negotiable Criteria are met, then continue to **Section II: Additional Criteria of Superior Quality.**

- Review the **required** Indicators of Superior Quality for each criterion.
- If there is a "Yes" for all **required** Indicators of Superior Quality, then the materials receive a "Yes" for the additional criteria.
- If there is a "No" for any **required** Indicator of Superior Quality, then the materials receive a "No" for the additional criteria.

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

[1] **Required Indicators of Superior Quality** are labeled "**Required**" and shaded yellow. Remaining indicators that are shaded white are included to provide additional information to aid in material selection and do not affect tiered rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] 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 a large majority of class time to the major work of the grade. Overall, 69% of the instructional days are spent on the major work of the grade for Algebra II with 28% of the instructional days spent on Major Standards, 41% on a combination of Major and Supporting/Additional standards, and 31% on Supporting/Additional standards.
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	**Yes**	The instructional materials spend minimal time on content outside of the appropriate course. In assessment materials, assessment components do not make students/teachers responsible for any topics before the course in which they are introduced. Although some items assess standards outside of Algebra II, implementation suggestions for Louisiana teachers are provided for each item. These suggestions are found in the Correlation of Algebra II Assessment Items to the Louisiana Student Standards Mathematics document. Assessment guidance includes notes for items that "prepare" students for course-level standards and for items that assess beyond the grade level. Items that assess above grade level are noted as, "This item does not assess a Louisiana Content

[2] For more on the major work of the grade, see Focus by Grade Level.
[3] 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
			Standard." Review items are labeled as "Reviews" and indicate the standard from a previous grade level. Extension items are labeled as "Extends" and indicate the standard is extended. For example, in the Topic 1 Assessment, Items 18-20 are labeled, "This item does not assess a Louisiana Content Standard." In the Topic 2 Assessment, Item 1 is labeled, "Reviews A1: A-CED.A.2." In Benchmark Test 1, Item 9 is labeled, "Prepares for A2: F-BF.A.2." In the Topic 4 Assessment, Items 3 and 4 are labeled, "Extends A2: A.CED.A.1." Additionally, the following lessons are not aligned to LSSM for Algebra II and therefore do not have an aligned standard attached to the lesson: Topic 4 Lesson 2, Topic 7 Lesson 1, Topic 8 Lessons 1 through 5, Topic 10 Lessons 1 through 5, and Topic 12 Lessons 1 through 6.
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. This is evident in Topic 3, Graphing Polynomial Functions, Lesson 3-4 Dividing Polynomials, where lesson components connect Supporting LSSM A-APR.D.6 (rewriting simple rational expressions in different forms) to Major LSSM A-SSE.A2 (using the structure of an expression to identify ways to rewrite it)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and A-APR.B.2 (knowing and applying the Remainder Theorem). In Example 3, students use the structure of the given expression to rewrite it in the form of x-a. Students then interpret the remainder by explaining how the value of P(a) is related to the remainder of P(x)(x-a). This is also seen in Topic 4, Rational Functions where Supporting LSSM A-CED.A.1 (creating equations and inequalities in one variable and using them to solve problems) is connected to Major LSSM A-REI.A.1 (explaining each step in solving an equation, constructing a viable argument to justify a solution method). During the lesson, students create equations in one variable based on the context in order to solve the problem. Students then explain each step in solving the problem, connecting LSSM A-CED.A.1 to LSSM A.REI.A.1. For example, in Example 5, students create an equation to find how long it would take Tyler to plant tomatoes based on the information given in the problem. Students formulate the equation, compute, and interpret the solution.
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a course, in cases where these connections are natural and important. This is evident in Topic 5, Rational Exponents and Radical functions, where students extend their knowledge

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			of radical functions and understand the properties of rational exponents and radicals (N-RN.A.1 and N-RN.A.2). They apply these skills to solving radical equations (A-REI.A.1). At the start of the Topic in Lessons 1 and 2, students evaluate expressions with rational expressions and interpret radical expressions that represent a quantity in terms of its context. In Lesson 5-4, students use these skills to solve equations that include radicals or rational exponents. In Example 1, students solve the radical equation "x+5-1=3"by squaring both sides to eliminate the radical. Students then check their work by substituting 11 for x in the original equation and also by graphing. The topic and lessons connect the RN (The Real Number System) and REI (Reasoning with Equations and Inequalities) domains. An example of connecting two clusters within a domain is evidenced in Topic 6, Exponential and Logarithmic Functions. In Lesson 6-1, Key Features of Exponential Functions, students interpret key features of exponential functions, graph transformations of exponential functions, and model quantities that increase or decrease by a fixed percent. In Example 3, students model with exponential functions as they solve the following problem: “The population of a large city was about 4.6 million in the year 2010 and grew at a rate of 1.3% for the next

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			four years. What exponential function models the population of the city over that four year period? If the population continues to grow at the same rate, what will the population be in 2040?" Students compute the population for the first few years in order to look for a pattern and then model the exponential function. This example connects two clusters, LE.A (Construct and compare linear, quadratic, and exponential models and solve problems) and LE.B (Interpret expressions for functions in terms of the situation they model) within the same domain, F-LE (Functions: Linear, Quadratic, and Exponential Models).
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**Required** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**Yes**	The materials develop a conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards. For example, in Topic 1, Linear Functions and Systems, Lesson 1-7, students work to answer the Essential Question, "What are the ways in which functions can be used to represent and solve problems involving quantities?" In Lesson 1-7, Key Features of Functions, students first learn to identify key features of a graph in order to understand that a function can model a relationship between two quantities and that interpreting the key features can help them solve problems about functions (LSSM F-IF.B.4). In Example 1, students find the domain and range of the function. Students develop

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			an understanding that by using the general behavior and shape of the graph they can translate the information into set-building or interval notation. Students then summarize the ways they can indicate intervals of numbers in words and set notation. Students develop contextual understanding before applying what they have learned in a real-world context, as evidenced in Example 2. At the end of the lesson, the concept is summarized, followed by an opportunity to demonstrate understanding through questions that are presented in “Do You UNDERSTAND?” and “Do You KNOW HOW?” portions of the lesson. Additionally, in Topic 5, students develop a deeper understanding of rational exponents and radicals as they use the properties of exponents to rewrite expressions involving radicals, find all real nth roots of a number, and use nth roots to solve equations by rewriting expressions using the properties of exponents (N.RN.A.1-2). In Example 2, students determine the meaning of the exponent in the expression 1614 and then in the expression 2723. Students are also asked conceptual questions such as, “Why might it be easier to calculate the nth root before raising to a power?” “What is another method you could use to evaluate an expression that has a negative rational exponents?” and “What is another approach you can use to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			simplify the expression?" At the end of the lesson, students complete an "Understand" section that provides students the opportunity to demonstrate conceptual understanding of the concepts learned. For example, Question 18 states, "Justice found that the fifth root of 243x15y5is 3x3y" then asks, "Is Justice correct? Explain your reasoning."
	Required **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the Standards. This is seen throughout the materials, especially with the standards that call for procedural skill and fluency in rigor. Students have the opportunity to practice these procedural and fluency skills in the practice section at the end of the lesson. For example, in Topic 2, Quadratic Functions and Equations, students use the distributive property and the zero product Property to factor quadratic expressions (LSSM A-SSE.A.2) and combine like terms to add and subtract complex numbers (LSSM N-CN.A.2). In Lesson 2-4, Complex Numbers and Operations, students first find the sum of (4-7i)and (-11+9i)and then find the difference of (6+8i)and (2-5i). Students continue to practice this skill in the problems that follow. Students then learn to write products in the form (a+bi)step by step using the distributive property and then practice the skill in the problems that follow. Students learn how to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			simplify a quotient with complex numbers step by step and again use the distributive property. At the end of the lesson, students use the practice section to practice these skills (questions 14 - 39). The problems develop procedural skills as outlined in LSSM N-CN.A.2. In Topic 6, Exponential and Logarithmic Functions, students use the Property of Equality for Logarithmic Equations to rewrite logarithmic equations as polynomial equations in order to solve (LSSM A-SSE.A.1 and A-REI.A.1). This is evidenced in Lesson 6-5, Properties of Logarithms, as students evaluate logarithmic expressions. At the end of the lesson, students use the properties of logarithms to expand each expression in questions 14-17, use the properties of logarithms to write each expression as a single logarithm in questions 18-23, and then find exact and approximate solutions for the given equations in questions 30-35.
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**Yes**	The materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the course, afford opportunities for practice, and engage students in problem-solving. In Topic 6, Exponential and Logarithmic Functions, Lesson 6-2, Exponential Models, students analyze real-world

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			situations using exponential functions (LSSM S-ID.B.6a). For example, in Question 28, students solve the following multi-step, contextual problem, reflecting the application component of LSSM S-ID.B.6a: "A blogger found that the number of visits to her website increases 5.6% annually. The website had 80,000 visits this year. Write an exponential model to represent this situation. By what percent does the number of visits increase daily? Explain how you found the daily rate." In Question 29, students solve the following problem: "Jae invested $3,500 at a rate of 2.25% compounded continuously in 2010. How much will be in the account in 2025? How much interest will the account have earned by 2025?" In Topic 11, Data Analysis and Statistics, students "use graphs and simulations to confirm or reject a hypothesis about real-world data" reflecting the application component of LSSM S-IC.B.5. For example, in Lesson 11-6, Introduction to Hypothesis Testing, students engage in multi-step, contextual problems where they determine whether a certain fertilizer will increase the yield of soybean plants. Students are provided data for the average yield of soybeans with and without fertilizer. Students first find the mean and difference for both samples. Next they state how the average yield of soybean crops with fertilizer compares to the average yield of the soybean crops

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			without fertilizer. Throughout the materials, engaging applications are used to deepen understanding of the topics presented.
	Required **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The three aspects of rigor are not always treated together and are not always treated separately in the materials. At the beginning of each Topic, a section entitled "Math Background: Rigor" highlights the three aspects of rigor that the students will encounter within the topic. In the Teacher Edition, each topic is broken into four steps: Step 1-Explore, Step 2-Understand and Apply, Step 3-Practice and Problem Solving, and Step 4-Assess and Differentiate. Step 1 allows the teacher to guide mathematical discourse, Step 2 provides examples of where conceptual understanding is built, Step 3 provides examples that focus on each component of rigor, and Step 4 provides assessment, followed by differentiated interventions and extensions. Teacher guidance also provides information about the components of rigor that are highlighted within each lesson. For example, Topic 11, Data Analysis and Statistics, Lesson 11-5, Margin of Error, emphasizes conceptual understanding and procedural skill and fluency as students "understand that the accuracy of a population parameter estimate depends on how well a sample represents the population" and "approximate a margin of error by using" given formulas.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			In Topic 4, Rational Functions, Lesson 4-5, Solving Rational Exponents, the lesson emphasizes procedural skill and fluency and application as students solve rational equations and apply knowledge of operations with rational expressions to solve rate problems. In Example 1, students find the solution to a rational equation, 1x+4=2, by multiplying both sides of the equation by the common denominator. Students use what they know about rational expressions and must explain why they have to make sure the solution is valid in the original equation, making sure the solution does not cause the denominator of the rational expression to equal zero. After solving the equation, students are asked, "Why do you multiply both sides of the equation by the common denominator?" Students understand that by doing so, they eliminate the fractions.
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 and enrich the content standards of the course. Each topic addresses the math practices in the lessons. For example, the Teacher Edition Program Overview states that the Math Practices and Processes provide "Descriptions of what mathematically proficient students can do with regard to two highlighted math practices and guiding questions to help students develop proficiency with the two highlighted practices." Additionally, each

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			topic presents students with Mathematical Modeling in 3 Acts. The Teacher Edition Program Overview document states, "These tasks present to students interesting, real-world situations and ask them to come up with a question to answer. They work in groups to determine what assumptions they can make, what information they need, and what mathematics can model the situation." With an extra emphasis on Modeling with Mathematics (MP.4), the Modeling in 3 Acts provide the opportunity for students to engage in each of the Math Practices as they work through the tasks. Another example is in the Topic 7, Trigonometric Functions, Teacher Overview where MP.4, Model with Mathematics and MP.7 Look for and Express in Repeated Reasoning are highlighted. The materials state that "mathematically proficient students" are able to "recognize when trigonometric functions are an appropriate model for a given situation" and to "look for patterns in the y-values of the sine function and notice that they begin to repeat themselves after x=2[pi]."
Section II: Additional Criteria of Superior Quality			
5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across	**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	**Yes**	Materials provide all students extensive work with course-level problems. The review of materials from previous grades and courses is clearly identified. At the start of the lesson, students work through several Example problems with the teacher who asks several

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	specific responsibility is for the current year.		questions along the way to help build new understanding. Previous math concepts are built upon and extended during this portion of the lesson. Two end-of-lesson formative assessments are given at the close of instruction, including Do You UNDERSTAND? which checks for conceptual understanding, along with Do You KNOW HOW? which checks for procedural skill and fluency. Students then complete the Practice & Problem Solving section independently. This section includes several problems that allow students to demonstrate understanding and application of skills and concepts. Students have the opportunity to utilize several interactive learning aids including Help Me Solve This, View an Example, Videos links to Virtual Nerd Tutorials, and a Glossary. The teacher then has the option to assign a digital, auto-graded Lesson Quiz that differentiates the student assignment based on their performance. The Differentiation Library includes Reteach to Build Understanding, Enrichment, Additional Practice, Mathematical Literacy and Vocabulary, and Virtual Nerd Tutorials. All tools support course-level problems.
	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**	Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. Every topic includes a Math Background Coherence section that explains how concepts are connected to prior learning. For example, in Topic 1, Linear Functions and Systems, the Looking Back section explains how students solved equations and inequalities algebraically in Algebra I and will continue to do so in Algebra II using

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			additional methods like graphing and tables. This teacher guidance connects previous learning to the current topic by explaining that, in Lessons 1-1 to 1-5, students approximate solutions and solve equations and inequalities using graphs, tables, and technology. Learning from this topic is then connected to learning in later topics. For example, in Topic 5, students build upon this knowledge to solve radical equations and graph radical functions. Additionally, Topic 4, Rational Functions, connects content within this topic to Algebra I concepts. In Algebra I, students solved linear, quadratic, and exponential equations and will extend this knowledge by learning how to solve rational equations.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. For example, Topic 7, Trigonometric Functions reflects cluster F-TF.A (Extend the domain of trigonometric functions using the unit circle). More specifically, the Lesson Objectives of Topic 7, Lesson 7-2, Angles and the Unit Circle, include, “Find the measures of an angle in standard position and its reference angle” and “Use radian measure on the unit circle to find arc length.” These learning objectives reflect the language and intent of LSSM F-TF.A.1 and F-TF.A.2. Another example is found in Topic 3, Polynomial Functions, Lesson 3-1 Graphing Polynomial Functions. The

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			learning objective states, "Graph polynomial functions and show key features of the graph." This learning objective reflects the language and intent of LSSM F-IF.C.7.
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**	Materials attend to the full meaning of each practice standard. The Math Practice Standards (MP) are meaningfully present throughout the materials in the form of assignments, activities, projects, classroom discussions, and problems/exercises, and are utilized to their full depth. Students have the opportunity to apply these practices throughout each lesson. Every lesson begins with an Explore section that supports conceptual understanding through problem solving. This Explore section contains one of three types of problems: Explore and Reason, Critique and Explain, and Model and Discuss. These problems support the continued use of the Math Practices throughout the materials. For example, Topic 5, Rational Exponents and Radical Functions, Lesson 5-1, Roots, Radicals, and Rational Exponents, opens with an Explore & Reason section where students are given the following scenario: "The graph shows $y=x^2$. A. Find all possible values of x or y so that the point is on the graph. B. Write a precise set of instructions that show how to find an appropriate value of 13using the graph." The graph and various coordinates with missing x and y values

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			are provided. Before students begin the problem students are asked what they notice about the graph. Students use reasoning (MP.2) to determine that the graph is a parabola and that all values of y are greater than zero. Students are then encouraged to productively struggle through the problem (MP.1) as the teacher asks, "What is true about the possible missing x-values compared to the possible missing y-values?" Once the students finish the problem, the teacher facilitates meaningful discourse by asking questions that encourage students to analyze the problem and justify their solutions and responses (MP.3). In addition, each lesson highlights specific Math Practices that are utilized within the lesson. In the same topic, Lesson 5-2, Properties of Exponents and Radicals, the highlighted Math Practices are Reason Abstractly and Quantitatively (MP.2) and Look For and Make Use of Structure (MP.7). In the lesson, students use structure as they learn that "when multiplying numbers with the same base, adding a negative exponent gives the same result as subtracting its opposite," as evidenced in Example 1. The practices are highlighted in the student problems, as well. For example, in Topic 6, Lesson 6-7, Geometric Sequences and Series, Question 11 in the Practice and Problem Solving section, students use reasoning skills as they identify whether the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			statement "If the first two terms of a geometric sequence are positive, then the third term is positive" is true or false and then explain their reasoning (MP.2, MP.3).
	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**	Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that are detailed in the content standards. Throughout the lessons, the teacher prompts student thinking with several questions that help build conceptual understanding. As students apply the newly learned skills and concepts, students defend their solutions and strategies as they work through both the Example and Practice problems. For example, in Topic 11, Data Analysis and Statistics, Lesson 11-2, Statistical Studies and Sampling Methods, students construct viable arguments as they "use mathematical terms and definitions to explain how they could redesign a biased study so that the samples are not biased." This is evidenced in Example 3 where students first identify the type of sampling method used in given examples and then determine if the method is likely to be biased. To extend the learning, students construct arguments to redesign biased studies so that the samples are not biased. In Topic 5, Lesson 5-2, Properties of Exponents

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and Radicals, students are asked, "If 32+42=52, does 32+42=52, and if not, how could they rewrite the equation using radicals so that it is true." Students must answer the question and then construct an argument on how to rewrite the equation. Students have several opportunities throughout the materials to conduct error analysis problems. For example, in Topic 3, Polynomial Functions, Lesson 3-1, Graphing Polynomial Functions, Question 2 of the Do You UNDERSTAND section states, "Allie said the degree of the polynomial function f(x)=x5+2x4+3x3-2x6-9x2-6x+4is 5. Explain and correct Allie's error." A sample student response given is, "Allie did not write the polynomial function in standard form; instead, she said the exponent of the first term was the degree of the polynomial. The degree is 6."
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Yes**	Materials include teacher-directed materials that explain the role of the Math Practice Standards (MP) in the classroom and in students' mathematical development. The Math Practices are described at the start of the Teacher's Edition. Math Practices are described in terms of Algebra II and also include suggestions on how to help students develop proficiency with the standards. For example, to help students develop proficiency in MP.4, Model with Mathematics, the materials suggest that teachers "ask students to think of an

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			equation or graphical representation that describes the problem," and "to ask students to identify what quantities they should use to solve the problem and what the numbers in the solution represent." The Topic Overview for each topic includes a Math Practices and Processes section. This section highlights two Math Practices within the topic and provides specific examples of how the Math Practices are utilized within the Topic. For example, Topic 6, Exponential and Logarithmic Functions, highlights MP.2, Reason Abstractly and Quantitatively, and MP.8, Look For and Make Use of Structure. Within the topic students "make sense of quantities and their relationships as they explore the inverse relationship between logarithms and exponents and as they evaluate common and natural logarithms" in order to reason abstractly and quantitatively. Additionally, students look for and make use of structure by looking for "repeated multiplication in their calculations and recognize that these problems can be represented by exponential functions." Math practices are also noted in the margins of the example problems in the Practice and Problem Solving section in both the Teacher and Student Editions. For example, in Topic 3, Polynomial Functions, Lesson 3-3, Polynomial Identities, as students are applying the binomial theorem, guidance is provided

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			for teachers to encourage students to use structure when identifying what binomial expression is for a given expansion (MP.8). In the Practice and Problem Solving section of the same lesson, Question 23, students reason abstractly and quantitatively (MP.2), as they use Pascal's Triangle to find the value of n in the polynomial expression $(a+b)^n$ when given 64 as the sum of coefficients in the expansion. Teachers are also given guidance on the use of the Math Practices within each lesson. This section further explains the use of the practices specifically to the skills and concepts within the lesson.
	6d) Materials explicitly attend to the specialized language of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout the materials, teacher guidance is provided to help students gain proficiency in MP.6, Attending to Precision, by encouraging clear and precise mathematical discourse, asking students to correctly identify symbols used in mathematical models, and asking students to describe alternative strategies used to find and check solutions. Specific guidance is also provided at the lesson level. For example, in Topic 1, Linear Functions and Systems, Lesson 1-1, Key Features of Functions, students learn the key features of a graph using mathematical terms such as the domain, range, and intercepts. During the lesson, students are expected to use correct

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			terminology as they identify and interpret these key features of the graph of a function. Several examples of MP.6 are present throughout the lessons, as students are encouraged to use precise mathematical language when explaining concepts and defending solutions. For example, in Topic 2, Quadratic Functions and Equations, Lesson 2-1, Vertex Form of a Quadratic Function, students are asked to communicate precisely if and how they think the effect of altering A(x) in the two ways they did in the example problem would work for any function that they started with. An example response given states, "Yes; each time you multiply the value of the function by 2, the y-value of each coordinate will double, and each time you add 2 to the value of the function, the y-value of each coordinate will increase by 2." At the start of each lesson, a Vocabulary Builder is provided that includes a review of vocabulary, as well as new vocabulary. A vocabulary activity is also provided to help students understand the concept behind the vocabulary. For example, in Topic 2, Quadratic Functions and Equations, students review "zero of a function" and then learn the new vocabulary "zero product property." Students are then asked "How does the Zero Product Property help you identify the zero(s) of a function?"
7. INDICATORS OF QUALITY:	**Required**	**Yes**	In the materials, students are asked to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☒ Yes ☐ No	**7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		produce answers in a variety of ways. At the start of each lesson, students complete the Explore section. Students produce various answers during this activity, such as solutions, equations, explanations, and graphs. Students are expected to produce a wide variety of answers during the lesson as well. Students not only find solutions to problems, but often model their answers through use of graphs and equations. In the Practice and Problem Solving portion of the lesson, students answer several types of questions resulting in a variety of answers. Within the first section, titled Understand, students demonstrate an understanding of the math skills and concepts learned through multiple ways, such as writing equations, constructing arguments, conducting error analyses, and using higher order thinking skills to explain relationships. In the next section, titled Practice, students demonstrate their ability to apply concepts and skills by finding solutions. Finally, in the Apply section, students apply skills and concepts to real world situations and multi-step problems. For example, in Topic 1, Linear Functions and Systems, Lesson 1-5, Solving Equations and Inequalities by Graphing, students provide answers in a variety of ways that align with the expectations of the standards. In the opening activity, Model and Discuss, students use the stem, “A homeowner

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			has 32 feet of fencing to build three sides of a rectangular chick run" with a perimeter of 32 feet and then complete three parts. First, they make a table of values and write a function for the area, then they graph the function, and finally, provide reasoning by explaining what happens when the graph intersects the x-axis. Students continue solving several problems and answer in a variety of ways throughout the lesson. In Example 4, students then use graphing technology to approximate the solution of a given equation. In the Practice and Problem Solving section, students continue to work through a variety of problems. In problem 8, students explain how to use a table to find the approximate solution to the equation f(x)=g(x). In problems 15-20, students use a graph to solve each inequality, and in problem 31, students write and solve an equation based on real world context involving a kick ball that travels along a parabolic path. In addition, students participate in several Mathematical Modeling in 3 Acts activities throughout the materials. Students identify the problem presented in a hook video, develop a model to represent the situation, and then interpret the results. For example, in Topic 5, Rational Exponents and Radical Functions, students complete The Snack Shack. In this activity, students apply concepts related to radical expressions by

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			analyzing a situation that involves finding the quickest way to a destination. After students identify the problem, they determine the best way to mathematically model the time it takes each person to reach the snack shack. Students then find the solution and explain their reasoning.
	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**	Materials provide separate teacher materials that support and reward teacher study. At the start of each topic, in the Topic Overview, teachers are provided several sections that support the instructional process. The Math Background Focus section provides the focus of the lesson with explanations and examples of concepts and skills within the topic. The Math Background Coherence section explains how the concepts are connected throughout the curriculum and across grade/course levels. This section includes a Looking Back section that explains how the topic connects to what students learned in earlier grades, an In This Topic section that explains how content is connected within the topic, and a Looking Ahead section that explains how the topic is connected to what students will learn later in the materials and beyond the course level. The Math Background Rigor section details the conceptual understanding, procedural skill and fluency, and applications emphasized in the topic. The Math Practices and Processes section highlights

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Math Practices within the topic. A lesson Planner is also provided along with Topic Resources including Digital Lesson Coursewhere, Teaching Resources, and Digital Topic Support for Teachers. Instructional Suggestions for English Language Learners, Advanced Students, and Struggling Students are provided throughout the materials and are specific to the math content within the lessons. Teacher questions are provided to help elicit student thinking and to promote the use of the Math Practice Standards. The materials also provide Professional Development Videos that emphasize important mathematical skills and concepts in the topics.
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Yes**	The materials include support for English Language Learners and other special populations. Support is thoughtful and helps those students meet the same standards as all other students. Teacher guidance for supporting English Language Learners is included throughout the lessons and provides instructional suggestions and questions tied to specific examples within the lesson. For example, in Topic 6, Exponential and Logarithmic Functions, Lesson 6-7, Geometric Sequences and Series, teachers are given 3 instructional suggestions based on the level of the English Language Learner. Writing suggestions are given for students at a “Beginning” level, Reading suggestions are given for students at an

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			"Intermediate" level, and Listening suggestions are given for students at an "Advanced" level. In support of Example 3, Solve Problems with Geometric Sequences, Writing suggestions are provided. The materials suggest that the teacher display the phrases "Apple Tree, Factor Tree for 24, Probability tree for flipping a coin 3 times, Phone Tree," and then ask students to draw a diagram to represent each use of the word tree. A similar example is found in Topic 7, Trigonometric Functions, Lesson 7-6, Translating Trigonometric Functions. The materials provide a reading suggestion to help with Example 4, Write the Equation of a Translation, and suggest that the students first read the provided study tip and then answer the questions "How is the word phrase used in the sentence? What is another word that could be used instead of phrase? What is another word that could be used instead of shift?" Support is also provided for advanced students as well as struggling students. For example, in Topic 4, Rational Functions, Lesson 4-5, Solving Rational Equations, suggestions are provided for Example 2, Solve a Work-Rate Problem, for advanced students. The materials suggest the teacher challenges the students to solve the provided work-rate problem with radical solutions. In the same lesson, suggestions are provided for Example 4, Solve Problems with

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Extraneous Solutions, for struggling students. Materials suggest that students may need additional help with multiplying radical expressions and provide the additional practice. Digital tools are also provided to assess student learning to determine the need for intervention. Through these assessments, students are auto-assigned differentiated options, including Remediation, Additional Practice, and Enrichment. Students can also be placed on individualized study plans based off of each Topic Readiness Assessment administered at the start of a Topic.
	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. Each lesson is broken into 4 sections, including Explore, Understand and Apply, Practice and Problem Solving, and Assess and Remediate. The lesson opens with the Explore section that allows students the opportunity to apply conceptual understanding in problem solving. The teacher sets up the problem by asking questions to promote reasoning and problem solving. Students persevere through and solve the problem on their own, and then, as a class, they discuss the problem and the solution through mathematical discourse. This section is followed by the Understand and Apply section where new concepts and skills are learned through several Example problems. As the students work through

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			this section, the teacher asks several questions with the intent of deepening understanding of the new math. Additional examples are provided for students who need more practice before attempting the work independently. Students then complete the Practice and Problem Solving section. In this section, students apply the newly learned skills and concepts as they complete problems independently. The problems provide the opportunity for students to demonstrate understanding of the newly learned math and their ability to find and explain solutions.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Beginning with Topic 1, and included in every Topic thereafter, a Math Background Coherence section shows the connections from previous grade levels, connections within the topic, and connections made in future learning, both within the course and beyond. The breakdown of the coherence that exists within the materials reflects the natural coherence within the standards. The materials build on and extend student understanding from Algebra I. This is evidenced in Topic 2, Quadratic Functions and Equations. Students use concepts built in Algebra I about binomials and solutions of quadratic equations and extend their learning in this topic. In the first three lessons of the topic, students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			write quadratic functions in various forms and then use the forms to identify key features and find the zeros of quadratic functions. In the next three lessons, students solve quadratic equations using factoring, completing the square, and the Quadratic Formula. Later in Topic 9, students apply this knowledge while learning about vertical and horizontal parabolas. Another example is evidenced in Topic 11, Data Analysis and Statistics. Students begin learning about the requirements of a statistical question in Lesson 11-1, and then choose the best type of study to answer a statistical question in Lesson 11-2. In Lesson 11-6, students create two hypotheses for a statistical question and utilize statistical measures to determine if either of the hypotheses are correct.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	Materials support the uses of technology as called for in the Standards. Technology is utilized throughout the materials with Embedded Interactives, Additional Practice problems, Online Practice powered by MathXL for School, an English/Spanish Glossary, Digital Math Tools, and the Mathematical Modeling in 3 Acts. Students also complete a Topic Readiness Assessment online which is auto-scored to develop an Individualized Study Plan based on student performance and is designed to support students' specific learning needs. Digital interactives provided by Desmos are used

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			within the materials. This tool is embedded within the Student Realize Reader as needed within the lesson. This is evidenced in Topic 1, Linear Functions and Systems, Lesson 1-5, Solving Equations and Inequalities by Graphing. In this lesson, students use a graphing calculator to find or approximate solutions to equations and inequalities. In Topic 2, Quadratic Functions and Equations, Lesson 2-7, Linear-Quadratic Systems, students use the embedded technology to first draw a rough sketch of a parabola and a line on a coordinate plane. Later in the lesson, students solve an equation using the intersection feature of a graphing calculator in Example 5. These examples reflect the expectations of LSSM A-REI.D.11.
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality. ***Tier 2 ratings*** receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality. ***Tier 3 ratings*** receive a "No" 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-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	**Yes**	The materials devote a large majority of class time to major work of the grade. Although some of the assignment items include standards outside of Algebra II, implementation suggestions for Louisiana teachers are provided for these assessments items.

[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	2. Consistent, Coherent Content	**Yes**	Focus and coherence are enhanced through meaningful connections between supporting and major content, as well as through the 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.
	4. Focus and Coherence via Practice Standards	**Yes**	The materials use practice standards to enrich and strengthen the focus of the content standards.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The materials foster focus and coherence by linking topics across domains and clusters and across grades/courses, staying consistent with the progressions within the Standards.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards.
	7. Indicators of Quality	**Yes**	The materials provide teachers and students with a variety of tools needed to meet the expectations of the Standards.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

[5] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier I rating.

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

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

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

The 2019-2020 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Beauregard, Bossier, Caddo, Calcasieu, Caldwell, City of Monroe, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, Jefferson, Jefferson Davis, KIPP New Orleans, Lafayette, Lafourche, Lincoln, Livingston, LSU Lab School, Orleans, Orleans/Lusher Charter School, Ouachita, Plaquemines, Pointe Coupee, Rapides, Richland, RSD Choice Foundation, St. John the Baptist, St. Charles, St. James, St. Landry, St. Mary, St. Tammany, Tangipahoa, Vermillion, Vernon, West Baton Rouge, West Feliciana, and Zachary. This review represents the work of current classroom teachers with experience in grades 6-12.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

Public Comments

There were no public comments submitted.