Instructional Materials Evaluation - Student Standards Review

Louisiana educators engaged in a professional review of the state's academic standards for English language arts (ELA) and mathematics to ensure they continue to maintain strong expectations for teaching and learning aligned with college and workplace demands. The new ELA and math standards will be effective beginning with the 2016-2017 school year. As part of the Louisiana Department of Education's support for a seamless transition to these new standards, the LDOE identified the major changes of the standards and their potential impact upon criteria used to review instructional materials.

Title: **HMH Algebra I, HMH Geometry, and HMH Algebra II** Grade: **9-11**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

This Mathematics review has been examined for the following major shifts in alignment resulting from the Louisiana Student Standards Review:

- Include standards for money in grades K, 1, and 3 to ensure connections that provide smooth transitions from one grade to the next
- Provide developmentally appropriate content for all grades or courses while maintaining high expectations:
  - Additive area is moved to grade 4 from grade 3
  - The Statistics - Conditional Probability and the Rules of Probability (S-CP) domain is moved from Algebra II to Geometry
  - The standards provide extra clarity around the distinction between Algebra I and II

The following two indicators may be impacted:

- Focus on Major Work (Non-Negotiable)
- Consistent, Coherent Content (Non-Negotiable)

This review remains a Tier 3 rating. As a result of these changes, the following chart identifies the potential impact on specific elements in the current review. The LDOE recommends that district curriculum staff, principals, and teachers take these findings into consideration when using these instructional materials.

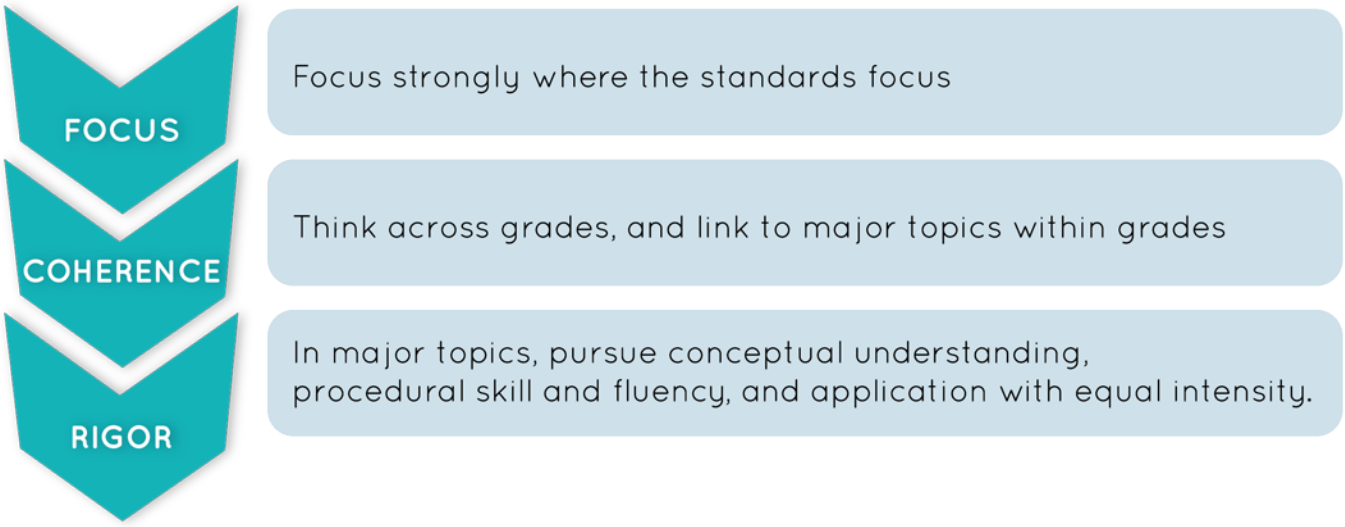
Criteria	Currently in the Rubric	Next Steps for Educators
Focus on Major Work (Non-Negotiable)	This program currently is reviewed as "No" for this criterion in grades 10 and 11 because students do not spend ample time on problems and materials applicable to the grade level and widely accepted prerequisites. This program currently is reviewed as "Yes" for this criterion in grade 9 because because the materials devote the majority of class time to the major work of the grade and spend minimal time outside the appropriate grade level.	Since these materials received a "No" for this indicator, the current weakness will likely remain and should be addressed by adjusting or supplementing with stronger programs. Make sure to review all assessment materials to ensure alignment to new clarifications/limitations and the revised placement of standards by grade/course.
Consistent, Coherent Content (Non-Negotiable)	This program currently is reviewed as "No" for this criterion because the materials were not consistently found to connect or review the major content to the supporting content. When review content is covered, it is not identified to the teacher or student, or linked to a standard.	Since these materials received a "No" for this indicator, the current weakness will likely remain and should be addressed by adjusting or supplementing with stronger programs.

DEPARTMENT of EDUCATION
Louisiana Believes

Instructional Materials Evaluation Review for Alignment in Mathematics Grades 9-12 (IMET)

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:



Title: **HMH Algebra I, HMH Geometry, and HMH Algebra II** Grade: **9-11**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
3. Rigor and Balance (Non-Negotiable) *	1. Focus in High School (Non-Negotiable) **
4. Focus Coh. via Practice Std (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)
* Weak at Grade 9	** Strong at Grade 9

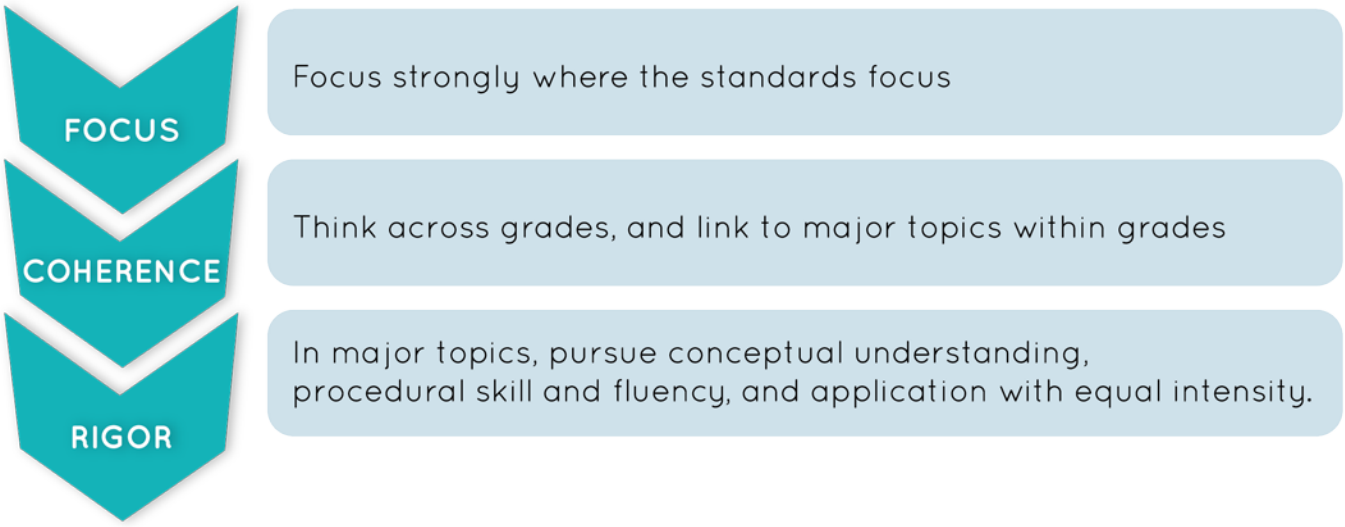
Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

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

Click below for complete grade-level reviews:

Grade 9 (Tier 3) Grade 10 (Tier 3) Grade 11 (Tier 3)

Strong mathematics instruction contains the following elements:



Title: **HMH Algebra I** Grade: **9**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
1. Focus in High School (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)
4. Focus Coh. via Practice Std (Non-Negotiable)	3. Rigor and Balance (Non-Negotiable)

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS IN HIGH SCHOOL: In any single course, students and teachers using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education.[1, 2] For courses that do not include Geometry standards, metrics 1a and 1b must be met. For courses including Geometry standards, all three of the metrics must be met. ☒ Yes ☐ No	**REQUIRED** **1a)** In any single course, students spend at least 50% of their time on **Widely Applicable Prerequisites** for postsecondary education.[3]	**Yes**	Students spend at least 50% of their time on content that is aligned with preparation for postsecondary education. 66 of 81 lessons (81%) are aligned to the Widely Applicable Prerequisites. Modules shown in the teacher edition list the corresponding standards with the module topic.
	REQUIRED **1b)** There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8 including[4]: • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6–8.SP). • Performing rational number arithmetic fluently.	**Yes**	Students are presented with problems at a level of sophistication appropriate to high school. Knowledge and skills from grades 6-8 are expanded upon. Basic function concepts are extended when students compare linear, quadratic, and exponential models in Lesson 23.2 using LE.A.1. Another example of this extension can be found in Module 24 as students are instructed to graph and interpret polynomial, inverse, square and cube root functions using F-IF.C.7b.
	REQUIRED (as applicable) **1c)** For courses that include standards from the Geometry conceptual category, student work in Geometry significantly involves applications/modeling as well as geometry applications that use algebra skills.[5]	**N/A**	

[1] Refer also to criterion #1 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[2] If materials show time in both block and standard 'days,' choose either but remain consistent.
[3] For more information on the Widely Applicable Prerequisites, see Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Information excerpted from Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Since the Geometry category itself contains relatively fewer Widely Applicable Prerequisites, this criterion is important to help foster students' college and career readiness.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards.[6] ☐ Yes ☒ No	**REQUIRED** **2a)** ***Giving 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.	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher. No review or remediation item explicitly lists standards or mentions from which prior coursework material originated. Although the Common Core Progressions Chart (located in the front of the teacher materials and the table of contents included in the teacher and student resources) allows teachers and students to see what their specific responsibility is for the current year, many Lessons include content from previous grades that is not noted as such.
	REQUIRED **2b)** ***Relating 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**	Course-level concepts are related to prior knowledge from earlier grades and courses. At the beginning of each unit, all prerequisite skills are reviewed in the "Are You Ready?" assessment. The items on this assessment connect the student's prior knowledge to what will be learned within the unit. For example, in Unit 9 lesson 21.1, students relate the creation of quadratics with algebra tiles to the factoring of quadratics using algebra tiles. However, it should be noted that the review items are not identified by standard and that Unit 5 and 6 do not relate prior knowledge to new content but rather unidentified review content.
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.[7]	**REQUIRED** **3a)** ***Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings by amply featuring high-quality conceptual problems and conceptual discussion questions.	**No**	The materials do not provide an ample number of problems aimed at developing conceptual understanding. Many of the problems in the "Explain" sections of the student text include fill in the blank or pre-formatted answer choices. This does not allow students to develop conceptual understanding of key mathematical concepts. For example, in Unit 5, Lesson 11.1, Problem 4, students are given a "real-world context" and asked to solve a system by graphing. The second step asks the students to "Formulate a Plan" by writing a system of linear equations. In the following step, "Solve", the students are told to graph two lines

[6] Refer also to criterion #3 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[7] Refer also to criterion #2 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
☐ Yes ☒ No			whose equations are given. These given equations are the answer to the "Formulate a Plan" step.
	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. Progress toward fluency and procedural skill is interwoven with the student's developing conceptual understanding of the skills in question	**Yes**	Practice exercises are provided for each lesson to develop procedural skill and fluency and ensure mastery of the content. The curriculum allows for sufficient practice of skills to produce fluency. There are many opportunities within each chapter for students to practice working problems. For example, unit 9 lesson 22.3, students derive the quadratic formula using a series of procedural steps and continue to use the formula throughout the lesson, specifically on the homework and practice page.
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. There are single- 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. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. Application problems particularly stress applying the Widely Applicable Prerequisites.	**Yes**	Sufficient time is spent working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. This includes single- and multi-step contextual problems. For example, in Unit 8, Module 20, Lesson 3 students are given multiple application problems (diving, height of a golf ball, etc.) to support solving quadratic equations using the zero product property. Each lesson also features a performance task that enhances the lesson content with real-world context (lesson 22.3 pg. 1072).
	3d) *Balance:* The three aspects of rigor are not always treated together, and are not always treated separately	**Yes**	Lessons align to the components of rigor as addressed by the content standards for each lesson. The majority of standards for Algebra 1 suggest procedural skill and this aspect of rigor is the most stressed throughout the content.
Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: **Materials promote focus and coherence by connecting practice**	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practices strengthen the focus of the course instead of detracting from it, in both teacher and student materials.	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade. Mathematical practices for each lesson chapter are explained extensively in the margins of the teacher's edition. For example, in Unit 6, Module 16, Lesson 1, teachers are instructed to Focus on Reasoning by discussing the Equality of Bases Property

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
standards with content that is emphasized in the Standards.[8] ☒ Yes ☐ No			with students. Teachers are also asked to reference common errors and misconceptions throughout the text while addressing precision through vocabulary.
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters). Courses are designed based on the content in the standards. ☐ Yes ☐ No	**REQUIRED** **5a)** Materials base courses on the content specified in the standards (Algebra I, Geometry, and Algebra II).[9]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **5b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a category, or two or more categories, in cases where these connections are natural and important.[10, 11]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	5c) Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	5d) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards.	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[12] 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. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development Alignments to practice standards are accurate.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **6b)** Materials Support the Standards' Emphasis on Mathematical	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[8] Refer also to criterion #6 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[9] Refer also to criterion #3 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[10] Refer also to criterion #4 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[11] Refer to the standards for each course found in the Teacher Support Library.
[12] Refer also to criterion #7 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
☐ Yes ☐ No	Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of other concerning key course-level mathematics that is detailed in the content standards (cf. MP.3).[13] Materials explicitly attend to the specialized language of mathematics.[13]		
	6c) Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the standards. [14] ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7c)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7d)** 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 students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7e)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7f) Materials support the uses of technology as called for in the standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[13] Refer also to criterion #8 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[14] Refer also to pages 16-18 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	7g) There is variety in the pacing and grain size of content coverage**.**	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7h) Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7i) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

FINAL EVALUATION

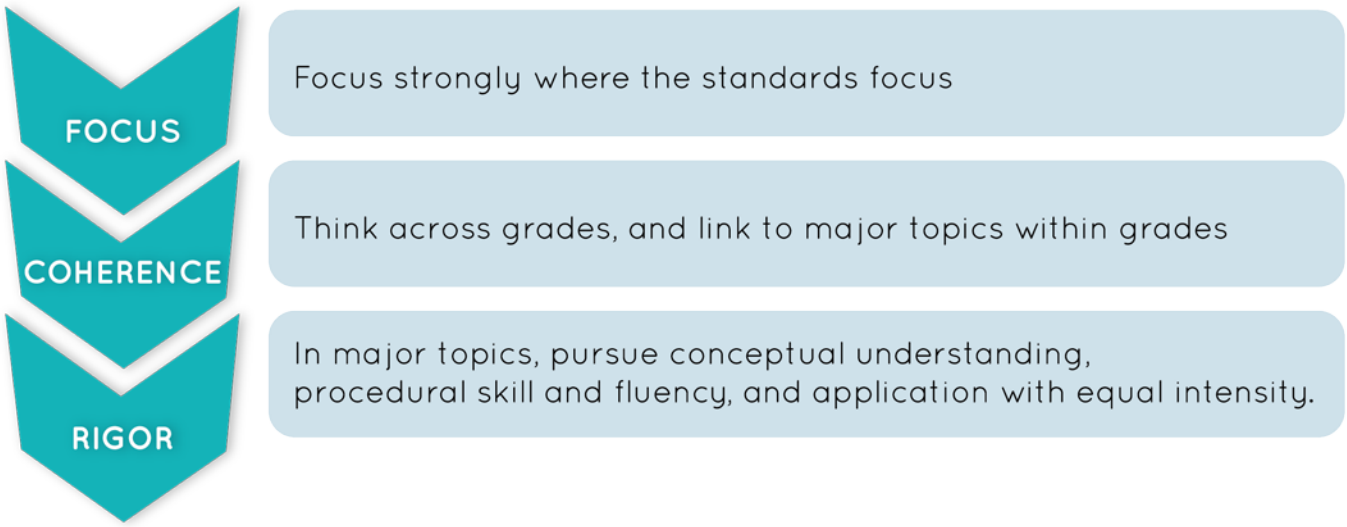
Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

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

Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus in High School	**Yes**	Students spend ample time on problems and material applicable to the grade level and widely acceptable prerequisites.
	2. Consistent, Coherent Content	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher.
	3. Rigor and Balance	**No**	Students do not spend ample time working on conceptual understanding, whereas ample time is spent on procedural skill and application.
	4. Focus and Coherence via Practice Standards	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	6. Alignment Criteria for Standards for Mathematical Practice	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7. Indicators of Quality	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: **Tier III, Not representing quality**			

Strong mathematics instruction contains the following elements:



Title: **HMH Geometry** Grade: **10**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
3. Rigor and Balance (Non-Negotiable)	1. Focus in High School (Non-Negotiable)
4. Focus Coh. via Practice Std (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS IN HIGH SCHOOL: In any single course, students and teachers using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education.[15, 16] For courses that do not include Geometry standards, metrics 1a and 1b must be met. For courses including Geometry standards, all three of the metrics must be met. ☐ Yes ☒ No	**REQUIRED** **1a)** In any single course, students spend at least 50% of their time on **Widely Applicable Prerequisites** for postsecondary education.[17]	**No**	Students do not spend at least 50% of their time on content that is aligned with preparation for postsecondary education. 45% (38 of 84 lessons) are aligned to the Widely Applicable Prerequisites.
	REQUIRED **1b)** There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8 including[18]: • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6–8.SP). • Performing rational number arithmetic fluently.	**Yes**	Students are presented with problems at a level of sophistication appropriate to high school. Knowledge and skills from grades 6-8 are expanded upon. For example, in Lesson 11.3 students use their knowledge about ratios and proportions to determine if two triangles are similar and find missing measurements as needed.
	REQUIRED (as applicable) **1c)** For courses that include standards from the Geometry conceptual category, student work in Geometry significantly involves applications/modeling as well as geometry applications that use algebra skills.[19]	**Yes**	Student work significantly involves modeling and proofs. Each module and lesson features a Performance task that addresses the content in a contextual situation. For example, Lesson 16.3 features real-world multi-step problem that infuses the area of a sector of a circle and the area that the Earth traverses during the Summer and Winter.

[15] Refer also to criterion #1 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[16] If materials show time in both block and standard 'days,' choose either but remain consistent.
[17] For more information on the Widely Applicable Prerequisites, see Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[18] Information excerpted from Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[19] Since the Geometry category itself contains relatively fewer Widely Applicable Prerequisites, this criterion is important to help foster students' college and career readiness.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards.[20] ☐ Yes ☒ No	**REQUIRED** **2a) *Giving 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.	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher. No review or remediation item explicitly lists standards or mentions from which prior coursework material originated. Although the Common Core Progressions Chart (located in the front of the teacher materials and the table of contents included in the teacher and student resources) allows teachers and students to see what their specific responsibility is for the current year, many Lessons include content from previous grades that is not noted as such.
	REQUIRED **2b) *Relating 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**	Course-level concepts are related to prior knowledge from earlier grades and courses. At the beginning of each unit, all prerequisite skills are reviewed in the "Are You Ready?" assessment. The items on this assessment connect the student's prior knowledge to what will be learned within the unit. For example, in Unit 2, Module 5 students review angle relationships and congruent figures in preparation for lessons on triangle congruence criteria. However, it should be noted that the review items are not identified by standard.
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.[21]	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings by amply featuring high-quality conceptual problems and conceptual discussion questions.	**Yes**	The materials do provide an ample number of problems aimed at developing conceptual understanding. For example, In Lesson 11.2 Students use folding and tracing paper to conceptualize how congruency can lead to similarity. In this same lesson, students also use a variety of tools such as a table and coordinate plane to demonstrate how similarity is obtained through a series of transformations. However, many of the problems in the "Explain" sections of the student text include fill in the blank or pre-formatted answer choices. This does not allow students to develop conceptual understanding of key mathematical concepts. For example, in Unit 6, Module 17, Lesson 17.1, students write the equation

[20] Refer also to criterion #3 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[21] Refer also to criterion #2 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
☒ Yes ☐ No			of a circle given the center and radius or by completing the square.
	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. Progress toward fluency and procedural skill is interwoven with the student's developing conceptual understanding of the skills in question	**Yes**	Practice exercises are provided for each lesson to develop procedural skill and fluency and ensure mastery of the content. The curriculum allows for sufficient practice of skills to produce fluency. There are many opportunities within each chapter for students to practice working problems. For example, Lesson 4.5 provides procedural skill practice opportunities on the homework and practice sheet where students are expected to determine the equation of a line perpendicular or parallel to another.
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. There are single- 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. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. Application problems particularly stress applying the Widely Applicable Prerequisites.	**Yes**	Teachers and students spend sufficient time working with engaging applications/modeling. Each module and lesson features a Performance Task that addresses the content in a contextual situation. For example, Lesson 16.3 features real-world multi-step problem that infuses the area of a sector of a circle and the area that the Earth traverses during the Summer and Winter. The standard G-SRT-C.8 calls for students to use trigonometry and the pythagorean theorem in applied problems. Lesson 13.4 features opportunities for students to problem solve using applied problems and application problems with real-world context.
	3d) *Balance:* The three aspects of rigor are not always treated together, and are not always treated separately	**Yes**	Lessons align to the components of rigor as addressed by the content standards for each lesson. The majority of standards for Geometry suggest procedural skill and conceptual understanding and these aspects of rigor are the most stressed throughout the content.
Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: **Materials promote focus and coherence by connecting practice standards with content that is**	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practices strengthen the focus of the course instead of detracting from it, in both teacher and student materials.	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade. Mathematical practices for each lesson chapter are explained in the margins of the teacher's edition. For example, in Unit 1, Module 2, Lesson 3 teachers are instructed to help students Focus on Reasoning by asking them to examine a table, make a conjecture, and explain their choice. Teachers are also

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
emphasized in the Standards.[22] ☒ Yes ☐ No			asked to reference common errors and misconceptions throughout the text while addressing precision through vocabulary.
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters). Courses are designed based on the content in the standards. ☐ Yes ☐ No	**REQUIRED** **5a)** Materials base courses on the content specified in the standards (Algebra I, Geometry, and Algebra II).[23]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **5b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a category, or two or more categories, in cases where these connections are natural and important.[24, 25]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	5c) Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	5d) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards.	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[26] 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. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development Alignments to practice standards are accurate.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **6b)** Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[22] Refer also to criterion #6 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[23] Refer also to criterion #3 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[24] Refer also to criterion #4 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[25] Refer to the standards for each course found in the Teacher Support Library.
[26] Refer also to criterion #7 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
☐ Yes ☐ No	other concerning key course-level mathematics that is detailed in the content standards (cf. MP.3).[27] Materials explicitly attend to the specialized language of mathematics.[13]		
	6c) Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the standards.[28] ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7c)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7d)** 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 students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7e)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7f) Materials support the uses of technology as called for in the standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[27] Refer also to criterion #8 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[28] Refer also to pages 16-18 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	7g) There is variety in the pacing and grain size of content coverage**.**	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7h) Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7i) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

FINAL EVALUATION

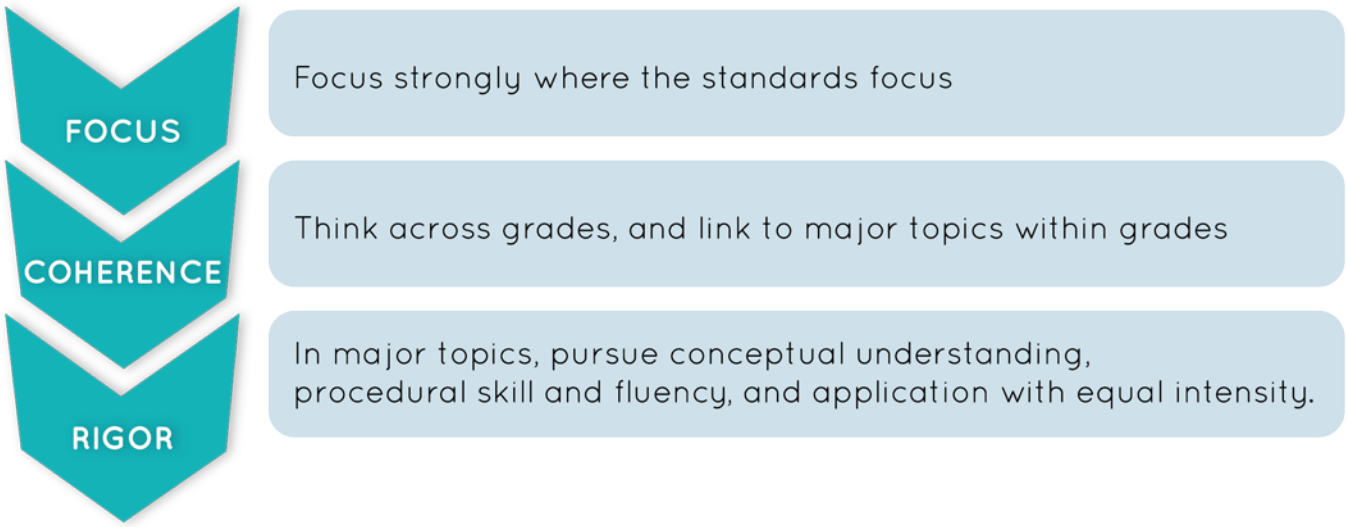
Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

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

Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus in High School	**No**	Students do not spend ample time on problems and material applicable to the grade level and widely acceptable prerequisites.
	2. Consistent, Coherent Content	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher.
	3. Rigor and Balance	**Yes**	Teachers and students spend ample time working with the three components of rigor as addressed by the standards for Geometry.
	4. Focus and Coherence via Practice Standards	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	6. Alignment Criteria for Standards for Mathematical Practice	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	7. Indicators of Quality	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: Tier III, Not representing quality			

Strong mathematics instruction contains the following elements:



Title: **HMH Algebra II** Grade: **11**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
3. Rigor and Balance (Non-Negotiable)	1. Focus in High School (Non-Negotiable)
4. Focus Coh. via Practice Std (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS IN HIGH SCHOOL: In any single course, students and teachers using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education.[29, 30] For courses that do not include Geometry standards, metrics 1a and 1b must be met. For courses including Geometry standards, all three of the metrics must be met. ☐ Yes ☒ No	**REQUIRED** **1a)** In any single course, students spend at least 50% of their time on **Widely Applicable Prerequisites** for postsecondary education.[31]	**No**	Students do not spend at least 50% of their time on content that is aligned with preparation for postsecondary education. 45% (32 of 71 lessons) are aligned to the Widely Applicable Prerequisites.
	REQUIRED **1b)** There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8 including[32]: • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6–8.SP). • Performing rational number arithmetic fluently.	**Yes**	Students are presented with problems at a level of sophistication appropriate to high school. Knowledge and skills from grades 6-8 are expanded upon. For example, in Unit 1, Module 2, Lesson 2.1 students are asked to extend their knowledge of function transformations to absolute value functions.
	REQUIRED (as applicable) **1c)** For courses that include standards from the Geometry conceptual category, student work in Geometry significantly involves applications/modeling as well as geometry applications that use algebra skills.[33]	**No**	LDOE defines Algebra 2 to include G-GPE.A.2. Lesson 4.2 derives the formula of a parabola using the directrix and focus but does not list it as G-GPE.A.2. The lesson does include applications. However, the lesson does not significantly involve applications/modeling. Modeling is only briefly mentioned at the bottom of page 178 of the Teacher's Edition.

[29] Refer also to criterion #1 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[30] If materials show time in both block and standard 'days,' choose either but remain consistent.
[31] For more information on the Widely Applicable Prerequisites, see Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[32] Information excerpted from Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[33] Since the Geometry category itself contains relatively fewer Widely Applicable Prerequisites, this criterion is important to help foster students' college and career readiness.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards.[34] ☐ Yes ☒ No	**REQUIRED** **2a) *Giving 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.	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher. No review or remediation item explicitly lists standards or mentions from which prior coursework material originated. Although the Common Core Progressions Chart (located in the front of the teacher materials and the table of contents included in the teacher and student resources) allows teachers and students to see what their specific responsibility is for the current year, many Lessons include content from previous grades that is not noted as such.
	REQUIRED **2b) *Relating 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**	Course-level concepts are related to prior knowledge from earlier grades and courses. At the beginning of each unit, all prerequisite skills are reviewed in the "Are You Ready?" assessment. The items on this assessment connect the student's prior knowledge to what will be learned within the unit. For example, in Unit 5, Module 11.2 students review basic exponent rules in order to get ready to compute using rational exponents. However, it should be noted that the review items are not identified by standard.
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.[35] ☒ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings by amply featuring high-quality conceptual problems and conceptual discussion questions.	**Yes**	The materials do provide an ample number of problems aimed at developing conceptual understanding. For example, Lesson 17.1 examines how radian measure is derived from degree measure using drawings and tables for conceptualization. However, many of the problems in the "Explain" sections of the student text include fill in the blank or pre-formatted answer choices. This does not allow students to develop conceptual understanding of key mathematical concepts. For example, in Unit 7, Module 17, Lesson 17.1, Explain 2, students are solving a real-world problem involving arc length.
	REQUIRED **3b) *Attention to Procedural Skill and Fluency:*** The materials are	**Yes**	Practice exercises are provided for each lesson to develop procedural skill and fluency and ensure

[34] Refer also to criterion #3 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[35] Refer also to criterion #2 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	designed so that students attain the fluencies and procedural skills required by the Standards. Progress toward fluency and procedural skill is interwoven with the student's developing conceptual understanding of the skills in question		mastery of the content. The curriculum allows for sufficient practice of skills to produce fluency. There are many opportunities within each chapter for students to practice working problems. For example, Lesson 10.1 homework and practice uses procedural problems to solve inverses of simple quadratic and cubic functions.
	REQUIRED **3c)** ***Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. There are single- 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. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. Application problems particularly stress applying the Widely Applicable Prerequisites.	**Yes**	Sufficient time is spent working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. This includes single- and multi-step contextual problems. For example, in Unit 2, Module 4, Lesson 2 students are given multiple application problems (satellite dish, spotlight, ball thrown in the air, cable for a suspension bridge, etc.) to support understanding the properties of parabolas. Each lesson also features a performance task that enhances the lesson content with real-world context (lesson 15.1 pg. 670).
	3d) ***Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately	**Yes**	Lessons align to the components of rigor as addressed by the content standards for each lesson. The majority of standards for Algebra 2 suggest procedural skill and this aspect of rigor is the most stressed throughout the content.
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.**[36] ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practices strengthen the focus of the course instead of detracting from it, in both teacher and student materials.	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade. Mathematical practices for each lesson chapter are explained in the margins of the teacher's edition. For example, in Unit 5, Module 11, Lesson 2 teachers are instructed to help students Focus on Reasoning by asking them to derive the quotient property of roots. Teachers are also asked to reference common errors and misconceptions throughout the text while addressing precision through vocabulary.

[36] Refer also to criterion #6 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters). Courses are designed based on the content in the standards. ☐ Yes ☐ No	**REQUIRED** **5a)** Materials base courses on the content specified in the standards (Algebra I, Geometry, and Algebra II).[37]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **5b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a category, or two or more categories, in cases where these connections are natural and important.[38, 39]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	5c) Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	5d) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ☐ Yes ☐ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[40] 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. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development Alignments to practice standards are accurate.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **6b)** Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of other concerning key course-level mathematics that is detailed in the content standards (cf. MP.3).[41] Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	6c) Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[37] Refer also to criterion #3 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[38] Refer also to criterion #4 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[39] Refer to the standards for each course found in the Teacher Support Library.
[40] Refer also to criterion #7 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[41] Refer also to criterion #8 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the standards. [42] ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7c)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7d)** 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 students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7e)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7f) Materials support the uses of technology as called for in the standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7g) There is variety in the pacing and grain size of content coverage**.**	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7h) Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[42] Refer also to pages 16-18 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	active participation by all students in their own learning and in the learning of their classmates.		
	7i) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

FINAL EVALUATION

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

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

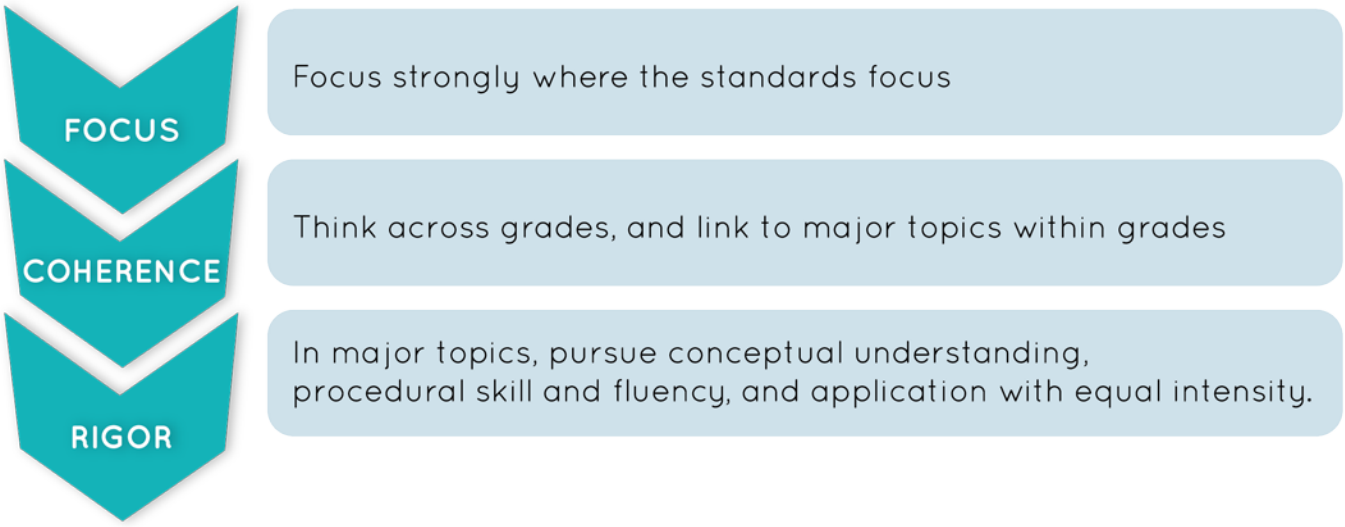
Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus in High School	**No**	Students do not spend ample time on problems and material applicable to the grade level and widely acceptable prerequisites. The geometry standard required for Algebra 2 does not pay ample attention modeling and application.
	2. Consistent, Coherent Content	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher.
	3. Rigor and Balance	**Yes**	Students spend ample time working on problems related to the three components of rigor: conceptual understanding, procedural skill and fluency, and application.
	4. Focus and Coherence via Practice Standards	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	6. Alignment Criteria for Standards for Mathematical Practice	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7. Indicators of Quality	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
FINAL DECISION FOR THIS MATERIAL: **Tier III, Not representing quality**			

Appendix I.

Publisher Response

Strong mathematics instruction contains the following elements:



Title: **HMH Algebra I, HMH Geometry, and HMH Algebra II** Grade: **9-11**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
3. Rigor and Balance (Non-Negotiable) *	1. Focus in High School (Non-Negotiable) **
4. Focus Coh. via Practice Std (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)
* Weak at Grade 9	** Strong at Grade 9

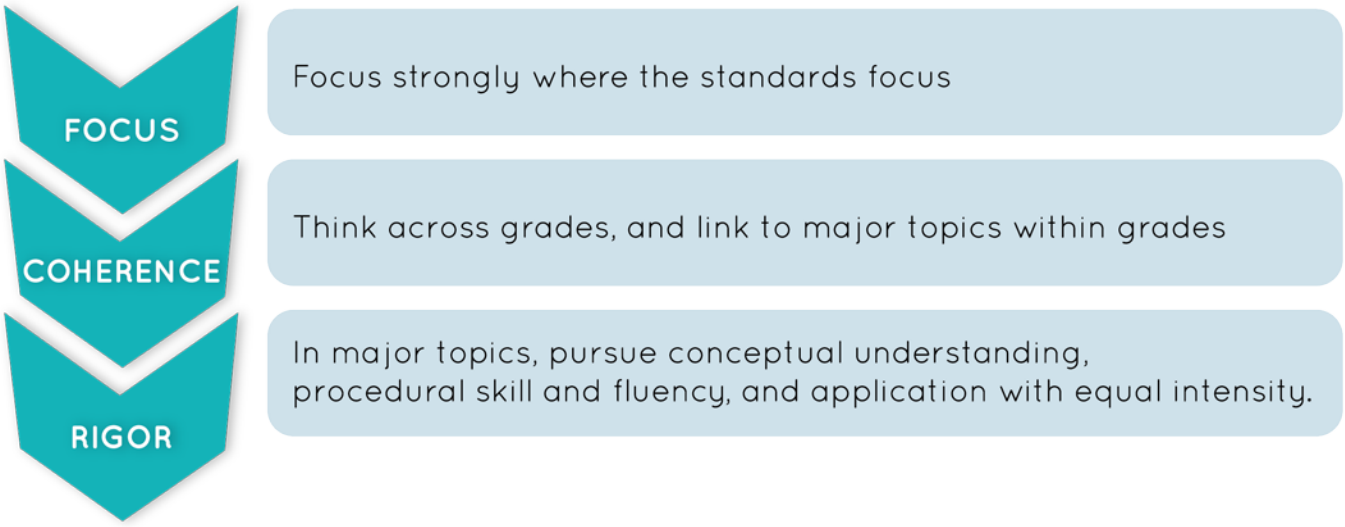
Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

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

Click below for complete grade-level reviews:

Grade 9 (Tier 3) Grade 10 (Tier 3) Grade 11 (Tier 3)

Strong mathematics instruction contains the following elements:



Title: **HMH Algebra I** Grade: **9**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
1. Focus in High School (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)
4. Focus Coh. via Practice Std (Non-Negotiable)	3. Rigor and Balance (Non-Negotiable)

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.				
Non-Negotiable 1. FOCUS IN HIGH SCHOOL: In any single course, students and teachers using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education.[1, 2] For courses that do not include Geometry standards, metrics 1a and 1b must be met. For courses including Geometry standards, all three of the metrics must be met. ☒ Yes ☐ No	**REQUIRED** **1a)** In any single course, students spend at least 50% of their time on **Widely Applicable Prerequisites** for postsecondary education.[3]	**Yes**	Students spend at least 50% of their time on content that is aligned with preparation for postsecondary education. 66 of 81 lessons (81%) are aligned to the Widely Applicable Prerequisites. Modules shown in the teacher edition list the corresponding standards with the module topic.	
	REQUIRED **1b)** There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8 including[4]: • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6–8.SP). • Performing rational number arithmetic fluently.	**Yes**	Students are presented with problems at a level of sophistication appropriate to high school. Knowledge and skills from grades 6-8 are expanded upon. Basic function concepts are extended when students compare linear, quadratic, and exponential models in Lesson 23.2 using LE.A.1. Another example of this extension can be found in Module 24 as students are instructed to graph and interpret polynomial, inverse, square and cube root functions using F-IF.C.7b.	
	REQUIRED (as applicable) **1c)** For courses that include standards from the Geometry conceptual category, student work in Geometry significantly involves applications/modeling as well as geometry applications that use algebra skills.[5]	**N/A**		

[1] Refer also to criterion #1 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[2] If materials show time in both block and standard 'days,' choose either but remain consistent.
[3] For more information on the Widely Applicable Prerequisites, see Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Information excerpted from Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Since the Geometry category itself contains relatively fewer Widely Applicable Prerequisites, this criterion is important to help foster students' college and career readiness.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards.[6] ☐ Yes ☒ No	**REQUIRED** **2a) *Giving 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.	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher. No review or remediation item explicitly lists standards or mentions from which prior coursework material originated. Although the Common Core Progressions Chart (located in the front of the teacher materials and the table of contents included in the teacher and student resources) allows teachers and students to see what their specific responsibility is for the current year, many Lessons include content from previous grades that is not noted as such.	Every module opens with a Real World Video and an Are You Ready? feature that connects the Module topics and concepts to prior knowledge from earlier lessons, grade levels, and courses. The Teacher Edition also provides Math Background for each Unit so that teachers can readily review the topics and their relevance to continued understanding of the Standards.
	REQUIRED **2b) *Relating 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**	Course-level concepts are related to prior knowledge from earlier grades and courses. At the beginning of each unit, all prerequisite skills are reviewed in the "Are You Ready?" assessment. The items on this assessment connect the student's prior knowledge to what will be learned within the unit. For example, in Unit 9 lesson 21.1, students relate the creation of quadratics with algebra tiles to the factoring of quadratics using algebra tiles. However, it should be noted that the review items are not identified by standard and that Unit 5 and 6 do not relate prior knowledge to new content but rather unidentified review content.	
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.[7]	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings by amply featuring high-quality conceptual problems and conceptual discussion questions.	**No**	The materials do not provide an ample number of problems aimed at developing conceptual understanding. Many of the problems in the "Explain" sections of the student text include fill in the blank or pre-formatted answer choices. This does not allow students to develop conceptual understanding of key mathematical concepts. For example, in Unit 5, Lesson 11.1, Problem 4, students are given a "real-world context" and asked to solve a system by graphing. The second step asks the students to "Formulate a Plan" by writing a system of linear equations. In the following step, "Solve", the students are told to graph two lines	The Houghton Mifflin Harcourt Algebra 1 course is designed around thorough, thought-provoking lessons that use the 5E instructional model to investigate Essential Questions. Lessons and Teacher Edition commentary are written to lead students to deep conceptual understanding of the Standards. The companion Interactive Student Edition provides additional Performance Tasks focused on conceptual understanding of every Standard. Each interactive example is accompanied by the Math on the Spot video tutorial. Student-centered Reflect and Elaborate questions give meaningful opportunities

[6] Refer also to criterion #3 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[7] Refer also to criterion #2 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
☐ Yes ☒ No			whose equations are given. These given equations are the answer to the "Formulate a Plan" step.	for students to develop and demonstrate understanding and inductive reasoning. Here are some examples: A.REI.A.1 Understanding that solving an equation is a process of reasoning and being able to explain the reasoning is important. Developing this understanding is well emphasized in Module 1 Lesson 1 (pp. 5–14). In the Explore part of the Lesson students solve equations by guess and check and working backward. Then students extend their understanding of the process by applying Properties of Equality to explain the process used in solving the equation. The Teacher Edition provides Questioning Strategies to guide students in developing their understanding. The Teacher Edition provides a Peer to Peer activity that allows students to collaborate and learn together. A.APR.B Understanding the relationship between zeros and factors of polynomials is an important concept prevalent throughout High School mathematics. Unit 8 Module 2 Lesson 2 (pp. 951–960) develops this relationship. Students connect factors and x-intercepts, and then connect factors and zeroes. Students are then able to write a polynomial given its x-intercepts. The Teacher Edition provides Questioning Strategies for each lesson that guide and deepens understanding. Each interactive example is accompanied by the Math on the Spot video tutorial. Personal Math Trainer provides online homework, hints and help, and extra practice.
	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. Progress toward fluency and procedural skill is interwoven with the student's developing conceptual understanding of the skills in question	**Yes**	Practice exercises are provided for each lesson to develop procedural skill and fluency and ensure mastery of the content. The curriculum allows for sufficient practice of skills to produce fluency. There are many opportunities within each chapter for students to practice working problems. For example, unit 9 lesson 22.3, students derive the quadratic formula using a series of procedural steps and continue to use the formula throughout the lesson, specifically on the homework and practice page.	
	REQUIRED	**Yes**	Sufficient time is spent working with engaging	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	3c) ***Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. There are single- 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. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. Application problems particularly stress applying the Widely Applicable Prerequisites.		applications/modeling without losing focus on the Widely Applicable Prerequisites. This includes single- and multi-step contextual problems. For example, in Unit 8, Module 20, Lesson 3 students are given multiple application problems (diving, height of a golf ball, etc.) to support solving quadratic equations using the zero product property. Each lesson also features a performance task that enhances the lesson content with real-world context (lesson 22.3 pg. 1072).	
	3d) ***Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately	**Yes**	Lessons align to the components of rigor as addressed by the content standards for each lesson. The majority of standards for Algebra 1 suggest procedural skill and this aspect of rigor is the most stressed throughout the content.	
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.**[8] ☒ Yes ☐ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practices strengthen the focus of the course instead of detracting from it, in both teacher and student materials.	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade. Mathematical practices for each lesson chapter are explained extensively in the margins of the teacher's edition. For example, in Unit 6, Module 16, Lesson 1, teachers are instructed to Focus on Reasoning by discussing the Equality of Bases Property with students. Teachers are also asked to reference common errors and misconceptions throughout the text while addressing precision through vocabulary.	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters). Courses are	**REQUIRED** **5a)** Materials base courses on the content specified in the standards (Algebra I, Geometry, and Algebra II).[9]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **5b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[8] Refer also to criterion #6 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[9] Refer also to criterion #3 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
designed based on the content in the standards. ☐ Yes ☐ No	domains in a category, or two or more categories, in cases where these connections are natural and important. [10, 11]			
	5c) Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	5d) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ☐ Yes ☐ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[12] 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. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development Alignments to practice standards are accurate.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **6b)** Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of other concerning key course-level mathematics that is detailed in the content standards (cf. MP.3).[13] Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	6c) Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools	**REQUIRED** **7a)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED	**Not Evaluated**	This section was not evaluated because the non-	

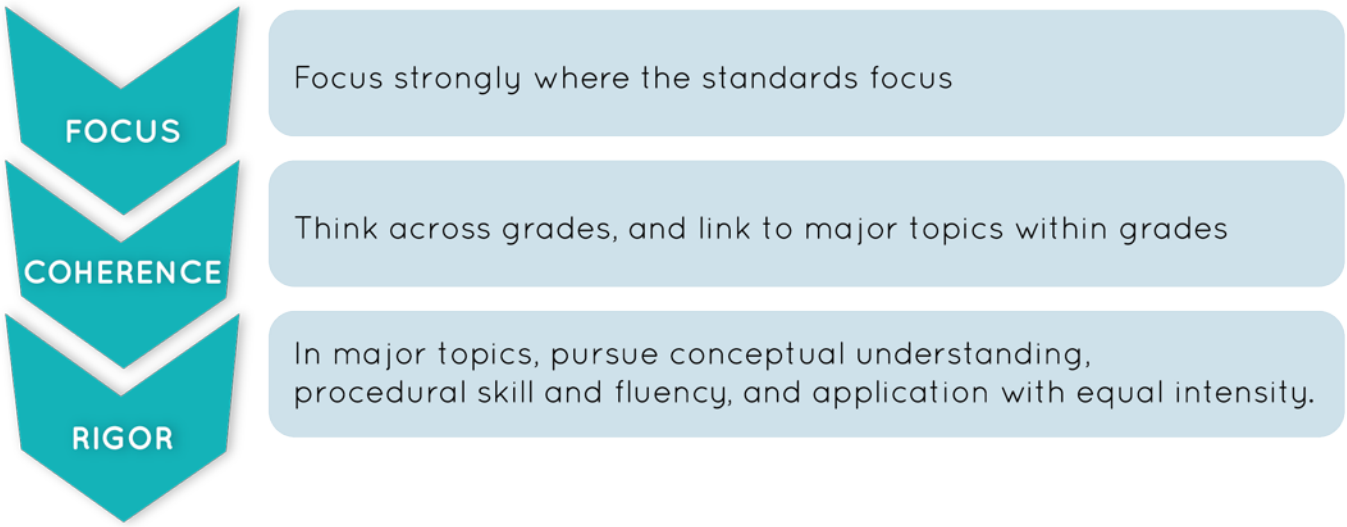
[10] Refer also to criterion #4 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[11] Refer to the standards for each course found in the Teacher Support Library.
[12] Refer also to criterion #7 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[13] Refer also to criterion #8 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
they need to meet the expectations of the standards. [14] ☐ Yes ☐ No	**7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.		negotiable criteria were not met.	
	REQUIRED **7c)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7d)** 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 students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7e)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7f) Materials support the uses of technology as called for in the standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7g) There is variety in the pacing and grain size of content coverage.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7h) Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7i) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[14] Refer also to pages 16-18 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	**Criteria**	**Yes/No**	**Final Justification/Comments**	
I: Non-Negotiables	1. Focus in High School	**Yes**	Students spend ample time on problems and material applicable to the grade level and widely acceptable prerequisites.	
	2. Consistent, Coherent Content	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher.	
	3. Rigor and Balance	**No**	Students do not spend ample time working on conceptual understanding, whereas ample time is spent on procedural skill and application.	
	4. Focus and Coherence via Practice Standards	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	6. Alignment Criteria for Standards for Mathematical Practice	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7. Indicators of Quality	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL DECISION FOR THIS MATERIAL: **Tier III, Not representing quality**				

Strong mathematics instruction contains the following elements:



Title: **HMH Geometry** Grade: **10**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
3. Rigor and Balance (Non-Negotiable)	1. Focus in High School (Non-Negotiable)
4. Focus Coh. via Practice Std (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.				
Non-Negotiable 1. FOCUS IN HIGH SCHOOL: In any single course, students and teachers using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education.[15, 16] For courses that do not include Geometry standards, metrics 1a and 1b must be met. For courses including Geometry standards, all three of the metrics must be met. ☐ Yes ☒ No	**REQUIRED** **1a)** In any single course, students spend at least 50% of their time on **Widely Applicable Prerequisites** for postsecondary education.[17]	**No**	Students do not spend at least 50% of their time on content that is aligned with preparation for postsecondary education. 45% (38 of 84 lessons) are aligned to the Widely Applicable Prerequisites.	There are total of 48 lessons that instruct the Widely Applicable Prerequisistes for postsecondary eduction. HMH Geometry list major standards within the TOC and Correlation Chart, but at the Lesson Opener Level additional standards are listed that are covered in the lesson. These additional standards are not referenced in either the TOC or the front-matter correlation chart, but are used as a referenced for the teacher to see the connections that the standards have with each other. Counting the Lesson Opener standards shows that 48 lessons out of 84 cover the required standards.
	REQUIRED **1b)** There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8 including[18]: • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6–8.SP). • Performing rational number arithmetic fluently.	**Yes**	Students are presented with problems at a level of sophistication appropriate to high school. Knowledge and skills from grades 6-8 are expanded upon. For example, in Lesson 11.3 students use their knowledge about ratios and proportions to determine if two triangles are similar and find missing measurements as needed.	
	REQUIRED (as applicable) **1c)** For courses that include standards from the Geometry conceptual category, student work in Geometry significantly involves applications/modeling as well as geometry applications that use algebra skills.[19]	**Yes**	Student work significantly involves modeling and proofs. Each module and lesson features a Performance task that addresses the content in a contextual situation. For example, Lesson 16.3 features real-world multi-step problem that infuses the area of a sector of a circle and the area that the Earth	

[15] Refer also to criterion #1 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[16] If materials show time in both block and standard 'days,' choose either but remain consistent.
[17] For more information on the Widely Applicable Prerequisites, see Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[18] Information excerpted from Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[19] Since the Geometry category itself contains relatively fewer Widely Applicable Prerequisites, this criterion is important to help foster students' college and career readiness.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
			traverses during the Summer and Winter.	
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards.[20] ☐ Yes ☒ No	**REQUIRED** **2a)** ***Giving 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.	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher. No review or remediation item explicitly lists standards or mentions from which prior coursework material originated. Although the Common Core Progressions Chart (located in the front of the teacher materials and the table of contents included in the teacher and student resources) allows teachers and students to see what their specific responsibility is for the current year, many Lessons include content from previous grades that is not noted as such.	Every module opens with a Real World Video and Are You Ready? feature that connects the Module topics and concepts to prior knowledge from earlier lessons, grade levels, and courses. The Teacher Edition also provides Math Background for each Unit so that teachers can readily review the topics and their relevance to continued understanding of the Standards.
	REQUIRED **2b)** ***Relating 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**	Course-level concepts are related to prior knowledge from earlier grades and courses. At the beginning of each unit, all prerequisite skills are reviewed in the "Are You Ready?" assessment. The items on this assessment connect the student's prior knowledge to what will be learned within the unit. For example, in Unit 2, Module 5 students review angle relationships and congruent figures in preparation for lessons on triangle congruence criteria. However, it should be noted that the review items are not identified by standard.	
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.[21]	**REQUIRED** **3a)** ***Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings by amply featuring high-quality conceptual problems and conceptual discussion questions.	**Yes**	The materials do provide an ample number of problems aimed at developing conceptual understanding. For example, In Lesson 11.2 Students use folding and tracing paper to conceptualize how congruency can lead to similarity. In this same lesson, students also use a variety of tools such as a table and coordinate plane to demonstrate how similarity is obtained through a series of transformations. However, many of the problems in the "Explain" sections of the student text include fill in the blank or pre-formatted answer choices. This does not allow	

[20] Refer also to criterion #3 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[21] Refer also to criterion #2 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
☒ Yes ☐ No			students to develop conceptual understanding of key mathematical concepts. For example, in Unit 6, Module 17, Lesson 17.1, students write the equation of a circle given the center and radius or by completing the square.	
	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. Progress toward fluency and procedural skill is interwoven with the student's developing conceptual understanding of the skills in question	**Yes**	Practice exercises are provided for each lesson to develop procedural skill and fluency and ensure mastery of the content. The curriculum allows for sufficient practice of skills to produce fluency. There are many opportunities within each chapter for students to practice working problems. For example, Lesson 4.5 provides procedural skill practice opportunities on the homework and practice sheet where students are expected to determine the equation of a line perpendicular or parallel to another.	
	REQUIRED **3c)** ***Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. There are single- 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. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. Application problems particularly stress applying the Widely Applicable Prerequisites.	**Yes**	Teachers and students spend sufficient time working with engaging applications/modeling. Each module and lesson features a Performance Task that addresses the content in a contextual situation. For example, Lesson 16.3 features real-world multi-step problem that infuses the area of a sector of a circle and the area that the Earth traverses during the Summer and Winter. The standard G-SRT-C.8 calls for students to use trigonometry and the pythagorean theorem in applied problems. Lesson 13.4 features opportunities for students to problem solve using applied problems and application problems with real-world context.	
	3d) ***Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately	**Yes**	Lessons align to the components of rigor as addressed by the content standards for each lesson. The majority of standards for Geometry suggest procedural skill and conceptual understanding and these aspects of rigor are the most stressed throughout the content.	
Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: **Materials promote focus and**	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practices strengthen the focus of the course instead of detracting from it, in both teacher and student materials.	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade. Mathematical practices for each lesson chapter are explained in the margins of the teacher's edition. For example, in Unit 1, Module 2, Lesson 3 teachers are instructed to help students Focus on	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
coherence by connecting practice standards with content that is emphasized in the Standards.[22] ☒ Yes ☐ No			Reasoning by asking them to examine a table, make a conjecture, and explain their choice. Teachers are also asked to reference common errors and misconceptions throughout the text while addressing precision through vocabulary.	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters). Courses are designed based on the content in the standards. ☐ Yes ☐ No	**REQUIRED** **5a)** Materials base courses on the content specified in the standards (Algebra I, Geometry, and Algebra II). [23]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **5b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a category, or two or more categories, in cases where these connections are natural and important. [24, 25]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	5c) Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	5d) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards.	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[26] 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. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development Alignments to practice standards are accurate.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **6b)** Materials Support the Standards' Emphasis on Mathematical	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[22] Refer also to criterion #6 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[23] Refer also to criterion #3 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[24] Refer also to criterion #4 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[25] Refer to the standards for each course found in the Teacher Support Library.
[26] Refer also to criterion #7 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

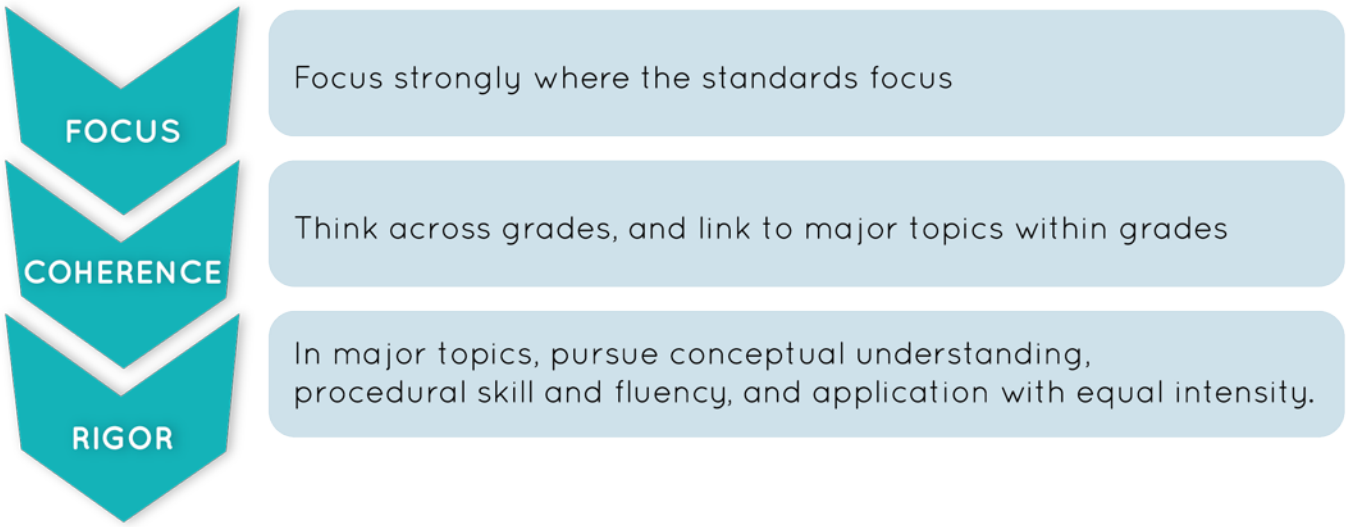
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
☐ Yes ☐ No	Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of other concerning key course-level mathematics that is detailed in the content standards (cf. MP.3).[27] Materials explicitly attend to the specialized language of mathematics.[13]			
	6c) Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the standards.[28] ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7c)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7d)** 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 students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7e)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7f) Materials support the uses of technology as called for in the standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[27] Refer also to criterion #8 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[28] Refer also to pages 16-18 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
	7g) There is variety in the pacing and grain size of content coverage.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7h) Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7i) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	**Criteria**	**Yes/No**	**Final Justification/Comments**	
I: Non-Negotiables	1. Focus in High School	**No**	Students do not spend ample time on problems and material applicable to the grade level and widely acceptable prerequisites.	
	2. Consistent, Coherent Content	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher.	
	3. Rigor and Balance	**Yes**	Teachers and students spend ample time working with the three components of rigor as addressed by the standards for Geometry.	
	4. Focus and Coherence via Practice Standards	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
	6. Alignment Criteria for Standards for Mathematical Practice	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7. Indicators of Quality	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL DECISION FOR THIS MATERIAL: **Tier III, Not representing quality**				

Strong mathematics instruction contains the following elements:



Title: **HMH Algebra II** Grade: **11**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
3. Rigor and Balance (Non-Negotiable)	1. Focus in High School (Non-Negotiable)
4. Focus Coh. via Practice Std (Non-Negotiable)	2. Consistent, Coherent Content (Non-Negotiable)

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.				
Non-Negotiable 1. FOCUS IN HIGH SCHOOL: In any single course, students and teachers using the materials as designed spend the majority of their time developing knowledge and skills that are widely applicable as prerequisites for postsecondary education.[29, 30] For courses that do not include Geometry standards, metrics 1a and 1b must be met. For courses including Geometry standards, all three of the metrics must be met. ☐ Yes ☒ No	**REQUIRED** **1a)** In any single course, students spend at least 50% of their time on **Widely Applicable Prerequisites** for postsecondary education.[31]	**No**	Students do not spend at least 50% of their time on content that is aligned with preparation for postsecondary education. 45% (32 of 71 lessons) are aligned to the Widely Applicable Prerequisites.	There are total of 45 lessons that instruct the Widely Applicable Prerequisistes for postsecondary eduction. HMH Algebra II list major standards within the TOC and Correlation Chart, but at the Lesson Opener Level additional standards are listed that are covered in the lesson. These additional standards are not referenced in either the TOC or the front-matter correlation chart, but are used as a referenced for the teacher to see the connections that the standards have with each other. Counting the Lesson Opener standards shows that 45 lessons out of 71 lessons cover the required standards.
	REQUIRED **1b)** There are problems at a level of sophistication appropriate to high school (beyond mere review of middle school topics) that involve the application of knowledge and skills from grades 6-8 including[32]: • Applying ratios and proportional relationships. • Applying percentages and unit conversions, e.g., in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.). • Applying basic function concepts, e.g., by interpreting the features of a graph in the context of an applied problem. • Applying concepts and skills of geometric measurement e.g., when analyzing a diagram or schematic. • Applying concepts and skills of basic statistics and probability (see 6–8.SP). • Performing rational number arithmetic fluently.	**Yes**	Students are presented with problems at a level of sophistication appropriate to high school. Knowledge and skills from grades 6-8 are expanded upon. For example, in Unit 1, Module 2, Lesson 2.1 students are asked to extend their knowledge of function transformations to absolute value functions.	
	REQUIRED (as applicable) **1c)** For courses that include standards from the Geometry conceptual category, student work in Geometry significantly involves applications/modeling as well as geometry applications that use algebra skills.[33]	**No**	LDOE defines Algebra 2 to include G-GPE.A.2. Lesson 4.2 derives the formula of a parabola using the directrix and focus but does not list it as G-GPE.A.2. The lesson does include applications. However, the lesson does not significantly involve applications/modeling. Modeling is only briefly	In lesson 4.2, modeling is mentioned at the bottom of the TE on page 178, but is also demonstrated in the Peer-to-Peer activity,in Explain 4 on pages 181-182. It is continued in the Evaluate section in problems 11-14, 18, and the lesson Performance Task. The correlation to G-GPE.A.2 is not provided due to the

[29] Refer also to criterion #1 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[30] If materials show time in both block and standard 'days,' choose either but remain consistent.
[31] For more information on the Widely Applicable Prerequisites, see Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[32] Information excerpted from Table 1 on Page 8 of the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[33] Since the Geometry category itself contains relatively fewer Widely Applicable Prerequisites, this criterion is important to help foster students' college and career readiness.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
			mentioned at the bottom of page 178 of the Teacher's Edition.	fact that it is not a standard for Algebra 2 in the CCSS Appendix A Pathways.
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards.[34] ☐ Yes ☒ No	**REQUIRED** **2a)** ***Giving 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.	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher. No review or remediation item explicitly lists standards or mentions from which prior coursework material originated. Although the Common Core Progressions Chart (located in the front of the teacher materials and the table of contents included in the teacher and student resources) allows teachers and students to see what their specific responsibility is for the current year, many Lessons include content from previous grades that is not noted as such.	Every module opens with a Real World Video and Are You Ready? feature that connects the Module topics and concepts to prior knowledge from earlier lessons, grade levels, and courses. The Teacher Edition also provides Math Background for each Unit so that teachers can readily review the topics and their relevance to continued understanding of the Standards.
	REQUIRED **2b)** ***Relating 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**	Course-level concepts are related to prior knowledge from earlier grades and courses. At the beginning of each unit, all prerequisite skills are reviewed in the "Are You Ready?" assessment. The items on this assessment connect the student's prior knowledge to what will be learned within the unit. For example, in Unit 5, Module 11.2 students review basic exponent rules in order to get ready to compute using rational exponents. However, it should be noted that the review items are not identified by standard.	
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.[35]	**REQUIRED** **3a)** ***Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings by amply featuring high-quality conceptual problems and conceptual discussion questions.	**Yes**	The materials do provide an ample number of problems aimed at developing conceptual understanding. For example, Lesson 17.1 examines how radian measure is derived from degree measure using drawings and tables for conceptualization. However, many of the problems in the "Explain" sections of the student text include fill in the blank or pre-formatted answer choices. This does not allow students to develop conceptual understanding of key mathematical concepts. For example, in Unit 7, Module 17, Lesson 17.1, Explain 2, students are solving a real-world problem involving arc length.	

[34] Refer also to criterion #3 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[35] Refer also to criterion #2 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
☒ Yes ☐ No				
	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. Progress toward fluency and procedural skill is interwoven with the student's developing conceptual understanding of the skills in question	**Yes**	Practice exercises are provided for each lesson to develop procedural skill and fluency and ensure mastery of the content. The curriculum allows for sufficient practice of skills to produce fluency. There are many opportunities within each chapter for students to practice working problems. For example, Lesson 10.1 homework and practice uses procedural problems to solve inverses of simple quadratic and cubic functions.	
	REQUIRED **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. There are single- 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. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. Application problems particularly stress applying the Widely Applicable Prerequisites.	**Yes**	Sufficient time is spent working with engaging applications/modeling without losing focus on the Widely Applicable Prerequisites. This includes single- and multi-step contextual problems. For example, in Unit 2, Module 4, Lesson 2 students are given multiple application problems (satellite dish, spotlight, ball thrown in the air, cable for a suspension bridge, etc.) to support understanding the properties of parabolas. Each lesson also features a performance task that enhances the lesson content with real-world context (lesson 15.1 pg. 670).	
	3d) *Balance:* The three aspects of rigor are not always treated together, and are not always treated separately	**Yes**	Lessons align to the components of rigor as addressed by the content standards for each lesson. The majority of standards for Algebra 2 suggest procedural skill and this aspect of rigor is the most stressed throughout the content.	
Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: **Materials promote focus and coherence by connecting practice**	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the Widely Applicable Prerequisites; practices strengthen the focus of the course instead of detracting from it, in both teacher and student materials.	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade. Mathematical practices for each lesson chapter are explained in the margins of the teacher's edition. For example, in Unit 5, Module 11, Lesson 2 teachers are instructed to help students Focus on Reasoning by asking them to derive the quotient	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
standards with content that is emphasized in the Standards.[36] ☒ Yes ☐ No			property of roots. Teachers are also asked to reference common errors and misconceptions throughout the text while addressing precision through vocabulary.	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters). Courses are designed based on the content in the standards. ☐ Yes ☐ No	**REQUIRED** **5a)** Materials base courses on the content specified in the standards (Algebra I, Geometry, and Algebra II). [37]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **5b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a category, or two or more categories, in cases where these connections are natural and important. [38, 39]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	5c) Materials include learning objectives that are visibly shaped by CCSSM cluster and domain headings.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	5d) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.[10]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards.	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[40] 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. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development Alignments to practice standards are accurate.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **6b)** Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[36] Refer also to criterion #6 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[37] Refer also to criterion #3 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[38] Refer also to criterion #4 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[39] Refer to the standards for each course found in the Teacher Support Library.
[40] Refer also to criterion #7 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
☐ Yes ☐ No	to construct viable arguments and critique the arguments of other concerning key course-level mathematics that is detailed in the content standards (cf. MP.3).[41] Materials explicitly attend to the specialized language of mathematics.[13]			
	6c) Materials explicitly attend to the specialized language of mathematics.[13]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the standards.[42] ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7c)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7d)** 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 students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED **7e)** 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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7f) Materials support the uses of technology as called for in the standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[41] Refer also to criterion #8 in the HS Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[42] Refer also to pages 16-18 in the High School Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
	7g) There is variety in the pacing and grain size of content coverage.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7h) Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7i) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL EVALUATION ***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7. ***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. ***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	**Criteria**	**Yes/No**	**Final Justification/Comments**	
I: Non-Negotiables	1. Focus in High School	**No**	Students do not spend ample time on problems and material applicable to the grade level and widely acceptable prerequisites. The geometry standard required for Algebra 2 does not pay ample attention modeling and application.	
	2. Consistent, Coherent Content	**No**	Previous grades review and previous course review are not clearly identified as such to the teacher.	
	3. Rigor and Balance	**Yes**	Students spend ample time working on problems related to the three components of rigor: conceptual understanding, procedural skill and fluency, and application.	
	4. Focus and Coherence via Practice Standards	**Yes**	The practice standards are embedded within the material in such a way as to enrich the Major Work of the grade	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	
	6. Alignment Criteria for Standards for Mathematical Practice	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
	7. Indicators of Quality	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL DECISION FOR THIS MATERIAL: **Tier III, Not representing quality**				

Appendix II.

Public Comments

There were no public comments submitted.