

## 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: **Big Ideas Math High School Algebra 1, Geometry, and Algebra 2**

Grade: **9-11**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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)

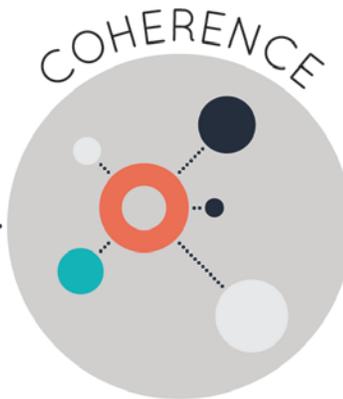
**This review remains a Tier 3 rating.** As a result of these changes, the following chart identifies the potential impact on specific elements in the current review. The LDOE recommends that district curriculum staff, principals, and teachers take these findings into consideration when using these instructional 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 because the published pacing guide indicates less than 65% (between 35 and 61.25%) of class time is spent on the major content of each grade level course. There is material on assessments that are not introduced until later courses.  | 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. |
| Consistent, Coherent Content (Non-Negotiable) | This program currently is reviewed as “No” for this criterion because the materials were not consistently found to connect the major content to the support content in meaningful ways at all grade levels throughout the year. In each grade level, entire chapters are included that only have supporting content with no major content of the grade level. Materials do connect domains or clusters. | 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. |

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Big Ideas Math High School Algebra 1, Geometry, and Algebra 2**

Grade: **9-11**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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 on Major Work (Non-Negotiable)          |
| 4. Focus Coh. via Practice Std (Non-Negotiable) | 2. Consistent, Coherent Content (Non-Negotiable) |
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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 \(Tier 3\)](#)

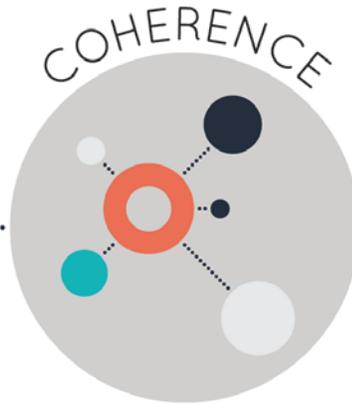
[Grade 10 \(Tier 3\)](#)

[Grade 11 \(Tier 3\)](#)

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Big Ideas Math High School Algebra 1**

Grade: **9**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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 on Major Work (Non-Negotiable)          |
| 4. Focus Coh. via Practice Std (Non-Negotiable) | 2. Consistent, Coherent Content (Non-Negotiable) |
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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  |
|--|--|------------------------|--|
| <b>SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.</b>   |  |                        |  |
| <p><b>Non-Negotiable</b><br/> <b>1. FOCUS ON MAJOR WORK<sup>1</sup>:</b><br/>           Students and teachers using the materials as designed devote the large majority<sup>2</sup> of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>1a)</b> Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>   | No                     | <p>Based on the pacing guide, there are 160 days for Chapters 1-11. 62 out of the 160 (38.75%) days are not spent on priority content based on the standards listed on the Correlation from Algebra 1 standards for Mathematical Content. This means 61.25% is spent on what the Correlation and Pacing guides indicate as priority content.</p> <p>There are sections, which the correlation guide has listed as priority content standards that do not match up with the standard for Algebra 1. For example, parallel and perpendicular lines are not introduced until Geometry (Chapter 4, Section 3). Another example is supporting content present in Chapter 5: Solving Systems of Linear Equations (15 days) and Chapter 11: Data Analysis and Displays (14 days) account for 18% of the pacing guide while providing no major content. In addition to these examples, significant sections of the materials (e.g., Sections 6.1-6.4, 10.2-10.4, or 12.1-12.4) focus on supporting or additional content. These lessons were not included in the 38.75%.</p> |
|  | <p><b>REQUIRED</b><br/> <b>1b)</b> In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.<sup>3</sup></p> | No                     | <p>Assessments include topics outside the grade level. For example, Chapter 10 Section 3 requires students to solve radical equations. These topics are found on the Chapter 10 test. Chapter 4 test includes questions on parallel and perpendicular lines, which is material introduced in Geometry.</p>   |

<sup>1</sup> For more on the major work of the grade, see [Focus by Grade Level](#).

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

<sup>3</sup> Refer also to criterion #2 in the K–8 [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   |
|--|--|------------------------|---|
| <p><b>Non-Negotiable</b><br/> <b>2. CONSISTENT, COHERENT CONTENT</b><br/>           Each course’s instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>2a)</b> Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.<sup>4</sup></p>  | <p>No</p>              | <p>The correlation guide indicates there are lessons where major work is connected to supporting content. However, materials do not connect supporting content to major content in meaningful ways throughout the course. For example, Chapter 11 is all supporting content with no major work of Algebra I.</p> <p>It should be noted that in Section 1.2: Solving Multi-Step Equations, the supporting standard HSN-Q.A.1 is integrated within major standards HSA-CED.A.1 and HSA-REI.B.3.</p>   |
|  | <p><b>REQUIRED</b><br/> <b>2b)</b> Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.<sup>5</sup></p> | <p>Yes</p>             | <p>There are places in the curriculum that connects two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important. The correlation guide does give multiple standards for each lesson. Examples of this can be found in Chapter 8 Lessons 8.1-8.2 where students are graphing Quadratic Functions. Standards that are addressed in that section are HSF-IF.C.7A and HSF.BF.B.3. HSA-CED.A.2 is also listed; however, there is little to no evidence that students are creating equations.</p> <p>Materials make natural connections between two domains: NQ and CED. Herein, students attend to appropriate units and quantities (see supporting standards N.Q.1, N.Q.2, N.Q.3) in modeling contexts involved in creating equations (see major content standards in the A.CED cluster). This is seen throughout various sections in the curriculum: 2.1, 3.2, or 4.5, for example.</p> |
| <p><b>Non-Negotiable</b><br/> <b>3. RIGOR AND BALANCE:</b><br/>           Each grade’s instructional materials reflect the balances in the</p>   | <p><b>REQUIRED</b><br/> <b>3a) <i>Attention to Conceptual Understanding:</i></b> Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific</p>   | <p>Yes</p>             | <p>Most lessons begin with an exploration. There are a number of places where these explorations help develop conceptual understanding of the material being addressed in the lesson. An example of this can be found in Section 9.4, Solving Quadratic</p>   |

<sup>4</sup> Refer also to criterion #3 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>5</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 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  |
|--|---|------------------------|--|
| <p>Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.<sup>6</sup></p> <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p>content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>  |                        | <p>Equations by Completing the Square. There are places where students have to justify their steps using mathematical models. This section also relates Completing the Square to writing quadratics in vertex form. Section 3.6 has a conceptual question that requires students to explain the transformation of a linear function as it relates to the x-intercepts.</p>   |
|  | <p><b>REQUIRED</b><br/> <b>3b) Attention to Procedural Skill and Fluency:</b> The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>  | <p>Yes</p>             | <p>Every lesson has adequate procedural skill and fluency problems at the end of the lesson. Section 3.3 has a number of problems to give students practice with HSF-IF.A.2, which is a standard that is procedural skill based. Section 2.3: Solving Inequalities Using Multiplication and Division has 3 guided practice examples, 2 vocabulary and concept check questions, and 37 practice questions. Throughout the course, students are offered many opportunities to solve equations and inequalities in one variable as well as quadratic equations (A.REI.3 and A.REI.4) throughout the chapter progression.</p>  |
|  | <p><b>REQUIRED</b><br/> <b>3c) Attention to Applications:</b> Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p> | <p>Yes</p>             | <p>There are application problems at the end of the lesson. They are usually found behind the procedural skill and fluency problems. Each section includes an application guided example as well as application problems throughout the practice section. Standard HSA-CED.A.3 is a standard focused on application. Section 5.7, Systems of Linear Inequalities has a number of application problems that address the standard. Section 9.2: Solving Quadratic Equations by Graphing requires students apply their knowledge of solving quadratic equations (HSA-REI.D.11) to an underhand volleyball serve. In Chapter 3, Solving Linear Inequalities, students must write inequalities to find how much money can be withdrawn from an ATM, determine whether or not job applicants meet criteria for getting a job, or determining the minimum length of a geometric figure.</p> |

<sup>6</sup> Refer also to criterion #4 in the K–8 [Publishers' Criteria](#) and #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  |
|--|---|------------------------|--|
|  | <b>REQUIRED</b><br><b>3d) Balance:</b> The three aspects of rigor are not always treated together and are not always treated separately.  | Yes                    | When looking at different lessons in the curriculum, conceptual, procedural, and application are present. HS.CED.A.2 represents all 3 aspects of rigor, and Chapter 3 has 5 out of 7 lessons that include this standard. There are also places where the standard addresses one aspect of rigor. Finally, the Chapter 9 assessment is an example of treating the three aspects of rigor together or separately, appropriately.   |
| <b>Non-Negotiable</b><br><b>4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:</b><br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. <sup>7</sup><br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>REQUIRED</b><br><b>4a)</b> Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.  | Yes                    | All lessons have Mathematical Practice Standards listed in the teacher resources and in the student resources. In most cases, the stated mathematical practice is evident in the course materials. Every few lessons has a page entitled, "What Did You Learn?" There are questions listed there that reflect the mathematical practices. An example of this can be found on page 347, Chapter 6. There are teacher's notes at the bottom of most pages that have Mathematical Practice notations for use with the class. Section 8-3, page 433 is an example of this.<br><br>In the teacher edition, the mathematical practices are noted in each section to aid the teacher in implementing them throughout the lesson. For example, Section 1.1: Solving Simple Equations provides teachers with information regarding MP4: Model with Mathematics (drawing a number line). Also, "Laurie's Notes" provide specific explanation of how the practice standards connect to the content standards. |
| <b>SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY</b>   |   |                        |  |
| <b>Additional Criterion</b><br><b>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:</b><br>Materials foster focus and coherence by linking topics (across  | <b>REQUIRED</b><br><b>5a)</b> Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year. <sup>10</sup> | Not Evaluated          | This section was not evaluated because the non-negotiable criteria were not met.   |

<sup>7</sup> Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #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   |
|---|--|-----------------------------|---|
| <p>domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>   | <p><b>REQUIRED</b></p> <p><b>5b)</b> Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.<sup>10</sup></p>  | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |
|   | <p><b>5c)</b> Materials base content progressions on the progressions in the Standards.<sup>8</sup></p>  | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |
|   | <p><b>5d)</b> Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards.<sup>9</sup></p>  | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |
|   | <p><b>5e)</b> Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.<sup>11</sup></p>  | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |
| <p><b>Additional Criterion</b></p> <p><b>6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:</b></p> <p>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.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>6a)</b> Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.<sup>10</sup> 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.<sup>11</sup> 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.</p> | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |
|   | <p><b>6b)</b> Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content</p>   | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |

<sup>8</sup> Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).  
<sup>9</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).  
<sup>10</sup> Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).  
<sup>11</sup> Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 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  |
|--|--|------------------------|--|
|  | standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. <sup>12</sup>  |                        |  |
|  | <b>6c)</b> Materials explicitly attend to the specialized language of mathematics. <sup>12</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
| <b>Additional Criterion</b><br><b>7. INDICATORS OF QUALITY:</b><br>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. <sup>13</sup><br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | <b>7a)</b> 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.  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>7b)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>7c)</b> 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.   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>7d)</b> 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.   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |

<sup>12</sup> Refer also to criterion #10 in the K–8 [Publishers' Criteria](#) and #8 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

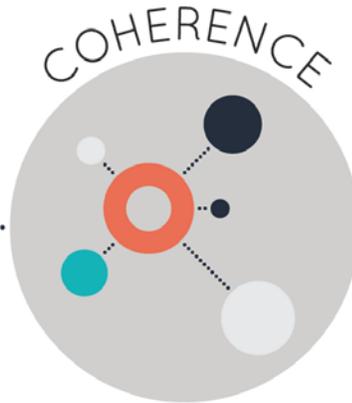
<sup>13</sup> Refer also to pages 18-20 in the K – 8 [Publishers' Criteria](#) and pages 16-18 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY   | MEETS METRICS (Yes/No) | JUSTIFICATION/ COMMENTS WITH EXAMPLES  |
|--|--|------------------------|--|
|  | Each problem or exercise has a purpose.  |                        |  |
|  | <b>7e)</b> Lessons are appropriately structured and scaffolded to support student mastery. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |
|  | <b>7f)</b> Materials support the uses of technology as called for in the Standards.        | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |
| <b>FINAL EVALUATION</b><br><i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7.<br><i>Tier 2 ratings</i> 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.<br><i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria. |  |                        |  |
| <b>Compile the results for Sections I and II to make a final decision for the material under review.</b>   |  |                        |  |
| Section  | Criteria   | Yes/No                 | Final Justification/Comments   |
| <b>I: Non-Negotiables</b>  | 1. Focus on Major Work   | <b>No</b>              | The published pacing guide indicates 61.25% of the time is spent on the major content of Algebra 1. There is material on assessments that are not introduced until later courses in Algebra 1. |
|  | 2. Consistent, Coherent Content  | <b>No</b>              | There is an entire chapter that only has supporting content with no major content of Algebra 1. Materials do connect domains or clusters.  |
|  | 3. Rigor and Balance   | <b>Yes</b>             | All three aspects (Conceptual, Fluency, and Application) are present and meaningful to the coursework in Algebra 1.  |
|  | 4. Focus and Coherence via Practice Standards  | <b>Yes</b>             | Practice standards are given throughout the course in the teacher guide as well as the student edition.  |
| <b>II: Additional Alignment Criteria and Indicators of Quality</b>   | 5. Alignment Criteria for Standards for Mathematical Content                               | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |
|  | 6. Alignment Criteria for Standards for Mathematical Practice                              | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |
|  | 7. Indicators of Quality   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |
| FINAL DECISION FOR THIS MATERIAL: <b>Tier III, Not representing quality</b>  |  |                        |  |

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Big Ideas Math High School Geometry**

Grade: **10**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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 on Major Work (Non-Negotiable)          |
| 4. Focus Coh. via Practice Std (Non-Negotiable) | 2. Consistent, Coherent Content (Non-Negotiable) |
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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  |
|--|---|------------------------|--|
| <b>SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.</b>   |   |                        |  |
| <p><b>Non-Negotiable</b><br/> <b>1. FOCUS ON MAJOR WORK<sup>14</sup>:</b><br/> Students and teachers using the materials as designed devote the large majority<sup>15</sup> of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>1a)</b> Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>  | <p>No</p>              | <p>Based on the pacing guide, there are 160 days for Chapters 1-12. 65.5 out of the 160 (41%) days are not spent on priority content based on the standards for Geometry. This means 59% is spent on what the correlation and pacing guides indicate as priority content. Significant portions of the materials focus on supporting or additional content, or content that lies outside of the content standards for high school Geometry.</p>   |
|  | <p><b>REQUIRED</b><br/> <b>1b)</b> In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.<sup>16</sup></p> | <p>No</p>              | <p>Assessments include topics outside the grade level. For example, Chapter 9 test has law of sines/cosines, which is not introduced until after Geometry. Chapter 12: Probability features standards (HSS-CP.A and HSS-CP.B) that are not included in the Geometry standards.</p>   |
| <p><b>Non-Negotiable</b><br/> <b>2. CONSISTENT, COHERENT CONTENT</b><br/> Each course’s instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p>   | <p><b>REQUIRED</b><br/> <b>2a)</b> Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.<sup>17</sup></p>  | <p>No</p>              | <p>The correlation guide indicates there are lessons where major work is connected to supporting content. However, materials do not connect supporting content to major content in meaningful ways throughout the course. For example, Chapter 12 is all supporting content with no major content of Geometry.</p> <p>It should be noted that in Chapter 3 (Parallel and Perpendicular Lines), supporting content on geometric constructions (G.CO.D.12) is integrated into a major content focus on proving geometric</p> |

<sup>14</sup> For more on the major work of the grade, see [Focus by Grade Level](#).

<sup>15</sup> The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

<sup>16</sup> Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>17</sup> Refer also to criterion #3 in the K–8 [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  |
|--|---|------------------------|--|
|  |   |                        | theorems about lines and angles (G.CO.C.9).  |
|  | <b>REQUIRED</b><br><b>2b)</b> Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important. <sup>18</sup>   | Yes                    | Materials make important connections across domains, as in Chapter 11, where standards in the HSG-GMD domain are presented in the context of modeling with geometry (HSG-MG). Natural connections between clusters are also made, as in Chapter 8.2, where HSG.SRT.A.3 and HSG.SRT.B.5 are presented concurrently. Another example is in Chapter 7 Lessons 7.3 - 7.4 connect HSG-CO.C.11, HSG-SRT.B.5, and HSG-MG.A.1.   |
| <b>Non-Negotiable</b><br><b>3. RIGOR AND BALANCE:</b><br>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. <sup>19</sup><br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>REQUIRED</b><br><b>3a) Attention to Conceptual Understanding:</b> Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.  | Yes                    | Conceptual understanding is developed in the materials, especially where it is explicitly demanded in the content standards. For instance, in in Chapter 4.1 (Translations), students are given the opportunity to explore the answer to an essential question: "How can you translate a figure in the coordinate plane?" The presentation here focuses on concepts, as opposed to leading students through prescribed steps. In a significant number of questions, students are asked to "explain" their reasoning and "justify" their answer. As another example, Lesson 7.2 has an exploration where students are finding properties of parallelograms. |
|  | <b>REQUIRED</b><br><b>3b) Attention to Procedural Skill and Fluency:</b> The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the | Yes                    | Procedural skill and fluency is emphasized, where such an emphasis is appropriate for the high school Geometry standards. In Chapter 1, for example, students are given significant opportunities to sketch geometric figures with a variety of tools (compass, straightedge, etc.), gaining speed and accuracy with these procedures. Section 9.4 and Section 9.5 are examples of students having plenty of procedural skill and fluency problems. Students practice fluently writing the ratios of sine, cosine, and tangent ratios given right triangles. Lastly, Section 2.4: Algebraic Reasoning has 5 guided   |

<sup>18</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>19</sup> Refer also to criterion #4 in the K–8 [Publishers' Criteria](#) and #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  |
|---|--|------------------------|--|
|   | foundation for later work in algebra.  |                        | practice examples, 2 vocabulary and concept check questions, and 54 practice questions.  |
|   | <b>REQUIRED</b><br><b>3c) Attention to Applications:</b> Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. | Yes                    | Application is emphasized, where appropriate in the content standards for high school Geometry. The materials present material on MG.2 by requiring a variety of single-step and multi-step problems that are presented in the context of real-world situations. In addition, key takeaways from K-8 are required to solve a number of high school level problems (including finding areas of rectangles, making unit conversions, etc.). HSG-SRT.C.8 is an application standard and lessons 9.1 and 9.2 have examples of application problems as they apply to the Pythagorean Theorem and Special Right Triangles. There are also a number of practice problems for students to engage in. Lastly, Section 6.3: Medians and Altitude of Triangles uses a paper airplane as a means of applying their knowledge of the content to the real world. |
|   | <b>REQUIRED</b><br><b>3d) Balance:</b> The three aspects of rigor are not always treated together and are not always treated separately.   | Yes                    | The three aspects of rigor are not always presented together, nor are they always represented separately. For example, key geometric concepts and definitions are developed on their own (i.e. conceptual development of lines and angles), but they are also integrated into fluency standards involving making geometric constructions. The Chapter 9 test is an example of balance of the three aspects of rigor.   |
| <b>Non-Negotiable</b><br><b>4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:</b><br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. <sup>20</sup><br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>REQUIRED</b><br><b>4a)</b> Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.   | Yes                    | Mathematical Practice Standards are addressed explicitly throughout the materials. "Laurie's Notes" makes these practice standards explicit and provides specific recommendations for implementing the practice standards. For instance, in presentation of material on geometric constructions, students are asked to make use of tools strategically (computer software, compasses, etc.). Or, in the HSG-MG domain, students are asked to "construct viable arguments." There are mathematical practices embedded throughout the teacher materials and student materials.   |

<sup>20</sup> Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #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  |
|---|--|------------------------|--|
| <b>SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY</b>  |  |                        |  |
| <p><b>Additional Criterion</b><br/> <b>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:</b><br/> Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>5a)</b> Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.<sup>10</sup></p>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>REQUIRED</b><br/> <b>5b)</b> Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.<sup>10</sup></p>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>5c)</b> Materials base content progressions on the progressions in the Standards.<sup>21</sup></p>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>5d)</b> Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards.<sup>22</sup></p>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>5e)</b> Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.<sup>11</sup></p>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
| <p><b>Additional Criterion</b><br/> <b>6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:</b><br/> Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include</p>  | <p><b>6a)</b> Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.<sup>23</sup> 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.<sup>24</sup> There are teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical</p> | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |

<sup>21</sup> Refer also to criterion #5 in the K–8 [Publishers’ Criteria](#) and #3 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>22</sup> Refer also to criterion #6 in the K–8 [Publishers’ Criteria](#) and #4 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>23</sup> Refer also to criterion #9 in the K–8 [Publishers’ Criteria](#) and #7 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>24</sup> Refer also to criterion #7 in the K–8 [Publishers’ Criteria](#) and #5 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  |
|--|--|------------------------|--|
| additional content/skills to teach which are not included in the Standards.<br><br><input type="checkbox"/> Yes <input type="checkbox"/> No  | development. Alignments to practice standards are accurate.  |                        |  |
|  | <b>6b)</b> Materials Support the Standards’ Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. <sup>25</sup>                    | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>6c)</b> Materials explicitly attend to the specialized language of mathematics. <sup>12</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
| <b>Additional Criterion</b><br><b>7. INDICATORS OF QUALITY:</b><br>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. <sup>26</sup><br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | <b>7a)</b> 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.  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>7b)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>7c)</b> Support for English Language Learners and other special populations is thoughtful and helps those   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |

<sup>25</sup> Refer also to criterion #10 in the K–8 [Publishers’ Criteria](#) and #8 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>26</sup> Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and 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  |
|----------|--|------------------------|--|
|          | students meet the same standards as all other students. The language in which problems are posed is carefully considered.  |                        |  |
|          | <b>7d)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|          | <b>7e)</b> Lessons are appropriately structured and scaffolded to support student mastery.   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|          | <b>7f)</b> Materials support the uses of technology as called for in the Standards.  | <b>Not Evaluated</b>   | 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.

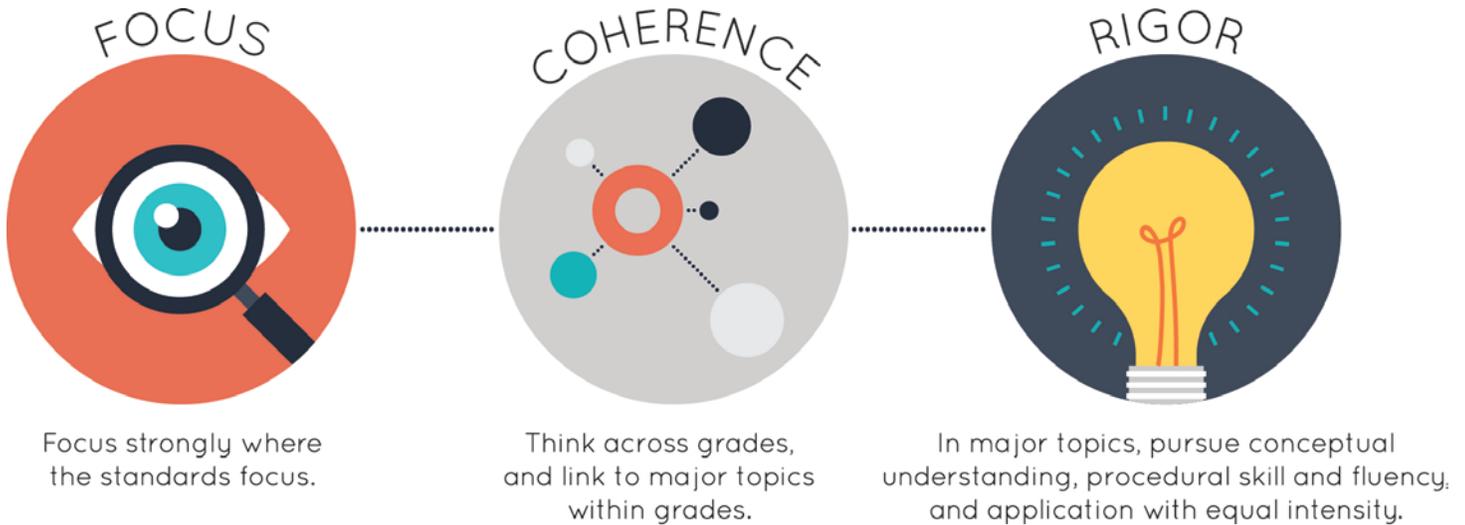
*Tier 3 ratings* receive a “No” in Column 1 for at least one of the non-negotiable criteria.

**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  |
|---------------------------|---|------------|---|
| <b>I: Non-Negotiables</b> | 1. Focus on Major Work                        | <b>No</b>  | The published pacing guide indicates 59% of the time is spent on major content of Geometry. There is material on assessments that are not introduced until later courses in Geometry. |
|                           | 2. Consistent, Coherent Content               | <b>No</b>  | There is an entire chapter that only has supporting content with no major content of Geometry. Materials do connect domains or clusters.  |
|                           | 3. Rigor and Balance                          | <b>Yes</b> | All three aspects (Conceptual, Fluency, and Application) are present and meaningful to the coursework in Geometry.  |
|                           | 4. Focus and Coherence via Practice Standards | <b>Yes</b> | Practice standards are given throughout the course in the teacher guide as well as the student edition.   |

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY                                   | MEETS METRICS<br>(Yes/No) | JUSTIFICATION/ COMMENTS WITH<br>EXAMPLES   |
|--|--|---------------------------|--|
| <b>II: Additional Alignment Criteria<br/>and Indicators of Quality</b>             | 5. Alignment Criteria for Standards for Mathematical<br>Content  | <b>Not Evaluated</b>      | This section was not evaluated because the non-<br>negotiable criteria were not met. |
|  | 6. Alignment Criteria for Standards for Mathematical<br>Practice | <b>Not Evaluated</b>      | This section was not evaluated because the non-<br>negotiable criteria were not met. |
|  | 7. Indicators of Quality   | <b>Not Evaluated</b>      | This section was not evaluated because the non-<br>negotiable criteria were not met. |
| FINAL DECISION FOR THIS MATERIAL: <b><u>Tier III, Not representing quality</u></b> |  |                           |  |

Strong mathematics instruction contains the following elements:



Title: **Big Ideas Math High School Algebra 2**

Grade: **11**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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

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

| <b>STRONG</b>                                   | <b>WEAK</b>                                      |
|---|--|
| 3. Rigor and Balance (Non-Negotiable)           | 1. Focus on Major Work (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  |
|--|--|------------------------|--|
| <b>SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.</b>   |  |                        |  |
| <p><b>Non-Negotiable</b><br/> <b>1. FOCUS ON MAJOR WORK<sup>27</sup>:</b><br/>           Students and teachers using the materials as designed devote the large majority<sup>28</sup> of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>1a)</b> Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p> <p><b>REQUIRED</b><br/> <b>1b)</b> In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.<sup>29</sup></p> | <p>No</p> <p>No</p>    | <p>Based on the pacing guide, there are 160 days for Chapters 1-11. 105 out of the 160 (65%) days are not spent on priority content for Algebra II standards. This means 35% is spent on what the correlation and pacing guides indicate as priority content.</p> <p>Materials contain content that is not introduced at the appropriate grade level. Section 5.6: Inverse of a Function focuses heavily on the Algebra I standard, HSA-CED.A.4. Assessments include topics outside the grade level. Section 7.1: Inverse Variation requires students to be proficient on standards not included in Algebra II (HSA-CED.A.2 and HSA-CED.A.3). These topics are found on the Chapter 7 test. Also, Chapter 9 test has problems using Sum and Difference formulas for sine, cosine, and tangent, which are topics beyond Algebra II.</p> |
| <p><b>Non-Negotiable</b><br/> <b>2. CONSISTENT, COHERENT CONTENT</b><br/>           Each course’s instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p>   | <p><b>REQUIRED</b><br/> <b>2a)</b> Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.<sup>30</sup></p>   | <p>No</p>              | <p>The correlation guide indicates there are lessons where major work is connected to supporting content. However, materials do not connect supporting content to major content in meaningful ways throughout the course. For example, Chapter 9 and 10 is all supporting content with no major work of Algebra II.</p> <p>It should be noted that in Section 4.3: Dividing Polynomials, the supporting standard HSA-APR.D.6 is connected to the major standard HSA-APR.B.2.</p>   |

<sup>27</sup> For more on the major work of the grade, see [Focus by Grade Level](#).

<sup>28</sup> The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

<sup>29</sup> Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>30</sup> Refer also to criterion #3 in the K–8 [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   |
|--|---|------------------------|---|
|  | <b>REQUIRED</b><br><b>2b)</b> Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important. <sup>31</sup>   | Yes                    | Materials make important connections within two or more clusters throughout the curriculum. For example, Section 6.1: Exponential Growth and Decay Functions includes the major standard HSA-SSE.B.3c, supporting standards HSF-IF.C.7e, HSF-IF.C.8b, and HSF-LE.B.5, and additional standards HSF-LE.A.2. In addition, HSA-APR standards are presented concurrently with HSA-SSE standards in Chapter 4.   |
| <b>Non-Negotiable</b><br><b>3. RIGOR AND BALANCE:</b><br>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. <sup>32</sup><br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>REQUIRED</b><br><b>3a) Attention to Conceptual Understanding:</b> Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.  | Yes                    | Materials provide students with various high-quality questions that require conceptual understanding of the content. Each section includes a “core concept check” that includes at least one discussion question. Section 2.4: Modeling With Quadratic Functions requires students to explain when it is appropriate to use a quadratic function to model data. In presenting the HSA-SSE.A cluster, students are given a variety of opportunities to identify different ways to rewrite algebraic expressions.   |
|  | <b>REQUIRED</b><br><b>3b) Attention to Procedural Skill and Fluency:</b> The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra. | Yes                    | Materials provide many opportunities for students to enhance their fluency and procedural skills. For example, Section 1.2: Transformations of Linear and Absolute Value Functions has 5 guided practice examples, 2 vocabulary and concept check questions, and 43 practice questions. In Chapter 5 (Rational Exponents and Radical Functions), for example, students are given ample opportunities to develop speed and accuracy in rewriting exponential expressions using the properties of exponents. This addresses HS.RN.A.2, which is a standard focused on procedural skill and fluency. |
|  | <b>REQUIRED</b><br><b>3c) Attention to Applications:</b> Materials are designed so that teachers and students spend sufficient time working   | Yes                    | Materials are designed to provide teachers and students with high-quality problems that require students to apply their knowledge of the content. In  |

<sup>31</sup> Refer also to criterion #6 in the K–8 [Publishers’ Criteria](#) and #4 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>32</sup> Refer also to criterion #4 in the K–8 [Publishers’ Criteria](#) and #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   |
|--|---|------------------------|---|
|  | <p>with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p> |                        | <p>Chapter 8 (Series and Sequences), students practice writing arithmetic and geometric sequences (HSF-BF.A.2) in a number of real-world modeling contexts. These materials include performance tasks. For example, a performance task in this chapter asks students to apply their knowledge of sequences to integrated circuits and Moore's Law.</p>  |
|  | <p><b>REQUIRED</b><br/> <b>3d) Balance:</b> The three aspects of rigor are not always treated together and are not always treated separately.</p>   | <p><b>Yes</b></p>      | <p>Materials balance the three aspects of rigor throughout the curriculum. Chapter tests and quizzes include an assortment of questioning types, including conceptual, fluency, and application problems. The Chapter 6 test is an example of an assessment, which includes all three aspects of rigor. Lesson 8.4 addresses HS.SSE.B.4, which includes all 3 aspects of rigor. There are also lessons that address an aspect of rigor separately. An example is lesson 5.2 only focuses on HS.RN.A.2, which is a procedural skill.</p>   |
| <p><b>Non-Negotiable</b><br/> <b>4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:</b><br/> Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<sup>33</sup></p> <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>4a)</b> Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.</p>   | <p><b>Yes</b></p>      | <p>Mathematical practices are noted in each section of the teacher edition. For example, Section 3.2: Complex Numbers emphasizes MP7 (Look for and make use of structure). Students are asked to make the connection back from complex number solutions to a quadratic equation. In addition, each chapter contains a section called "Laurie's Notes," which explains connections of the Chapter's content to the practice standards. For major standards emphasizing application, for instance, a number of problems are identified by their connection to MP.4 (Modeling with Mathematics).</p> |

<sup>33</sup> Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #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  |
|---|--|------------------------|--|
| <b>SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY</b>  |  |                        |  |
| <p><b>Additional Criterion</b><br/> <b>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:</b><br/> Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>5a)</b> Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.<sup>10</sup></p>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>REQUIRED</b><br/> <b>5b)</b> Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.<sup>10</sup></p>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>5c)</b> Materials base content progressions on the progressions in the Standards.<sup>34</sup></p>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>5d)</b> Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards.<sup>35</sup></p>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|   | <p><b>5e)</b> Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.<sup>11</sup></p>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
| <p><b>Additional Criterion</b><br/> <b>6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:</b><br/> Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include</p>  | <p><b>6a)</b> Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.<sup>36</sup> 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.<sup>37</sup> There are teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical</p> | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |

<sup>34</sup> Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>35</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>36</sup> Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>37</sup> Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 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  |
|--|--|------------------------|--|
| additional content/skills to teach which are not included in the Standards.<br><br><input type="checkbox"/> Yes <input type="checkbox"/> No  | development. Alignments to practice standards are accurate.  |                        |  |
|  | <b>6b)</b> Materials Support the Standards’ Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. <sup>38</sup>                    | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>6c)</b> Materials explicitly attend to the specialized language of mathematics. <sup>12</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
| <b>Additional Criterion</b><br><b>7. INDICATORS OF QUALITY:</b><br>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. <sup>39</sup><br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | <b>7a)</b> 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.  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>7b)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|  | <b>7c)</b> Support for English Language Learners and other special populations is thoughtful and helps those   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |

<sup>38</sup> Refer also to criterion #10 in the K–8 [Publishers’ Criteria](#) and #8 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>39</sup> Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and 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  |
|----------|--|------------------------|--|
|          | students meet the same standards as all other students. The language in which problems are posed is carefully considered.  |                        |  |
|          | <b>7d)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|          | <b>7e)</b> Lessons are appropriately structured and scaffolded to support student mastery.   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |
|          | <b>7f)</b> Materials support the uses of technology as called for in the Standards.  | <b>Not Evaluated</b>   | 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  |
|---------------------------|---|------------|---|
| <b>I: Non-Negotiables</b> | 1. Focus on Major Work                        | <b>No</b>  | The pacing guide indicates 35% of the time is spent on major content of Algebra II. In addition, assessments include materials that are not introduced until the later courses of Algebra II. |
|                           | 2. Consistent, Coherent Content               | <b>No</b>  | There is an entire chapter that only has supporting content with no major content of Geometry. Materials do connect domains or clusters.  |
|                           | 3. Rigor and Balance                          | <b>Yes</b> | All three aspects (Conceptual, Fluency, and Application) are present and meaningful to the coursework in Algebra II.  |
|                           | 4. Focus and Coherence via Practice Standards | <b>Yes</b> | Practice standards are given throughout the course in the teacher guide as well as the student edition.   |

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY                                   | MEETS METRICS<br>(Yes/No) | JUSTIFICATION/ COMMENTS WITH<br>EXAMPLES   |
|--|--|---------------------------|--|
| <b>II: Additional Alignment Criteria<br/>and Indicators of Quality</b>             | 5. Alignment Criteria for Standards for Mathematical<br>Content  | <b>Not Evaluated</b>      | This section was not evaluated because the non-<br>negotiable criteria were not met. |
|  | 6. Alignment Criteria for Standards for Mathematical<br>Practice | <b>Not Evaluated</b>      | This section was not evaluated because the non-<br>negotiable criteria were not met. |
|  | 7. Indicators of Quality   | <b>Not Evaluated</b>      | This section was not evaluated because the non-<br>negotiable criteria were not met. |
| FINAL DECISION FOR THIS MATERIAL: <b><u>Tier III, Not representing quality</u></b> |  |                           |  |

Appendix I.

Publisher Response

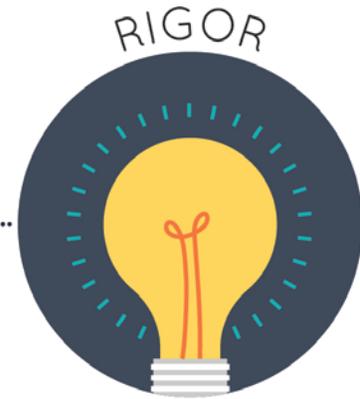
Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Big Ideas Math High School Algebra 1, Geometry, and Algebra 2**

Grade: **9-11**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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 on Major Work (Non-Negotiable)          |
| 4. Focus Coh. via Practice Std (Non-Negotiable) | 2. Consistent, Coherent Content (Non-Negotiable) |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |

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 \(Tier 3\)](#)

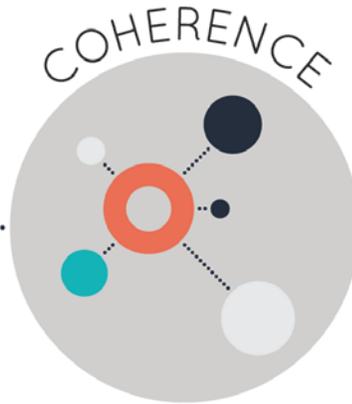
[Grade 10 \(Tier 3\)](#)

[Grade 11 \(Tier 3\)](#)

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Big Ideas Math High School Algebra 1**

Grade: **9**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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 on Major Work (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  | PUBLISHER RESPONSE   |
|--|--|------------------------|--|--|
| <b>SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.</b>   |  |                        |  |  |
| <p><b>Non-Negotiable</b><br/> <b>1. FOCUS ON MAJOR WORK<sup>1</sup>:</b><br/> Students and teachers using the materials as designed devote the large majority<sup>2</sup> of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>1a)</b> Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p> | <p>No</p>              | <p>Based on the pacing guide, there are 160 days for Chapters 1-11. 62 out of the 160 (38.75%) days are not spent on priority content based on the standards listed on the Correlation from Algebra 1 standards for Mathematical Content. This means 61.25% is spent on what the Correlation and Pacing guides indicate as priority content.</p> <p>There are sections, which the correlation guide has listed as priority content standards that do not match up with the standard for Algebra 1. For example, parallel and perpendicular lines are not introduced until Geometry (Chapter 4, Section 3). Another example is supporting content present in Chapter 5: Solving Systems of Linear Equations (15 days) and Chapter 11: Data Analysis and Displays (14 days) account for 18% of the pacing guide while providing no major content. In addition to these examples, significant sections of the materials (e.g., Sections 6.1-6.4, 10.2-10.4, or 12.1-12.4) focus on supporting or additional content. These lessons were not included in the 38.75%.</p> | <p>Big Ideas Math was developed with the Common Core State Standards for Mathematics at its core. The balanced approach to instruction used in Big Ideas Math allows for the majority of students' time to be spent on developing the knowledge and skills that are Widely Applicable Prerequisites for postsecondary education: Number and Quantity, Algebra, Functions, Geometry, and Statistics.</p> <p>Using the Pacing Guide and the correlation in the front matter of each Teaching Edition, students spend about 83% of the time in Algebra 1 on the Widely Applicable Prerequisites</p> <p>Sample Citations:<br/> A1: (PE) 11-18, 103-110, 195-200, 209-216, 299-304, 313-322, 385-390, 391-396, 397-402, 449-458, 505-514</p> <p>Once material is taught, it is used throughout the Big Ideas Math series to ensure full coverage of the material and connections between standards, grade levels, and real-life situations. Because of this, the correlations in the the Teaching Edition do not show all areas where a standard is covered. These correlations only show where the standards are the primary focus of the chapter, not where they are supporting additional content.</p> <p>Therefore, Big Ideas Math fully meets this criteria.</p> |

<sup>1</sup> For more on the major work of the grade, see [Focus by Grade Level](#).

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

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY   | MEETS METRICS (Yes/No) | JUSTIFICATION/ COMMENTS WITH EXAMPLES   | PUBLISHER RESPONSE  |
|--|--|------------------------|---|---|
|  | <p><b>REQUIRED</b><br/> <b>1b)</b> In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.<sup>3</sup></p> | No                     | <p>Assessments include topics outside the grade level. For example, Chapter 10 Section 3 requires students to solve radical equations. These topics are found on the Chapter 10 test. Chapter 4 test includes questions on parallel and perpendicular lines, which is material introduced in Geometry.</p>  | <p>No chapter exclusively teaches content that is not considered to be Algebra 1 content.</p> <p>The content on parallel and perpendicular lines that is in chapter 4 is the equations of parallel and perpendicular lines which is an Algebra 1 topic, not a Geometry topic. Certain content is taught to expand students understanding of the material in a meaningful way. The content taught in chapter 10 is taught to fully cover standard BF.4a. This standard requires students to solve radical equations. Although this is not needed until Algebra 2, the material was deliberately kept together to allow for a more meaningful and sensible approach to the material.</p> <p>Therefore, Big Ideas Math fully meets this criteria.</p>            |
| <p><b>Non-Negotiable</b><br/> <b>2. CONSISTENT, COHERENT CONTENT</b><br/> Each course’s instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>2a)</b> Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.<sup>4</sup></p>  | No                     | <p>The correlation guide indicates there are lessons where major work is connected to supporting content. However, materials do not connect supporting content to major content in meaningful ways throughout the course. For example, Chapter 11 is all supporting content with no major work of Algebra I.</p> <p>It should be noted that in Section 1.2: Solving Multi-Step Equations, the supporting standard HSN-Q.A.1 is integrated within major standards HSA-CED.A.1 and HSA-REI.B.3.</p> | <p>When a connection can be made across standards, Big Ideas Math does it. Connections are made across the standards when it is natural, and within and across each course as well. Once new content is taught, it is used throughout the rest of the book and program.</p> <p>The correlations in the Teaching Edition do not show full correlations for the Big Ideas Math program. They simply show where standards are the primary focus of the lesson. Since content is used throughout the series to support additional content, there are no chapters in which major content is truly lacking. The content in chapter 11 includes one of the Widely Applicable Prerequisites (S.ID.2).</p> <p>Therefore, Big Ideas Math fully meets this criteria.</p> |

<sup>3</sup> Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>4</sup> Refer also to criterion #3 in the K–8 [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 |
|--|---|------------------------|---|--------------------|
|  | <p><b>REQUIRED</b><br/> <b>2b)</b> Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.<sup>5</sup></p>  | Yes                    | <p>There are places in the curriculum that connects two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important. The correlation guide does give multiple standards for each lesson. Examples of this can be found in Chapter 8 Lessons 8.1-8.2 where students are graphing Quadratic Functions. Standards that are addressed in that section are HSF-IF.C.7A and HSF.BF.B.3. HSA-CED.A.2 is also listed; however, there is little to no evidence that students are creating equations.</p> <p>Materials make natural connections between two domains: NQ and CED. Herein, students attend to appropriate units and quantities (see supporting standards N.Q.1, N.Q.2, N.Q.3) in modeling contexts involved in creating equations (see major content standards in the A.CED cluster). This is seen throughout various sections in the curriculum: 2.1, 3.2, or 4.5, for example.</p> |                    |
| <p><b>Non-Negotiable</b><br/> <b>3. RIGOR AND BALANCE:</b><br/> 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.<sup>6</sup></p> | <p><b>REQUIRED</b><br/> <b>3a) Attention to Conceptual Understanding:</b> Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p> | Yes                    | <p>Most lessons begin with an exploration. There are a number of places where these explorations help develop conceptual understanding of the material being addressed in the lesson. An example of this can be found in Section 9.4, Solving Quadratic Equations by Completing the Square. There are places where students have to justify their steps using mathematical models. This section also relates Completing the Square to writing quadratics in vertex form. Section 3.6 has a conceptual question that requires students to explain the transformation of a linear function as it relates to the x-intercepts.</p>   |                    |
| <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p>  | <p><b>REQUIRED</b><br/> <b>3b) Attention to Procedural Skill and Fluency:</b> The materials are designed so that students attain the</p>  | Yes                    | <p>Every lesson has adequate procedural skill and fluency problems at the end of the lesson. Section 3.3 has a number of problems to give students practice with HSF-IF.A.2, which is a standard that is</p>  |                    |

<sup>5</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>6</sup> Refer also to criterion #4 in the K–8 [Publishers' Criteria](#) and #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 |
|---|---|------------------------|--|--------------------|
|   | <p>fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>  |                        | <p>procedural skill based. Section 2.3: Solving Inequalities Using Multiplication and Division has 3 guided practice examples, 2 vocabulary and concept check questions, and 37 practice questions. Throughout the course, students are offered many opportunities to solve equations and inequalities in one variable as well as quadratic equations (A.REI.3 and A.REI.4) throughout the chapter progression.</p>  |                    |
|   | <p><b>REQUIRED</b><br/> <b>3c) Attention to Applications:</b> Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p> | <p>Yes</p>             | <p>There are application problems at the end of the lesson. They are usually found behind the procedural skill and fluency problems. Each section includes an application guided example as well as application problems throughout the practice section. Standard HSA-CED.A.3 is a standard focused on application. Section 5.7, Systems of Linear Inequalities has a number of application problems that address the standard. Section 9.2: Solving Quadratic Equations by Graphing requires students apply their knowledge of solving quadratic equations (HSA-REI.D.11) to an underhand volleyball serve. In Chapter 3, Solving Linear Inequalities, students must write inequalities to find how much money can be withdrawn from an ATM, determine whether or not job applicants meet criteria for getting a job, or determining the minimum length of a geometric figure.</p> |                    |
|   | <p><b>REQUIRED</b><br/> <b>3d) Balance:</b> The three aspects of rigor are not always treated together and are not always treated separately.</p>   | <p>Yes</p>             | <p>When looking at different lessons in the curriculum, conceptual, procedural, and application are present. HS.CED.A.2 represents all 3 aspects of rigor, and Chapter 3 has 5 out of 7 lessons that include this standard. There are also places where the standard addresses one aspect of rigor. Finally, the Chapter 9 assessment is an example of treating the three aspects of rigor together or separately, appropriately.</p>  |                    |
| <p><b>Non-Negotiable</b><br/> <b>4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:</b><br/> Materials promote focus and coherence by connecting practice</p> | <p><b>REQUIRED</b><br/> <b>4a)</b> Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.</p>   | <p>Yes</p>             | <p>All lessons have Mathematical Practice Standards listed in the teacher resources and in the student resources. In most cases, the stated mathematical practice is evident in the course materials. Every few lessons has a page entitled, "What Did You Learn?" There are questions listed there that reflect the</p>   |                    |

| CRITERIA  | INDICATORS OF SUPERIOR QUALITY  | MEETS METRICS (Yes/No) | JUSTIFICATION/ COMMENTS WITH EXAMPLES  | PUBLISHER RESPONSE |
|---|---|------------------------|--|--------------------|
| standards with content that is emphasized in the Standards. <sup>7</sup><br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |   |                        | mathematical practices. An example of this can be found on page 347, Chapter 6. There are teacher's notes at the bottom of most pages that have Mathematical Practice notations for use with the class. Section 8-3, page 433 is an example of this.<br><br>In the teacher edition, the mathematical practices are noted in each section to aid the teacher in implementing them throughout the lesson. For example, Section 1.1: Solving Simple Equations provides teachers with information regarding MP4: Model with Mathematics (drawing a number line). Also, "Laurie's Notes" provide specific explanation of how the practice standards connect to the content standards. |                    |
| <b>SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY</b>  |   |                        |  |                    |
| <b>Additional Criterion</b><br><b>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:</b><br>Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.<br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | <b>REQUIRED</b><br><b>5a)</b> Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year. <sup>10</sup> | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |                    |
|   | <b>REQUIRED</b><br><b>5b)</b> Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge. <sup>10</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |                    |
|   | <b>5c)</b> Materials base content progressions on the progressions in the Standards. <sup>8</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |                    |
|   | <b>5d)</b> Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards. <sup>9</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.   |                    |

<sup>7</sup> Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #6 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013)

<sup>8</sup> Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>9</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 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 |
|---|--|------------------------|--|--------------------|
|   | <b>5e)</b> Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. <sup>11</sup>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
| <p><b>Additional Criterion</b><br/> <b>6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:</b><br/>           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.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>6a)</b> Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.<sup>10</sup> 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.<sup>11</sup> 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.</p> | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|   | <p><b>6b)</b> Materials Support the Standards’ Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.<sup>12</sup></p>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|   | <p><b>6c)</b> Materials explicitly attend to the specialized language of mathematics.<sup>12</sup></p>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
| <p><b>Additional Criterion</b><br/> <b>7. INDICATORS OF QUALITY:</b><br/>           Quality materials should exhibit the indicators outlined here in order to give teachers and students the</p>  | <p><b>7a)</b> 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.</p>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |

<sup>10</sup> Refer also to criterion #9 in the K–8 [Publishers’ Criteria](#) and #7 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>11</sup> Refer also to criterion #7 in the K–8 [Publishers’ Criteria](#) and #5 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>12</sup> Refer also to criterion #10 in the K–8 [Publishers’ Criteria](#) and #8 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 |
|---|---|-----------------------------|---|--------------------|
| <p>tools they need to meet the expectations of the Standards.<sup>13</sup></p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>   | <p><b>7b)</b> 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.</p> | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>7c)</b> 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.</p>   | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>7d)</b> 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.</p>   | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>7e)</b> Lessons are appropriately structured and scaffolded to support student mastery.</p>   | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>7f)</b> Materials support the uses of technology as called for in the Standards.</p>  | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
| <p><b>FINAL EVALUATION</b><br/> <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7.<br/> <i>Tier 2 ratings</i> 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.<br/> <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.</p> |   |                             |   |                    |

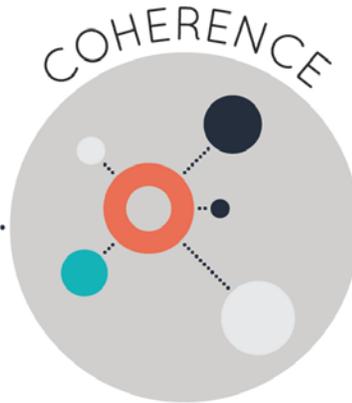
<sup>13</sup> Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and pages 16-18 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY                                | MEETS METRICS (Yes/No) | JUSTIFICATION/ COMMENTS WITH EXAMPLES  | PUBLISHER RESPONSE  |
|--|---|------------------------|--|---|
| <b>Compile the results for Sections I and II to make a final decision for the material under review.</b> |   |                        |  |   |
| Section  | Criteria  | Yes/No                 | Final Justification/Comments   |   |
| <b>I: Non-Negotiables</b>  | 1. Focus on Major Work  | No                     | The published pacing guide indicates 61.25% of the time is spent on the major content of Algebra 1. There is material on assessments that are not introduced until later courses in Algebra 1. | Using the Pacing Guide and the correlation in the front matter of each Teaching Edition, students spend about 83% of the time in Algebra 1 is on the Widely Applicable Prerequisites<br><br>Sample Citations:<br>A1: (PE) 11-18, 103-110, 195-200, 209-216, 299-304, 313-322, 385-390, 391-396, 397-402, 449-458, 505-514   |
|  | 2. Consistent, Coherent Content                               | No                     | There is an entire chapter that only has supporting content with no major content of Algebra 1. Materials do connect domains or clusters.  | Big Ideas Math bases its content on the Widely Applicable Prerequisites set forth by the Common Core State Standards. According to these, no chapter exclusively teaches content that is not considered to be Algebra 1 content.<br><br>Once material is taught, it is used throughout the Big Ideas Math series to ensure full coverage of the material and connections between standards, grade levels, and real-life situations. |
|  | 3. Rigor and Balance  | Yes                    | All three aspects (Conceptual, Fluency, and Application) are present and meaningful to the coursework in Algebra 1.  |   |
|  | 4. Focus and Coherence via Practice Standards                 | Yes                    | Practice standards are given throughout the course in the teacher guide as well as the student edition.  |   |
| <b>II: Additional Alignment Criteria and Indicators of Quality</b>                                       | 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: <b>Tier III, Not representing quality</b>                              |   |                        |  |   |

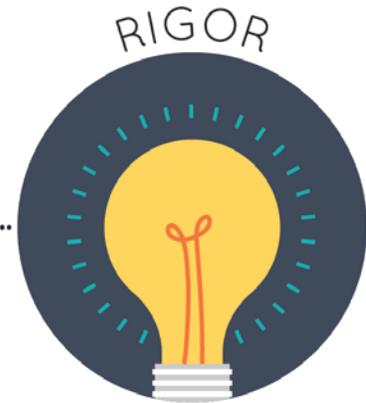
Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Big Ideas Math High School Geometry**

Grade: **10**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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

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

| <b>STRONG</b>                                   | <b>WEAK</b>                                      |
|---|--|
| 3. Rigor and Balance (Non-Negotiable)           | 1. Focus on Major Work (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  | PUBLISHER RESPONSE   |
|--|--|------------------------|--|--|
| <b>SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.</b>   |  |                        |  |  |
| <p><b>Non-Negotiable</b><br/> <b>1. FOCUS ON MAJOR WORK<sup>14</sup>:</b><br/> Students and teachers using the materials as designed devote the large majority<sup>15</sup> of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>1a)</b> Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p> | <p>No</p>              | <p>Based on the pacing guide, there are 160 days for Chapters 1-12. 65.5 out of the 160 (41%) days are not spent on priority content based on the standards for Geometry. This means 59% is spent on what the correlation and pacing guides indicate as priority content. Significant portions of the materials focus on supporting or additional content, or content that lies outside of the content standards for high school Geometry.</p> | <p>Big Ideas Math was developed with the Common Core State Standards for Mathematics at its core. The balanced approach to instruction used in Big Ideas Math allows for the majority of students' time to be spent on developing the knowledge and skills that are Widely Applicable Prerequisites for postsecondary education: Number and Quantity, Algebra, Functions, Geometry, and Statistics.</p> <p>Using the Pacing Guide and the correlation in the front matter of each Teaching Edition, students spend about 71% of the time in Geometry on the Widely Applicable Prerequisites.</p> <p>Sample Citations:<br/> G: (PE) 3-10, 37-46, 99-104, 137-144, 147-154, 181-188, 319-326, 335-342, 435-444, 445-452, 487-492, 493-500</p> <p>Once material is taught, it is used throughout the Big Ideas Math series to ensure full coverage of the material and connections between standards, grade levels, and real-life situations. Because of this, the correlations in the the Teaching Edition do not show all areas where a standard is covered. These correlations only show where the standards are the primary focus of the chapter, not where they are supporting additional content.</p> <p>Therefore, Big Ideas Math fully meets this criteria.</p> |

<sup>14</sup> For more on the major work of the grade, see [Focus by Grade Level](#).

<sup>15</sup> The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY  | MEETS METRICS (Yes/No) | JUSTIFICATION/ COMMENTS WITH EXAMPLES  | PUBLISHER RESPONSE  |
|--|---|------------------------|--|---|
|  | <p><b>REQUIRED</b><br/> <b>1b)</b> In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.<sup>16</sup></p> | No                     | <p>Assessments include topics outside the grade level. For example, Chapter 9 test has law of sines/cosines, which is not introduced until after Geometry. Chapter 12: Probability features standards (HSS-CP.A and HSS-CP.B) that are not included in the Geometry standards.</p>   | <p>No chapter exclusively teaches content that is not considered to be Geometry content.</p> <p>According to Appendix A of the CCSSM, the law of sines/cosines (G.SRT.10 and G.SRT.11) is a Geometry topic and should be fully covered in a Geometry course. Also according to Appendix A of the CCSSM, standards S.CP.A and S.CP.B should be fully covered by a Geometry course.</p> <p>Please see pages 12 and 14 of the following document:<br/> <a href="http://www.corestandards.org/assets/CCSSI_Mathematics_Appendix_A.pdf">http://www.corestandards.org/assets/CCSSI_Mathematics_Appendix_A.pdf</a></p> <p>Therefore, Big Ideas Math fully meets this criteria.</p> |
| <p><b>Non-Negotiable</b><br/> <b>2. CONSISTENT, COHERENT CONTENT</b><br/> Each course’s instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>2a)</b> Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.<sup>17</sup></p>  | No                     | <p>The correlation guide indicates there are lessons where major work is connected to supporting content. However, materials do not connect supporting content to major content in meaningful ways throughout the course. For example, Chapter 12 is all supporting content with no major content of Geometry.</p> <p>It should be noted that in Chapter 3 (Parallel and Perpendicular Lines), supporting content on geometric constructions (G.CO.D.12) is integrated into a major content focus on proving geometric theorems about lines and angles (G.CO.C.9).</p> | <p>When a connection can be made across standards, Big Ideas Math does it. Connections are made across the standards when it is natural, and within and across each course as well. Once new content is taught, it is used throughout the rest of the book and program.</p> <p>The correlations in the Teaching Edition do not show full correlations for the Big Ideas Math program. They simply show where standards are the primary focus of the lesson. Since content is used throughout the series to support additional content, there are no chapters in which major content is truly lacking.</p> <p>Therefore, Big Ideas Math fully meets this criteria.</p>       |
|  | <p><b>REQUIRED</b><br/> <b>2b)</b> Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.<sup>18</sup></p>   | Yes                    | <p>Materials make important connections across domains, as in Chapter 11, where standards in the HSG-GMD domain are presented in the context of modeling with geometry (HSG-MG). Natural connections between clusters are also made, as in Chapter 8.2, where HSG.SRT.A.3 and HSG.SRT.B.5</p>  |   |

<sup>16</sup> Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>17</sup> Refer also to criterion #3 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>18</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 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 |
|--|--|------------------------|--|--------------------|
|  |  |                        | are presented concurrently. Another example is in Chapter 7 Lessons 7.3 - 7.4 connect HSG-CO.C.11, HSG-SRT.B.5, and HSG-MG.A.1.  |                    |
| <p><b>Non-Negotiable</b></p> <p><b>3. RIGOR AND BALANCE:</b><br/>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.<sup>19</sup></p> <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>REQUIRED</b></p> <p><b>3a) Attention to Conceptual Understanding:</b> Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>  | Yes                    | Conceptual understanding is developed in the materials, especially where it is explicitly demanded in the content standards. For instance, in in Chapter 4.1 (Translations), students are given the opportunity to explore the answer to an essential question: "How can you translate a figure in the coordinate plane?" The presentation here focuses on concepts, as opposed to leading students through prescribed steps. In a significant number of questions, students are asked to "explain" their reasoning and "justify" their answer. As another example, Lesson 7.2 has an exploration where students are finding properties of parallelograms.   |                    |
|  | <p><b>REQUIRED</b></p> <p><b>3b) Attention to Procedural Skill and Fluency:</b> The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p> | Yes                    | Procedural skill and fluency is emphasized, where such an emphasis is appropriate for the high school Geometry standards. In Chapter 1, for example, students are given significant opportunities to sketch geometric figures with a variety of tools (compass, straightedge, etc.), gaining speed and accuracy with these procedures. Section 9.4 and Section 9.5 are examples of students having plenty of procedural skill and fluency problems. Students practice fluently writing the ratios of sine, cosine, and tangent ratios given right triangles. Lastly, Section 2.4: Algebraic Reasoning has 5 guided practice examples, 2 vocabulary and concept check questions, and 54 practice questions. |                    |
|  | <p><b>REQUIRED</b></p> <p><b>3c) Attention to Applications:</b> Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample</p>   | Yes                    | Application is emphasized, where appropriate in the content standards for high school Geometry. The materials present material on MG.2 by requiring a variety of single-step and multi-step problems that are presented in the context of real-world situations. In addition, key takeaways from K-8 are required to solve a number of high school level   |                    |

<sup>19</sup> Refer also to criterion #4 in the K-8 [Publishers' Criteria](#) and #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 |
|---|--|------------------------|--|--------------------|
|   | practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit. |                        | problems (including finding areas of rectangles, making unit conversions, etc.). HSG-SRT.C.8 is an application standard and lessons 9.1 and 9.2 have examples of application problems as they apply to the Pythagorean Theorem and Special Right Triangles. There are also a number of practice problems for students to engage in. Lastly, Section 6.3: Medians and Altitude of Triangles uses a paper airplane as a means of applying their knowledge of the content to the real world.  |                    |
|   | <b>REQUIRED</b><br><b>3d) Balance:</b> The three aspects of rigor are not always treated together and are not always treated separately.   | Yes                    | The three aspects of rigor are not always presented together, nor are they always represented separately. For example, key geometric concepts and definitions are developed on their own (i.e. conceptual development of lines and angles), but they are also integrated into fluency standards involving making geometric constructions. The Chapter 9 test is an example of balance of the three aspects of rigor.   |                    |
| <b>Non-Negotiable</b><br><b>4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:</b><br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. <sup>20</sup><br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>REQUIRED</b><br><b>4a)</b> Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.   | Yes                    | Mathematical Practice Standards are addressed explicitly throughout the materials. "Laurie's Notes" makes these practice standards explicit and provides specific recommendations for implementing the practice standards. For instance, in presentation of material on geometric constructions, students are asked to make use of tools strategically (computer software, compasses, etc.). Or, in the HSG-MG domain, students are asked to "construct viable arguments." There are mathematical practices embedded throughout the teacher materials and student materials. |                    |
| <b>SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY</b>  |  |                        |  |                    |
| <b>Additional Criterion</b><br><b>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:</b><br>Materials foster focus and coherence by linking topics (across   | <b>REQUIRED</b><br><b>5a)</b> Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year. <sup>10</sup>  | Not Evaluated          | This section was not evaluated because the non-negotiable criteria were not met.   |                    |

<sup>20</sup> Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #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   | PUBLISHER RESPONSE |
|---|--|-----------------------------|---|--------------------|
| <p>domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>   | <p><b>REQUIRED</b><br/> <b>5b)</b> Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.<sup>10</sup></p>  | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>5c)</b> Materials base content progressions on the progressions in the Standards.<sup>21</sup></p>   | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>5d)</b> Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards.<sup>22</sup></p>   | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>5e)</b> Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.<sup>11</sup></p>  | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
| <p><b>Additional Criterion</b><br/> <b>6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:</b><br/>           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.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>6a)</b> Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.<sup>23</sup> 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.<sup>24</sup> 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.</p> | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |
|   | <p><b>6b)</b> Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content</p>   | <p><b>Not Evaluated</b></p> | <p>This section was not evaluated because the non-negotiable criteria were not met.</p> |                    |

<sup>21</sup> Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>22</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>23</sup> Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>24</sup> Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 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 |
|--|--|------------------------|--|--------------------|
|  | standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. <sup>25</sup>  |                        |  |                    |
| <b>Additional Criterion</b><br><b>7. INDICATORS OF QUALITY:</b><br>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. <sup>26</sup><br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | <b>6c)</b> Materials explicitly attend to the specialized language of mathematics. <sup>12</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | <b>7a)</b> 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.  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | <b>7b)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | <b>7c)</b> 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.   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | <b>7d)</b> 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.   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |

<sup>25</sup> Refer also to criterion #10 in the K–8 [Publishers' Criteria](#) and #8 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>26</sup> Refer also to pages 18-20 in the K – 8 [Publishers' Criteria](#) and pages 16-18 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

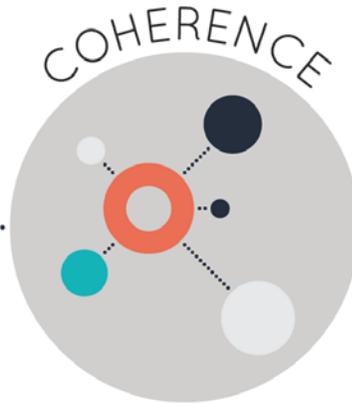
| CRITERIA   | INDICATORS OF SUPERIOR QUALITY   | MEETS METRICS (Yes/No) | JUSTIFICATION/ COMMENTS WITH EXAMPLES   | PUBLISHER RESPONSE   |
|--|--|------------------------|---|--|
|  | Each problem or exercise has a purpose.  |                        |   |  |
|  | <b>7e)</b> Lessons are appropriately structured and scaffolded to support student mastery. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.  |  |
|  | <b>7f)</b> Materials support the uses of technology as called for in the Standards.        | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.  |  |
| <b>FINAL EVALUATION</b><br><i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7.<br><i>Tier 2 ratings</i> 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.<br><i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria. |  |                        |   |  |
| <b>Compile the results for Sections I and II to make a final decision for the material under review.</b>   |  |                        |   |  |
| Section  | Criteria   | Yes/No                 | Final Justification/Comments  |  |
| <b>I: Non-Negotiables</b>  | 1. Focus on Major Work   | <b>No</b>              | The published pacing guide indicates 59% of the time is spent on major content of Geometry. There is material on assessments that are not introduced until later courses in Geometry. | Using the Pacing Guide and the correlation in the front matter of each Teaching Edition, students spend about 71% of the time in Geometry is on the Widely Applicable Prerequisites.<br><br>Sample Citations:<br>G: (PE) 3-10, 37-46, 99-104, 137-144, 147-154, 181-188, 319-326, 335-342, 435-444, 445-452, 487-492, 493-500  |
|  | 2. Consistent, Coherent Content  | <b>No</b>              | There is an entire chapter that only has supporting content with no major content of Geometry. Materials do connect domains or clusters.  | Big Ideas Math bases its content on the Widely Applicable Prerequisites set forth by the Common Core State Standards. According to these, no chapter exclusively teaches content that is not considered to be Geometry content.<br><br>Once material is taught, it is used throughout the Big Ideas Math series to ensure full coverage of the material and connections between standards, grade levels, and real-life situations. |
|  | 3. Rigor and Balance   | <b>Yes</b>             | All three aspects (Conceptual, Fluency, and Application) are present and meaningful to the coursework in Geometry.  |  |
|  | 4. Focus and Coherence via Practice Standards  | <b>Yes</b>             | Practice standards are given throughout the course in the teacher guide as well as the student edition.   |  |

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY                                | MEETS METRICS<br>(Yes/No) | JUSTIFICATION/ COMMENTS WITH<br>EXAMPLES   | PUBLISHER RESPONSE |
|--|---|---------------------------|--|--------------------|
| <b>II: Additional Alignment Criteria and Indicators of Quality</b>                 | 5. Alignment Criteria for Standards for Mathematical Content  | <b>Not Evaluated</b>      | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | 6. Alignment Criteria for Standards for Mathematical Practice | <b>Not Evaluated</b>      | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | 7. Indicators of Quality                                      | <b>Not Evaluated</b>      | This section was not evaluated because the non-negotiable criteria were not met. |                    |
| FINAL DECISION FOR THIS MATERIAL: <b><u>Tier III, Not representing quality</u></b> |   |                           |  |                    |

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Big Ideas Math High School Algebra 2**

Grade: **11**

Publisher: **Big Ideas Learning**

Copyright: **2014**

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 on Major Work (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   | PUBLISHER RESPONSE  |
|--|--|------------------------|---|---|
| <b>SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.</b>   |  |                        |   |   |
| <p><b>Non-Negotiable</b><br/> <b>1. FOCUS ON MAJOR WORK<sup>27</sup>:</b><br/>           Students and teachers using the materials as designed devote the large majority<sup>28</sup> of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>1a)</b> Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p> | <p>No</p>              | <p>Based on the pacing guide, there are 160 days for Chapters 1-11. 105 out of the 160 (65%) days are not spent on priority content for Algebra II standards. This means 35% is spent on what the correlation and pacing guides indicate as priority content.</p> | <p>Big Ideas Math was developed with the Common Core State Standards for Mathematics at its core. The balanced approach to instruction used in Big Ideas Math allows for the majority of students' time to be spent on developing the knowledge and skills that are Widely Applicable Prerequisites for postsecondary education: Number and Quantity, Algebra, Functions, Geometry, and Statistics.</p> <p>Using the Pacing Guide and the correlation in the front matter of each Teaching Edition, students spend about 72% of the time in Algebra 2 on the Widely Applicable Prerequisites.</p> <p>Sample Citations:<br/>           A2: (PE) 55-64, 179-186, 237-242, 365-372, 375-382, 383-390, 425-432, 435-440, 603-608, 609-616, 619-624</p> <p>Once material is taught, it is used throughout the Big Ideas Math series to ensure full coverage of the material and connections between standards, grade levels, and real-life situations. Because of this, the correlations in the the Teaching Edition do not show all areas where a standard is covered. These correlations only show where the standards are the primary focus of the chapter, not where they are supporting additional content.</p> <p>Therefore, Big Ideas Math fully meets this criteria.</p> |

<sup>27</sup> For more on the major work of the grade, see [Focus by Grade Level](#).

<sup>28</sup> The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

| CRITERIA   | INDICATORS OF SUPERIOR QUALITY  | MEETS METRICS (Yes/No) | JUSTIFICATION/ COMMENTS WITH EXAMPLES  | PUBLISHER RESPONSE  |
|--|---|------------------------|--|---|
|  | <p><b>REQUIRED</b><br/> <b>1b)</b> In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.<sup>29</sup></p> | No                     | <p>Materials contain content that is not introduced at the appropriate grade level. Section 5.6: Inverse of a Function focuses heavily on the Algebra I standard, HSA-CED.A.4. Assessments include topics outside the grade level. Section 7.1: Inverse Variation requires students to be proficient on standards not included in Algebra II (HSA-CED.A.2 and HSA-CED.A.3). These topics are found on the Chapter 7 test. Also, Chapter 9 test has problems using Sum and Difference formulas for sine, cosine, and tangent, which are topics beyond Algebra II.</p> | <p>No chapter exclusively teaches content that is not considered to be Algebra 2 content.</p> <p>According to Appendix A of the CCSSM, standards A.CED.2, A.CED.3, and A.CED.4 are Algebra 2 standards as well as Algebra 1 standards. Sections 5.6 and 7.1 focus on equations using all available types of expressions which should be covered in an Algebra 2 course.</p> <p>Please see page 9 of the following document:<br/> <a href="http://www.corestandards.org/assets/CCSSI_Mathematics_Appendix_A.pdf">http://www.corestandards.org/assets/CCSSI_Mathematics_Appendix_A.pdf</a></p> <p>Certain content is taught to expand student understanding of the material in a meaningful way. The content taught in Chapter 9 is taught to fully cover standard F.TF.C. This standard requires students to prove and apply trigonometric identities. Although this is not fully needed in Algebra 2, the material was deliberately kept together to allow for a more meaningful and sensible approach to the material.</p> <p>Therefore, Big Ideas Math fully meets this criteria.</p> |
| <p><b>Non-Negotiable</b><br/> <b>2. CONSISTENT, COHERENT CONTENT</b><br/> Each course’s instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>2a)</b> Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.<sup>30</sup></p>  | No                     | <p>The correlation guide indicates there are lessons where major work is connected to supporting content. However, materials do not connect supporting content to major content in meaningful ways throughout the course. For example, Chapter 9 and 10 is all supporting content with no major work of Algebra II.</p> <p>It should be noted that in Section 4.3: Dividing Polynomials, the supporting standard HSA-APR.D.6 is connected to the major standard HSA-APR.B.2.</p>   | <p>When a connection can be made across standards, Big Ideas Math does it. Connections are made across the standards when it is natural, and within and across each course as well. Once new content is taught, it is used throughout the rest of the book and program.</p> <p>The correlations in the Teaching Edition do not show full correlations for the Big Ideas Math program. They simply show where standards are the primary focus of the lesson. Since content is used throughout the series to support additional content, there are no chapters in which major content is truly lacking.</p>   |

<sup>29</sup> Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>30</sup> Refer also to criterion #3 in the K–8 [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                                   |
|---|--|--|---|--|
|   |  |  |   | Therefore, Big Ideas Math fully meets this criteria. |
| <p><b>Non-Negotiable</b><br/> <b>3. RIGOR AND BALANCE:</b><br/> 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.<sup>32</sup></p> <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.</b><sup>31</sup></p>  | Yes  | Materials make important connections within two or more clusters throughout the curriculum. For example, Section 6.1: Exponential Growth and Decay Functions includes the major standard HSA-SSE.B.3c, supporting standards HSF-IF.C.7e, HSF-IF.C.8b, and HSF-LE.B.5, and additional standards HSF-LE.A.2. In addition, HSA-APR standards are presented concurrently with HSA-SSE standards in Chapter 4.   |  |
|   | <p><b>REQUIRED</b><br/> <b>3a) Attention to Conceptual Understanding:</b> Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>  | Yes  | Materials provide students with various high-quality questions that require conceptual understanding of the content. Each section includes a “core concept check” that includes at least one discussion question. Section 2.4: Modeling With Quadratic Functions requires students to explain when it is appropriate to use a quadratic function to model data. In presenting the HSA-SSE.A cluster, students are given a variety of opportunities to identify different ways to rewrite algebraic expressions.   |  |
|   | <p><b>REQUIRED</b><br/> <b>3b) Attention to Procedural Skill and Fluency:</b> The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p> | Yes  | Materials provide many opportunities for students to enhance their fluency and procedural skills. For example, Section 1.2: Transformations of Linear and Absolute Value Functions has 5 guided practice examples, 2 vocabulary and concept check questions, and 43 practice questions. In Chapter 5 (Rational Exponents and Radical Functions), for example, students are given ample opportunities to develop speed and accuracy in rewriting exponential expressions using the properties of exponents. This addresses HS.RN.A.2, which is a standard focused on procedural skill and fluency. |  |
| <p><b>REQUIRED</b></p>  | Yes  | Materials are designed to provide teachers and |   |  |

<sup>31</sup> Refer also to criterion #6 in the K–8 [Publishers’ Criteria](#) and #4 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>32</sup> Refer also to criterion #4 in the K–8 [Publishers’ Criteria](#) and #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 |
|--|--|------------------------|---|--------------------|
|  | <p><b>3c) Attention to Applications:</b> Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p> |                        | <p>students with high-quality problems that require students to apply their knowledge of the content. In Chapter 8 (Series and Sequences), students practice writing arithmetic and geometric sequences (HSF-BF.A.2) in a number of real-world modeling contexts. These materials include performance tasks. For example, a performance task in this chapter asks students to apply their knowledge of sequences to integrated circuits and Moore's Law.</p>  |                    |
|  | <p><b>REQUIRED</b><br/> <b>3d) Balance:</b> The three aspects of rigor are not always treated together and are not always treated separately.</p>  | <p><b>Yes</b></p>      | <p>Materials balance the three aspects of rigor throughout the curriculum. Chapter tests and quizzes include an assortment of questioning types, including conceptual, fluency, and application problems. The Chapter 6 test is an example of an assessment, which includes all three aspects of rigor. Lesson 8.4 addresses HS.SSE.B.4, which includes all 3 aspects of rigor. There are also lessons that address an aspect of rigor separately. An example is lesson 5.2 only focuses on HS.RN.A.2, which is a procedural skill.</p>   |                    |
| <p><b>Non-Negotiable</b><br/> <b>4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:</b><br/> Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<sup>33</sup></p> <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> | <p><b>REQUIRED</b><br/> <b>4a)</b> Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.</p>  | <p><b>Yes</b></p>      | <p>Mathematical practices are noted in each section of the teacher edition. For example, Section 3.2: Complex Numbers emphasizes MP7 (Look for and make use of structure). Students are asked to make the connection back from complex number solutions to a quadratic equation. In addition, each chapter contains a section called "Laurie's Notes," which explains connections of the Chapter's content to the practice standards. For major standards emphasizing application, for instance, a number of problems are identified by their connection to MP.4 (Modeling with Mathematics).</p> |                    |

<sup>33</sup> Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #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  | PUBLISHER RESPONSE |
|---|--|------------------------|--|--------------------|
| <b>SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY</b>  |  |                        |  |                    |
| <b>Additional Criterion</b><br><b>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:</b><br>Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.<br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | <b>REQUIRED</b><br><b>5a)</b> Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year. <sup>10</sup>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|   | <b>REQUIRED</b><br><b>5b)</b> Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge. <sup>10</sup>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|   | <b>5c)</b> Materials base content progressions on the progressions in the Standards. <sup>34</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|   | <b>5d)</b> Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards. <sup>35</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|   | <b>5e)</b> Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. <sup>11</sup>  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
| <b>Additional Criterion</b><br><b>6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:</b><br>Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than  | <b>6a)</b> Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard. <sup>36</sup> 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. <sup>37</sup> There are teacher-directed materials that explain the role of the practice | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |

<sup>34</sup> Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>35</sup> Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>36</sup> Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>37</sup> Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 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 |
|--|--|------------------------|--|--------------------|
| detract from the focus and include additional content/skills to teach which are not included in the Standards.<br><br><input type="checkbox"/> Yes <input type="checkbox"/> No   | standards in the classroom and in students’ mathematical development. Alignments to practice standards are accurate.   |                        |  |                    |
|  | <b>6b)</b> Materials Support the Standards’ Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. <sup>38</sup>                    | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | <b>6c)</b> Materials explicitly attend to the specialized language of mathematics. <sup>12</sup>   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
| <b>Additional Criterion</b><br><b>7. INDICATORS OF QUALITY:</b><br>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. <sup>39</sup><br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | <b>7a)</b> 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.  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | <b>7b)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |
|  | <b>7c)</b> Support for English Language Learners and other special populations is thoughtful and helps those   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met. |                    |

<sup>38</sup> Refer also to criterion #10 in the K–8 [Publishers’ Criteria](#) and #8 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

<sup>39</sup> Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and 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  |
|--|--|------------------------|---|---|
|  | students meet the same standards as all other students. The language in which problems are posed is carefully considered.  |                        |   |   |
|  | <b>7d)</b> 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. | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.  |   |
|  | <b>7e)</b> Lessons are appropriately structured and scaffolded to support student mastery.   | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.  |   |
|  | <b>7f)</b> Materials support the uses of technology as called for in the Standards.  | <b>Not Evaluated</b>   | This section was not evaluated because the non-negotiable criteria were not met.  |   |
| <b>FINAL EVALUATION</b><br><i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7.<br><i>Tier 2 ratings</i> 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.<br><i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria. |  |                        |   |   |
| <b>Compile the results for Sections I and II to make a final decision for the material under review.</b>   |  |                        |   |   |
| Section  | Criteria   | Yes/No                 | Final Justification/Comments  |   |
| <b>I: Non-Negotiables</b>  | 1. Focus on Major Work   | <b>No</b>              | The pacing guide indicates 35% of the time is spent on major content of Algebra II. In addition, assessments include materials that are not introduced until the later courses of Algebra II. | Using the Pacing Guide and the correlation in the front matter of each Teaching Edition, students spend about 72% of the time in Algebra 2 on the Widely Applicable Prerequisites.<br><br>Sample Citations:<br>A2: (PE) 55-64, 179-186, 237-242, 365-372, 375-382, 383-390, 425-432, 435-440, 603-608, 609-616, 619-624 |
|  | 2. Consistent, Coherent Content  | <b>No</b>              | There is an entire chapter that only has supporting content with no major content of Geometry. Materials do connect domains or clusters.  | Big Ideas Math bases its content on the Widely Applicable Prerequisites set forth by the Common Core State Standards. According to these, no chapter exclusively teaches content that is not considered to be Algebra 2 content.<br><br>Once material is taught, it is used throughout the Big                          |

| CRITERIA  | INDICATORS OF SUPERIOR QUALITY                                     | MEETS METRICS<br>(Yes/No)                                    | JUSTIFICATION/ COMMENTS WITH<br>EXAMPLES   | PUBLISHER RESPONSE   |
|---|--|--|--|--|
|   |  |  |  | Ideas Math series to ensure full coverage of the material and connections between standards, grade levels, and real-life situations. |
|   | 3. Rigor and Balance   | Yes  | All three aspects (Conceptual, Fluency, and Application) are present and meaningful to the coursework in Algebra II. |  |
|   | 4. Focus and Coherence via Practice Standards                      | Yes  | Practice standards are given throughout the course in the teacher guide as well as the student edition.              |  |
|   | <b>II: Additional Alignment Criteria and Indicators of Quality</b> | 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: <b>Tier III, Not representing quality</b> |  |  |  |  |

Appendix II.

Public Comments

There were no public comments submitted.