

## Review Team Appraisal of Title

(9-12 Mathematics)

This appraisal form is provided for use by educators responsible for the selection of instructional materials for implementation with districts and charter schools across New Mexico to meet the needs of their student populations.

This appraisal form should be used in conjunction with the publisher provided Form D: Research Based Effectiveness Determination that supports this reviewed material which can be found on the Instructional Material Bureau website.

<https://webnew.ped.state.nm.us/bureaus/instructional-materials/the-adoption-cycle/>

Text Title	Big Ideas Math: Common Core Curriculum Algebra I	Publisher	Big Ideas Learning
SE ISBN	9781642087178	TE ISBN	9781642087185
SW ISBN	9781608408528	Grade Level/Content	9-10

**Core Material Designation** (Core Material is - the comprehensive print or digital educational material, including basal material, which constitutes the necessary instructional components of a full academic course of study in those subjects for which the department has adopted content standards and benchmarks.)

Recommended \_\_\_\_\_ Recommended with Reservations   X   Not Recommended \_\_\_\_\_

### Total Score

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
79.3%	83.3%	81.8%	82.6%

**Standards Review** - Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
87.3%	86.6%	86.1%	86.7%

Materials align with grade level standards.
<p><i>Statements of appraisal and supporting evidence:</i></p> <ul style="list-style-type: none"> <li>● Throughout the text you can find examples, explorations, and exercises that meet grade level standards.             <ul style="list-style-type: none"> <li>○ There were standards that were not met within the materials, more specifically HS.ACED.A.3, HS.SID.B.6.a, and HS.FBF.A.1.b.</li> <li>○ There are also some cases that the citation by the publisher partially met the standard, and later on reviewers found the evidence to make it meet the standard expectation.</li> </ul> </li> <li>● Throughout the texts, the students have Monitoring Progress sections that keep activating prior knowledge.</li> </ul>
Materials align to standards for mathematical practice.
<i>Statements of appraisal and supporting evidence:</i>

- Throughout the text there is evidence that supports the alignment to all the mathematical practices. There is alignment to the Math practices at the beginning of each chapter and in the teacher notes on the bottom of the pages throughout the chapter, and all cover at least part of a mathematical practice, so that all practices are covered multiple times in the text.
- The TE points out the alignments and gives teachers examples of where they are found and how they are being met. For example, in the TE Formative Assessment Strategy piece it gives teachers ways to incorporate mathematical discourse among students addressing MP3.

Materials show aspects of rigor.

*Statements of appraisal and supporting evidence:*

- Roughly two thirds of the problems present in each chapter are procedural in nature.
- Roughly a third are word problems, with most word problems being almost exactly what is presented in the example.
  - The lack of conceptual questions to students and conceptual questions dropped the score in this area.
- Lessons average 2 error analysis problems.
- In concepts, there are few explanations of why formulas work, or why we need to know the content we are learning, or how it ties to what we need to learn later.

**Math Content Review** - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the specific reviewed content area.

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
75%	82.1%	85.7%	81.0%

Materials are consistent with grade level content, supporting the intent of the delivery and understanding of mathematics.

*Statements of appraisal and supporting evidence:*

- TE gives the teacher Laurie's Notes sections that help them with questions, where the Mathematical Practices apply, and extra examples if needed for students.
- SW has structured notes and more examples for more understanding and structure.
  - The SW gives sets of problems intertwined with notes in the examples as well as a place for definitions after the students work through the section.
- TE lets teachers know what material has been taught in prior grades leading up to the grade level standard so that they can activate past learning as an entry point to a lesson.
  - It is listed within the side notes of the sections and includes some of the standards from the middle school level, but it is all tied into the Algebra 1 standards within each chapter.

Materials support student learning of mathematics.

*Statements of appraisal and supporting evidence:*

- TE is structured with explorations, examples, and practice for consistent procedures to learn the content.
- TE and SE have a pre-lesson Motivate section that allows students to warm up with the content and then be prepared for the learning of the material.
- SW is an extension of the SE work and helps bring understanding to the terms within the texts.
  - It gives them a place to take notes, write in definitions of terms, and has extra problems to work out to learn the material better.

**All Content Review** - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the material regarding the progression of the standards, lesson structure, pacing, assessment, individual learners and cultural relevance.

Reviewer #55 59.3%	Reviewer #56 75%	Reviewer #57 70%	Average Score 68.1%
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Materials are coherent and consistent with the high school standards which all students should study in order to be college and career ready.

*Statements of appraisal and supporting evidence:*

- The standards for Algebra 1 are 87% covered by the publisher in the text.
- The text is lacking in conceptual understanding needed for students to understand at a deep level.
  - This is noted within the “materials align with grade level standards” section.
- TE has a list of 6-8 grade standards that aid the teacher in knowing how the HS standards build on the middle school ones.
  - They are located in every chapter on the right side next the chapter summaries and Laurie’s Notes.

Materials are well designed and take into account effective lesson structure and pacing.

*Statements of appraisal and supporting evidence:*

- TE is well organized and follows a traditional pacing of Algebra 1.
- SW and SE are aligned with the TE and leave little room for confusion.
- TE has suggested pacing guide at the beginning of the text as well as at the beginning of each chapter.
- TE is nicely broken down and offers a wide variety of tools at the teacher’s disposal, including teacher notes before each section and on the bottom of each page. These tools make lesson plan, strategy, and pacing suggestions for the teacher easy to use.
- Pacing suggestions are made at the beginning of each section.

Materials support teacher planning, learning, and understanding of the standards.

*Statements of appraisal and supporting evidence:*

- TE has a list of standards and where they can be found in the front of the book.
- TE has a list of standards on the side of the page that are addressed in each chapter.
- TE provides teacher tips, ample lesson examples, suggested teacher strategies, and examples of appropriate questions to ask.
- There are Formative and Summative Assessments within the materials.
  - The TE has Formative Assessment tips within every chapter, averaging about 3 per chapter. Some did not have any, but other had 7 tips.
    - The formative assessments are the same type in nature, but they are not given the same way. They do have some variance on when and how to use them.
  - It also has What Did You Learn sections about midway through most chapters.
  - There are Quizzes, Chapter Tests, and Cumulative Tests within each chapter (summative).
- We were unable to find evidence where the materials help the teacher learn the standards themselves to effectively teach those standards.

Materials offer teachers resources and tools to collect ongoing data about student progress on the standards.

*Statements of appraisal and supporting evidence:*

- Online component does have a tab for collecting students’ responses within the digital chapters.

Materials give all students extensive opportunities and support to explore key concepts.

*Statements of appraisal and supporting evidence:*

- TE and SE provide reminders of key concepts in little boxes on the top of the pages throughout the sections in each chapter.
- Each section in the TE and SE have exploration sections that allow prior knowledge to be activated and for students to work with problems on their own.
- Digital materials have STEM videos that students can watch to start off each chapter and lesson.
- The TE and the digital material provide graphic organizers, rubrics for alternative assessments, and formative assessment tips that provide opportunities for all students to succeed.

Materials support effective use of technology to enhance student learning. Digital materials are accessible and available in multiple platforms.

*Statements of appraisal and supporting evidence:*

- Digital materials are accessible and available in multiple platforms according to the publisher, however they do not list which platforms. We have verified they work with Safari and Chrome.
- Digital platforms provide numerous opportunities to enhance student learning.
- Digital materials are hinted at within the TE and SE to provide the opportunity to see more on those pages in the materials.

Materials can be easily customized for individual learners.

*Statements of appraisal and supporting evidence:*

- Digital material is in a customizable Microsoft word template available to the teacher.
- Ease of customization could be a little more user friendly.
- SW can be utilized to support students who need more practice or structured notes.

Materials take into account cultural perspectives.

*Statements of appraisal and supporting evidence:*

- Cultural perspectives of the text are all at a level one. Different cultures are addressed in the context of some real life problems but only include basic knowledge of the culture.

**Reviewer Professional Summation** - *These materials are reviewed by Level II and Level III educators from across New Mexico. The reviewers have brought their knowledge, experience and expertise into the review of these materials. They offer here their individual summary of the material as a whole.*

Reviewer #55 background and experience: I am a level 3 teacher with 18 years of teaching experience ranging from 7th grade mathematics to high school geometry, and 7th and 8th grade science. I have a Bachelor's in Engineering, a Master's in Curriculum and Instruction with an emphasis in Secondary Mathematics, a Master's in School Administration and an Educational Doctorate in School Improvement Leadership. I have been on multiple district curriculum review and alignment teams over the last 18 years.

*Professional summary of material:*

I was really excited about getting to evaluate Big Ideas, as I had heard it was a good math book, and I had high hopes. I opened the book to find all the practice problems with steps color coded so students can follow along and see what happens in each step which I have been sorely missing for the last several years, and was even more excited. But then, I dug deeper, and I was disappointed with the substance I found.

On the surface, this looks like it supports a diverse classroom with areas that are labeled for ELL support, remediation, differentiation and enrichment. But on closer inspection, all the remediation says go to the resource book for a worksheet, the enrichment says go to the resource book for a worksheet or send them to the next chapter. The ELL supports are either not helpful, or not transferable to students who do

not speak Spanish. Spanish resources are great, but they do not work for a child who is an ELL who is not a Spanish speaker.

The word problems look great until you read through the examples, then the practice problems in the lesson, and many of the word problems are just more procedure questions with context, or error analysis questions over the procedures taught in the lesson.

Then, there is the missing conceptual piece. In order for students to get deep understanding in math, they need to understand why the numbers act as they do, and why the formulas work for the situations we use them. These were very weakly covered in this text, if they were covered at all.

Reviewer #56 background and experience: I am a level 2 teacher with 4 years of experience in the subjects of Algebra 1, Algebra 2, and Geometry. I have been a part of reviewing and creating of assessments for the last 3 years. I have a Bachelor's degree in Secondary Education, Emphasis in Mathematics, and currently working on a Master's in Curriculum and Instruction, Emphasis in Educational Technology.

*Professional summary of material:*

Overall, Big Ideas Math Algebra 1 is a good set of materials. It is trying to blend technology and the aspects of the Common Core State Standards into the materials. It has a lot of digital content that can help drive instruction, which is a great aspect to have for materials. It also has a Student Workbook included to provide extra structure to note taking and problems for teachers and students to use as needed. I like that the Student Workbook does not have the same problems and how they have note taking areas designated within the material. These materials focus a lot on the procedural aspects of Algebra 1. They give a lot of different problems, performance tasks, and have areas of discussion that students need in order to learn the material. It does not show strong evidence for the conceptual understanding or the application of the concepts. The materials do have some parts of these two aspects of rigor, but it is not consistent throughout the materials. These materials do not answer the "Why does this occur?", "Why does that statement make sense?", or "Why should we approach the problem like this?" The application problems also are not as in-depth as I have seen in other materials. This is a great procedural set of materials that would just need more conceptual knowledge and application problems built into it.

Reviewer #57 background and experience: I am a level three mathematics teacher in the state of New Mexico with 15 year's experience in areas of Algebra 1 through Pre-Calculus. I am AP certified and have multiple year's experience as a department head for my district. I have my Master's degree in Educational Administration.

*Professional summary of material:*

Big Ideas Math Algebra 1 text is a refreshing attempt at a publisher trying to meet all the Common Core State Standards for Algebra 1. The publisher does a fairly good job of touching on or fully meeting the standards they claim. The book is well organized and easy to follow. I appreciate the extra information the publisher provides to teachers in the teacher's edition, and throughout the digital component. This information is really helpful not only to seasoned teachers but also teachers just coming into the profession. The technology piece is very nice and handy to have for many different reasons, from differentiated instruction to progress monitoring of students. The procedural aspect of the text is rich; they show step by step examples with color coding and lots of organization. The conceptual knowledge piece of the text is good but in places lacks the "why" that would help greatly with student understanding. The application piece of the text, in my opinion, is lacking. They make a good effort to get students thinking but it is not balanced within the text and a lot of times this piece is hard to find. While I have a few reservations, overall I find this to be a good set of materials.



## Review Team Appraisal of Title

(9-12 Mathematics)

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Text Title	Big Ideas Math: Common Core Curriculum Geometry	Publisher	Big Ideas Learning
SE ISBN	9781642087611	TE ISBN	9781642087628
SW ISBN	9781608408535	Grade Level/Content	9-12

**Core Material Designation** *(Core Material is - the comprehensive print or digital educational material, including basal material, which constitutes the necessary instructional components of a full academic course of study in those subjects for which the department has adopted content standards and benchmarks.)*

Recommended \_\_\_\_\_ Recommended with Reservations X Not Recommended \_\_\_\_\_

**Total Score**

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
83.2%	86.7%_	87%	85.6%

**Standards Review** - *Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.*

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
95%	92.2%	95%	94%

Materials align with grade level standards.
<p><i>Statements of appraisal and supporting evidence:</i></p> <ul style="list-style-type: none"> <li>● Most of the standards are addressed, but a few are only partially met.             <ul style="list-style-type: none"> <li>○ Some examples of some Standards that were partially met: HS.SCP.B.6 and HS.GGPE.B.7</li> </ul> </li> <li>● The standards are covered well throughout the entirety of the materials.</li> <li>● Grade level standards are listed at the beginning of each section, on the side columns in the teachers addition, and within the content of the TE, SE, and SW.</li> </ul>
Materials align to standards for mathematical practice.
<p><i>Statements of appraisal and supporting evidence:</i></p> <ul style="list-style-type: none"> <li>● TE shows many Mathematical Practices throughout the Laurie’s notes in each section of each chapter.</li> </ul>

- Additional evidence found by the review team also shows that there are all 8 Mathematical Practices throughout the TE and shown within the SE.
- The Mathematical practices are also met in the Exploration piece at the beginning of each lesson as well as side notes in both the SE and the TE where they are specifically met within the content of the chapters.

Materials show aspects of rigor.

*Statements of appraisal and supporting evidence:*

- The practice sets of problems were over  $\frac{2}{3}$  conceptual in nature, mostly in using proof and verifying theorems.
- There was procedure imbedded within the proof sets.
- There were very few application and real life questions within each section, and those that were there were low level.

**Math Content Review** - *Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the specific reviewed content area.*

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
75%	85.7%_	82%	81 %

Materials are consistent with grade level content, supporting the intent of the delivery and understanding of mathematics.

*Statements of appraisal and supporting evidence:*

- This text had many proofs throughout the lessons, and many thought questions at a typical geometry level.
- There were definitions and proofs of geometric theorems provided to students in the text.
- The Student workbook is highly aligned with the text and helps students keep track of conceptual information.

Materials support student learning of mathematics.

*Statements of appraisal and supporting evidence:*

- Online materials have opportunities for teachers to track student progress, have quick reports, and have tutorial sections for students to access.
  - TE and SE makes a reference to the online website bigideasmath.com.
- There are a variety of different problem types for the students to solve and understand the content of the materials.
  - Examples include Performance Tasks, Explorations, Quizzes, Chapter Assessments, and Cumulative Assessments after each chapter.
- TE and SE references the Mathematical Practices after the exploration parts of the lessons.

**All Content Review** - *Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the material regarding the progression of the standards, lesson structure, pacing, assessment, individual learners and cultural relevance.*

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
55%	72.5%	68%	65%

Materials are coherent and consistent with the high school standards which all students should study in order to be college and career ready.

*Statements of appraisal and supporting evidence:*

- TE has a section that shows all of the standards not only for Geometry but for Algebras 1 and 2.
- The start of each chapter references the middle school and Algebra 1 standards that support the Geometry standards within the chapters.
- The TE and SE have an “additional topics” section at the end of the book that can be covered to also help students prepare for precalculus and/or trigonometry.

Materials are well designed and take into account effective lesson structure and pacing.

*Statements of appraisal and supporting evidence:*

- TE has a pacing guide in the front of the book.
  - It also has a mini version of the pacing guide at the start of each chapter.
- TE and SE follow the same structure of how the lesson materials are taught.
  - SW also follows the same structure, but also has embedded places for students to take notes alongside their work.
  - The examples, exercises, and note taking guides go perfectly together for ease of lesson structure.
  - There are motivation pieces, monitoring progress, and mini quizzes teachers can access to make sure their pacing is on track.

Materials support teacher planning, learning, and understanding of the standards.

*Statements of appraisal and supporting evidence:*

- The content lists the standards to be covered in each section for easy reference by the teacher.
- The reviewers had a hard time finding anywhere in the material that provided learning and understanding of the standards from the teacher’s point of view.

Materials offer teachers resources and tools to collect ongoing data about student progress on the standards.

*Statements of appraisal and supporting evidence:*

- Online tools reference that there are ways to collect data,
- TE and SE has Cumulative Assessments as well as Chapter tests to track student progress on skills.
  - TE and SE has Performance Tasks that allow the students to progress in their skills.
  - There is not much else provided about the actual tracking of progress.

Materials give all students extensive opportunities and support to explore key concepts.

*Statements of appraisal and supporting evidence:*

- Key concepts are highlighted at the beginning of each section.
- Differentiated Instruction and ELL strategies are found in the side columns of the TE for easy access. They suggest to teachers multiple ways to reach each student with different teaching strategies.

Materials support effective use of technology to enhance student learning. Digital materials are accessible and available in multiple platforms.

*Statements of appraisal and supporting evidence:*

- The digital piece is extensive with lots of helpful aspects students can use to enhance their learning.
  - Homework Tutor
  - Math content specific games
  - Online Performance tasks

Materials can be easily customized for individual learners.

*Statements of appraisal and supporting evidence:*

- Online materials make a reference to this, but the team was unable to see how individualized online materials can be customized for individual learners.
- There is no reference in the TE, SE, or SW on how to customize learning within the materials.

Materials take into account cultural perspectives.

*Statements of appraisal and supporting evidence:*

- There are pictures and some problems that talk about other aspects of culture.
  - There is not enough detail or depth of the cultures represented within the materials.
- There are several references to different cultures in some of the application problems, however they only mention something that is culturally relevant; none of them go into any kind of detail or background.
- All cultural pieces are at a level 1 or are not present at all. There are few people at all. Those we found did not show Hispanic or native students. There was a question about a Navajo rug, but it was surface and did not give a lot of detail.

**Reviewer Professional Summation** - *These materials are reviewed by Level II and Level III educators from across New Mexico. The reviewers have brought their knowledge, experience and expertise into the review of these materials. They offer here their individual summary of the material as a whole.*

Reviewer #55 background and experience: I am a level 3 teacher with 18 years of teaching experience ranging from 7th grade mathematics to high school geometry, and 7th and 8th grade science. I have a Bachelor's in Engineering, a Master's in Curriculum and Instruction with an emphasis in Secondary Mathematics, a Master's in School Administration and an Educational Doctorate in School Improvement Leadership. I have been on multiple district curriculum review and alignment teams over the last 18 years.

*Professional summary of material:*

The geometry book offered by Big Idea looks like most typical geometry textbooks, starting with definitions, moving to lines and angles, then to triangles, followed by quadrilaterals and other polygons, circles, then probability and statistics. The best part of this text set is the student workbook, which gives students a place to keep up with these new, complex ideas.

When it comes to rigor, I was pleased to see that this book was very conceptually relevant, and had a decent amount of procedural practice. I was highly disappointed in the lack of application questions, especially in a geometry text, because there are so many rich, thought provoking application questions available in other resources.

Bottom line, as a seasoned teacher, I could teach with this text, but I would have to add application questions to almost every section. However, a new teacher would struggle to make sure all the aspects of rigor are covered in their classroom using this text book.

Reviewer #56 background and experience: I am a level 2 teacher with 4 years of experience in the subjects of Algebra 1, Algebra 2, and Geometry. I have been a part of reviewing and creating of assessments for the last 3 years. I have a Bachelor's degree in Secondary Education, Emphasis in Mathematics, and currently working on a Master's in Curriculum and Instruction, Emphasis in Educational Technology.

*Professional summary of material:*

The Geometry materials by Big Ideas Math is overall a good set of materials to use in a classroom setting. The Standard are covered very well in the texts, with only a couple of them just missing parts of the concepts within them. I feel that they represent the Geometry course well.

In looking at the aspects of rigor, it is safe to say that these materials have a lot of understanding and procedural skills for the students to learn all of the material. It goes through each Theorem that is covered in the standards and has exercises that follow to solidify the materials that were covered. It just does not have as much application as I would have liked to have seen. There are some, and they are good problems, but I feel that in learning the materials there is not enough application within the lesson structure. This does not impair the students from the learning of any of the content of the materials. It would just be more rounded if there were some more applications built into the book to create a better balance.

The other portions of the materials were also good. There is a good variety of online content for the teacher to explore and use within their classrooms as they need to. The SW also has a lot of structured notes and examples for teachers and students to utilize in helping the fluidity of the learning of the concepts. This is a good set of materials, as part of the other two material sets of Algebra 1 and Algebra 2.

Reviewer #57 background and experience: I am a level three mathematics teacher in the state of New Mexico with 15 years' experience in the areas of Algebra 1 through Pre-Calculus. I am AP certified and have multiple years' experience as a department head for my district. I have my Master's degree in Educational Administration.

*Professional summary of material:*

Big Ideas Math Geometry is a solid set of materials for teachers and students to use in the Geometry classroom. The materials cover the majority of the Common Core State Standards for Geometry. The book is incredibly well organized and easy to follow. I appreciate the extra information the publisher provides to teachers in the teacher's edition and throughout the digital component. This information is really helpful not only to seasoned teachers but also teachers just coming into the profession. The technology piece has a wide range of tools beneficial to the content being taught. The teacher's edition as well as the technology piece provide strategies for teachers to use to meet the needs of all the students in their classroom from differentiated instruction to English Language Learner strategies to use. The conceptual and procedural parts of the materials are strong, well organized, and easy to access and follow. The exercises touch on the concept and procedures necessary for mastery of each standard covered in that section. There is a good application part to the materials as well but is lacking some of the true thought provoking and discovery type questions that go hand in hand with geometry content. While I have a few reservations, overall it is a good set of geometry material.

## Review Team Appraisal of Title

(9-12 Mathematics)

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Text Title	Big Ideas Math: Common Core Curriculum Algebra II	Publisher	Big Ideas Learning
SE ISBN	9781642088052	TE ISBN	9781642088069
SW ISBN	9781608408542	Grade Level/Content	9-12

**Core Material Designation** *(Core Material is - the comprehensive print or digital educational material, including basal material, which constitutes the necessary instructional components of a full academic course of study in those subjects for which the department has adopted content standards and benchmarks.)*

Recommended \_\_\_\_\_ Recommended with Reservations   X   Not Recommended \_\_\_\_\_

**Total Score**

Reviewer #55 84.5%	Reviewer #56 86%	Reviewer #57 87%	Average Score 86%
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**Standards Review** - *Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.*

Reviewer #55 95.9%	Reviewer #56 93.5%	Reviewer #57 93%	Average Score 94%
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Materials align with grade level standards.
<p><i>Statements of appraisal and supporting evidence:</i></p> <ul style="list-style-type: none"> <li>● Within the materials, the students have Monitoring Progress sections that keep activating prior knowledge as well as practicing current content.</li> <li>● Throughout the materials you can find examples, explorations, and exercises that meet grade level standards. However, not all of them are met.             <ul style="list-style-type: none"> <li>○ Example of standards of this are rate of change and explaining why the x coordinates of a system of equations (f(x) and g(x)) satisfy the equation f(x) = g(x). They are found within other problems, but they are not fully addressed within the materials.</li> </ul> </li> <li>● Most of the scores within this section were either Meets expectations or Partially Meets expectations on the reviewer end. After searching for the content, most of the standards were found within the materials.</li> </ul>

Materials align to standards for mathematical practice.

*Statements of appraisal and supporting evidence:*

- The TE points out the alignments within the Laurie's Notes sections of the TE, giving teachers examples of where they are found and how they are being met within the materials.
  - These are also found within the SE in the margins from time to time. One example would be on p. 539.
- Exercise problems have some of the mathematical practices for the title of the problem.
  - Examples: SE, p. 138, Exercise 59n(model with Mathematics); p. 146, Exercise 50 (Making an Argument); and p. 241, Exercises 21-24 (Using Structure)
  - These examples meet the SMPs they are said to be aligned to, asking students to explain their reasoning, listen to the logic of others, make different models based on given information, etc.

Materials show aspects of rigor.

*Statements of appraisal and supporting evidence:*

- Lessons average 2 error analysis problems.
- Towards the beginning of the text, practice problems are about  $\frac{2}{3}$  procedural, and  $\frac{1}{3}$  low level application problems that look very similar to the example problems given, with almost no conceptual problems or explanations.
- In the middle of the text there is a shift to higher level thinking, with about  $\frac{1}{2}$  of the problems being procedural,  $\frac{1}{3}$  being low to mid-level application problems, and  $\frac{1}{6}$  being high level application problems, and conceptual in nature. The authors spend more time answering the questions of why things work the way they do and asking thought provoking questions.

**Math Content Review** - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the specific reviewed content area.

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
64.3%	82.1%	93%	80%

Materials are consistent with grade level content, supporting the intent of the delivery and understanding of mathematics.

*Statements of appraisal and supporting evidence:*

- Materials are consistent with grade level content, referring back from time to time to concepts and standards learned in previous grades and how the new concepts build upon them.
  - In the TE overviews of sections such as Section 5.3, the text refers to graphs that were studied in Algebra 1 and relates them to the transformation of graphs being covered in the section.

Materials support student learning of mathematics.

*Statements of appraisal and supporting evidence:*

- TE is structured with explorations, examples, and practice for consistent procedures to learn the content.
  - Performance tasks at the end of each chapter can also be used to further learning of the material.
- TE and SE have a pre-lesson Motivate section that allows students to warm up with the content and then be prepared for the learning of the material.
- SW is an extension of the SE work and helps bring understanding to the terms within the texts.

- The SW provides additional and different practice problems for students who need that extra practice and support.
- It gives them a place to take notes, write in definitions of terms, and has extra problems to work out to learn the material better.

**All Content Review** - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the material regarding the progression of the standards, lesson structure, pacing, assessment, individual learners and cultural relevance.

Reviewer #55	Reviewer #56	Reviewer #57	Average Score
58.9%	67.5%	72%	66%

Materials are coherent and consistent with the high school standards which all students should study in order to be college and career ready.

*Statements of appraisal and supporting evidence:*

- TE is well organized and follows a traditional pacing of Algebra 2
- SW and SE are aligned with the TE and leave little room for confusion.
- TE has suggested pacing guide at the beginning of the text as well as at the beginning of each chapter.
- TE is nicely broken down and offers a wide variety of tools at the teacher's disposal, including teacher notes before each section and on the bottom of each page. These tools make lesson plan, strategy, and pacing suggestions for the teacher easy to use.
- TE has a list of 6-8 grade standards as well as Algebra 1 standards that aid the teacher in knowing how the HS standards build on the middle school standards and the Algebra standards.
  - They are located in every chapter on the right side next the chapter summaries and Laurie's Notes.

Materials are well designed and take into account effective lesson structure and pacing.

*Statements of appraisal and supporting evidence:*

- TE has a list of standards and where they can be found in the front of the book.
  - A pacing guide is also found in the same section of the TE.
- TE has a list of standards on the side of the page that are addressed in each chapter.
  - There is a pacing guide provided as well.
- TE provides teacher tips, ample lesson examples, suggested teacher strategies, examples of appropriate questions to ask.
- There are Formative and Summative Assessments within the materials
  - The TE has Formative Assessment tips within every chapter, averaging about 3 per chapter. Some did not have any, but other had 7 tips.
  - It also has What Did You Learn sections about midway through most chapters.
  - There are Quizzes, Chapter Tests, and Cumulative Tests within each chapter (summative).
- We were unable to find evidence where the materials help the teacher learn the standards themselves to effectively teach those standards.

Materials support teacher planning, learning, and understanding of the standards.

*Statements of appraisal and supporting evidence:*

- Online component does have a tab for collecting students' responses within the digital chapters.

- The online materials did not allow for us to look into this more. We have to rely on the materials for saying that it can be done.

Materials offer teachers resources and tools to collect ongoing data about student progress on the standards.

*Statements of appraisal and supporting evidence:*

- Online component does have a tab for collecting student's responses within the digital chapters.
- There was no way to verify this within the digital resource given.

Materials give all students extensive opportunities and support to explore key concepts.

*Statements of appraisal and supporting evidence:*

- TE and SE provide reminders of key concepts in little boxes on the top of the pages throughout the sections in each chapter.
- Each section in the TE and SE have exploration sections that allow prior knowledge to be activated and for students to work with problems on their own.
- Digital materials have STEM videos that students can watch to start off each chapter and lesson.
- The TE and the digital material provide graphic organizers, rubrics for alternative assessments, and formative assessment tips that provide opportunities for all students to succeed.
- SE and TE have Performance Tasks that students can complete to enhance the learning of the key concepts.

Materials support effective use of technology to enhance student learning. Digital materials are accessible and available in multiple platforms.

*Statements of appraisal and supporting evidence:*

- Digital platform provides numerous opportunities to enhance student learning.
- Digital materials are accessible and available in multiple platforms according to the publisher, however they do not list which platforms. We have verified they work with Safari and Chrome.
- Digital materials are hinted at within the TE and SE to provide the opportunity to see more on those pages in the materials.
  - It does not tell them anywhere specifically to go beyond a website.

Materials can be easily customized for individual learners.

*Statements of appraisal and supporting evidence:*

- Digital material is in a customizable Microsoft word template available to the teacher.
- Ease of customization could be a little more user friendly.
- SW can be utilized to support students who need more practice or structured notes.

Materials take into account cultural perspectives.

*Statements of appraisal and supporting evidence:*

- The cultural perspectives only talk about culture on a surface level. They do not expand beyond showing a picture or talking about a place or food within the materials.
- The students are exposed to other cultures, but only visually via pictures.
- The pictures of people within this text are predominately white with a few dark skinned individuals. There are no natives represented in pictures.

**Reviewer Professional Summation** - These materials are reviewed by Level II and Level III educators from across New Mexico. The reviewers have brought their knowledge, experience and expertise into the review of these materials. They offer here their individual summary of the material as a whole.

Reviewer #55 background and experience: I am a level 3 teacher with 18 years of teaching experience ranging from 7th grade mathematics to high school geometry, and 7th and 8th grade science. I have a

IM= Instructional Material SE= Student Edition TE= Teacher Edition SW= Student Workbook

Bachelor's in Engineering, a Master's in Curriculum and Instruction with an emphasis in Secondary Mathematics, a Master's in School Administration and an Educational Doctorate in School Improvement Leadership. I have been on multiple district curriculum review and alignment teams over the last 18 years.

*Professional summary of material:*

This material grew on me as I reviewed it. The beginning of the book is very weak in conceptual content, and high in procedural content with a good amount of "real life problems" that are much like the examples provided in the lesson. However, as I advance through the book, the material became more and more conceptual, the explanations deeper, and the problems more relevant. From chapter 1 to chapter seven, I found a typical Algebra book that will work when teaching students, but lacked relevance. From chapter 8 to the end of the book is a strong Algebra 2 book.

The publishers made sure all the mathematical standards and practices were well incorporated into the text, but many of the questions in the first half of the text were low-level in rigor. This improved later in the text.

This text takes a huge hit on the cultural relevance piece that is required in New Mexico. Rather than embracing diversity, it appears they try to avoid the issue completely, with very few pictures relating to people and very few culturally relevant situations included.

When it comes to my classroom, I could teach with this book, but I would have to hunt for more rigorous material to add to it to make it sufficient.

Reviewer #56 background and experience: I am a level 2 teacher with 4 years of experience in the subjects of Algebra 1, Algebra 2, and Geometry. I have been a part of reviewing and creating of assessments for the last 3 years. I have a Bachelor's degree in Secondary Education, Emphasis in Mathematics, and currently working on a Master's in Curriculum and Instruction, Emphasis in Educational Technology.

*Professional summary of material:*

Overall, this material is a good set of material blending technology and the aspects of the Common Core State Standards well. The level that the standards are covered in these materials is great. They covered almost all of them, and only had a few things missing from some of them. I really feel that this book covered the standards well.

When looking into the content, the issues are the same from similar materials by the publishers. It lacks in cultural perspectives, helping out other learners other than just ELL, and how the online content is as impactful as it is. These three aspects were a part of why the All Content section reflected the grade that was given. The online materials provided did not give access to validate any of these, and if it is in the full version, then these points will not need to be addressed.

The math content was really laid out in ways that helped students obtain the information well. There was a good balance of understanding, procedure, and application throughout the materials. It also has a SW that helps bring more structure and problems to help the students.

I believe the only aspects of this material set that are missing are what the online content can really do to support the classroom teacher. Without actually being able to navigate each of the parts that it mentioned, I cannot say how impactful that will be in helping teachers use these materials. If the

publisher's online materials perform as they are listed, then this set of materials would help any teacher facilitate the learning of this subject well.

Reviewer #57 background and experience: I am a level three mathematics teacher in the state of New Mexico with 15 years' experience in areas of Algebra 1 through Pre-Calculus. I am AP certified and have multiple years' experience as a department head for my district. I have my Master's degree in Educational Administration.

*Professional summary of material:*

Big Ideas Math Algebra 2 materials are overall a good resource for teachers to use in their classrooms with a solid attempt at meeting the Common Core State Standards for Algebra 2. The publisher does a good job of touching on or fully meeting the standards they claim. The book is well organized and easy to follow. I appreciate the extra information the publisher provides to teachers in the teacher's edition, and throughout the digital component. This information is really helpful not only to seasoned teachers but also teachers just coming into the profession. The technology piece is an asset to any teacher and provides an engaging aspect to the curriculum. The technology piece is useful to have for many different reasons, from differentiated instruction to progress monitoring of students. The procedural aspect of the text is rich; they show step by step examples with color coding and lots of organization. The conceptual knowledge piece of the text is full of explanations, necessary content, and connections the real life applications of that content. The application piece of the text is an improvement from its Algebra 1 counterpart. They make a good effort to get students thinking, it is more balanced within the text and easier to find. The connection to real life will help students to understand the why and how such higher level mathematics is so important. While I have a few reservations, overall I find this to be a good set of materials.