

McGraw Hill LLC

English Mathematics, Algebra II

Texas Algebra 2

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Full-Subject, Tier-1	9781265352950	Both Print and Digital	Static

Rating Overview

TEKS SCORE	ELPS SCORE	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	100%	2	Flags Not in Report	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	28 out of 28	100%
2. Progress Monitoring	26 out of 26	100%
3. Supports for All Learners	27 out of 27	100%
4. Depth and Coherence of Key Concepts	19 out of 19	100%
5. Balance of Conceptual and Procedural Understanding	39 out of 41	95%
6. Productive Struggle	22 out of 22	100%

Breakdown by Suitability Noncompliance and Excellence Categories

SUITABILITY NONCOMPLIANCE FLAGS BY CATEGORY	IMRA REVIEWERS	PUBLIC	Flags NOT Addressed by November Vote
1. Prohibition on Common Core	0	0	0
2. Alignment with Public Education's Constitutional Goal	0	0	0
3. Parental Rights and Responsibilities	0	0	0
4. Prohibition on Forced Political Activity	0	0	0
5. Protecting Children's Innocence	0	0	0
6. Promoting Sexual Risk Avoidance	0	0	0
7. Compliance with the Children's Internet Protection Act (CIPA)	0	0	0

SUITABILITY EXCELLENCE FLAGS BY CATEGORY	IMRA REVIEWERS
Category 2: Alignment with Public Education's Constitutional Goal	3
Category 6: Promoting Sexual Risk Avoidance	0

IMRA Quality Report

1. Intentional Instructional Design

Materials support educators in effective implementation through intentional course and lesson-level design.

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	All criteria for guidance met.	4/4
1.1b	All criteria for guidance met.	2/2
1.1c	All criteria for guidance met.	2/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	TOTAL	12/12

1.1a – Materials include a scope and sequence outlining the TEKS, ELPS, and concepts taught in the course.

The Texas Essential Knowledge and Skills (TEKS) process standards and English Language Proficiency Standards (ELPS) are listed by lesson, along with the course concepts in the "Scope and Sequence" document. The ELPS are indicated at the beginning of each chapter at the top of the "Scope and Sequence" document, and TEKS are indicated for each activity and lesson. For example, Lesson 6-3 in Chapter 6 specifies that TEKS A2.2(C) and A2.4(C) are addressed in the lesson. The materials provide objectives for each lesson, showing evidence of the concepts taught in the course.

1.1b – Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days – 165, 180, 210).

The Pacing Guide breaks down the content into "Focal Areas," chapters, and lessons, including day ranges for the successful completion of each chapter. For example, Chapter 4: "Quadratic Functions and Relations," has been assigned a completion time of nine days. The Pacing Guide also provides TEKS for each chapter.

The materials offer guidance for various instructional calendars in the Pacing Guide, including ranges for days to complete each chapter. The "Scope and Sequence" document provides instructional calendars for 119 and 127 days of instruction.

1.1c – Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.

In the "Planning Information" for each chapter, TEKS from previous courses are referenced as background knowledge for students. In addition to the concepts covered in the lessons, TEKS for upcoming chapters and lessons are listed to note when the current content will be referenced again. Skills are designated "Then," "Now," and "Next" to connect concepts throughout the course; for example, in the TEKS Skills Trace for Lesson 2-4, A.3(A) is cited as a previous skill ("Then"). The standard addressed in the current lesson is labeled "Now" and the future skill progression is identified as "Next."

The "Algebra II Chapter Order Rationale" document explains the order of each chapter as well as how specific concepts introduced in each chapter connect throughout the course. The document begins by explaining that the chapters are ordered strategically to first build foundational skills, progressing to complex concepts, and finally to real-world applications of the learned skills.

1.1d – Materials include protocols with corresponding guidance for unit and lesson internalization.

The "Texas Math 6–12 Lesson Internalization Protocol" document includes detailed instructions for teachers to prepare for each lesson. For example, Step 1 suggests that teachers "Identify the lesson's purpose and objective," providing bulleted action steps to do so.

The "Texas Math 6–12 Chapter Internalization Protocol" document provides specific steps for internalization of each chapter prior to instruction. For example, Step 1 suggests that teachers "identify the chapter's purpose, objectives, essential question, and pacing," followed by specific steps that guide teachers to locations of resources, identify pacing for each lesson in the chapter, summarize objectives and their connections across the chapter, and identify "Essential Questions" and "Big Ideas."

1.1e – Materials include resources and guidance for instructional leaders to support teachers with implementing the materials as designed.

The "Texas Math 6–12 Lesson Internalization Guide for Instructional Leaders" document provides specific resources and guidance for instructional leaders to support teachers with implementing the materials. The guide provides a structured approach to "ensure clarity in lesson objectives, mastery of lesson structure, and preparation for rigorous mathematics instruction."

The "Texas Math 6–12 Lesson Internalization Guide for Instructional Leaders" also provides specific steps for instructional leaders to support teachers in identifying lesson purposes and objectives, understanding lesson structure, facilitating preparation for rigorous instruction, organizing and rehearsing lessons, and providing feedback.

1.2 Unit-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	All criteria for guidance met.	2/2
1.2b	All criteria for guidance met.	2/2
—	TOTAL	4/4

1.2a – Materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.

At the beginning of each chapter of the eBook, the "Teacher Notes" provide a "Mathematical Background" section. For example, the Chapter 4 "Mathematical Background" states: "The graphs of quadratic functions are called *parabolas*. Each parabola has a vertex, axis of symmetry, and a y-intercept."

The "Teacher Notes" include a list of TEKS categorized "Then," "Now," and "Next," providing the teacher with the background knowledge students need before entering each new chapter and where students are progressing after completing it.

The materials provide readiness quizzes and vocabulary in addition to the TEKS and ELPS addressed in the chapter. For example, Chapter 4 outlines "Then" TEKS as A.7(C) and A.8(A); "Now" TEKS as A2.4(A), A2.4(B), A2.4(D), A2.8(A), A2.8(B), and A2.8(C); and "Next" TEKS as A2.2(A), A2.4(C), A2.5(A), and A2.6(A).

1.2b – Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.

The materials offer family letters in both Spanish and English for each chapter. These letters outline the concepts that will be introduced in the upcoming chapter as well as provide instructions for online access to the materials and suggestions for troubleshooting and supporting the student at home.

The family letters list specific, targeted questions for families to ask their student to advance problem-solving skills, identify key information, and learn from their mistakes. The materials emphasize the family as a partner in learning with the student, offering strategies to help overcome obstacles, and encouraging discourse to address difficult concepts.

1.3 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.3a	All criteria for guidance met.	8/8
1.3b	All criteria for guidance met.	3/3
1.3c	All criteria for guidance met.	1/1
—	TOTAL	12/12

1.3a – Materials include comprehensive, structured, detailed lesson plans that include daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson (aligned with the TEKS and the ELPS).

The eBook includes a lesson plan at the beginning of each lesson, as well as associated daily objectives, TEKS, and ELPS. For example, Lesson 5-1: "Operations with Polynomials" cites TEKS A2.7(B), A2.1(F), and A2.1(G). ELPS addressed in the lesson are d.1.E, d.2.B, d.2.C, d.2.D, d.2.E, d.2.F, d.3.B, d.3.C, d.3.E, d.3.F, and d.4.C. The lesson's objective is "Students will multiply, divide, and simplify monomials and expressions involving powers. Students will add, subtract, and divide polynomials."

The eBook provides guiding questions, student tasks with teacher support, practice tests, and scaffolded support. For example, Lesson 2-3 includes specific guiding questions that are provided in the "Scaffolded Supports": "What do the variables r , d , and t represent?" and "At what rate was the car traveling in the first three hours?" It also includes an informal, eight-question "Check Your Understanding" assessment.

1.3b – Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson, and the suggested timing for each lesson component.

The "Algebra II Lesson Overview" document includes guidance for each lesson that outlines the objective, the essential question, the TEKS addressed, materials needed, and a suggested timeline for each lesson component. For example, Lesson 3-4 lists the objectives as "Solve systems of linear equations in three variables" and "Solve real-world problems using systems of equations in three variables." The essential question for this lesson is "How can you find the solution to a math problem?" The lesson overview lists A2.3(A) and A2.3(B) as the TEKS addressed in the lesson, and the materials needed for the lesson are the eBook, journal or scratch paper, and a pencil. Teachers can follow the given timing of the lesson components, such as the "Launch" component for 10 minutes, the "Teach" component for 15 minutes, the "Practice" component for 15 minutes, and the "Assess" component for 5 minutes.

1.3c – Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).

Materials include guidance on the effective use of lesson materials for extended practice throughout the lesson. For example, the Chapter 5 planning information overview provides specific response to intervention details for Tiers 1, 2, and 3: "If students miss __%, then ____."

At the end of each lesson is a "Differentiated Homework Options" chart categorized by basic, core, and advanced levels that lists the set of questions for each level. For example, in Lesson 5-3, students at the basic level would complete problems 13-42 and 63-71 or problems 13-41 (odd) and 69-71.

2. Progress Monitoring

Materials support educators in effective implementation through frequent, strategic opportunities to monitor and respond to student progress.

2.1 Instructional Assessments

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.1a	All criteria for guidance met.	9/9
2.1b	All criteria for guidance met.	2/2
2.1c	All criteria for guidance met.	2/2
2.1d	All criteria for guidance met.	6/6
2.1e	All criteria for guidance met.	2/2
—	TOTAL	21/21

2.1a – Materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative) that vary in types of tasks and questions.

Diagnostic assessments at the beginning of each chapter evaluate students' understanding of the essential skills needed for the chapter. For example, the Chapter 8 "Quick Check" contains 14 questions that assess student understanding of simplifying expressions and solving equations involving rational numbers. The "Teacher Notes" indicate when these skills will be needed in the upcoming chapter.

The "Assessment Guidelines" document describes multiple formative assessments, including "Assess Activities" and "Self-Check Quizzes," at the lesson level. At the end of each lesson, "Assess Activities" provide opportunities to check student understanding of the lesson. "Check Your Understanding" for Lesson 4-3 provides students with 16 questions to demonstrate understanding of solving quadratic equations by factoring. "Self-Check Quizzes" allow students to evaluate their knowledge independently and can be assigned digitally. The "Self-Check Quiz" for Lesson 3-1 consists of five questions that allow students to identify their strengths and weaknesses in solving systems of equations.

Summative assessments for each chapter include versions with different question types, as well as differentiated versions for students at-level, approaching-level, and beyond-level proficiency. For example, Chapter 10 assessments include two multiple-choice assessments, three free-response assessments, a vocabulary test, and an extended-response test. The materials note that the multiple-choice assessments are intended for approaching-level students, while the free-response assessments are intended for at-level students. Beyond-level students complete the extended-response assessment.

2.1b – Materials include the definition and intended purpose for the types of instructional assessments included.

The "Assessment Guidelines" document defines each assessment and states its intended purpose. For example, the document states that the "Self-Check Quiz" is a formative assessment and allows students to review concepts from each lesson, and identifies the "Vocabulary Test" as a summative assessment that includes "a list of vocabulary words and questions to assess students' knowledge of the words used in the chapter."

2.1c – Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.

The materials include teacher guidance to ensure consistent administration of instructional assessments. The "Assessment Guidelines" document defines the consistency of administration by providing insight on the purpose of each assessment, administration in the form of time limits and sequencing of assessments, materials needed, how to use the results, and the format of each assessment. For example, the "Self-Check Quiz" is designed to provide immediate feedback to students via automatic grading. Students should be encouraged to reflect on their results and revisit concepts with which they struggled. Based on the scores, teachers can plan enrichment or remediation activities as needed, such as the *Personal Tutor* videos.

2.1d – Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.

The "Quick Review" and associated "Quick Check" diagnostic assessment for each chapter describe the individual TEKS that are addressed in the upcoming content. In the eBook, students review and are assessed on their understanding of 6.12(C), 7.6(E), and A2.7(B). The "Teacher Notes" indicate that 6.12(C) will be used in Lesson 11-2, 7.6(E) will be used in Lesson 11-3, and A.11(B) will be used in Lesson 11-4.

Diagnostic assessments, such as "Preparing for the Assessment Exercises," provide individual TEKS for each question, indicating content and process standards. The "Teacher Notes" for the exercises indicate that Exercise 2 is aligned with A2.4(F) and Mathematical Process Standard A2.1(A), and Exercise 3 aligns with A2.4(F) and Mathematical Process Standard A2.1(B).

Summative assessments are aligned to TEKS addressed in each chapter, as indicated in the "Scope and Sequence" document. The Chapter 2 "Chapter Test" lists A2.2(A), A2.3(E), A2.3(F), A2.6(C), A2.7(I), A2.8(B), and A2.8(C) as the TEKS covered in the assessment.

2.1e – Instructional assessments include TEKS-aligned items at varying levels of complexity.

The Chapter 3 "Anticipation Guide" in the Teacher Dashboard requires students to agree or disagree with statements relating to systems of equations and inequalities.

The "Chapter Project" for Chapter 7 requires students to collect and organize population data, create at least three possible models, and predict population trends.

Summative assessments for Chapter 12 include two multiple-choice assessments, three free-response assessments, a vocabulary test, and an extended-response test. The materials note that the multiple-choice assessments are intended for approaching-level students, while the free-response assessments are intended for at-level students. Beyond-level students complete the extended-response assessment.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	All criteria for guidance met.	2/2
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
—	TOTAL	5/5

2.2a – Instructional assessments and scoring information provide guidance for interpreting student performance.

The "Assessment Guidelines" document provides guidance for instructional assessments. For example, the "Self-Check Quiz" is recommended for assignment at the end of each lesson. Based on the scores, teachers can plan additional support or enrichment activities, such as the "Personal Tutor," to address specific areas of misunderstanding.

After students complete the "Initial Knowledge Check" in *ALEKS*, their results are presented in a pie chart, with specific shading of each section correlating to mastery of concepts. Full mastery is represented by a solid color, and concepts in need of remediation are indicated with lighter values.

"Preparing for the Assessment Cumulative Review" in the eBook provides guidance on interpreting student performance at the question level. For instance, in Chapter 7: "Preparing for the Assessment Cumulative Review," each multiple-choice answer in Example 1 is analyzed, indicating the concepts and skills that were not mastered or applied incorrectly. Students who select answer (a) receive the feedback "Solved $3(x + 2) = 4(x + 3)$." The guidance for answer choice (b) is "Solved $8(x + 2) = 16(x + 3)$," and the guidance for answer choice (c) is "Solved $16(x + 2) = 8(x + 3)$." Answer choice (d) is marked "correct."

2.2b – Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.

The "Teacher Notes" for each chapter recommend when to assign various tasks and activities. For example, in Chapter 4, teachers are instructed to assign the "Student-Built Glossary" and present the chapter opener. The Chapter 4 "Intervention Planner" indicates that if students complete at least 75% of the exercises in the "Quick Check" correctly, teachers should assign the "Chapter Project" as described in "Assess and Practice."

"Teacher Notes" for each lesson suggest additional remediation for students based on their performance on practice exercises. Lesson 4-2: "Practice, Error Analysis," instructs students to consider the graph of a quadratic function and compare behavior near an intercept to behavior near a maximum or minimum.

"Preparing for the Assessment" in each lesson of the eBook requires students to use the skills needed on Texas assessments, which are coded with content and process TEKS. For example, Lesson 7-3's

"Preparing for the Assessment" provides one worked example and three student exercises that assess A2.1(B), A2.1(D), and A2.1(E).

The "Teacher Notes" provide guidance for teachers to analyze student errors on the exercises. For example, if students chose answer (a) for Exercise 67, the guidance indicates that students did not realize that n must be a negative number and believed it needed to be greater than p . If students chose (b), students did not realize that n must be a negative number and thought it must be less than p . If students chose (c), students did not realize n that must be a negative number and believed it needed to be less than m . Answer choice (d) was noted as correct.

2.2c – Materials include tools for teachers to track student progress and growth, and tools for students to track their own progress and growth.

The "Reports" feature provides an overview of student progress, showing how performance has changed over time and suggesting standards for focus. In the "Standards Overview," the "Domains Performance Over Time" report enables teachers to analyze progress and changes in performance over a specified time period. Another report, "Standards to Focus On," provides teachers with the top five standards for remediation.

The "Reports" feature provides an "Activities Overview" that displays student performance on selected activities and assignments using a color-coded graph: Scores of 0-59% are displayed in red, 60-69% are displayed in orange, 70-79% are displayed in purple, 80-89% are displayed in green, and 90-100% are displayed in blue.

ALEKS provides self-monitoring progress tools for students. The "ALEKS Pie Detail" contains a pie chart representing student mastery of course concepts. Each variously colored pie wedge represents a concept, and the shading of the section suggests the level of mastery of the concept. Hovering over the pie wedge displays the percentage of topic mastery within the concept.

3. Supports for All Learners

Materials support educators in reaching all learners through design focused on engagement, representation, and action/expression for learner variability.

3.1 Differentiation and Scaffolds

Guidance marked with a (T) refers to teacher-facing components. Guidance with an (S) refers to student-facing components.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	3/3
3.1b	All criteria for guidance met.	2/2
3.1c	All criteria for guidance met.	2/2
—	TOTAL	7/7

3.1a – Materials include teacher guidance for differentiated instruction, activities, and paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.

The materials provide teacher guidance for differentiated instruction for students who have not yet achieved proficiency in grade-level content and skills. "Scaffolding Questions" in the "Teacher Notes" of the eBook precede each example to be used during instruction to help teachers to meet the needs of students who have not yet achieved proficiency. For instance, in Lesson 2-5, the question designated for approaching-level students in Example 1 is "How do you determine what values to place on the axes of a scatterplot?"

"Differentiated Homework Options" in the Teacher Dashboard includes a categorized chart for basic (approaching-level), core (at-level), and advanced (beyond-level), listing which set of questions each proficiency level should complete. For example, in Lesson 4-3, students who have not yet met proficiency would complete the basic-level questions, numbered 17-48 and 79-89.

ALEKS offers differentiated lessons for students who have not yet achieved proficiency in grade-level content and skills. Students are provided with a personalized path that offers lessons and practice on topics not yet mastered based on the individual performance of the "Initial Knowledge Check." After students complete the "Initial Knowledge Check," solid-color wedges of their results pie chart indicate mastered topics, and topics that are not mastered are shaded. The topics that are not fully mastered are incorporated into the student's individualized path, and *ALEKS* provides practice and instruction on those specific targeted topics.

3.1b – Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). (T/S)

The "Teacher Notes" for each chapter in the eBook provide "Key Vocabulary" and a suggested mode of pre-teaching the vocabulary. In "Get Started on the Chapter," students are given new vocabulary words and review vocabulary words. The materials suggest that teachers introduce the "Key Vocabulary" using a "define, example, and ask" routine. For Chapter 8's word *asymptote*, for example, teachers will present the definition: "An *asymptote* is a line that a graph approaches." Teachers will then provide an example for students to consider: "The graph shows asymptotes at $x = -3$ and $f(x) = 2$," showing by a visual of the graph. Students are then asked to explain what a vertical asymptote represents.

The "Student-Built Glossary" in the Teacher Dashboard provides students with a list of the vocabulary words for each chapter, directing the student to note the page number of the book containing the vocabulary word and include a definition or example of the word. The materials suggest that students should update their "Student-Built Glossary" as they progress through the chapter.

The "Teacher Notes" in the eBook provide embedded support for unfamiliar references. For example, Lesson 10-2, Example 3, "Differentiated Instruction" offers guidance to support English language learners by suggesting that students keep a list of the various notations and symbols introduced, provide an example for each, and explain their importance.

3.1c – Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skill.

Enrichment activities are provided in each lesson to help students who have demonstrated proficiency apply concepts and build fluency. For example, Lesson 2-7 addresses transforming linear and quadratic functions. In the Teacher Dashboard, the related enrichment activity requires students to apply the concept of transforming functions to a cubic function, which has not yet been introduced in the course. Students are asked to describe and graph the transformations, connecting the effects of the transformations with the lesson content.

"Differentiated Instruction" in the eBook provides extension practice for proficient students. For example, in Lesson 3-4, "Creative and Critical Thinking" offers extension exercises to students who have mastered grade-level skills, such as "Evaluate $\log 39$ and $\log 327$."

Each lesson in the eBook includes "Scaffolding Questions" for teachers to guide students at above-level, at-level, and below-level proficiency. For instance, in Lesson 5-8, Example 3, the "Scaffolding Question" for above-level students is "How many zeroes are possible?"

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	4/4
3.2b	All criteria for guidance met.	2/2
3.2c	All criteria for guidance met.	3/3
—	TOTAL	9/9

3.2a – Materials include explicit (direct) prompts and guidance to support the teacher in modeling and explaining the concept(s) to be learned.

"Scaffolding Questions" in the "Teacher Notes" of the eBook provide direct prompts to support teachers in modeling concepts effectively. For instance, Lesson 2-4, Example 1 prompts the teacher to ask, "Where is the y-intercept located on the graph?" "How do you find the y-intercept for the graph of the equation in slope-intercept form?" and "How would you find the equation from the graph if the graph did not include the y-axis?"

The materials provide explicit prompts to support the teacher in explaining the concepts. In "Teacher Notes," Example 3 of "Think About" in Lesson 4-4 prompts the teacher to emphasize that when students take the square root of both sides of an equation, students must use the $\pm$ symbol before the radical sign.

"Think About" in the "Teacher Notes" also offers guidance to support the teacher in explaining the concepts to be learned in Lesson 4-1, Example 2, suggesting that the teacher reiterate that $f(x)$ and y can be used interchangeably, and that the y-coordinate of the vertex of the parabola gives the maximum and minimum value of the function.

"Differentiated Instruction" in the "Teacher Notes" of the eBook contains guidance to support the teacher in modeling concepts in Lesson 6-2, Example 3, which suggests that teachers model the graph of the identity function $f(x) = x$ using a length of string on a large coordinate grid. Students can then place a second length of string to represent one of the functions from the examples and another to describe the inverse of the function. The students relate the identity graph, the graph of the example function, and its inverse.

3.2b – Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.

The materials include teacher guidance and recommendations for lesson delivery. "Additional Resources" in the Teacher Dashboard offers a "Lesson Cycle" document to help guide and pace teachers through each lesson component. For example, in the "Teach" section, teachers are instructed to use "Examples

and Guided Practice" to facilitate whole-group instruction. In "Practice," teachers are instructed to use the "Critical and Creative Thinking Problems" to help develop critical-thinking and reasoning skills.

The materials also offer hands-on explorations using technology. "Explore Labs" in each chapter support learning of the concepts presented in the lessons. For example, in "Explore 9-3 Graphing Technology Lab," students use graphing calculators to examine the characteristics of circles and their equations.

The materials connect to real-world problems and scenarios, effectively teaching mathematical concepts. Lesson 11-2 addresses data distributions, and the materials connect each dataset in the examples and guided practice to real-world problems. Example 1 begins with data displaying prices for a random sample of laptops, and the associated "Guided Practice" incorporates real-world annual rainfall for a region over 24 years.

The materials provide opportunities for exploring concepts in a collaborative setting. In "Explore 4-7 Graphing Technology Lab," students work in cooperative groups to graph quadratic functions with various transformations in their graphing calculators. The activity connects the equations of quadratic functions to the transformations of their graphs, providing students with opportunities for collaboration and discussion.

3.2c – Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.

The eBook supports multiple types of practice to support effective lesson implementation. Lesson 3-1, Example 2 shows students how to solve a system of equations by graphing, and the "Guided Practice" that follows provides two exercises for students to practice this strategy. "Practice" exercises are provided at the end of each lesson, focusing on skills learned in that lesson. Additionally, "Problem Solving" exercises are provided, which apply the skills learned in the lesson to develop problem-solving skills.

The Teacher Dashboard provides explicit instructions for implementing lessons. In the "Organize" section, teachers are directed to assign end-of-lesson activities. "Instruction, Mathematical Background" provides the teacher with instructions for launching the interactive edition of the lesson and introducing the "Student Guide" as well as options for presenting concepts via *Personal Tutor* videos. The "Practice" section offers multiple options for practice, including formative assessments, *ALEKS*, and worksheets.

The materials include recommended structures to support effective implementation. The "Lesson Cycle" document specifies that the "Teach" portion of the lesson should be whole-group instruction. The "Explore Labs" and "Extend Labs" in the eBook specify that students should be in cooperative groups. "Get Started on the Chapter" recommends that students work with a partner to identify important terms and organize resources. The materials in the "Study Guide and Review" suggest that students work with a partner to complete the "Vocabulary Check."

3.3 Support for Emergent Bilingual Students

An emergent bilingual student is a student who is in the process of acquiring English and has another language as the primary language. The term emergent bilingual student replaced the term English learner in the Texas Education Code 29, Subchapter B after the September 1, 2021 update. Some instructional materials still use English language learner or English learner and these terms have been retained in direct quotations and titles.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	All criteria for guidance met.	2/2
3.3b	All criteria for guidance met.	1/1
3.3c	All criteria for guidance met.	8/8
3.3d	This guidance is not applicable to the program.	N/A
—	TOTAL	11/11

3.3a – Materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

The materials include teacher guidance on providing linguistic accommodations tailored to various levels of language proficiency. Each lesson identifies the English Language Proficiency Standards (ELPS). "Differentiated Instruction" in the "Teacher Notes" of the eBook provides specific supports for various language proficiency levels in select lessons. For example, Lesson 4-3, which covers solving quadratic equations by factoring, offers guidance for beginner, intermediate/advanced, and advanced-high students. The tasks are designed to promote increasingly complex language use. Beginning-level students are encouraged to answer yes-or-no questions related to the lesson content. In contrast, advanced-high students are expected to answer questions about the content in complete sentences, using academic vocabulary.

Chapter 4 begins with the ELPS, along with new and reviewed vocabulary in English and Spanish, accompanied by visual representations of the terms. In Lesson 4-6, Example 4, the materials provide specific guidance for teachers to support verbal and linguistic learners. Teachers are encouraged to have students research the root words that form the words *quadratic* and *discriminant* and discuss how the root words relate to the mathematical meanings of the vocabulary words.

3.3b – Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.

The "Algebra II EB Supports" document provides strategies for addressing the needs of Emergent Bilingual students in specific lessons. For example, the guidance for Lesson 4-3 provides tiered strategies

for students with varied language proficiency. Students in the pre-production stage of language acquisition use a teacher-provided list of factors to write factored-form equations with a partner. Students in the intermediate stage of language acquisition answer questions with short answers related to multiplying binomials.

The "Math EB Supports" document outlines the characteristics of each proficiency level of the ELPS, as well as typical tasks and activities that students in each category can be expected to complete. Explicit ELPS integration strategies are also provided, including content and language objective integration, developing routines for mathematical discourse, and maximizing total physical response.

3.3c – Materials include embedded guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.

The materials include guidance for teachers to support emergent bilingual students in acquiring academic vocabulary through oral and written discourse. For instance, "Get Started on the Chapter" for Chapter 1 in the eBook advises students to work with a partner to identify essential terms to prepare for the vocabulary in the chapter, supporting the acquisition of academic language through oral discourse. In the "Study Guide and Review" for Chapter 10, students are administered a "Vocabulary Check" that contains true/false vocabulary statements. False statements require students to replace the vocabulary word to make the statement true, thereby developing academic vocabulary through written discourse.

"Differentiated Instruction" in the eBook's "Teacher Notes" for Lesson 8-5 provides EB support for variation functions. The tiered guidance helps students grasp academic content through various discourse forms: Beginning students derive meaning using teacher models to record information in their notes; intermediate students identify essential pieces of information in an example and record in their notes; advanced students listen to examples and afterward record information remembered; and advanced/high students practice active listening as the teacher reads examples, followed by working with a partner to summarize and solve the problems, reinforcing comprehension through written discourse.

The materials include embedded guidance for teachers to support emergent bilingual students in building background knowledge through oral and written discourse. For example, Lesson 7-3 includes an "Assess: Crystal Ball" note that suggests that teachers have students discuss how the current lesson's work on logarithms will help them solve logarithmic equations in the next lesson, thereby supporting oral discourse. Lesson 2-6's "Assess: Crystal Ball" prompts teachers to ask students to write about how the current lesson on special functions will help them with the next lesson on parent functions and transformations, supporting written discourse.

The "Math EB Supports" document offers guidance for teachers to specifically include cognates in instruction to help students make cross-linguistic connections. Cognate recognition is included with suggested ways that teachers can incorporate cognates verbally and in writing.

3.3d – If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

This guidance is not applicable because the program is not designed for dual language immersion (DLI) programs.

4. Depth and Coherence of Key Concepts

Materials are designed to meet the rigor of the standards while connecting concepts within and across grade levels/courses.

4.1 Depth of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.1a	All criteria for guidance met.	2/2
4.1b	All criteria for guidance met.	1/1
—	TOTAL	3/3

4.1a – Practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

At the chapter level, multiple opportunities are provided for students to demonstrate their depth of understanding of chapter concepts. In Chapter 4, the "Quick Check" is used to evaluate prerequisite knowledge, the "Mid-Chapter Quiz" assesses the depth of student understanding for the first half of the chapter, and the "Chapter 4 Test" provides students with the opportunity to demonstrate their knowledge and skills of quadratic expressions and equations.

At the lesson level, the materials provide opportunities to demonstrate a depth of understanding of concepts presented in the lesson. In Lesson 9-3 of the eBook, examples are paired with "Guided Practice," concluding with "Check Your Understanding," which requires students to write equations for circles given varying information. The "Practice" exercises expand on writing and graphing equations of circles, providing application and problem-solving exercises that reinforce learning.

4.1b – Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics TEKS.

Examples and guided practice progress in rigor and complexity from lesson to lesson. For example, students begin Lesson 2-4, Example 1 by writing an equation in slope-intercept form given varying information. The rigor and complexity increase with Examples 2 and 3, in which students write equations in point-slope form, followed by Example 4, which requires students to write equations of parallel and perpendicular lines.

Instructional materials include suggested teacher questions that progressively increase in rigor and complexity. Each lesson includes "Scaffolding Questions" that progress from representing variables to writing equations for real-world scenarios. For example, in Lesson 1-4, students are presented with the problem "In the equation, what does x represent?" Scaffolding questions that progress in rigor and complexity follow: "What is the meaning of the number 0.5 in the equation?" "What would be the equation for the distance to shore estimated at 962.3 yards?"

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	All criteria for guidance met.	3/3
4.2c	All criteria for guidance met.	4/4
—	TOTAL	8/8

4.2a – Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.

The "TEKS Skills Trace" outlines connections among lessons and chapters. For example, in Lesson 3-7: "Planning Information," the "Then" TEKS are A2.3(A) and A2.3(B), and the "Now" TEKS are A2.3(A) and A2.3(B), and the "Next" TEKS is A2.3(B). The material provides guidance to help teachers connect concepts and skills from previous chapters and reinforce prior knowledge.

The student eBook also includes a "Then" and "Now" section at the beginning of each lesson to identify the skills required for the current lesson. For example, in Lesson 4-7, the "Then" statement for the student is "You transformed graphs of functions," and the "Now" statements are "Write a quadratic function in the form $y = a(x - h)^2 + c$ " and "Transform graphs of quadratic functions of the form $y = a(x - h)^2 + c$."

4.2b – Materials demonstrate coherence across units by connecting the content and language learned in previous courses/grade levels and what will be learned in future courses/grade levels to the content to be learned in the current course/grade level.

The eBook provides opportunities to connect the content learned in previous courses with the current one. Chapter 2's "Quick Check" in "Get Ready for the Chapter" requires students to recall the use of coordinate geometry to identify locations on a plane (6.11). The materials note that this skill will be applied in Lessons 2-1 through 2-8.

"Get Started on the Chapter" also provides "Review Vocabulary" from prior courses. For example, Chapter 2's "Review Vocabulary" includes terms such as *equation*, *function*, and *relation*, with definitions and graphics for each.

"TEKS Skills Trace" outlines connections to future content. For example, Chapter 9's "TEKS Skills Trace" notes that the content from the current chapter is essential for mastery of P.3(F), P.3(G), P.3(H), and P.3(I) in the precalculus course.

4.2c – Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.

The materials connect students' knowledge of concepts from the previous grade level to their current knowledge and skills. The "Teacher Notes" at the beginning of each chapter of the eBook provide a "Mathematical Background" to clarify concepts that students should recall to master the current lesson. Lesson 1-3's "Mathematical Background" notes that students should recognize that the rules used to solve equations are based on the properties of equality. Students should also recognize that when a number is added to or subtracted from each side of an equation, the result is an equivalent equation with the same solution as the original.

Procedures from the previous grade level are connected to students' current skills in the "Teacher Notes" section of the eBook as well; "TEKS Skills Development" outlines previously addressed standards, current standards, and future standards associated with the lesson. "TEKS Skills Development" in Lesson 1-3 notes that students addressed A.11(A) and A.11(B) in a previous course and will continue to follow these procedures in the current lesson.

Students will apply knowledge from the current grade level in upcoming lessons; in Lesson 2-7, for example, students will transform linear functions, and in Lesson 4-7, students will transform quadratic functions.

The materials connect students' prior knowledge of procedures from the current grade level to new knowledge and skills. The Lesson 3-1 introduction ("Then," "Now," and "Why?") recalls the procedures for graphing and solving linear equations from previous lessons, applying these same procedures to solve systems of equations.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	All criteria for guidance met.	4/4
4.3b	All criteria for guidance met.	4/4
—	TOTAL	8/8

4.3a – Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.

Materials provide spaced retrieval opportunities with previously learned skills across lessons. The Lesson 3-2: "Solving Systems of Inequalities," introduction recalls previous skill A2.3(A), which addresses graphing and solving systems of linear equations, noted as essential for the current lesson. Example 1 requires students to graph a system of linear inequalities and determine the overlapping solution set on the graph, while Example 3 requires students to graph a system of linear inequalities that do not overlap.

In the introduction of Lesson 2-5, "Then" recalls that students have previously written linear equations. The "Scaffolded Support" section provides questions for students over background knowledge: "About how many people visited the park in 2000?" "About how many people visited in 2010?" and "What is a reasonable estimate for the number of people who visited this park in 2015?"

Materials provide spaced retrieval opportunities with previously learned skills across chapters. Chapter 4's "Get Ready for the Chapter" includes a "Quick Review" that identifies A.12(B) (evaluating quadratic functions) and A.8(A) (factoring trinomials) as skills needed for the chapter. Students must demonstrate mastery of these previous skills in the associated "Quick Check."

Each chapter introduction includes "Mathematical Background" that reviews concepts from previous lessons or courses essential to understanding the current content. Chapter 6's "Mathematical Background" notes that students should recall that the inverse of a function can be found by exchanging the domain and range of the function. Students should also recall that functions with a variable under a radical symbol are referred to as *radical functions*.

4.3b – Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.

Materials provide interleaved practice opportunities that reinforce previously learned skills across lessons. In Lesson 3-4, "Guided Practice" and Example 1, the materials require students to solve a system of three equations. The skills of substitution and elimination for systems with two variables are revisited through this process, drawing on earlier lessons or courses.

In Lesson 1-3, students are required to solve linear equations, and in Lesson 1-4, students are required to solve absolute value equations. Lesson 1-5 requires students to solve inequalities. The concept of solving equations is applied throughout all lessons.

Materials provide interleaved practice opportunities that reinforce previously learned skills across chapters. The "Scope and Sequence" document lists TEKS that are addressed in each chapter and lesson. For example, A2.4(F) is among the skills addressed in Lesson 1-3, and this standard is revisited in Lessons 4-2 through 4-5 and Lesson 6-7.

Concepts from Chapter 4: "Quadratic Functions and Relations," are essential for Chapter 5: "Polynomials and Polynomial Functions." "Then" in the eBook's Chapter 5 introduction notes that students have already graphed quadratic functions and solved quadratic equations. Students apply these concepts when graphing polynomial functions in Lessons 5-3 and 5-4, as well as in Lesson 5-5, when they solve polynomial equations.

5. Balance of Conceptual and Procedural Understanding

Materials are designed to balance conceptual understanding, procedural skills, and fluency.

5.1 Development of Conceptual Understanding

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.1a	All criteria for guidance met.	3/3
5.1b	All criteria for guidance met.	1/1
5.1c	All criteria for guidance met.	1/1
—	TOTAL	5/5

5.1a – Questions and tasks require students to interpret, analyze, and evaluate models and representations for mathematical concepts and situations.

The materials include questions and tasks that require students to interpret and evaluate models and representations for mathematical concepts and situations. The introduction to each lesson in the eBook includes a "Why?" section; Lesson 3-1's "Why?" provides a scenario and a graph for students to consider, along with guiding questions from the teacher. "Scaffolded Support" in the Lesson 3 "Teacher Notes" provides questions such as "What is the y-intercept of the line representing Libby's cost?" "What does this point represent?" and "What happens if Libby mows 17 lawns or more?"

"Critical and Creative Thinking Problems" in the eBook offer opportunities for students to analyze models and representations of mathematical concepts. Lesson 6-3: "Critical and Creative Thinking Problems" presents an error analysis that features a graph and an equation, with a description indicating that one student believes represents the same function, while another student disagrees. Students are required to determine who is correct by analyzing the graph and the equation.

Lesson 3-4 in the eBook provides examples and guided practice for students to interpret models and representations of systems of linear equations in three variables. Example 3 provides a real-world example of a system of equations in three variables addressing profit from different types of seats at a concert venue. The students are asked to interpret the descriptions into equations, solve to find the number of each type of seat available, and interpret and communicate the solution.

5.1b – Questions and tasks require students to create models to represent mathematical situations.

The Assess and Practice tab of the Teacher Dashboard provides "Chapter Projects" at the beginning of each chapter. These projects require students to create models and apply concepts learned in a real-world context. For example, Chapter 4's "Chapter Project" requires students to use data to develop a mathematical model for dropping a ball from different heights and recording the time it takes to reach the ground.

Each lesson includes "Problem Solving" questions and tasks requiring students to create models to represent mathematical situations. In Lesson 1-3, for example, students create multiple representations of a verbal description of an absolute value, including geometric, tabular, graphical, and verbal.

The materials require students to create models to represent mathematical ideas in the examples and guided practice within each lesson. Example 6 in Lesson 4-2 presents a quadratic function based on a golfer hitting a ball from an elevated tee. Students are tasked with graphing the function and finding the time required for the ball to reach the ground by locating the x-intercept on the graph.

5.1c – Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

Lessons in the eBook provide students with opportunities to apply conceptual understanding of transformations of functions in new situations. In Lesson 2-7, students are introduced to transformations in linear and quadratic functions. In Lesson 7-3, students build on this foundational knowledge by learning to transform logarithmic functions. Students revisit and apply the concept of transformations again in Lesson 12-8, as they transform trigonometric functions.

Each lesson's "Enrichment" activity in the Teacher Dashboard offers opportunities for students to apply conceptual understanding to new problem situations and contexts. Lesson 2-4's "Enrichment" involves writing linear equations in multiple forms, requiring students to apply their conceptual understanding of linear functions to writing equations in two-intercept form and analyzing how this form facilitates graphing the linear function.

"Problem Solving" questions and tasks in each lesson provide opportunities for students to apply their conceptual understanding to new problem situations and contexts. For example, in Lesson 4-4's "Problem Solving," students extend their thinking in Exercises 61 and 62 after practicing operations with complex numbers. Students are required to apply operations with complex numbers to calculate voltage using the formula $v = c \cdot i$.

5.2 Development of Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.2a	All criteria for guidance met.	2/2
5.2b	All criteria for guidance met.	3/3
5.2c	All criteria for guidance met.	3/3
5.2d	All criteria for guidance met.	1/1
—	TOTAL	9/9

5.2a – Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks.

The materials provide tasks that build automaticity in retrieving foundational skills. For example, Lesson 5-1, "Practice," offers multiple opportunities to practice the foundational skills of simplifying polynomial expressions, enabling students to recall these skills efficiently in later lessons. In the Teacher Dashboard, additional opportunities to practice these skills are available through "Homework Practice," "Skills Practice," and "Practice" worksheets.

ALEKS provides targeted tasks that build student fluency. The program identifies areas of strength and weakness, allowing students to build fluency in topics that require intervention. After students complete the "Initial Knowledge Check" in *ALEKS*, the program generates a personalized remediation plan based on their performance.

5.2b – Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit.

The eBook provides opportunities for students to practice efficient mathematical procedures. In Lesson 2-4, students write equations of linear functions in multiple forms (slope-intercept, point-slope). "Critical and Creative Thinking Problems," Exercise 44, asks students why linear equations can be represented in more than one form. The answer states that, depending on the information given and the problem, it may be easier to represent a linear equation in one form over the other, thereby increasing efficiency.

The materials provide opportunities for students to practice flexible mathematical procedures. Lessons in Chapter 4 of the eBook allow the student to choose among four methods for solving quadratic equations—graphing, factoring, completing the square, and the quadratic formula—based on what they consider most efficient.

Implementing procedures to ensure accuracy is prevalent in many of the materials' examples. For example, Lesson 4-6, Example 1, models checking solutions of quadratic equations by substituting the

solution values into the original equation. Example 2 models checking quadratic equation solutions by graphing the calculator function and locating x-intercepts.

5.2c – Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit.

The eBook provides students with opportunities to evaluate procedures, processes, and solutions for efficiency. Lesson 2-7, Example 2 models translations in multiple types of functions and connects translations to h and k in the function $y = f(x - h) + k$. This approach allows students to identify translations without graphing them, increasing efficiency. The same processes can be applied when translations are encountered again in later chapters with different functions.

Lesson 3-1 demonstrates multiple methods for solving systems of linear equations to students. For instance, Example 1 models using a table to find the solution to a system of linear equations, Example 2 outlines how to find the solution by graphing, and Example 4 models the substitution method. Example 5 demonstrates how to solve a system using the elimination method, and Example 6 illustrates systems with no solutions or infinite solutions.

Students are provided opportunities to evaluate procedures, processes, and solutions for accuracy and effectiveness. In the eBook, Lesson 4-8, Example 2, students are required to solve a quadratic inequality by graphing. The steps include using test points to check for accuracy, with the materials providing guidance to choose points based on the values for x found in the solution.

5.2d – Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.

The materials provide embedded support for teachers to guide students toward increasingly efficient approaches. In the eBook's Lesson 4-3 "Teacher Notes" and "Mathematical Background" notes that quadratic equations can be solved using different methods. While factoring takes relatively little time, students can use other methods if the polynomial is difficult or not factorable.

The "Teaching Tip" for Lesson 2-4, Example 3 prompts teachers to point out that finding the slope in the example eliminated three of the answer choices. The materials also note that the teacher may emphasize that eliminating answer choices helps students to use their time efficiently when taking a timed test.

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	All criteria for guidance met.	2/2
5.3b	All criteria for guidance met.	3/3
5.3c	All criteria for guidance met.	6/6
—	TOTAL	11/11

5.3a – Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.

The eBook clearly outlines how the conceptual aspects of the TEKS are addressed in each lesson, which includes an overview highlighting these emphases. For instance, in Lesson 8-4: "Graphing Rational Functions," the "Why?" section reinforces conceptual understanding, using a real-world context related to calculating the average cost of visiting a waterpark m times.

The Teacher Dashboard contains explicit discussion of how the procedural emphasis of the TEKS is addressed; the "Planning Information" provides a "TEKS Skills Trace" that outlines the TEKS that students have already mastered, the TEKS for the current lesson, and the TEKS that will be covered in upcoming lessons. "Targeted TEKS" for the lesson, highlighting the skills and procedures addressed in the current lesson, are also provided. For example, in Lesson 6-3, the "Targeted TEKS" are indicated as A2.2(C), which addresses describing and analyzing the relationship between a function and its inverse, and A2.4(C), which addresses determining effects of transformations of functions.

5.3b – Questions and tasks include the use of concrete models and manipulatives, pictorial representations (figures/drawings, and abstract representations, as required by the TEKS.

Questions and tasks in the eBook use concrete models and manipulatives to support instruction, such as the Algebra Tiles used in Lesson 5-2's "Problem Solving" Exercise 42. Students must use Algebra Tiles to represent a rectangle with area $2x^2 + 7x + 3$ and length $2x + 1$. The "Geometry Lab" in Lesson 12-4's "Extend" requires students to use a compass, straightedge, and a protractor to investigate measures in regular polygons using trigonometry.

Pictorial representations are frequently employed to reinforce concepts. The "Practice" exercises for Lesson 3-2 require students to use pictorial representations to express solutions for systems of inequalities. The "Algebra Lab" in Lesson 2-5's "Extend" includes a graphic of a news report linking brain tumors to cell phone use. In this lab, students use data to explore the difference between correlation and causation.

The materials use abstract representations as the TEKS require, including symbols and algebraic representations of concepts. Lesson 3-5 in the eBook addresses operations with matrices. The questions and tasks in the "Guided Practice" include multiple abstract representations, such as matrices and the

operation symbols (+, -, ·). The examples in Lesson 4-5 model solving quadratic equations by completing the square, and various symbols and algebraic representations, including exponents, $\pm$, and $\sqrt{}$ are used.

5.3c – Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic concepts, as required by the TEKS.

The materials support students in connecting concrete models to abstract concepts, as the TEKS requires. The "Problem Solving" exercises in Lesson 5-2 of the eBook include using Algebra Tiles in Exercise 42. Students must use algebra tiles to represent a rectangle with area $2x^2 + 7x + 3$ and length $2x + 1$.

The materials support students' connections between representational models and abstract concepts. For Lesson 3-1's "Explore" in the eBook, the "Graphing Technology Lab" provides teacher guidance to support students in connecting representational models to abstract concepts. In the "Scaffolded Support" section of the "Teacher Notes," teachers are encouraged to prompt students to connect equations with graphs before identifying intersection points of the graphs.

The "Problem Solving" exercises support students in connecting concrete models to abstract concepts. In Lesson 2-2, Exercise 50 describes a relationship between washing cars and money earned. Students are required to write an equation, graph it, and answer questions using their created models.

Tasks and activities support students in creating representational models to represent abstract concepts. "Teacher Notes" for Lesson 2-1 in the eBook includes an "Assess" section that suggests that teachers require students to summarize their learning about discrete and continuous functions. Students are then tasked with drawing graphs of real-life situations modeled by discrete and continuous functions and explaining why each graph is discrete or continuous.

The materials include supports for students in defining and explaining concrete models to abstract concepts. In the "Critical and Creative Thinking Problems" for Lesson 2-2, Exercise 55, students analyze four models in various forms (algebraic, table of values, and graphs), determine which one does not belong, and explain their reasoning. Exercise 56 asks students to consider the relationship between the number of hours worked and earnings. Students are then required to explain when this graph would represent a linear relationship and to provide another real-world example of a linear relationship.

The "Extend" and "Explore" Labs allow students to define and explain representational models of abstract concepts. For example, the planning information in the Teacher Dashboard for the "Graphing Technology Lab" in Lesson 4-1's "Extend" suggests that teachers have students explain how a scatterplot helps gain insight into possible relationships between two variables.

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	3/3
5.4b	All criteria for guidance met.	1/1
5.4c	All criteria for guidance met.	6/6
—	TOTAL	10/10

5.4a – Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and other language development strategies.

The "Multilingual Glossary" in "Additional Resources" allows students to select vocabulary words to obtain a definition, providing an option to hear the vocabulary word and a visual example as well. For example, the information provided for the vocabulary term Cartesian coordinate plane displays a coordinate plane labeled with x-axis, y-axis, quadrants, and the origin.

Lesson 12-4's "Geometry Lab" in the eBook allows students to use manipulatives to develop their academic mathematical language. The activity requires students to use a compass, straightedge, and protractor to construct triangles inscribed in circles, investigating measures in regular polygons using trigonometry.

The "Algebra Lab" in Lesson 1-6's "Explore" requires students to be paired while exploring interval notation. The "Teacher Notes" suggest that connecting new notation with familiar notation can help develop mathematical language. For example, the "+" in " $+\infty$ " is familiar to the students, and teachers are encouraged to reiterate the familiar aspects of the symbols and explain how they connect to the new symbols.

5.4b – Materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary in context.

The eBook includes embedded "Reading Math" notes that offer insight and suggestions for effectively reading and using mathematical terms in context. For example, the Lesson 11-6, Example 3 "Reading Math" tip offers guidance on interpreting a *significance level*: "A significance level of 5% means that when an experiment is conducted repeatedly, 95% of the time, the result will be true. So, 5% of the experiments would contain data that is not true."

"Scaffolding Questions" are provided for most examples, and many questions prompt students to use academic language in their responses. In Lesson 2-4, Example 4, the embedded "Scaffolding Questions" prompt students to use academic language to identify the term describing two numbers whose product is -1 and to describe the slopes of parallel and perpendicular lines.

"Get Started on the Chapter" includes a vocabulary routine at the beginning of each chapter. In Chapter 6's "Key Vocabulary" tab, the text refers to the term *radical inequality* as an example: The teacher is prompted to define the term, provide an example, ask the students whether a given expression represents a *radical inequality*, and explain their answers.

5.4c – Materials include embedded teacher guidance to support the application of appropriate mathematical language to include vocabulary, syntax, and discourse to include guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers and develop their math language toolkit over time as well as guide teachers to support student responses using exemplar responses to questions and tasks.

The materials provide guidance to support the application of mathematical language, including vocabulary. The "Study Guide and Review" in the eBook uses vocabulary terms to support mathematical conversations. In the Chapter 9 "Study Guide and Review," students work with a partner to complete the "Vocabulary Check" and clarify each vocabulary term with each other.

The materials often include embedded guidance for modeling appropriate syntax in mathematical conversations. "Differentiated Instruction" in Lesson 6-6, Example 3 reminds teachers to encourage students to read exponents and square root expressions aloud to support correct pronunciation. The materials provide the example of reading the expression x^3 as "x cubed" or "x to the third power."

The materials include embedded teacher guidance to support the application of appropriate mathematical language in conversations that enable students to use math language with peers and develop their math language tool kit over time. The "Explore" and "Extend" Labs often require collaborative partners or small groups, prompting students to discuss concepts with each other and develop mathematical language. For example, the "Algebra Lab" in Lesson 2-5's "Extend" requires students to work in pairs to complete the activity, discussing *lurking variables* and their effect on other variables. The students consider situations in which lurking variables influence a relationship between two variables that exhibit a high correlation, requiring them to use mathematical language with their peers.

The "Read Aloud" feature also provides students with accurate pronunciations of academic vocabulary and models the appropriate use of these terms in context. "Differentiated Instruction" in Lesson 7-5 of the eBook suggests that pairs of students rework the previous example together, taking turns explaining the solution steps to each other and discussing the reasonableness of their solution.

The materials include embedded teacher guidance for using exemplars to support student responses to questions and tasks. Sample answers are often provided for open-ended questions, particularly in the "Problem Solving" exercises and "Critical and Creative Thinking Problems." Lesson 3-1: "Critical and Creative Thinking Problems," contains several open-ended questions, and the materials provide sample

answers to offer guidance for students and teachers. Exercise 78 presents an error analysis to students; after analyzing two work samples, they must determine whether Gloria's or Syreeta's sample is correct and explain their reasoning. The materials provide a sample answer: "Gloria, Syreeta subtracted 26 from 17 instead of 17 from 26 and got $3x = -9$ instead of $3x = 9$. She proceeded to get a value of -11 for y . She would have found her error if she had substituted the solution into the original equations."

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	The materials lack evidence of a description of how the process TEKS are connected throughout the course.	1/2
5.5c	The materials lack evidence of a description of how the process TEKS are connected throughout the chapter .	1/2
5.5d	All criteria for guidance met.	1/1
—	TOTAL	4/6

5.5a – TEKS process standards are integrated appropriately into the materials.

The TEKS process standards are integrated appropriately into the materials. In Lesson 4-1, the appropriate process standards are evident in a lesson on parts of a quadratic function. This lesson includes activities that require students to apply real-world scenarios for determining at what point a bike rental company will maximize its income.

In Lesson 3-4 of the eBook, the process standards are appropriately integrated in a lesson on solving systems of equations in three variables. This lesson includes exercises and activities that require students to create and use representations to organize, record, and communicate mathematical ideas. Three-dimensional representations of planes are used to model the concept of solving in three dimensions, and students organize information given in word problems into tables and equations.

The Lesson 4-1 "Graphing Technology Lab" in "Explore" identifies the process standard as A2.1(A), in which students apply mathematics to problems arising in everyday life, society, and the workplace. This lab requires students to use recorded data for the outside temperature at various times during the day to formulate a quadratic function that models the data and use it to make predictions.

5.5b – Materials include a description of how TEKS process standards are incorporated and connected throughout the course.

The "TEKS Standards Correlation" document outlines how the TEKS process standards are incorporated throughout the course. The document includes a table that lists each of the TEKS, beginning with the process standards, and outlining course locations in which teachers can find lessons using any given standard. For example, process standard A2.1(A) addresses applying mathematics to problems arising in everyday life, society, and the workplace, and the document indicates that this standard is used throughout the text, providing Lesson 2-4, Lesson 4-2, Lesson 6-6, and Lesson 8-5 as examples.

The materials provide no evidence of how the TEKS process standards are connected throughout the course. While TEKS process standards are indicated for lessons, there is no description or indication of how these standards connect or build across the course.

5.5c – Materials include a description for each unit of how TEKS process standards are incorporated and connected throughout the unit.

The Teacher Dashboard provides "Teaching the Mathematical Processes" for select lessons of the planning information, outlining how the TEKS process standards are incorporated throughout the chapter. For Lesson 6-6's "Practice" section, the planning information contained in "Teaching the Mathematical Processes" indicates that mathematically proficient students make sense of "problem-solving" and "multiple representations." The notes go on to identify the process standards applied in specific exercises and provide teacher guidance for instructing these standards.

The materials provide no evidence of how the TEKS process standards are connected throughout the chapter. While TEKS process standards are indicated for lessons, there is no description or indication of how these standards connect or build across the chapter.

5.5d – Materials include an overview of the TEKS process standards incorporated into each lesson.

The ebook provides an overview of the TEKS process standards at the beginning of each lesson. For example, in Lesson 3-6, the opening page lists process standards A2.1(E) and A2.1(F) as applicable to the lesson's tasks and activities.

At the end of each lesson in the eBook, a chart identifies which exercises emphasize specific TEKS process standards. In Lesson 3-1, the "Check Your Understanding" page indicates that Exercises 74 and 75 emphasize A2.1(F).

The Teacher Dashboard also indicates the process standards in the "Planning Information." Lesson 6-2 records A2.1(E) and A2.1(G) as the targeted process standards for the lesson.

6. Productive Struggle

Materials support students in applying disciplinary practices to productive problem-solving, including explaining and revising their thinking.

6.1 Student Self-Efficacy

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.1a	All criteria for guidance met.	3/3
6.1b	All criteria for guidance met.	6/6
6.1c	All criteria for guidance met.	3/3
—	TOTAL	12/12

6.1a – Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.

The eBook provides teachers with "Scaffolding Questions" to prompt students to think mathematically. In Lesson 2-5, Example 2, the below-level question encourages teachers to ask students why they think extrapolation—predicting outside the dataset—can be inaccurate even if the correlation coefficient is almost one. This question prompts students to think mathematically about the available data and recognize that the data pattern may change outside the known range.

In Chapter 10 of the eBook, "Test-Taking Strategies" in "Preparing for Assessment" provides students opportunities to persevere through solving problems. The materials offer students a procedure for solving multistep problems: "Step 1 Read the problem statement carefully," "Step 2 Organize your approach," and "Step 3 Solve and check." Each step includes tips that expand on the step to provide students with a procedure for effectively and efficiently solving complex problems.

Select lessons include "Scaffolding Questions" that prompt teachers to ask students to make sense of their answers to problems. In Lesson 12-1, students are asked to evaluate their answer to applying trigonometric ratios to find the length of a roller coaster track, which is the hypotenuse of a triangle. When assessing whether their answer makes sense, students recognize that it must be the longest side of the triangle because it is the hypotenuse. The materials also provide "Sense-Making" sections in select lessons. Lesson 7-5, Example 4's "Sense-Making" prompts teachers to encourage students to check their answers to problems involving logarithms by estimating. In evaluating $\log_2 25$, students recognize that since $2^4 = 16$ and $2^5 = 32$, the answer must be between 4 and 5, since 25 is between 16 and 32.

6.1b – Materials support students in understanding, explaining, and justifying that there can be multiple ways to represent and solve problems and complete tasks.

The eBook supports students in understanding that there can be multiple ways to represent problems. "Problem Solving" exercises in Lesson 1-4 ask students to represent absolute values in multiple ways. In

Exercise 44, students represent values geometrically on a number line, in a table of values, and algebraically.

"Differentiated Instruction" offers students opportunities to understand that there are multiple ways to solve problems and complete tasks. Lesson 3-8's "Differentiated Instruction" notes on the "Preparing for Assessment" page provide an extension activity for students engaged in solving systems of equations. Students solve a given system of equations with four different methods: graphing, algebraically, with Cramer's rule, and with inverse matrices. Students conclude the activity by comparing and contrasting the methods using criteria such as ease of use and quickness.

The "Practice" exercises in Lesson 2-1 support students in explaining that there can be multiple ways to represent problems. For example, Exercise 14 provides students with a data table containing information about populations of individual states of the US and the number of state representatives each has. Students graph the data, identify key features, and determine whether the relation represents a function, explaining their reasoning.

Lesson 5-1's "Problem Solving" exercises prompt teachers to encourage students to explain alternate ways to solve the same problem. Exercise 64 provides students with a model for multiplying two polynomials using Algebra Tiles. Students use the model to find the product of the given rectangle, use FOIL to find the product algebraically, and explain how each term is represented in the model.

The materials support students in justifying that there can be multiple ways to represent problems. In the Lesson 8-3 "Problem Solving" exercises, Exercise 37 requires students to represent power functions with positive and negative exponents in multiple ways, such as a table, a graph, and verbally. Students must form conclusions about the similarities and differences between power functions with positive and negative exponents and justify their conclusions with evidence-based explanations.

In Lesson 7-7, "Problem Solving," Exercise 71 provides students with opportunities to justify multiple problem-solving methods. Students explore two methods for solving a logarithmic equation using a graphing calculator. One method involves creating a table of values from one side of the equation, while the second graphs each side of the equation as two lines and identifies the point of intersection. After solving the equation algebraically, students confirm that the answer is the same for both methods and justify their findings with an explanation.

6.1c – Materials are designed to require students to make sense of mathematics through multiple opportunities for students to do, write about, and discuss math with peers and teachers.

The materials require students to do math with their peers and the teacher. Each lesson in the eBook requires students to work through example exercises with the teacher in "Guided Practice." In Lesson 3-1, "Guided Practice," students work through examples with the teacher to solve systems of equations, justifying each step in the process for students to practice.

In Lesson 1-6's "Explore," students write about math with their peers and teacher in the "Algebra Lab." This lab requires students to work in cooperative groups to write the domain and range of functions using interval notation, inequalities, and set notation. In "Writing in Math" exercises, students work with a partner to translate a domain or range given in set notation verbally. Students then explain how symbols are used to write solution sets for inequalities, defining the use of infinity symbols, parentheses, brackets, union, and intersection symbols in written form.

The materials require students to make sense of mathematics through multiple opportunities for students to discuss math with peers and teachers. The "Differentiated Instruction" for Lesson 2-8's "Critical and Creative Thinking Problems" suggests that students who confuse equations and inequalities should discuss the differences and similarities between solving equations and inequalities with a partner or group and share their observations.

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	6/6
6.2b	All criteria for guidance met.	4/4
—	TOTAL	10/10

6.2a – Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.

The eBook provides teacher guidance to encourage students to share their explanations of problem-solving approaches. "Differentiated Instruction" for Lesson 5-3's "Problem Solving Exercises" suggests that the teacher provide a polynomial graph and have students write an opinion or explanation of what the graph represents. Students share their explanations with their group and compare and contrast group members' responses.

Teachers support students in sharing their arguments about problem-solving approaches in the materials. Lesson 12-5's "Differentiated Instruction," Example 2, provides guidance for students to create an argument for the various methods of using trigonometric ratios to solve right triangles. Students discuss in small groups how to choose a method, compare their approaches, and develop a brief explanation to help others make a decision. All groups share their arguments with the class.

The materials support teachers in guiding students to share their justifications in their problem-solving approaches. In Lesson 5-4's "Explore," "Graphing Technology Lab," students work cooperatively to model data using polynomial functions. Exercises 4–10 provide a data table showing the estimated number of alternative-fueled vehicles in the United States per year from 1998 to 2007. Students draw a scatterplot of the data and determine which curve of best fit is most appropriate for the dataset, justifying their answer with correlation coefficients provided by the graphing calculator.

Students reflect on the explanations of their problem-solving approaches in the materials. "Differentiated Instruction" for Lesson 3-7, Example 5, provides guidance for teachers to encourage students to reflect on their process of manipulating matrices. Students write a brief reflection of their reactions to various methods they have learned involving the manipulation of matrices and comment on which aspects they found helpful and which they found complicated or confusing.

The materials support teachers in guiding students to reflect on their arguments about their problem-solving approaches. Lesson 4-3's "Critical and Creative Thinking Problems" provides opportunities for students to reflect on their problem-solving approaches through arguments. Exercise 85 requires students to reflect on the statement "In a quadratic equation in standard form where a , b , and c are integers, if b is odd, then the quadratic equation cannot be a perfect square trinomial." Students

determine whether the statement is always, sometimes, or never true and provide an argument for their response.

Teachers guide students in reflecting on the justification of their problem-solving approaches. Select lessons include "Teaching the Mathematical Processes" sections that provide teachers with tips and prompts to guide students in reflection on their problem-solving strategies. Lesson 2-5, "Teaching the Mathematical Processes," Example 2 suggests that teachers encourage students to interpret their mathematical results in the context of the situation and reflect on whether the results make sense, allowing them to justify their responses.

6.2b – Materials include prompts and guidance to support teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

The eBook offers prompts to support teachers in providing explanatory feedback based on student responses. For example, in Lesson 1-2's "Practice," "Think About" offers teachers suggestions for feedback to students based on their responses to questions relating to algebraic properties. The section suggests that if students are having difficulty identifying properties, teachers should prompt them first to examine the change from one expression to the other and decide whether it is a change in grouping or position.

The materials provide prompts to support teachers in delivering explanatory feedback based on anticipated misconceptions. Lesson 6-1, "Think About: Student Misconceptions," Example 2, addresses the common error of reading $f \circ g$ as fog . This tip prompts teachers to emphasize that the correct wording can help students understand the meaning of the expression. Teachers should lead students to understand the similarity in meaning between $f(x)$, read as " f of x ," and $[f \circ g](x)$, read as " f of g of x ."

The materials offer guidance to support teachers in providing explanatory feedback based on student responses. For example, Lesson 7-1's "Preparing for Assessment" includes teacher guidance for student feedback based on their responses to particular multiple-choice questions. Students who chose (a) for the answer to Exercise 39 are correct. If students selected (b), they have translated the graph down one unit instead of up one. Students who chose (c) have misinterpreted the roles of the 3 and the 5 in the equation, and those who chose (d) misinterpreted the roles of 3 and 5, translating down one unit instead of up one unit.

The materials offer guidance to support teachers in providing explanatory feedback based on anticipated misconceptions. For instance, Lesson 4-3, Example 5, "Think About" includes guidance on providing feedback for anticipated common misconceptions when solving quadratic equations. If students suggest solving the equation by dividing both sides by a variable, the teacher should point out that the variable's value could be zero, and dividing by it would be undefined.