Lowman Education, LLC

Supplemental English Mathematics, Algebra I

Algebra I

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9781967218769**	**Digital**	**Static**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	1	0	Flags Addressed	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	13 out of 23	57%
2. Progress Monitoring	12 out of 20	60%
3. Supports for All Learners	35 out of 36	97%
4. Depth and Coherence of Key Concepts	11 out of 16	69%
5. Balance of Conceptual and Procedural Understanding	36 out of 38	95%
6. Productive Struggle	21 out of 21	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)	1	0	0

SUITABILITY EXCELLENCE FLAGS BY CATEGORY	IMRA REVIEWERS
Category 2: Alignment with Public Education's Constitutional Goal	52
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	The materials do not include an alignment guide outlining the TEKS, ELPS, and concepts covered, with a rationale for learning paths across grade levels (vertical alignment) and within the same grade level (horizontal alignment) as designed in the materials.	0/5
1.1b	The materials do not include an implementation guide with usage recommendations and strategies for effective educator use, such as just-in-time supports, advanced learning, or as a course.	0/3
1.1c	The materials do not include a TEKS correlation guide with recommended skill entry points based on diagnostic assessment results.	0/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	**TOTAL**	4/14

1.1a – Materials include an alignment guide outlining the TEKS, ELPS, and concepts covered, with a rationale for learning paths across grade levels (vertical alignment) and within the same grade level (horizontal alignment) as designed in the materials.

The materials do not provide an alignment guide that outlines the Texas Essential Knowledge and Skills (TEKS), the English Language Proficiency Standards (ELPS), or the covered concepts.

The materials organize lessons in folders with clearly labeled topics and days. Each lesson lists the associated TEKS at the top of the page. For example, on Day 1 of "Equations and Inequalities," the title reads "Solve Equations—TEKS A.5(A)." Similarly, the Factoring lesson on Day 1 lists TEKS A.10(D).

The materials do not explain how the content aligns vertically or horizontally across grade levels or within the course. While materials reference the TEKS throughout, they do not reference the ELPS.

The "Algebra 1 Focus Package" includes a preview of a calendar. The unit list includes nine topics, ranging from Equations and Inequalities to Exponential Functions.

1.1b – Materials include an implementation guide with usage recommendations and strategies for effective educator use, such as just-in-time supports, advanced learning, or as a course.

The materials do not include an implementation guide with usage recommendations or educator strategies, nor do they include just-in-time supports, advanced learning options, or course-level guidance.

The materials do not include resources to support effective implementation.

1.1c – Materials include a TEKS correlation guide with recommended skill entry points based on diagnostic assessment results.

The materials list an associated TEKS number within the lesson, but do not provide a guide with recommended entry points based on diagnostic results.

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

The materials do provide protocols or guidance for lesson or unit internalization. For example, a "Unit and Lesson Internalization" document provides guidance for educators to prepare to understand and teach a concept. The guide provides processes and strategies for teachers to implement when preparing to teach a unit or lesson, and establishes protocols to ensure consistent instructional practices that align with learning goals and objectives.

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

The materials provide a framework or tools for instructional leaders to support or monitor teacher implementation. The "Instructional Leader Observation Tool" helps instructional leaders support educators in implementing materials and provides strategies for addressing instructional challenges.

The materials include resources for instructional leaders to support educators with implementing the materials as designed. An implementation checklist is provided to support instructional leaders in monitoring progress and providing targeted feedback to teachers.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	All criteria for guidance met.	7/7
1.2b	This guidance is not applicable to the program.	N/A
1.2c	All criteria for guidance met.	2/2
—	**TOTAL**	9/9

1.2a – If designed to be static, materials include detailed lesson plans with learning objectives, teacher and student materials, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

The materials include detailed lesson plans with learning objectives, teacher and student materials, lesson components with suggested timeframes, and assessment resources aligned to both the TEKS and the ELPS. Each lesson lists the relevant TEKS standards and includes a key for teacher reference, along with corresponding ELPS correlations. For example, in Unit 3: "Linear Equations and Inequalities," Day 3, Lesson 3.1, the TEKS are clearly identified and the corresponding assignment from the lesson is available to both teachers and students. In the Day 3: "Factoring" lesson, the factoring examples are aligned to TEKS A.10(E) and include ELPS guidance, providing educators with explicit connections between content standards, language proficiency expectations, and instructional tasks.

Each unit in the materials includes printable student materials and teacher answer keys. Each lesson provides a lesson page, an assignment page, and an exit pass. For example, Unit 3: "Linear Equations and Inequalities" includes lessons, assignments, and exit passes for Days 1–19. Each unit also includes Pick 4 Essays with suggested use over multiple weeks.

The materials include exit passes at the end of lessons. For example, in the Day 4: "Factoring," lesson the exit pass asks students to explain the steps needed to factor an expression. The materials provide opportunities for students to demonstrate understanding through unit assessments. For example, the "Quadratic Functions" unit includes a test with thirteen questions.

1.2b – If designed to be adaptive, materials include detailed lesson overviews with learning objectives, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

This guidance is not applicable because the program is not designed to be adaptive.

1.2c – Materials contain support for families in Spanish and English for each unit, with suggestions on supporting the progress of their student(s).

The materials include a "Family Letter" in English and Spanish for each unit that outlines the unit's content, purpose, and ways families can support learning at home. The "Family Letter" reinforces in-class learning with at-home support suggestions, such as reviewing homework at night and incorporating math into everyday life.

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	The materials do not include the definition or intended purpose of the types of instructional assessments.	0/2
2.1b	All criteria for guidance met.	2/2
2.1c	Digital assessments do not include text-to-speech, content and language supports, or calculators that educators can enable or disable to support individual students.	Not Scored
2.1d	The materials do not include diagnostic assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.	0/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	6/12

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

The materials include instructional assessments in unit tests, but do not provide a definition or purpose; however, the materials contain various assessments, including unit exams and exit passes.

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

The materials do define accuracy in administration, such as suggested time limits. The materials do include guidance on administering assessments consistently to students. The "Unit Test Administration Guide" includes guidance for teachers to consistently and accurately administer the assessments. The materials provide scripts to ensure the administration of the included assessments is consistent and standardized across examiners. The materials provide suggestions for the time allotted to complete the assessment, as well as recommendations for breaking apart extended assessments across day or class periods.

2.1c – Digital assessments include printable versions and accommodations, including text-to-speech, content and language supports, and calculators, that educators can enable or disable to support individual students.

This is a static program that includes printable assessments. Assessments are not designed to be digital assessments. They do not include digital accommodations such as text-to-speech, content and language supports, and calculators, that educators can enable or disable to support individual students.

2.1d – Materials include diagnostic assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

The materials do not include diagnostic assessments.

2.1e – Materials include a variety of formative assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

The materials include exit passes and Pick 4 Essays, which provide TEKS-aligned questions with varying levels of complexity. The exit pass for Unit 3, Day 1, asks students to define slope, and the exit pass for Unit 4, Day 4, prompts students to demonstrate the skill of solving a system of linear equations using the substitution method. Pick 4 Essay from Unit 4, Week 2, requires students to analyze work for mistakes, and the Pick 4 essay from Unit 8, Week 5, asks students to explain the impact of adding to an input versus output.

The materials provide formative assessments in the form of exit passes and Pick 4 Essays that contain open-ended questions and a variety of interactive item types for a paper format. Unit 2 contains five exit passes. The Day 1 exit pass asks to explain a principle, but Day 4 asks to solve it.

The materials provide students with opportunities to demonstrate their skills through a variety of question types. For example, in the Unit 4, Day 8 exit pass, there is a formative assessment that presents questions in three different ways: Question 1 requires a short answer involving elimination, Questions 2–5 require students to graph equations, and Question 6 asks students to solve a linear equation and input a numerical answer.

The materials contain questions with varying levels of complexity. For example, the Unit 5, Day 3 exit pass gives students varying questions, such as calculator questions for finding the correlation coefficient in Questions 1 and 2; critical thinking skills to determine if each statement is an association, causation, or neither; and application of systems of equations for Question 9.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	Instructional assessments do not include a rationale for each correct and incorrect response.	1/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	All criteria for guidance met.	2/2
2.2e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	6/8

2.2a – Instructional assessments include scoring information and guidance for interpreting student performance, including rationale for each correct and incorrect response.

The materials include a "Unit Test Administration Guide" and unit test answer keys that include instructions for educators on analyzing assessment data to identify misconceptions and areas for targeted support based on student performance on the assessed TEKS. The materials include scoring information with the correct answers for assessments, such as the Unit 5 Test Answer Key. The materials do not include rationales for correct and incorrect answers.

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

The materials guide the use of tasks and activities to respond to trends in student performance. The "Student Unit Test Tracker" includes a guide for teachers to respond to student data on assessments.

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 materials contain tools for teachers or students to track progress and growth. The "Student Unit Test Tracker" provides a document for teachers and students to track progress and growth, allowing teachers to provide timely interventions and instructional adjustments.

2.2d – If designed to be static, materials provide prompts and guidance to support educators in conducting frequent checks for understanding at key points throughout each lesson or activity.

The materials include prompts and guided questions to support frequent checks for understanding, such as in Module 9, Lesson 15, which prompts teachers to ask, "How can you tell if a transformation is vertical

or horizontal just by looking at the equation?" and "Why do a vertical stretch and a horizontal compression both make the parabola look narrower.

2.2e – If designed to be adaptive, materials provide frequent checks for understanding at key points throughout each lesson or activity.

This guidance is not applicable because the program is not designed to be adaptive.

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	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	1/1
3.1b	All criteria for guidance met.	4/4
3.1c	The materials do not contain extension into future grade levels.	1/2
3.1d	Digital materials do not include accommodations, including text-to-speech, content and language supports, or calculators, that educators can enable or disable to support individual students.	Not Scored
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	8/9

3.1a – Materials include explicit educator guidance for lessons or activities scaffolded for students who have not yet reached proficiency in prerequisite or grade-level concepts and skills.

The materials include lessons differentiated by TEKS and educator guidance to support students who have not yet reached proficiency. For example, the Unit 1, Day 1 lesson is titled "Solve Equations—TEKS A.5(A)." In Unit 8: "Quadratic Functions," Day 15, the lesson planning materials state, "Educator Guidance: Circulate and check for understanding, reinforcing the concept that changes *inside* the parentheses affect the graph horizontally, and changes *outside* affect it vertically. This is a crucial foundation for the day's lesson."

3.1b – Materials include explicit educator guidance for language supports, including pre-teaching and embedded supports for developing academic vocabulary and unfamiliar references in text.

The materials include explicit and consistent pre-teaching of academic vocabulary through sentence stems, fill-in-the-blank definitions, and structured discourse routines. Lessons direct the instruction of new terms prior to student use, ensuring front-loaded vocabulary acquisition. The materials also support the development of academic vocabulary through repeated contextual use and embedded student talk, such as exit passes and Pick 4 Essays.

The materials introduce new vocabulary terms at the beginning of each lesson with teacher support, explicit guidance for pre-teaching, or embedded supports for developing vocabulary. For example, Unit 6: "Polynomials," Day 4, lesson instructions prompt teachers as follows: "Distribute Supplemental Material 7.4A: 'Anatomy of a Term' Foldable. Guide students through creating the foldable to define and provide

examples for coefficient, variable, exponent, and the formal definition of like terms. This provides a tangible reference tool."

3.1c – Materials include explicit educator guidance for enrichment and extension activities for students who have demonstrated proficiency in grade-level and above grade-level content and skills.

The materials contain educator guidance for supporting students who have demonstrated proficiency in grade-level and above-grade-level content. For example, in Unit 8: "Quadratic Functions," Day 16, "Students who have mastered identifying and describing transformations should be provided with Supplemental Material 9.16C: Enrichment & Extension Choice Board. This offers a variety of high-rigor tasks, such as creating a quadratic function given a specific vertex and stretch factor, or analyzing and correcting a peer's flawed description of transformations." The materials contain extension and enrichment, but this does not extend into future coursework such as Algebra II or Geometry.

3.1d – Digital materials include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.

This is a static program that is not designed for digital use. Printable lesson materials do include some language supports for students, and materials can be used with or without calculators as needed.

3.1e – Materials include educator guidance on offering options and supports for students to demonstrate understanding of mathematical concepts in various ways, such as perform, express, and represent.

The materials contain educator guidance on offering options and support for students. For example, in Unit 5: "Linear Equations and Inequalities," the guidance states, "Represent: Draw a quick sketch showing the parent function and the final transformed line. Express: Write a bulleted list of the transformations in the correct order. (e.g., 1. Reflection across x-axis, 2. Vertical compression . . ., 3. Horizontal shift . . .). Perform: Verbally explain the transformations step-by-step to a partner or the teacher." This is similar to Unit 2: "Introduction to Functions," Day 5, in the closure and demonstration of understanding section of the lesson.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	5/5
3.2b	All criteria for guidance met.	2/2
3.2c	All criteria for guidance met.	3/3
3.2d	All criteria for guidance met.	2/2
3.2e	All criteria for guidance met.	2/2
—	**TOTAL**	14/14

3.2a – Materials include explicit (direct) prompts and guidance for educators to build knowledge by activating prior knowledge, anchoring big ideas, and highlighting and connecting key patterns, features, and relationships through multiple means of representation.

The materials include explicit guidance for educators to build knowledge by activating prior knowledge, anchoring big ideas, and highlighting key patterns, features, and relationships through multiple means of representation. For example, in Unit 2, Lesson 1, the "Activate Prior Knowledge" section directs teachers to pose the following Think-Pair-Share question: "Imagine a vending machine. If you press the button for 'A3' (the input), what do you expect to get (the output)? What would happen if you pressed 'A3' and sometimes you got a bag of chips, but other times you got a soda? Would the machine be working correctly?" This prompt encourages students to connect their existing knowledge about functions to the concept of a well-defined mapping, supporting the development of foundational understanding.

Additionally, in Unit 10: "Exponential Functions," Lesson 1, the materials explicitly link the big idea to both conceptual and procedural goals. The lesson states, "Unlike linear functions that change by a constant amount (addition), exponential functions change by a constant factor (multiplication), causing them to increase or decrease at a rapidly changing rate." This statement is connected to the conceptual goal of understanding exponential growth and decay and the procedural goal of calculating and graphing exponential functions. By explicitly naming the big idea and connecting it to learning goals, the materials provide clear guidance for educators to highlight patterns, anchor critical concepts, and guide students through both conceptual understanding and procedural practice by explicitly naming the big idea and connecting it to learning goals.

3.2b – If designed to be static, materials include educator guidance for effective lesson delivery and facilitation using various instructional approaches.

The materials provide educator guidance for lesson delivery through teacher lessons, which offer "TEKS, ELPS, Lesson Overview, and Instructional Design," "Instructional Materials," "Generated Supplemental Materials," and "Lesson Structure and Instructional Procedures" sections. In the "Lesson Structure and

Instructional Procedures" section, timing is included for each section of the lesson, accompanied by questions and guided instruction.

The materials include two types of instructional approaches with minimal guidance for educators. The materials include lessons in worksheet format. For example, Unit 4, Lesson 6 contains examples for solving systems using elimination with a worksheet.

3.2c – Materials include multi-tiered intervention methods for various types of practice and structures and educator guidance to support effective implementation.

The materials include multi-tiered intervention methods that provide structured opportunities for practice and include guidance to support effective implementation. For example, in Unit 4: "Linear Equations and Inequalities," Day 19, students are provided with Supplemental Material 9.6B, the "Quadratic Formula Solver Mat," and task cards. The mat serves as a structured graphic organizer, breaking the complex problem-solving process into manageable steps and supporting students as they practice procedural fluency. Additionally, in Unit 9: "Quadratic Functions," Day 6, the materials include a kinesthetic activity in which teachers use a "large number line on the floor or whiteboard" and instruct students to physically "jump" the common difference. This activity allows students to build a concrete understanding of the variable, *d,* before applying the abstract formula, providing an alternative pathway for students who benefit from movement-based or visual representations. These examples demonstrate that the materials offer multiple levels of support, incorporating both scaffolded graphic organizers and kinesthetic strategies to engage students with the content.

3.2d – Materials include enrichment and extension methods that support various forms of engagement, and guidance to support educators in effective implementation.

The materials include lessons and activities for all students, methods to enrich or extend student learning, and differentiation and tiers of support based on individual needs. For example, Unit 10: "Exponential Functions," Day 4 includes an enrichment choice board where activities include error analysis, creating real-world scenarios, comparing different models, and working backwards to solve for an unknown initial value. Additionally, in Unit 5: "Systems of Linear Equations and Inequalities," Day 1, activities challenge students to create their own systems with specific characteristics, apply the concepts to a business scenario, or write a real-world story to match a system.

3.2e – Materials include prompts and guidance to support educators in providing timely feedback during lesson delivery.

The materials provide prompts and guidance to support educators in providing timely feedback during lesson delivery. For example in Unit 2, Day 2, the lesson guidance provides anticipated misconceptions and guidance for explanatory feedback such as, "Students will correctly find the boundary numbers for a continuous range but will write the inequality in the wrong order (e.g., $9 \geq y \geq 0$ instead of $0 \leq y \leq 9$,)" and "In math, we always write inequalities from the least value to the greatest value, just like on a number

line. Let's write the smallest y-value on the left, the largest on the right, and place our 'y' in the middle. Now, what symbols do we need?"

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.	4/4
3.3b	This guidance is not applicable to the program.	N/A
3.3c	All criteria for guidance met.	1/1
3.3d	All criteria for guidance met.	8/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	13/13

3.3a – If designed to be static, materials include educator guidance on providing and incorporating linguistic accommodations for all 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 educator guidance on providing and incorporating linguistic accommodations for various levels of English language proficiency, as defined by the ELPS. These accommodations are designed to engage students in using increasingly more academic language as their proficiency develops. For example, in Unit 8: "Factoring," Day 5, the materials provide scaffolding aligned to proficiency levels labeled Approaching, Meeting, and Mastering. Specifically, for the Approaching level, the materials state: "Work in a teacher-led small group using the Perfect Square Identifier Mat (Supplemental Material 8.5B.) Focus on problems with a leading coefficient of 1 first, then move to problems with GCFs or other leading coefficients." This guidance supports students at varying stages of proficiency through differentiated practice and teacher-led support. Additionally, in the unit overview for "Linear Equations and Inequalities," the materials outline scaffolded tasks by ELPS proficiency level, including Pre-Production, Beginning, Intermediate, High Intermediate, and Advanced. These explicit references to proficiency levels demonstrate that the materials address linguistic development progressively, providing educators with targeted strategies to support students as they engage with academic language.

3.3b – If designed to be adaptive, materials include embedded linguistic accommodations for all 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.

This guidance is not applicable to the program because it is not designed to be adaptive.

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

The materials include some guidance that supports educators in implementing instructional strategies relevant to bilingual and ESL classrooms; however, the materials provide limited direction on how these strategies align with specific state-approved bilingual or ESL program models, such as dual language immersion or ESL pull-out programs. For example, in Module 8: "Factoring," Day 1, the lesson includes an activity in which one partner explains the steps to factor an expression in Spanish and the other partner paraphrases the explanation in English. This structure supports cross-linguistic connections and peer collaboration. Similarly, in the unit overview for Unit 2: "Introduction to Functions," the materials outline linguistic accommodations such as using visual aids, offering vocabulary support, and providing sentence stems (e.g., "First we need to convert _____ to a _____.").

3.3d – Materials include embedded guidance 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 embedded guidance to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse. For example, in Unit 4: "Linear Equations and Inequalities," Day 13, the materials provide visual, kinesthetic, and linguistic guidance. Specifically, the kinesthetic support includes the prompt: "When introducing the Zero Product Property, have two students each hold up a whiteboard representing a factor. Stand between them and say, 'If this student's board (a) times this student's board (b) equals zero, what must be true?'" This physical demonstration helps students connect abstract mathematical reasoning with a concrete visual model, reinforcing both comprehension and vocabulary use. Additionally, in Unit 9: "Quadratic Functions," Day 4, the lesson provides guidance in the "Supports for All Learners" section, specifically within the content-based ESL guidance. For instance, teachers are directed to "heavily utilize the Anchor Chart (4.13A) as a visual reference throughout the lesson. . . . [U]se gestures to reinforce concepts [and] provide sentence stems for both peer discourse and written explanations." These scaffolds promote comprehension and language development by allowing emergent bilingual students to access content through multiple modalities and structured opportunities for oral and written academic discourse.

3.3e – 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	The materials do not include questions and tasks that increase in rigor and complexity, leading to above-grade-level proficiency in the mathematics TEKS, nor enrichment and extension materials that increase in rigor and complexity, leading to grade-level and above-grade-level proficiency in the mathematics TEKS.	1/4
—	**TOTAL**	3/6

4.1a – Practice opportunities throughout learning pathways (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

Throughout each unit, practice opportunities are provided that require students to demonstrate a depth of understanding aligned with the TEKS. For example, Unit 2 assignments ask students to determine whether a table, graph, or situation represents a function on Day 1, and then require them to identify the domain and range from a table or graph on Day 2. The materials progress to asking students to determine domain and range in situational contexts on Day 3, and then provide interleaved practice on domain and range on Day 4. The unit concludes with practice opportunities for using function notation and evaluating functions from equations, graphs, tables, and real-world situations.

The materials provide "Unit Tests" that require students to demonstrate a depth of knowledge aligned to the TEKS. Unit Test 6: "Polynomials," provides students with opportunities to simplify expressions, perform operations with expressions, apply expressions in situational contexts, and analyze work with expressions. The unit tests on equations and inequalities provide students with opportunities to solve linear equations and inequalities, as well as to apply mathematical and scientific formulas. The questions are aligned to the TEKS because the answer key provides the TEKS associated with each question.

The materials provide students with opportunities to practice through daily assignments; still, there are no TEKS indicators to allow teachers to assess which TEKS are being addressed by each problem. There are also Pick 4 Essays available to enable students to demonstrate a depth of understanding, but no TEKS are mentioned in the assessments. The Pick 4 Essays offer opportunities to demonstrate in-depth knowledge within each unit.

The materials include opportunities for students to demonstrate depth of understanding. For example, in Unit 4 Pick 4 Essay, Week 2, students explain processes in words about concepts such as: "Explain the steps you would take to write a system of linear equations from a graph," and "Explain how to solve a system of linear equations using substitution. Use an example from a lesson or an assignment in your explanation." Another example in the assignment from Unit 4, Day 8, Question 1, asks students to find the cost of one apple and one pear using elimination. Students show a depth of understanding by showing the algebraic steps for elimination.

4.1b – Questions and tasks, including enrichment and extension materials, increase in rigor and complexity, leading to grade-level and above grade-level proficiency in the mathematics TEKS.

The materials do not include questions and tasks that increase in rigor and complexity, leading to above-grade-level proficiency in the mathematics TEKS, nor enrichment and extension materials that increase in rigor and complexity, leading to grade-level and above-grade-level proficiency in the mathematics TEKS. The questions and tasks throughout the units increase in rigor and complexity, allowing students to reach grade-level proficiency. For example, the Unit 7 lessons begin with factoring a greatest common factor, progress to factoring trinomials with a value of one, and then to trinomials with a value other than one. The lessons continue by asking students to combine factoring the greatest common factors with factoring trinomials, and then include factoring perfect square trinomials and difference of two squares.

The materials provide a variety of questions and tasks that increase in rigor and complexity to meet grade-level proficiency but do not extend above grade level. The materials do not include enrichment or extension activities. For instance, the daily assignments for "4. Systems of Linear Equations and Inequalities" guide students through a progression from identifying the number of solutions to a system to solving systems of equations using various methods and then graphing systems of equations and inequalities. The lessons never extend to more than two variables and do not include any other functions except linear.

The materials do not provide enrichment, but the questions in some daily assignments do increase in complexity throughout the lesson or unit. For example, Unit 3, Lesson 7 offers three levels of complexity for practice.

The materials increase in rigor and complexity, leading to grade-level proficiency. For example, in Unit 6, Day 2, Questions 2–7 provide students with opportunities to practice their skills in laws of exponents at varying levels. The complexity increases when a numerator is raised to a power and a denominator is raised to a different power. The assignment in Unit 6, Day 6, raises complexity in distribution from multiplying a monomial by two monomials in Question 5 to multiplying fractional numbers by monomials and combining like terms in Question 9.

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.	1/1
4.2c	The materials do not demonstrate coherence across lessons or activities by connecting students' prior knowledge of concepts and producers to the mathematical concepts to be learned in future grade levels.	2/4
—	**TOTAL**	4/6

4.2a – Materials demonstrate coherence across concepts horizontally within the grade level by connecting patterns, big ideas, and relationships.

The materials demonstrate connections between patterns, big ideas, or relationships throughout the course. However, the materials do contain lessons that have a Recent, Today, and All Year section, but these do not always correlate with the current topic. Skills remain separate and independent of one another. For example, in Linear Equations and Inequalities, Day 4, the materials reference strategies from previous lessons to determine the rate of change given real-world tables and graphs.

4.2b – Materials demonstrate coherence vertically across concepts and grade bands, including connections from grades 3–12, by connecting patterns, big ideas, and relationships.

The materials demonstrate vertical coherence and fail to make connections between patterns, big ideas, or relationships across grades 3–12. There are skills required from other grade levels, but there is no iteration of "remember when you did . . ."

4.2c – Materials demonstrate coherence across lessons or activities by connecting students’ prior knowledge of concepts and procedures to the mathematical concepts to be learned in the current grade level and future grade levels.

The materials introduce new concepts and procedures, but do not make connections between students' prior knowledge for future courses. Examples, Exit, Unit 4, Day 8, states, "What is your preferred method to solve a system of linear equations? Why?" The materials directly reference previous concepts and methods to solve systems of linear equations.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	All criteria for guidance met.	2/2
4.3b	All criteria for guidance met.	2/2
—	**TOTAL**	4/4

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

The materials provide spaced retrieval opportunities for skills within the unit and within the course. For example, Day 7: "Quadratic Functions" offers the opportunity to use the quadratic formula to solve a quadratic (used earlier in Unit 8), and an opportunity to write an equation in standard form given a slope and a point (used in an earlier unit).

The materials provide spaced retrieval opportunities for concepts within the unit and within the course. Day 16: "Quadratic Functions" prompts students to identify transformations of a quadratic (a concept from earlier in Unit 8) and prompts students to identify the range of a linear function from a table (a concept from a previous unit).

The materials provide spaced retrieval for previously learned concepts, but not skills. Lessons have a Recent section to recall concepts learned in previous lessons. See Assignment 1, Unit 7.

Students are given spaced retrieval opportunities in the All Year practice problems on assessments. For example, in Unit 3, Day 6, students are given opportunities to practice solving equations on the All Year Question 9. This skill is also available in Unit 1, Day 2.

For example, in Unit 4, Day 7, students are given an opportunity to review graphing a line that passes through a point and has a given slope. Students also practice this skill in Unit 3, Day 7.

The materials provide students with opportunities to review concepts and procedures throughout the learning materials. For example, Unit 8, Day 15 gives students an opportunity to review dividing monomials on the All Year Question 8. This concept was previously seen in Unit 6, Day 2.

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

The materials provide students with interleaved retrieval opportunities in the assignment for Day 4 of "Linear Equations and Inequalities," Day 4. Students are given real-world problems to find the rate of change from graphs, as well as problems involving increasing and decreasing functions, and are provided with tables. In addition, they are also given problems to solve linear equations in one variable using the distributive property with variables on both sides (A.5A). Students are also asked to find the slope of a

line given two points, which was a previously learned skill. However, the TEKS associated with these problems are not provided.

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	The materials provide opportunities for students to create representations of mathematical situations. The materials do not provide students with opportunities to create concrete models of mathematical situations.	1/2
5.1c	All criteria for guidance met.	1/1
—	**TOTAL**	5/6

5.1a – Questions and tasks provide opportunities for students to interpret, analyze, and evaluate mathematical concepts and complex, real-world situations.

The materials provide opportunities for students to interpret and evaluate mathematical concepts and real-world situations through questions and tasks. Unit 5: "Scatter Plots and Statistics," Day 1 provides students with a table of values, including the number of guests at a restaurant table and the corresponding dollar amount spent. Students are asked to evaluate the data for a line of best fit and then interpret the information to determine a prediction for the amount spent by a table of eight guests.

The materials provide opportunities for students to analyze and interpret mathematical concepts and real-world situations through questions and tasks. Unit 3: "Linear Equations and Inequalities," Day 4 asks students to analyze both tables and graphs in the context of real-world situations to determine a rate of change and interpret that rate of change in relation to the situation.

The materials provide opportunities for students to analyze mathematical concepts in real-world situations. For example, in Unit 9: "Exponents," Day 4, Question 6, the task states, "The graph shows the sea turtle population over *x* years. Use the graph to answer questions 5 and 6. . . . If the function = 250(0.88)*x* represents this situation, what is the rate of decay?" Students discuss the percentage decrease of the sea turtle population for each year, given a graph and a formula.

The materials provide opportunities for students to interpret mathematical concepts in real-world situations. For example, in Unit 9, Day 4, Question 4, the task states: "The function $y = 260(1.25)^x$ can be used to model the value of a rare coin after *x* years. What does each value represent?" Students identify what the 260 and 1.25 mean in the context of the value of the rare coin.

The materials provide opportunities for students to evaluate mathematical concepts, such as associations between two real-world variables. For example, in Unit 5, Day 3, Question 4, the task says, "When the number of miles traveled since a gas tank was filled increases, the number of gallons of gas

remaining in a gas tank decreases." Students describe the association and determine if the relationship between the two variables is causation.

5.1b – Questions and tasks provide opportunities for students to create concrete models and representations of mathematical situations.

Questions and tasks in the materials provide students with opportunities to create representations of mathematical situations. Unit 3: "Linear Equations and Inequalities," Day 7 prompts students to create a graph of a situation involving kayak and life jacket rental, and provides prompts for students to graph lines given intercepts and/or equations. However, the questions and tasks in the materials do not provide students with opportunities to use concrete models.

The materials contain occasional questions asking students to draw the graph or to find the equation of a graph of a system. Unit 3, Assignment 18, Questions 4 and 7, ask students to examine a graph and determine the function that best represents it.

The materials include opportunities for students to create representations of mathematical situations. For example, in Unit 9, Day 2, Question 8, students create an inequality to represent the cost of cookies and cupcakes under a restricted budget.

The materials include opportunities for students to create representations of mathematical situations. For example, in Unit 1, Day 6, Question 4, students define the variable, write an equation or inequality, and solve a problem involving the area of a rectangle and a parallelogram.

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

Questions and tasks in the materials prompt students to answer based on the knowledge given in the lesson and require them to apply concepts to new problem situations or contexts. For example, in Unit 5: "Scatterplots and Statistics," Day 3, students are asked to "Read the following and determine if an association is likely. If so, describe the association. If an association is likely, also determine if causation is likely."

The materials provide opportunities for students to engage in rote, procedural practice by identifying the intersection point of a system of equations from a graph.

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 mathematical tasks.

The materials provide students with opportunities to understand when and how to apply strategies or to choose from different methods to solve problems. Specifically, the materials include a Recent and All Year question in each daily assignment, allowing students to build automaticity with grade-level skills. For example, on the daily assignment for Unit 6: "Polynomials," Day 1, the Recent question asks students to find a correlation coefficient from a table of values, and the All Year question asks students to find the solution to a system of equations by graphing. In an additional example, materials provide assignments (see Unit 6, Day 3) that have a Recent section to practice previous concepts, the Today section to practice the current lesson, and the All Year section to practice concepts that will be seen on the STAAR test.

The materials provide tasks to build student automaticity. For example, in Unit 2, Day 2, Questions 2, 3, 5, 6, and 7, students practice finding the domain and range from graphs. Another example is Unit 1, Day 4, Questions 2–5, which provides students with opportunities to practice solving linear inequalities.

5.2b – Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout learning pathways.

The materials introduce accurate, efficient, and flexible mathematical procedures. For example, Unit 4: "Systems of Equations and Inequalities," presents graphing, substitution, and elimination as viable strategies. The spiral questions on the assignments throughout the pathways offer opportunities for students to use strategies of their choice to solve problems. Unit 4, Day 8, exit pass asks, "What is your preferred method to solve a system of linear equations? Why?"

The materials include problems in Unit 3, Day 4, for students to practice mathematical strategies for accuracy. Practice opportunities focus on whether students get the correct answer (accuracy) or how the answer was obtained, or if it was the most efficient method. Exit passes are available that allow students to develop their thought processes for solving problems.

5.2c – Materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy throughout learning pathways.

The materials provide opportunities for students to evaluate mathematical representations for accuracy. For example, the Unit 4 exit pass provides students with an opportunity to identify an error in an example of solving a system of equations using the substitution method.

The materials engage students in evaluating mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy throughout learning pathways.

The materials provide guidance that supports the development of students' critical thinking and problem-solving skills. For example, the Pick 4 Essays questions invite students to consider why various solution methods are effective. Unit 1, Week 2 asks, "How can you check that your solution for an equation is correct? Why is this an important skill to know? Why is it an important step to complete every time?" Unit 5, Week 1 asks, "What is the best way to solve a system of equations? Explain."

5.2d – Materials contain guidance to support students in selecting the most efficient approaches when solving mathematics problems.

The materials guide students to select increasingly efficient approaches to solve mathematics problems. Lessons provide opportunities for students to apply algorithms alongside visual tools, such as counters, number lines, and algebra tiles.

The materials initially incorporate tools, such as algebra tiles, when introducing the concept of solving equations. As the lesson progresses, it presents more efficient procedures that allow students to solve complex problems quickly.

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	The materials present all tasks using a single representation, without a concrete-pictorial-abstract progression. There are sometimes pictorial or abstract representations; however, concrete models are not used.	2/3
5.3c	All criteria for guidance met.	6/6
—	**TOTAL**	10/11

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

The materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed. Lessons also emphasize procedural learning by guiding students through step-by-step processes to apply and analyze mathematical transformations. For example, in Day 15 of "Quadratic Transformations: Stretches and Compressions," students learn that "transformations inside the parentheses affect the graph horizontally, while transformations outside the parentheses affect the graph vertically." The lesson further explains that students "will also understand why a vertical stretch and horizontal compression have a similar visual effect (narrower parabola)." This focus on distinguishing and applying transformation procedures supports procedural fluency, as students repeatedly practice identifying, interpreting, and executing these operations to achieve accurate graphing outcomes.

The materials provide unit overviews that have explicit connections to TEKS expectations, supporting teacher planning by emphasizing the balance between the "why" and the "how" of mathematics.

5.3b – Questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS.

The materials provide questions and tasks that require students to use pictorial representations as specified by the TEKS. For example, Unit 2: "Introduction to Functions," Day 1, asks students to identify functions from pictures of graphs, tables, and scatterplots. Another example is Unit 2: "Introduction to Functions," Day 3, Questions 1–6, which feature graphs or tables. The materials provide questions about identifying characteristics, such as finding the domain for these graphs and tables.

The materials provide questions and tasks that require students to use abstract representations as required by the TEKS. For example, Unit 4: "Systems of Linear Equations and Inequalities," Day 5, asks students to solve systems of equations from abstract equations with no other representations. Another example is in Unit 1: "Equations and Inequalities," Day 4, Questions 2–5, where the materials provide opportunities for students to solve linear inequalities.

The materials provide questions or tasks that require students to use concrete models, as specified by the TEKS. The materials present all tasks using a single representation, without a concrete-pictorial-abstract progression. There are some pictorial and abstract representations, but concrete models are not used. In Unit 8: "Quadratic Functions," Day 1, students are shown what a quadratic equation looks like graphically and are asked to identify its characteristics; however, there is no reference to the type of equation that represents it.

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.

Lessons promote a deep understanding of mathematical concepts through multiple representations. Lessons provide guidance for teachers to use to support students as they connect concrete models to the algorithm when solving equations. For example, the use of algebra tiles helps students connect concrete models to algebraic equations, explaining how the actions used in solving the model correspond to inverse operations when solving equations algebraically.

The materials support students in using concrete and pictorial models to build an understanding of key concepts from the TEKS. For example, the materials provide students with opportunities to use tools, such as algebra tiles, drawings, and symbolic representations, to solve equations.

Lessons incorporate hands-on activities that ask students to use manipulatives to model zero pairs; these lessons follow up with drawn representations to build conceptual understanding and procedural fluency. These activities enable students to experience concrete, representational, and abstract models of mathematical concepts. Assignments and essay questions guide students in defining and explaining their use of representations, reinforcing the transition from visual to symbolic reasoning in alignment with the TEKS.

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	1/1
5.4b	All criteria for guidance met.	2/2
5.4c	All criteria for guidance met.	1/1
5.4d	All criteria for guidance met.	2/2
5.4e	All criteria for guidance met.	2/2
—	**TOTAL**	8/8

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

The materials provide opportunities for students to develop academic mathematical language using other development strategies; for example, the Unit 5 exit pass on Scatterplots and statistics, Day 1, students are provided with a sentence stem to respond to the question on the purpose of linear regression and why they are used with scatterplots, such as, "The purpose of Linear Regression is ____ and they are used___."

5.4b – Materials include embedded educator guidance to scaffold, support, and extend students' use of academic mathematical vocabulary in context when communicating with peers and educators.

The materials embed educator guidance to promote the use of mathematical vocabulary through strategies such as Think-Pair-Share, sentence starters, and structured writing tasks. Lessons prompt students to explain concepts in writing, share them orally with peers, and revise them using feedback, thereby supporting academic discourse.

The materials include embedded educator guidance to support and extend students' use of academic mathematical vocabulary in context when communicating with peers and educators. For example, in Unit 8, Day 15, Closure, students write the function rule and a complete sentence explaining why they placed the multiplier where they did.

5.4c – Materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse.

The materials include embedded guidance to support student application of mathematical language or academic vocabulary. For example, in Unit 4, Day 8 states, "What is your preferred method to solve a system of linear equations? Why?" and gives a sentence stem. The materials also contain Pick 4 Essays, which prompt the instructor to support student opportunities to apply mathematical language.

5.4d – Materials include embedded guidance to facilitate mathematical conversations allowing students to hear, refine, and use math language with peers.

The materials include embedded guidance that facilitates mathematical conversations and supports students in hearing, refining, and using mathematical language with peers. For example, in Unit 8: "Quadratic Functions," Day 15, the Closure section directs students to "turn to a shoulder partner and orally justify your function rule, explaining why it represents a vertical compression and not a horizontal one." This prompt encourages students to articulate their reasoning using precise mathematical vocabulary while engaging in peer discussions that promote shared understanding. Similarly, in the same unit, the Closure task asks students to "write the function rule and a complete sentence explaining why you placed the multiplier where you did." This written reflection reinforces the use of academic mathematical language as students explain their reasoning and compare their approaches with peers. Together, these embedded opportunities guide students in developing and refining their ability to communicate mathematical ideas effectively. Lessons include structured opportunities for students to engage in academic discussions, promoting the use and refinement of mathematical language.

5.4e – Materials include embedded guidance to anticipate a variety of student answers including exemplar responses to questions and tasks, including guidance to support and/or redirect inaccurate student responses.

The Materials include embedded guidance to anticipate a variety of student answers, including exemplar responses to questions and tasks and guidance to support and redirect inaccurate student responses. For example in Unit 8: "Quadratic Functions," Day 15, the materials have multiple sentence stems and plans for misconception, e.g., "Students assume that a multiplier greater than 1 always means 'stretch' and a multiplier less than 1 always means 'compression,' failing to account for the counter-intuitive nature of horizontal transformations (e.g., thinking $(4x)^2$ is a stretch.)"

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	All criteria for guidance met.	2/2
5.5c	All criteria for guidance met.	1/1
—	**TOTAL**	4/4

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

The materials provide opportunities for students to solve real-world applications and communicate mathematical ideas with multiple representations. For example, Day 8 in "Systems of Equations and Inequalities" asks students to solve a real-world task involving two boys saving money. Students represent the situation with representational equations and graphical lines before communicating a solution verbally.

The materials provide opportunities throughout the learning pathways for students to analyze mathematical relationships and to justify and explain mathematical ideas. In Day 3 of "Scatterplots and Statistics," students must analyze the type of mathematical relationship between two variables and explain or justify their reasoning.

The materials integrate the TEKS into the assignments by providing students with opportunities to solve various types of problems, including real-world applications, as seen in Unit 5: "Scatterplots and Statistics," Day 1. The materials provide activities that enable students to solve real-world application tasks. For example, in Unit 5: "Scatterplots and Statistics," Day 1, Question 4, students are provided a table with the hotel cost per day. The materials ask students to predict the total cost for ten nights at a hotel.

The materials provide opportunities for students to display, explain, or justify mathematical ideas using precise mathematical language in written communication. For example, in the Pick 4 Essays in Unit 8: "Quadratic Functions," Week 2, Question 4, students are allowed to explain that multiplying two binomials can result in either a trinomial or another binomial.

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

The materials clearly describe and connect the TEKS process standards throughout the learning pathways using detailed tables in each unit overview. The Process Standard Integration tables explain how students apply mathematics to real-world problems, such as interpreting graphs and analyzing scatterplot data.

The materials include a description of how process standards are incorporated and connected throughout the learning pathways. The materials include a Process Standard Integration table in each

unit overview. The table lists each process standard and how it is incorporated and connected into the unit.

The course overviews consistently link process standards to content standards, ensuring cohesive integration across units.

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

Process standards are specified for each lesson. While the materials provide a brief lesson overview that discusses lesson goals and objectives, teacher lessons do not provide specific guidance on how each process standard connects to tasks that students will complete.

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.	3/3
6.1c	All criteria for guidance met.	3/3
—	**TOTAL**	9/9

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

The materials provide opportunities for students to think mathematically and make sense of mathematics. For example, Unit 4, Day 3 asks students to write an equation that would have one solution given a specific graph. This open-ended question, which has various correct solutions, enables students to apply their own reasoning to select a solution after interpreting the graphical representation of solutions to a system of linear equations.

The materials provide students with opportunities to make sense of mathematics and persevere through problem-solving. Unit 4, Day 7 instructs students that there may not be coefficients that allow for easy elimination of a variable, but provides scaffolds to encourage students to persevere through problem-solving and make sense of the elimination process when both equations require a multiplier. Students engage with open-ended questions that require reasoning and justification, such as in the Pick 4 Essays in Unit 7, Week 3, where students are asked to determine if a polynomial is factored correctly.

The materials provide opportunities for students to engage in problem-solving tasks, such as the exit passes in Unit 7, Day 5, where students are asked to explain why an expression is not a perfect square trinomial. This allows for mathematical thinking; however, the materials focus on on-level tasks without scaffolding and do not allow students either to persevere or to engage in productive struggle.

The materials provide opportunities for students to think mathematically and make sense of mathematics. For example, in exit passes in Unit 4, Day 10, students are given opportunities to create an example of a system of inequalities with no intersection and infinite solutions. In the Pick 4 Essays Unit 4, Week 1, students are given opportunities to think and reason with mathematical topics, such as explaining the difference between a vertical stretch and a horizontal compression. The materials do not include encouragement for students to persevere through solving problems.

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

The materials support students in understanding and explaining that there can be multiple ways to solve a problem. In Lesson 7, Day 6, students are shown that there are multiple ways to factor polynomials.

The materials support students in understanding and justifying that there can be multiple ways to solve a problem. For example, the Week 2 Pick 4 Essay in Unit 8 Quadratics asks students to justify how two different quadratic functions can have the exact same solutions.

The materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems. For example, in Pick 4 Essays, Unit 8, Week 2, Question 6, students are given the task of creating a system that can be best solved using substitution and comparing how it is easier to solve than using other methods, such as elimination. In Unit 4, Day 10, the last example states, "Write the inequalities in slope-intercept form to easily graph. Students can also graph using the intercepts."

Teachers are given guidance on how to review both methods for writing and graphing systems of linear inequalities. In Lesson 8, Day 8, the second set of examples involves solving quadratic equations using square roots. The materials state, "Have students look at these equations and determine what about these equations might make them easier to solve using square roots." Teachers are given guidance to support students in comparing and solving a quadratic equation using square roots and other methods, such as the quadratic formula from the previous lesson on Day 7.

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/or educators.

The materials provide multiple opportunities within the lessons for students to discuss mathematics with educators and peers. For example, the key for Lesson Scatterplots and Statistics Day 1 prompts teachers to discuss the variation in the lines drawn and equations written for a particular example. In contrast, the key for the Day 15 Quadratics Lesson prompts teachers to discuss with students why graphs look different when the input or output is changed. In Lesson 7, Day 2, teachers are provided with guidance on factoring trinomials using the box method. Teachers are also provided guidance to "discuss how to determine the sign of the factors based on the signs of ac and b." Students write the mathematical processes on their paper. In Unit 9, Day 1, students are given opportunities to analyze exponential graphs. Teachers are given guidance to "have a discussion comparing this graph with linear and quadratic functions." Students are doing and discussing in this example.

The materials offer multiple opportunities within the lessons for students to engage in mathematics with educators. For example, the keys for Unit 8 Quadratics Day 8 give prompts for teachers to guide students through solving equations by taking a square root, and then to have students determine what makes these equations easy to solve with a square root. The key for Unit 8,Day 15 in the same unit prompts

teachers to guide students in using the graphing calculator and to walk them through finding the points of transformed parabolas.

The materials provide multiple opportunities within the Pick 4 Essays for students to practice writing mathematics with educators. They provide six prompts in which students are directed to answer their choice of four prompts with short answer essays. For example, some prompts on the Pick 4 Essay for Unit 3, Week 1 include describing the steps to find slope, explaining the difference between zero slope and no slope, determining if a relation is a function, and verifying if a student is correct in a function evaluation problem. In the Pick 4 Essays, Unit 9, Week 2, Questions 2 and 3 ask students to write about exponential functions. Question 2 asks, "Compare and contrast growth and decay functions," and Question 3 asks, "What is an exponential regression? Why is technology used to find the equation that best represents the data?"

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	8/8
6.2b	All criteria for guidance met.	4/4
—	**TOTAL**	12/12

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

The materials guide students to reflect on their mathematical problem-solving for the week and share their reflections in the weekly Pick 4 Essays. For example, the Pick 4 Essays for "Quadratic Functions" Week 1 prompts students to share their explanation of the process of graphing quadratics by hand, their arguments for what information can be determined from an axis of symmetry, their justification of how a system they created would have no solution, and multiple points of entry by naming one way to check that a solution to an equation is correct.

The Pick 4 Essays for "Scatterplots and Statistics" Week 1 prompts students to reflect on multiple points of entry to share the best way to solve a system of equations and their explanation of this opinion, and to share their justification of why we should use the calculator to find the line of best fit instead of drawing a trend line. In the Unit 1, Week 2, Pick 4 Essay, students explain the process of solving an equation and justify their arguments about why checking if the solution for an equation is correct is an important step in solving equations. They also describe how they would approach it (multiple entry points). In Unit 6, Day 2, Pick 4 Essays, Questions 4 and 5 ask students to explain the process of writing an equation in slope-intercept form given a point on the line and a slope, and to identify errors in a student's calculation.

The materials provide students with opportunities to reflect on their problem-solving approaches. In Unit 8, Day 15, "Students who have demonstrated mastery can select a task from the Enrichment and Extension Choice Board (Supplemental Material 9.15C). The activities provide opportunities for students to apply their knowledge creatively, analyze errors in reasoning, and justify their understanding at a higher level."

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

The materials provide anticipated misconceptions, prompts, and guidance to support teachers in giving feedback. For example in Unit 8, Day 15 the materials state, "You correctly identified that the 4 is inside the parentheses, so the change is horizontal. That's a perfect start! Now, let's think about why horizontal changes seem backwards. To get the same y-value, the function $p(x) = (4x)^2$ needs a much smaller x-value than $f(x) = x^2$ does. It's reaching the y-values faster, so the graph gets squeezed horizontally, making it a compression. Let's test a point to prove it."