Kiddom, Inc.

English Mathematics, Algebra II

Kiddom Texas Math: Algebra 2

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Full-Subject, Tier-1	**9798894309132**	**Both Print and Digital**	**Static**

Rating Overview

TEKS SCORE	ELPS SCORE	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	100%	4	Flags Not in Report	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	22 out of 28	79%
2. Progress Monitoring	22 out of 26	85%
3. Supports for All Learners	23 out of 27	85%
4. Depth and Coherence of Key Concepts	16 out of 19	84%
5. Balance of Conceptual and Procedural Understanding	37 out of 41	90%
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	Materials do not include multiple pacing calendars that reflect various numbers of instructional days.	1/2
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**	11/12

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

The *Course Overview* includes an Algebra II scope and sequence that outlines the specific order of the math Texas Essential Knowledge (TEKS), English Language Proficiency Standards (ELPS), and concepts taught throughout the instructional year.

The scope and sequence found in the *Course Overview* includes the TEKS and ELPS within each unit and lesson, as well as the concepts taught within the course. For example, Unit 1, Section B, Lesson 3 has four learning targets and covers four of the TEKS and one ELPS.

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).

A "Texas Math High School Pacing Guide," located in the *Course Guide for Algebra II*, includes the number of weeks and days of instruction for each unit content for the school year.

The "Texas Math High School Pacing Guide" includes pacing for 32 weeks. The materials do not provide pacing for more than one instructional calendar with a note that states, "Pacing does not include time for student and staff holidays."

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

The "Course Narrative" in the materials gives a rationale of the unit order for the course. The "Course Narrative" states, "The first unit starts with creating and interpreting equations and their graphs. This sets a tone for the course of understanding quantities in context."

The "Course Narrative" in the "Course Overview" includes rationale for unit order and an explanation for how concepts in the scope and sequence connect throughout the course.

The concepts to be learned throughout the course located in the scope and sequence provides the explanation behind the unit progression.

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

The *Kiddom Texas Math High School Course Guide for Teachers* includes a section titled "Professional Learning Community (PLC)." The purpose of this section is to, "support teachers and coaches in this collective work; each unit section has an activity identified as a 'PLC activity.'" Also included in this section is a structure for teachers to use as they work together in professional-learning communities. The section provides guidance for teachers "before, during, and after" the PLC meeting.

The materials include a *Course Guide*, which includes a "Curriculum Study for Educators." This document provides teachers with a comprehensive unit internalization protocol, as well as a lesson internalization protocol. These sections provide teachers clear guidance to prepare to use the materials during instruction.

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

The *Kiddom Texas Math High School Course Guide* in the "PLC" section states, "To support teachers and coaches in this collective work, each unit section has an activity identified as a PLC activity." However, a PLC Activity was not found in the unit.

The materials include a *Course Guide*, which contains a section titled, "Administration Implementation Guide." This document provides resources and guidance for instructional leaders to support teachers with implementing the materials.

1.2 Unit-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	Materials do not include academic vocabulary at the unit level or background knowledge.	0/2
1.2b	All criteria for guidance met.	2/2
—	**TOTAL**	2/4

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.

The "Unit Narrative" includes a comprehensive unit overview with the unit learning goals, and a description of the unit.

The "Unit Narrative" does not include the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.

The materials include a glossary of terms for the course. The unit overviews do not include academic vocabulary.

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

For each unit, there is an Algebra II Unit FAQ document that contains suggestions for families on how to support the progress of their student. For example, for Unit 2, the section called "What Can I Do to Support My Student at Home?" suggests reviewing examples together.

The materials provide support for families in English and Spanish.

1.3 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.3a	Materials do not include ELPS addressed in the lesson plans.	7/8
1.3b	Materials are not specified as being either teacher or student materials.	1/3
1.3c	All criteria for guidance met.	1/1
—	**TOTAL**	9/12

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 Lessons Tabs within each unit include a presentation, lesson narrative, learning goals, learning targets (student-facing), the TEKS addressed, and the individual activities to complete the lesson; however, alignment to ELPS is not addressed in lesson plans. For example, in Unit 2 Lesson 4, there are two learning goals, one learning target ("I can" statement), the TEKS, and four activities.

The activity lesson plans in the lesson tab within each unit include necessary information for the effective implementation of instruction. For example, in Unit 2, Lesson 1, Activity 1.1 provides a list of the required materials, instructional routines to use with the activity, a lesson narrative, support for students with disabilities, questions for discussion, and problems with worked-out solutions.

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 "Lesson Overview" includes the materials needed for the lesson; however, the materials are not specified as being for either teacher or student.

The materials include timestamps for overall activities in the activity narratives.

The materials include suggested timing for each lesson component within each lesson.

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

The materials provide guidance on using the practice problems within each lesson and strategies to implement the practice problems. For example, the material states, "Assign practice problems for homework or for extra practice in class. Collect and score the problems. . .Decide which problems to assign."

The *Course Guide for* T*eachers* includes a section with guidance on the effective use of practice problems for extended practice.

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 diagnostic and summative assessments at the unit level that vary in types of tasks.	7/9
2.1b	All criteria for guidance met.	2/2
2.1c	All criteria for guidance met.	2/2
2.1d	All assessments are aligned to the learning objectives, but only the summative assessments show the alignment to the TEKS.	4/6
2.1e	All criteria for guidance met.	2/2
—	**TOTAL**	17/21

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.

The "Assessment Guide" found within the *Algebra II Kiddom Math High School Course Guide for Teachers* identifies the Diagnostic Assessment as each unit's Check For Readiness. These are found within each unit; for example, Unit 7 assesses student readiness for Unit 7 instruction in the Check for Readiness. These pre-assessments vary in the question types, including multi-select, fill-in-the-blank, short answer, graphing, and multiple choice.

The "Assessment Guide" identifies various types of classroom discussion as formative. These planned interactions vary and prepare the teacher with a wide array of options to assess student learning.

The "Assessment Guide" also identifies each unit's "End-Of-Unit Assessment" as summative; every unit includes one (see any nit). Individual lessons also provide summative assessment through daily practice and summary activities.

The materials do not include diagnostic and summative assessments at the unit level that vary in types of tasks.

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

The "Assessment Guide" found within defines and describes various types of diagnostic, formative, and summative assessments in the materials.

The "Assessment Guide" also describes the intended purpose for different assessments to inform the teacher on student learning so they may adjust instruction to meet students' needs. For example, the guide provides teachers with the guidance to assess how well students understand the work of the day when referring to the Cooldown Assessments.

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

The *Kiddom Math High School Teacher Resource Guide* includes teacher guidance to ensure accurate administration of instructional assessments. Learning goals are referenced multiple times in the *Kiddom Math High School Teacher Resource Guide* and within each lesson.

In each lesson, the materials include "Monitor for. . ." prompts, which give examples of what to look for in student work as they engage in a problem-solving activity. For example, in Unit 12, the "End-of-Unit Assessment" teacher instructions state, "Graphing calculators are not allowed in order to assess student understanding of the value of trigonometric functions with different radian inputs."

The *Course Guide* contains a section entitled "Assessment Guidance," which provides clear directions and a script for the teacher when administering assessments to ensure consistent and accurate administration.

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

Each unit includes a one to three problem Checkpoint Assessment that assesses the learning goals for that section. These formative assessments do not identify the associated TEKS.

While the Unit Assessment does not specify alignment of each question to the TEKS, the course scope and sequence identifies the TEKS and objectives addressed by each Unit Assessment (summative assessment).

The "Check for Readiness diagnostic included in each unit describes to the teacher the alignment to the learning objectives, but does not include the alignment to the TEKS.

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

Instructional assessments include multiple-choice, text-entry, multiselect, graphing, inline choice, and open-response items aligned to the TEKS. For example, in Unit 7, the End-of-Unit Assessment includes drag-and-drop, text entry, open-response, and graphing questions.

The Cumulative Practice Problem Set Assessment at the end of each lesson contains varying levels of complexity. For example, the Unit 3, Lesson 3, Cumulative Pp Set For Writing Inverse Functions to Solve Problems includes multiple choice, open-response, text-entry, and graphing questions.

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 materials provide guidance for teachers to interpret student performance, with a "Note for Evaluating Responses" section with each question on unit assessments and lesson questions. For example, in Unit 2, End-of-Unit Assessment, Question 3 provides teacher guidance with a rubric for identifying student work as tier 1, tier 2, or tier 3.

The materials provide guidance on how to continue "teaching grade-level content, with appropriate and aligned practice and support for students." The Cooldown guidance is divided into three categories (More Chances, Points to Emphasize, and Press Pause), with suggestions on next steps to help students.

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

The materials include a section that provides teachers guidance on how to respond to student performance based on the instructional assessments. For each item on the lesson assessments, teachers are provided sample student responses with a detailed and tiered analysis for a wide array of potential responses. For each potential response, teachers are provided suggestions on how to respond to student work.

The materials provide End-of-Unit Assessment Guidance that includes sample student responses, potential misconceptions, and common errors. For example, the materials state, "An upcoming activity might require solving an equation in one variable. Strategies might include: Add additional questions to the Warm-up, with the purpose of revisiting the skill."

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

Materials include tools for teachers to track student progress and growth, and tools for students to track their own progress and growth. Teachers and students have a Class Standard Mastery report, and students can check their progress weekly or monthly.

Additional information regarding tracking student progress and growth can be found on the Support Site. The article "What Insights Do My Reports Offer?" describes tools given to teachers and states, "The Reports help monitor student progress over time, track growth by mastery level, and analyze both class and student performance on individual standards." For students, the article "What Do My Reports Mean?" states, "The Reports feature. . . allows you to track your performance in each class based on standards and assignments."

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 guide teachers in supporting students who have not yet reached proficiency in grade-level content in the advancing student thinking section of the lessons. For example, in Unit 2, Lesson 3.2: "Reflecting Across," the materials state, "Students may think that the two graphs are related by a different type of transformation: reflection over the y-axis and 180-degree rotation around (0.6, 0) are both reasonable guesses. Have these students (and any other students questioning if their answer is correct) use tracing paper to check their initial guesses."

The materials provide differentiated activities through optional activities that address a concept or skill that is below grade level. Most students need to refocus on previous concepts before moving to grade-level material. For example, in Unit 12, Lesson 4.3: "Measuring Circles," the optional activity states, "The goal of this activity is to measure circles using the radius as a unit of measure. In grade 7, students measure the circumference and diameter of different-sized circles and observe that the pairs of measurements appear to be proportional."

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 materials provide embedded support for teachers to develop student proficiency with unfamiliar vocabulary and references in text. In Unit 7, Lesson 3, Activity 3, teachers are guided to create a display of important terms and vocabulary. During the launch, the materials suggest reviewing "the exponent rules and the definition of square root and display them as a reference for students".

The materials include frequent structured opportunities for students to talk with groups or partners, using academic language through the strategy that is in the "Activity Synthesis." For example, in Unit 2, Lesson 2.2: "New Hours for the Kitchen," the materials state, "As each selected student shares their response to the first question, ask students to restate what they heard using precise mathematical language."

The materials include frequent structured opportunities for students to talk with groups or partners using academic language. "Think Pair Share" is the activity used in Unit 7, Lesson 6, where students are grouped in pairs. They are given two minutes to read, two minutes to think and write down their individual response, and two minutes to share their thoughts with their partner. Then there is a whole-group discussion.

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.

The materials include specific prompts ("Are you ready for more?") for differentiation during the lesson. These problems provide extension and enrichment opportunities for students to go deeper into grade-level math and make connections between the current topic and other concepts. For example, in Unit 12, Lesson 1.3: "Where Is the Point," Question 5 is an extension of the lesson activity that requires a deeper understanding of applying and calculating unknown values in a real-world situation.

The materials provide detailed guidance to teachers on how to differentiate instruction for students who have demonstrated proficiency in grade-level content and skill in the *Teacher Resource Guide*, which is found within the *Course Guide*.

The materials provide teacher guidance for extension activities for students who have demonstrated proficiency in grade-level content. For example, in Unit 7, Lesson 5.4: "Make These Exponents Less Complicated," the materials state, "This activity is optional because it goes beyond the depth of understanding required to address the standards. Students build on their work in the previous activity to compare expressions with rational exponents." The activity includes teacher guidance for the optional activity, addressing possible student misconceptions, strategies for clarifying the misconception in the moment, facilitation tips for reviewing student work, and questions to encourage deeper thinking.

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.

The materials include explicit guidance and support for the teacher in modeling and explaining concepts. For example, in Unit 2, Lesson 4, the teacher is provided with suggested vocabulary to use when teaching the concept of symmetry.

The materials support the teacher in modeling the number line in Unit 4 by recommending the teacher use the north/south/east/west directions on a map.

The materials include questioning guidance and discussion prompts for teachers to engage students in deeper understandings of mathematical concepts. In Unit 1, Lesson 4.2: "Pieces of a Function," the "Activity Synthesis" section states, "Ask students: 'How did you know which equation to use to make the predictions on questions 2 and 3?'" and "If time allows, ask students: 'What does the use of two linear functions to model the data reveal about the connection between city and highway gas mileage that using one linear function would not?'"

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

The materials include guidance and recommendations for effective lesson delivery and provide more than two strategies for each lesson. For example, in Unit 2, Lesson 4, teachers are directed to use a "Think Pair Share" activity, followed by a group card sort, then a directed peer discussion, followed by a whole-class discussion led by the teacher.

The materials include teacher guidance and recommendations for effective lesson facilitation using a variety of instructional approaches. For example, in Unit 7, Lesson 1, teachers are supported in implementing guided practice, direct instruction, and collaborative learning strategies.

The *High School Course Guide for Teachers* includes teacher guidance and recommendations for effective lesson facilitation using a variety of instructional strategies in the instructional routines section. These include 5 Practices, Analyze It, Card Sort, Aspects of Mathematical Modeling, Construct It, Draw It, Extend It, Fit It, Graph It, Math Talk, Poll the Class, Take Turns, and Which Three Go Together.

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 materials include a variety of opportunities for students to apply and practice the concepts they learn. The opportunities included are guided practice, individual practice, partner practice, whole group learning, and project-based learning. For example, in Unit 1, Lesson 1, students work in groups of three to four, whole group discussion, and then individual practice.

The materials provide guided instruction for teachers to implement instructional routines and structures. For example, in Unit 12, Lesson 4.3: "Measuring Circles," the Launch section begins with students working in groups of four. The "Activity Synthesis" then guides a whole-class discussion in which students share their results. The lesson concludes with students working independently to complete the remaining questions, supporting a progression from collaborative to individual learning.

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	Materials do not include teacher guidance on providing linguistic accommodations for various levels of language proficiency, which are designed to engage students in using increasingly more academic language.	0/2
3.3b	All criteria for guidance met.	1/1
3.3c	The materials do not include guidance for teachers to support emergent bilinguals in making cross-linguistic connections through oral or written discourse.	6/8
3.3d	This guidance is not applicable to the program.	N/A
—	**TOTAL**	7/11

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 provide teacher guidance on implementing linguistic accommodations, providing linguistic accommodations; however, the supports are not differentiated by language proficiency levels as defined by the ELPS or any other proficiency framework.

The accommodations provided in the materials are general and directed to all English Language Learners. For example, in Unit 3, Lesson 4, the materials provide generic teacher guidance to help students build academic language with routines and sentence frames, but do not define the levels of proficiency of the students based on the ELPS.

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

The materials include implementation guidance for teachers in using the materials in a state-approved ESL program. "The Course Overview: Kiddom's Approach to English Language Proficiency in Texas Math" includes eight mathematical language routines.

An example of guidance in implementing the eight mathematical language routines is found in Unit 9, Lesson 5, where students use a handout called "Collect and Display," which captures student language, vocabulary, and gestures prior to student writing.

Lessons include implementation guidance for teachers in the "Support for English Language Learners" section, which focuses on all of the strategies used to help expand academic vocabulary. For example, Unit 2, Lesson 1 about transformations of functions gives guidance for using strategies of feedback prompts, oral discussion, and opportunity for revision based on peer feedback.

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 the development of academic vocabulary, increasing comprehension, and building background knowledge with emergent bilingual students. For example, in Unit 1, Lesson 3, sentence stems are provided for use during whole-class discussion to encourage the use of the terms domain and range. In Unit 4, Lesson 1, students are prompted to draft written explanations of their mathematical thinking, share their writing with a peer, and revise their writing with a focus on evaluating the mathematical arguments of others when solving quadratic equations.

Many lessons provide opportunities to connect visual aids to key vocabulary terms and prompt the teacher to use the visual displays to build background knowledge the students will need to apply the mathematical procedures. For example, Unit 1, Lesson 7 asks students to determine which function best fits the shape of given data based on this background knowledge.

The materials do not include the use of cross-linguistic connections either in oral or written discourse.

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.

The materials require students to show their understanding of the TEKS. For example, Unit 10, Lesson 8, Activity 2 requires students to complete a table in a contextual problem analyzing given information, formulating a plan or strategy, and determining a solution. This practice addresses TEKS A2.1.B.

In Unit 1, Lesson 2, students graph the parent functions and investigate how transformations affect these parent functions. This lesson addresses TEKS A2.4.C, with students describing the effect on the graph of transformations.

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

The materials contain questions and tasks that progressively increase in rigor and complexity. For example, in Unit 8, Lesson 2, students compute a table of values using functions, and then sketch the end behavior of polynomial functions. Later, students discuss scenarios related to the same standard.

In Algebra II, students collect and analyze bivariate data to answer investigative questions. They then analyze the relationships between two variables with bivariate data. Students then use technology to find the curve of best fit that models quadratic and exponential relationships between two variables.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	Materials do not demonstrate coherence across units by connecting the content and language learned in previous courses and grade levels and what will be learned in future courses and grade levels to the content to be learned in the current course and grade level.	0/3
4.2c	All criteria for guidance met.	4/4
—	**TOTAL**	5/8

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

The materials include a "Section Overview" for each Unit that explains the big ideas. For example, in Unit 2, the "Section Overview" breaks down the unit into Section A: Translations and Reflections, and Section B: Matching Functions to Data.

The materials begin in Unit 1 with teaching parent functions and transformations of functions. In subsequent units, students use these foundational concepts to understand rational functions and exponential functions.

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 materials do not demonstrate coherence across units by connecting the content and language learned in previous courses and grade levels and what will be learned in future courses and grade levels to the content to be learned in the current course and grade level.

There is no evidence that the materials demonstrate coherence with the language learned in previous courses or grade levels.

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' prior knowledge of concepts to new knowledge and skills. For example, Unit 1, Lesson 6 includes a "Lesson Narrative" section that connects the topic of the lesson to prior student knowledge of concepts and procedures learned in the previous courses. For example, the first paragraph of the "Lesson Narrative" revisits the idea that was first learned in middle school.

The materials connect concepts within the course at the lesson level. For example, in Unit 2, Lesson 1, the "Lesson Narrative" states, "In subsequent lessons, students will continue to write and interpret expressions, equations, and inequalities that represent situations and constraints."

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.

Lesson materials provide opportunities for spaced practice across units and lessons. For example, Unit 10, Lesson 5 embeds practice problems on previously learned concepts, such as factoring quadratic expressions, into the current lesson on solving quadratic equations by using the factored form of the equation.

The materials include Warm-ups for each lesson that embed spaced practice by including previously learned concepts.

The materials include Warm-ups for each lesson that embed spaced retrieval by including previously learned concepts. For example, in Unit 2, Lesson 1, "1.1: Warm-Up—What Happened to the Equations?" states, "The purpose of this warm-up is for students to consider both graphs and equations of functions when describing horizontal and vertical translations. This work builds on the more informal descriptions of the previous lesson and looks ahead to the following activities where students describe transformations using function notation."

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

The materials provide interleaved practice opportunities. For example, in Unit 6, Lesson 4, students write systems of linear equations in matrix form. Then, in Unit 6, Lesson 5, students continue practicing this skill.

In Unit 4, Lesson 2, students learn and apply how to add and subtract complex numbers and raise imaginary numbers to powers. Students practice this concept, and then engage in mixed (interleaved) practice over multiplying complex numbers from a previous lesson.

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 provide questions and tasks that require students to interpret mathematical representations. For example, in Unit 5, Lesson 6, students evaluate graphs and equations of quadratic functions and are asked to match them. Students rely on the structure of the quadratic expressions and how they relate to the graph.

The materials require students to analyze and evaluate models and representations. For example, in Unit 1, Lesson 1, "Activity 1: Warm-Up—Descriptive Words," students are asked to analyze four scatter plots and explain their reasoning.

The materials prompt students to evaluate models for mathematical concepts and situations. For example, in Unit 1, Lesson 4.2, students use technology to determine the equation of a piecewise function that best models the relationship between two variables. Students are encouraged to make predictions, explore relationships, and interpret data. Students are also given real-world problems to evaluate.

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

The materials include questions that prompt students to create models to represent mathematical situations. For example, Unit 1, Lesson 4, "Activity 3: Assessing Model Reasonableness," provides an opportunity for students to use graphing technology to place data into a table. They are then prompted to write the curve of best fit and the equation of the curve modeled by the data.

The materials include tasks that prompt students to create models to represent mathematical situations. In Unit 8, Lesson 1, "Activity 2: Building Boxes," provides a hands-on introduction to modeling the volume of a box using a polynomial function. The goal stated in the "Activity Synthesis" is for students to understand how to calculate the volume of a box without measuring each dimension.

In Unit 3, Lesson 1, "Activity 1.1: Warm-Up—What Does It Say?," students create their own shift cipher and exchange it with a partner. They then use their partner's shift cipher to decode the message. The materials provide teacher guidance to connect this activity to inverse functions.

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

The materials provide opportunities for students to apply conceptual understanding in a novel context. For example, in Unit 1, Lesson 8, students explore the pH scale as a real-world application of logarithmic functions. Students analyze a table with hydrogen ion concentrations and pH ratings, and then are asked to generalize the pattern with an expression.

In Unit 8, Lesson 1, students are asked to write an expression that models the volume of a box as a function and then graph the functions. Students use the graph to estimate the value that will produce the box with the largest volume.

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 include spiraled warm-up activities that build student automaticity and fluency necessary to complete grade-level tasks. For example, in Unit 2, Lesson 1.1: "Warm-Up—What Happened to the Equation?," the materials state, "The purpose of this warm-up is for students to consider both graphs and equations of functions when describing horizontal and vertical translations. This work builds on the more informal descriptions of the previous lesson and looks ahead to following activities where students describe transformations using function notation."

In Unit 7, Lesson 1 the materials state, "Students build fluency by matching equivalent expressions that involve exponents. This task gives students opportunities to analyze representations, statements, and structures closely and make connections."

The materials provide fluency-focused practice problems within each lesson that include questions from the current lesson and review material from earlier in the same unit and previous units.

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 materials provide opportunities for students to practice the application of efficiency by choosing the most efficient procedure given various options; for example, in Unit 7, Lesson 9, students examine various approaches to solving radical equations and then choose the most efficient.

The materials provide opportunities for students to develop and practice flexibility with mathematical procedures; for example, in Unit 2: "Transformation of Functions," students understand and use function notation to represent vertical and horizontal students use function notation to represent vertical and horizontal translations between graphs. They apply procedures introduced in previous lessons to flexibly show the relationship between a graph and its corresponding equation, particularly when describing horizontal translations.

The materials provide opportunities for students to practice the application of accurate mathematical procedures; for example, in Unit 4: "Complex Numbers," students practice adding, subtracting, and multiplying complex numbers with prevision. The activities guide students in developing procedures or rules to support accurate application of these operations as they progress to more complex concepts.

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 materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency. For example, in Unit 8, Lesson 1.2: "Building Boxes," the activity narrative states, "Monitor for students using logical reasoning to figure out the volume of their boxes instead of, or in addition to, measuring directly to share during the whole-class discussion".

The materials provide opportunities for students to evaluate procedures, processes, and solutions for flexibility and accuracy. For example, in Unit 8, Lesson 6.4: "Spot the Differences," the "Activity Synthesis," states, "Begin the discussion by selecting 2–3 previously identified students to share how they rewrote f(x) and g(x) in standard form. Display different methods used for all to see and compare. If all students multiplied the factors in the same order, demonstrate how multiplying in a different order results in the same product."

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

The materials contain embedded supports for teachers to guide students toward increasingly efficient approaches as the unit progresses. For example, in Unit 3, students begin with inverse functions, then writing inverse functions to solve problems, next combining functions, and compositions of functions.

Embedded supports within the materials guide teachers to provide support to help students move toward increased efficient approaches within the lessons. The materials suggest how students should be arranged in groups and how to begin and lead through class discussions. For example, in Unit 1, Lesson 5.2: "Functional Family Gallery Walk," the materials suggest pairing students up and for the teacher to "Discuss as a class the key features of each function family. Compare student observations and clarify any misconceptions. Highlight the unique characteristics that define each function family. Ask probing questions like 'How does the rate of change in this function compare to others?' or 'What happens to the graph as x approaches infinity?' to guide their thinking."

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 materials describe how conceptual and procedural content are developed together, in alignment with the TEKS. The "Course Overview" provides an explicit explanation of how students progress from procedural to conceptual understanding of linear equations, inequalities, and systems of linear equations and inequalities, ensuring a coherent and connected learning experience.

The materials describe the progression from procedural to conceptual understanding in the "Section Level Planning Guide" found within each unit. For example, in Unit 2, the "Section Level Planning Guide" describes how students start with fundamental concepts of interpreting the rational exponents in an exponential function. Then, students examine the property of growth by equal factors over equal intervals holds even when the interval has non-integer length. They use logarithms to solve for unknown exponents and are introduced to the number *e* and its use in modeling continuous growth. Logarithm functions and some situations they model well are also briefly addressed. This progression specifically aligns to the concepts and procedures called for in TEKS 2A.5.A, 2A.5.C, 2A.5.B, and 2A.5.D (in that order).

The "Family Support Materials" outline what students will specifically do and how students will connect the main ideas in each unit to the procedures taught. For example, for Unit 2, the "Family Support Materials" provide a "Frequently Asked Questions" handout, which describes the main ideas taught in Unit 2.

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.

The materials provide questions and tasks that include concrete models and manipulatives (e.g., in Unit 8, students use scissors to cut paper and construct a box). The measurements of that box are then used to describe the volume of the box as the product of the three measurements, written as the product of three polynomials.

The materials provide questions and tasks that include pictorial representations (e.g., in Unit 9, Lesson 3, students are prompted to represent rational functions by their graphs and then analyze their critical attributes).

The materials provide questions and tasks that include abstract representations (e.g., in Unit 1, Lesson 7, students are given the graph of a function and are asked to write the equation that best represents the graph).

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 include support for connecting the concrete and representational models to abstract concepts. Unit 8, Lesson 1 supports students connecting, creating, defining, and explaining concrete and representational models to abstract as required by the TEKS for this Unit. The video presentation, the Launch, and the "Activity Synthesis" provide the instruction with step-by-step instructions and strategies to ensure the students are engaged and have a deeper understanding of the mathematical concepts through multiple representations of the content presented.

The materials provide support for students to connect, create, and explain concrete and representational models to abstract concepts. For example, in Unit 2, Lesson 2, students are given a real-world situation of translating a graph to the left. Students are asked to explain why translating to the left does not mean subtracting. Then, students are given a new graph and are asked to describe what the graph tells them based on the previous graph. Finally, students write an expression for the situation.

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 materials provide opportunities for students to develop their academic mathematical language using visuals. The "Course Overview" includes a glossary that provides visuals for vocabulary words when appropriate; for example, for the word *focus*, there is a visual of a parabola with the "focus" labeled.

The materials provide opportunities for students to develop academic mathematical language using visuals and language development strategies such as questioning, communication strategies, and instruction routines embedded in the lesson. The materials in Unit 4 on complex numbers use visuals such as displayed problems, coordinate planes, and number line drawings. The same unit uses language development strategies such as instructional routines and Math Talk.

The materials provide opportunities for students to develop their academic mathematical language using manipulatives. For example, in Unit 5, Lesson 6, the material includes a Card Sort in the lesson to match given equations in vertex form to graphs. Teachers are guided to put students into groups of two for their Card Sort and have students take turns matching a graph to an equation. The partner completing the matching explains their thinking while the other partner listens. In the "Activity Narrative" it states, "As students work, encourage them to refine their descriptions of the equations and graphs using more precise language and mathematical terms" guiding the teacher to support students in using academic mathematical language during peer discussions.

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

The materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary in context. For example, in Unit 8, Lesson 3, students work with partners to complete a card sort matching equations to graphs. The materials have questions embedded in the teacher notes under the "Activity Synthesis" section including, "Which matches were tricky? Explain why", "Did you need to make adjustments in your matches", "What might have caused an error?", and "What adjustments were made?"

The materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary in context. For example, in Unit 1, Lesson 2, students begin their study of bivariate relationships. The teacher guidance includes the academic vocabulary (*bivariate data, scatterplot, outliers*, and *correlation*) that students will need to understand by the end of the lesson.

The materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary. For example, in Unit 3, Lesson 1, students are introduced to inverse functions, and they create their own shift cipher to make a secret code. Students then work with a partner to try to decode each other's secret message. The materials have questions embedded in the teacher notes under the "Activity Synthesis" section including, "Can we think of the process of encoding a message as a function? Why or why not", and "How are the two equations alike?"

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 support for teachers to facilitate mathematical discussions among students to hear, refine, and use their mathematical language toolkit. For example, all questions in Unit 3, Lesson 1, provide a note for evaluating responses, which provide guidance to support student responses using exemplar responses to questions and tasks.

The materials include group discussions that provide opportunities for students to hear, refine, and use mathematical language. For example, every lesson includes group discussions that provide opportunities for students to hear, refine, and use mathematical language. For example, in Unit 4, Lesson 3, students are grouped in pairs and discuss their responses with their partners. At the end of the lesson, the materials provide teacher guidance to lead a whole-class discussion by providing questions to ask students, vocabulary to support conversations, syntax, and discourse.

Materials include embedded teacher guidance to support student responses using exemplar responses to questions and tasks by including sample responses in the teacher notes. For example, in Unit 7, Lesson 2: "Info Gap: Two Points," the task provides notes for evaluating student responses.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	The materials do not include a description of how the TEKS process standards are connected throughout the course.	0/2
5.5c	Materials do not include a description for each unit of how the TEKS process standards are incorporated and connected throughout the unit.	0/2
5.5d	All criteria for guidance met.	1/1
—	**TOTAL**	2/6

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

The TEKS process standards are integrated appropriately into the materials. In the *Course Guide*, the section "What's in a Kiddom Math Lesson" describes how the process standards are integrated in each lesson and how each session provides opportunities throughout for the student to analyze and communicate mathematical concepts to real-world situations. It states, "The Warm-up strengthens procedural fluency; the Launch helps connect with an unfamiliar context; the "Activity Synthesis" allows time to make connections to new learning; the Cool Down determines students' understanding of the content."

The materials provide evidence of the process standards integrated appropriately into the activities. For example, Unit 8, Lesson 2, prompts students to write a polynomial to model a simple investment. Students decide how to represent the problem with a table, equation, or graph, and use graphing technology to see the expression over different years and with different investment amounts.

The materials integrate the process standards appropriately. For example, in Unit 1, Lesson 3, the process standards are clearly demonstrated in a lesson on quadratic regression. Activity 3.2 asks students to use a calculator to find the curve of best fit and the coefficient of determination. This activity integrates the process standard A2.1C.

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

The materials include a description of how the TEKS process standards are incorporated throughout the course. The scope and sequence in the "Course Overview" includes which process standards are included within each lesson.

The materials include a description of how the TEKS process standards are incorporated throughout the course. For example, in Unit 6, students create systems of equations from contextual situations. They must process and interpret the mathematical representations to differentiate between linear and

quadratic relationships and how to express them mathematically to make connections between the multiple representations.

The materials do not include a description of how the TEKS process standards are connected throughout the course.

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

The materials do not include a description of how the TEKS process standards are incorporated throughout the unit. There is a scope and sequence document that provides a chart with units and lessons, and which process standards are present in each lesson.

The materials do not include a description of how the TEKS process standards are incorporated and connected throughout the unit.

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

The materials include an overview of the TEKS process standards incorporated at the beginning of each lesson on the first page in the introduction under "Texas Essential Knowledge and Skills." For example, in Unit 4, the process standards addressed are A.1A, A.1B, A.1D, and A.1G. These are listed with the content standards.

The materials include a "Lesson Overview" that lists the TEKS that are addressed within the lesson. For example, in Unit 2, Lesson 4, the TEKS listed include 2A, 1G: display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

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 materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. For example, in Unit 1, Lesson 4, students analyze a piecewise function to determine which car would be most cost-effective for a trip based on gas mileage. This task requires students to complete several steps, including analyzing a graph to determine the line of best fit, and then using that equation to make predictions and provide recommendations related to car mileage.

The materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. For example, in Unit 11, Lesson 8, students analyze the relationship between hydrogen ions and acidity. Based on their analysis, they are prompted to write a logarithmic equation to represent the relationship. In Lesson 8.3, students use the logarithmic equation they wrote to test their theories and solve additional problems.

The materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. For example, in Unit 3, Lesson 4, students are asked to plot the values of B as a function of t using a data table. The next question asks students to explain what this plot tells them about the book sales.

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 materials support students in understanding that there can be multiple ways to represent and solve problems. For example, in Unit 2, Lesson 5, students determine whether a function is even or odd. In the "Activity Narrative" of the teacher notes, it states, "monitor for students who use different methods in the first 5 minutes, such as checking for specific points of symmetry, graphing then reflecting the curve to see if it results in the same curve, and checking points in an equation such as f(x)= f(-x)." After the first five

minutes, students are shown they can also determine if a function is even or odd algebraically in addition to the other methods listed above.

The materials support students in understanding that there can be multiple ways to represent and solve problems. For example, in Unit 8, Lesson 6, students are asked to multiply polynomials to determine if two expressions are equivalent and then multiply polynomials by a diagram. The "Activity Synthesis" states, "Invite students to share their diagrams. If some students used methods other than diagrams to multiply their partner's expression, invite them to share and explain their method."

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 are designed to require students to make sense of mathematics through multiple opportunities for students to do and discuss math with their peers. For example, in Unit 7, Lesson 9, the material directs students to work in pairs to write radical equations. In the "Activity Synthesis," the material states, "Ask students to check their solutions with their partners. Ask students to share any equations they felt helped them learn the most and discuss those equations with the class. If any students used graphs to help figure out their equations, invite them to share and display their visuals for all to see. Ask students if they prefer radicals or rational exponents." These prompts and questions require students to discuss math with their peers.

The materials are designed to require students to make sense of mathematics through multiple opportunities for students to do and write about math with their peers. For example, in Unit 2, Lesson 4, there is a Card Sort activity to be completed in partners where students sort their graphs in categories of their choosing. Students will share their categories, explaining both their selection process and how they organized the graphs. When students explain why they chose their categories, they will do so through written communication with their peers.

The materials are designed to require students to make sense of mathematics through multiple opportunities for students to do math with peers and teachers. In Unit 6, Lesson 6, students work with a partner to solve the system of equations given by whichever method they choose. Students then share and explain their justifications with the whole class and teacher.

The 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 *High School Course Guide for Teachers* includes the "MLR1 Stronger and Clearer Each Time." "The routine offers a structured and interactive opportunity for students to revise and refine their ideas and their verbal and written output (Zwiers, 2014). This routine provides a purpose for students' conversation through the use of a discussion-worthy and iteration-worthy prompt."

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 materials support teachers in guiding students to explain and reflect on their problem-solving approaches. For example, in Unit 1, Lesson 5, students work in small groups to analyze sets of graphs, tables, and equations representing different function families. As students collaborate, they record their observations on their worksheet. Students then explain their problem-solving approach. During the "Activity Synthesis," the materials direct teachers to have groups share their findings and highlight how multiple representations support understanding of function properties. The teacher is further prompted to "Ask students to compare and contrast the tables and graphs of the various function types—connect these comparisons to the equations. Clarify any misconceptions and summarize the key points of comparison." The compare, contrast, and summarize component of this task requires students to reflect on their thinking.

The materials support teachers in guiding students to explain, justify, and reflect on their problem-solving approaches. For example, in Unit 4, Lesson 2, students are introduced to *i* and complete a Math Talk activity. In the "Activity Synthesis," the materials prompt teachers to ask students to share their strategies for each problem, followed by questions including "Did anyone solve the problem in a different way?" and "Do you agree or disagree? Why?"

The materials support teachers in guiding students to share their problem-solving approaches with explanations, arguments, and justifications. For example, in Unit 8, Lesson 6, students work in groups to identify features of a polynomial function based on a given context and expression. The teacher then leads the class discussion by having students share their different strategies of rewriting the equation. Students then debate the advantages and disadvantages of the shared strategies.

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

The materials include guidance to support teachers in providing explanatory feedback based on student responses. For example, in Unit 3, Lesson 3, Activity 3.4, the section titled "Respond to Student Thinking" states, "Support students who were successful in solving for unknowns, but had errors in their equations by sharing student work that solved for the unknown using several equations and doing a think aloud for how to translate those steps into a single equation."

The materials include guidance to support teachers in providing explanatory feedback based on anticipated misconceptions. For example, in Unit 3, Lesson 3, the "Anticipated Misconceptions" section includes common misconceptions students might make in the activity relating to inverse functions. To address these misconceptions, the materials include the following teacher prompts: "Prompt them with questions such as, 'How quickly does the percentage of homes with only cell phones grow?' or 'By how many percent, roughly, does it grow each year? How can we find out?'"

The materials include prompts to support teachers in providing explanatory feedback based on student responses and anticipated misconceptions. For example, in Unit 3, Lesson 3, the "Warm-up" includes teacher prompts in the margin notes for evaluating responses for both questions and provides feedback for student responses. In Activity 3.2, under the "Advancing Student Thinking" section, the materials include a teacher prompt for explanatory feedback to address the anticipated student misconception that students might incorrectly interpret the πr^2 in the volume formula as $(\pi r)2$.