Publisher Name	Program Name
Curriculum Associates, LLC	*Texas i-Ready Classroom Mathematics*
Subject	**Grade Level**
Mathematics	8

Texas Essential Knowledge and Skills (TEKS) Coverage: **100%**

English Language Proficiency Standards (ELPS) Coverage: **100%**

Quality Review Overall Score: **212 / 227**

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	**47 / 53**
2. Progress Monitoring	**24 / 28**
3. Supports for All Learners	**29 / 32**
4. Depth and Coherence of Key Concepts	**23 / 23**
5. Balance of Conceptual and Procedural Understanding	**64 / 66**
6. Productive Struggle	**25 / 25**

Strengths

- 1.2 Unit-Level Design: Materials include comprehensive unit overviews that provide background content knowledge and academic vocabulary necessary for effective teaching, and contain supports for families in both Spanish and English with suggestions for supporting their student's progress.
- 1.3 Lesson-Level Design: Materials include comprehensive, structured lesson plans with daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards. They also provide a lesson overview outlining the suggested timing for each component, a list of necessary teacher and student materials, and guidance on the effective use of lesson materials for extended practice, such as homework, extension, and enrichment.
- 2.2 Data Analysis and Progress Monitoring: Materials include instructional assessments and scoring information that provide guidance for interpreting and responding to student performance, offer guidance on using tasks and activities to address student performance trends, and include tools for

students to track their own progress and growth.

- 3.1 Differentiation and Scaffolds: Materials include teacher guidance for differentiated instruction, activities, and scaffolded lessons for students who have not yet reached proficiency, pre-teaching or embedded supports for unfamiliar vocabulary and references in text, and guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.
- 3.2 Instructional Methods: Materials include prompts and guidance to support teachers in modeling, explaining, and directly and explicitly communicating concepts to be learned. They provide teacher guidance and recommendations for effective lesson delivery using various instructional approaches, and support multiple types of practice with guidance on recommended structures, such as whole group, small group, and individual settings, to ensure effective implementation.
- 3.3 Support for Emergent Bilingual Students: Materials provide guidance for teachers in bilingual/ESL programs, support academic vocabulary and comprehension, and include resources for metalinguistic transfer in dual language immersion programs.
- 4.1 Depth of Key Concepts: Materials provide practice opportunities and instructional assessments that require students to demonstrate depth of understanding aligned to the TEKS, with questions and tasks that progressively increase in rigor and complexity, leading to grade-level proficiency in mathematics standards.
- 4.3 Spaced and Interleaved Practice: Materials provide spaced retrieval and interleaved practice opportunities with previously learned skills and concepts across lessons and units.
- 5.1 Development of Conceptual Understanding: Materials include questions and tasks that require students to interpret, analyze, and evaluate various models for mathematical concepts, create models to represent mathematical situations, and apply conceptual understanding to new problem situations and contexts.
- 5.2 Development of Fluency: Materials provide tasks designed to build student automaticity and fluency for grade-level tasks, offer opportunities to practice efficient and accurate mathematical procedures, evaluate procedures for efficiency and accuracy, and include embedded supports for teachers to guide students toward more efficient approaches.
- 5.4 Development of Academic Mathematical Language: Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and language strategies, with embedded teacher guidance on scaffolding vocabulary, syntax, and discourse, and

supporting mathematical conversations to refine and use math language.
- 6.1 Student Self-Efficacy: Materials provide opportunities for students to think mathematically, persevere through problem-solving, and make sense of mathematics, while supporting them in understanding multiple ways to solve problems and requiring them to engage with math through doing, writing, and discussion.
- 6.2 Facilitating Productive Struggle: Materials support teachers in guiding students to share and reflect on their problem-solving approaches, offering prompts and guidance for providing explanatory feedback based on student responses and anticipated misconceptions.

Challenges

- 1.1 Course-Level Design: Materials do not include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course and do not have pacing guides for various instructional calendars.
- 2.1 Instructional Assessments: Formative and summative assessments are not TEKS-aligned to TEKS, and instructional assessments do not have items at varied levels of complexity.
- 3.3 Support for Emergent Bilingual Students: Materials do not provide linguistic accommodations for various levels of English language proficiency as outlined in the ELPS.
- 5.5 Process Standards Connections: Materials do not include descriptions of how process standards are connected throughout the course and units.

Summary

Texas i-Ready Classroom Mathematics is a grade 8 Mathematics program. It offers explicit instruction for mathematics acquisition at the grade eight level. The materials provide a multi-faceted approach to teaching mathematics at the grade eight level, including opportunities for students to learn with manipulatives, models, and abstract thinking. Each unit includes a detailed overview of instruction that provides a review of concepts learned in earlier units, learning and language objectives for each lesson, and strong vocabulary support. The materials include a personalized online learning platform with instruction, practice, and opportunities for games aligned with individual student needs. The resource offers a home and family connection component, which gives families an overview of the learning in each unit and activities to do at home to help support their child's instruction in the classroom. The materials include activities to support emergent bilingual students, students who may need reteach opportunities, and those who are ready for extension opportunities through lesson-specific language strategies and differentiated instruction.

Campus and district instructional leaders should consider the following:

- The materials provide alignment to grade 8 standards and instruction in all grade-level mathematical concepts and skills. Campus and district leaders may need to supplement alignment documents, such as the scope and sequence, where appropriate. They also have the option to request a scope and sequence directly from Curriculum Associates, LLC, given that one is not included in the materials.
- The materials have various activities and resources for supporting all learners, including students performing above and below grade-level proficiency and emergent bilingual students. Teachers may need additional support for providing linguistic accommodations in line with the four levels of language proficiency outlined in the ELPS.

Intentional Instructional Design

1.1	Course-Level Design	9/15
1.1a	Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course.	**0/5**
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).	**1/2**
1.1c	Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.	**2/2**
1.1d	Materials include guidance, protocols, and/or templates for unit and lesson internalization.	**2/2**
1.1e	Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.	**4/4**

The materials do not include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course. Materials include suggested pacing to support effective implementation within a 160-day instructional calendar. Materials do not include suggested pacing to support effective implementation for various calendars (e.g., varying numbers of instructional days —165, 180, 210). Materials include an explanation for the rationale of the unit order as well as how concepts connect throughout the course. Materials include guidance, protocols, and templates for unit and lesson internalization. Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.

Evidence includes, but is not limited to:

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

- The materials do not include a readily available scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course, though one can be requested directly from the publisher. Additionally, process standards are labeled throughout the units, though they are not the process standards in the TEKS.
- The Texas Ready Teacher Toolbox program implementation and the TEKS and ELPS Standards Correlations provide correlation charts that outline alignment to TEKS and ELPS breakouts in each lesson and process standards throughout the resource. Links include examples of the TEKS and ELPS breakouts being addressed within course materials.
- The i-Ready Classroom K–8 Teacher Toolbox and program implementation materials include pacing guidance for the year and a unit overview outlining concepts, knowledge, and topics taught throughout each unit aligned to the TEKS.

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

- The materials provide pacing guidance for the year within the *Teacher's Guide* to accommodate a 160-day instructional calendar.
- The materials include pacing guidance for a variety of instructional models, such as 4-day instructional weeks and extended math blocks within the "Alternate Schedules with *i-Ready* Classroom Mathematics" guide.
- The materials guide how to customize pacing within *i-Ready Success Central*.
- The materials do not provide suggested pacing for varied instructional calendars, such as the 180-day or 210-day calendar.

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

- The unit overview provides a rationale for the order of concepts in the course by including prerequisite knowledge for concepts that will be introduced and activities teachers may utilize before and after the unit to help students make connections between essential ideas.
- The *Teacher's Guide* includes a unit overview and lesson progression chart that provides a walkthrough explaining the planning and support features in each unit and the progression of previous, current, and future lessons to help students make connections.
- *i-Ready Success Central* features priority topic overview videos that provide a brief overview and explain the rationale behind the sequencing of units and lessons.

Materials include guidance, protocols, and/or templates for unit and lesson internalization.

- The *Teacher's Guide* contains a unit overview offering resources to help teachers internalize the unit and the lesson. It includes academic vocabulary used throughout the lesson and unit and prerequisite skills that students have already learned.
- The unit overview gives pacing guidance for each lesson section, provides objectives and standards for learning and language goals, offers options for math vocabulary, details a learning progression that connects previous, current, and future grade levels, and includes leveled differentiation within the unit and lesson.
- The *Teacher's Guide* and "Teacher Toolbox" include a "Math Background" Section that guides teachers into a deeper internalization of the concepts and skills that students will learn throughout each lesson and unit. This section discusses unit themes, prior knowledge, and insights on essential mathematical ideas.
- Before each unit, a section titled "Prepare for Unit" guides unit internalization. For example, "Prepare for Unit 1" provides recommendations regarding academic vocabulary, instructional routines, language support, and lesson delivery.
- *i-Ready Success Central* includes a "Plan and Pace" Section that provides interactive templates to support pacing instruction, unit planning, lesson planning, and session planning.

Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.

- *i-Ready Success Central* includes a “Professional Growth” Section that provides instructional leaders with the guidance and resources needed to conduct effective learning walks. Examples of resources provided include: "Conduct a Learning Walk: Pre-planning," "Try, Discuss, Connect Classroom Visits Bundle," and "Conduct a Learning Walk: Reflect.” The materials also include articles provided for administrators: "What is a Learning Walk?" and "How Can I Conduct a Learning Walk?"
- Within *i-Ready Success Central*, the materials include guidance and resources to help district leaders and school administrators facilitate professional development sessions, conduct learning walks, facilitate data analysis meetings, and help them understand the general flow of the program layout and how it fosters student learning.

Intentional Instructional Design

1.2	Unit-Level Design	4/4
1.2a	Materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.	**2/2**
1.2b	Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.	**2/2**

The materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit. Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.

Evidence includes, but is not limited to:

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

- The *Teacher's Guide* includes a general overview of the unit's structure and each lesson. This overview provides pacing guidance for each section within a lesson, objectives and standards that identify learning and language goals, math vocabulary options, a learning progression referencing connections across previous, current, and future grade levels, and leveled differentiation embedded within the unit and lesson.
- The materials include resources to help teachers internalize both the unit and the lesson by providing the academic vocabulary used throughout the lesson and unit, and prerequisite skills that have been introduced to students previously. The lesson progression page helps teachers understand the sequence of lessons, including what students have already learned or will learn in the future.

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

- In the *i-Ready Classroom Mathematics Family Center* and the *Spanish Family Center*, there is a family guide that provides an overview of *i-Ready*, a video explaining the learning in each unit, and family letters with activities for home practice for each lesson. These resources are available in English and Spanish.
- Within the *i-Ready Success Central*, the materials include an “Introduce *i-Ready* Classroom Mathematics to Families” guide in English and Spanish. The guide provides families with resources for getting started, supporting their students at home, how to familiarize themselves with the lesson framework, and practice problems.
- In the “Teacher Toolbox,” each lesson has a “Family Letter” that informs families what students are learning and includes an activity that families can do together. These family letters are available in English and Spanish, as well as Arabic, Korean, Mandarin, Portuguese, Russian, Tagalog, and Vietnamese.

- *Conocer sobre i-Ready Classroom Mathematics* includes a variety of resources to help families talk with their students about math, including instructions on how to use *i-Ready* at home, a description of how students use *i-Ready* at school, and math dialogue cards.

Intentional Instructional Design

1.3	Lesson-Level Design	34/34
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.	**30/30**
1.3b	Materials include a lesson overview outlining the suggested timing for each lesson component.	**1/1**
1.3c	Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.	**2/2**
1.3d	Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).	**1/1**

The 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. Materials include a lesson overview outlining the suggested timing for each lesson component. Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson. Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).

Evidence includes, but is not limited to:

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.

- The lesson plans within the materials include content objectives and language objectives. The materials include a lesson plan in the form of a lesson overview at the beginning of each unit. This overview includes daily objectives.
- The lesson plan materials within the *Teacher's Guide* include questions for teachers to ask students that are aligned with content standards and objectives and provide teachers with sample responses to listen for from students. For example, in "Lesson 21, Session 1," one of the prompts to facilitate a whole class discussion state "Ask: 'Why is multiplying 2 by 10^9 the same as moving the decimal point 9 places to the right?' Listen For: 'When you multiply 2 by 10 repeatedly, you get 20, then 200, then 2,000, and so on. The decimal point moves one place to the right each time. After 9 times, the decimal point will have moved 9 places right.'
- The materials include a variety of assessments with each lesson, such as "Exit Tickets" and lesson quizzes. Each lesson includes a digital comprehension check. For example, "Lesson 20, Session 2" includes an "Exit Ticket" question that tasks students with writing out whether individual values within a set are solutions of a given equation, which relates to the content objective of understanding what is meant by a solution of an equation and the language objective of using lesson vocabulary to write and talk about a solution of an equation. The

"Lesson 20" quiz includes a correlated task that requires students to determine if 1 is a solution to a given equation and explain their reasoning.

Materials include a lesson overview outlining the suggested timing for each lesson component.

- The materials include a lesson overview for each lesson. Each lesson is divided into parts called sessions. The materials provide suggested timing for each session and break down that timing for each component of the session.
- *i-Ready Success Central* provides guidance on how to customize pacing. For example, the "Plan and Teach" Section provides links to articles, such as "Set the Pace for Your Year" and "Discover Opportunities for Flexibility in Teaching."

Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.

- The materials provide lesson overviews that include a list of student and teacher materials that are needed for that session. For example, a sample session lists materials for students as geoboards, grid paper, tracing paper, and unit tiles, and materials for teachers as presentation slides. The materials also list the materials that students will need for differentiated parts of the lesson.
- The lesson overview includes a table that provides a list of daily materials. The "Math Toolkit" refers specifically to items that are needed for students, while the "Presentation Slides" icon refers specifically to items that are needed for teachers.

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

- The materials routinely incorporate activities titled "Reteach," "Reinforce," and "Extend." These activities are designed to be used as needed while students learn at their own pace.
- "*i-Ready* Personalized Instruction" allows students to work independently and at their own pace, based on the results of the *i-Ready* diagnostic test.
- The lesson overview located in the *Teacher's Guide* includes a "Differentiation" tab. This tab includes guidance on implementing various lesson parts in the "Prepare," "Reinforce," "Reteach," "Extend," and "Optional Add-on" Sections in each session. For example, in a session sample, interactive tutorials are listed in the "Prepare" Section, fluency and skills practice are listed in "Reinforce," and *i-Ready* personalized instruction is listed in the "Optional Add-on" Section.
- The materials include guidance for teachers on incorporating lesson materials to reteach, reinforce, enrich, and extend student learning. Within each session, there are differentiation boxes that are linked to different questions within either the "Try It," "Model It," or "Connect It" Sections that provide the teacher with suggestions on how to reinforce, reteach, or extend the information depending on how students respond to those questions.
- At the end of each session, the materials include additional practice with the suggestion to either assign it in class or as homework and further implementation guidance if the teacher assigns the additional practice during the class period.

Progress Monitoring

2.1	Instructional Assessments	20/24
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.	**12/12**
2.1b	Materials include the definition and intended purpose for the types of instructional assessments included.	**2/2**
2.1c	Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.	**2/2**
2.1d	Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.	**4/6**
2.1e	Instructional assessments include standards-aligned items at varying levels of complexity.	**0/2**

The 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. Materials include the definition and intended purpose for the types of instructional assessments included. Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments. Diagnostic assessments are aligned to the TEKS and objectives of the course, unit, or lesson. Formative and summative assessments are aligned to the objectives of the course, unit, or lesson. Formative and summative assessments are not aligned to the TEKS. Instructional assessments do not include standards-aligned items at varying levels of complexity.

Evidence includes, but is not limited to:

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 materials include a diagnostic assessment that guides teachers in personalizing student learning and making instructional decisions based on the data. The diagnostic assesses skills above and below students' chronological grade level. The assessment is administered at the beginning, middle, and end of the year and teachers can track student proficiency and growth. The results determine a personalized learning pathway of online lessons for each student.
- The materials include diagnostic, formative, and summative assessments at the unit level. A diagnostic assessment for the beginning of the course can be found within the *i-Ready* online materials. Additionally, each unit contains a "Prepare for the Unit" page just before the unit overview for students to complete individually, in groups, or in pairs. Each unit contains a variety of formative assessments called "Cumulative Practice," which include short answer, free response, and multiple-select questions. Within the unit review, students complete a performance task to show mastery of concepts. The materials contain two versions of an end-of-unit assessment that contain various question types such as numeric response, multiple-select, and multiple-choice.

- The materials include diagnostic, formative, and summative assessments at the lesson level. Each lesson begins with a lesson starter, such as "Which One Doesn't Belong," "Same and Different," and other brief checks for understanding. The checks for understanding provide suggestions for teacher responses based on student responses. Each section of the lesson, "Apply It," "Connect It," and "Model It," includes questions designed for the teacher to assess and respond to student understanding, along with breakout boxes labeled "Reteach," "Reinforce," or "Extend." The materials include unit assessments and digital comprehension checks at the end of each unit. These assessments are summative.
- The materials include "Exit Tickets" within each session for teachers to assess students' understanding. For example, "Lesson 1" has an "Exit Ticket" for each session that varies by type. In "Session 1," students are asked to explain how a reflection and a rotation are similar and different. In "Session 2," students are asked to draw and label a transformation and the type of transformation used. In "Session 3," students are asked to perform a translation, a reflection, and a rotation on a given figure and then use words and symbols to compare the size and shape of the original to the new figures.
- The materials include a lesson quiz at the end of each lesson and a digital comprehension check that can be assigned in place of the lesson quiz. Both assessments include various question types, including multiple-choice, short-answer, numeric response, and multiple-select. For example, the quiz for "Lesson 7" includes five total questions. One of the questions is multiple-choice, one is a table where students must decide if four statements are true or false, two are open-ended questions where students are asked to calculate an answer and show their work, and one asks students to answer a question regarding triangles and justify their response by sharing their reasoning.
- The *Teacher's Guide* includes a "Resources for Assessment" Section detailing the types of assessments in the unit, when to use the assessments, where to find the assessments, and related digital assessment reports. The assessment types include diagnostic, lesson quizzes (print) or comprehensive checks (digital), unit assessments (print) or comprehensive checks (digital), and the option for assessment practice.
- The "Teacher Toolbox" includes a "Classroom Resource" Section that provides lesson quizzes and unit assessments through the progression of the units. Teachers have three options for administering the lesson quizzes. Teachers can assign the printed view in Google Classroom, assign a student to fill in the answers in Google Classroom, or the teacher can edit and print the quiz. The unit assessments offer the same options as the lesson quizzes; however, forms A and B are offered. The question types in quizzes and unit assessments vary between multiple-choice, choose all that apply, fill-in-the-box, and open-ended questions.

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

- The materials include definitions for the diagnostic assessments and comprehension checks within *i-Ready Success Central*. The *Teacher's Guide* contains a "Resources for Assessment" guide, which provides a brief outline of each type of assessment, its intended purpose, components of the assessment, where to locate it within the materials, and when and with what frequency each type should be used. The materials also list digital alternatives for certain assessments, such as the lesson quizzes.

- The materials provide the teacher with a purpose for what each lesson quiz is assessing. The *Teacher's Guide* includes an "Error Alert" Section which outlines potential errors that students could make. The *Teacher's Guide* also provides a "Purpose" Section for each performance task, "Explore," and "Develop" Sections.
- The materials provide clear definitions of different types of assessments, such as comprehension checks and the *i-Ready* diagnostic assessment within *i-Ready Success Central*.
- The materials include an "Assessment Opportunities Reference Sheet" within *i-Ready Classroom Mathematics* that describes the diagnostic as "an adaptive digital assessment that determines proficiency and growth," and the unit assessments as tools to "assess students' cumulative understanding of concepts and skills." The materials in the *Teacher's Guide* provide clear instructions on utilizing formative assessments to monitor and adjust instruction. For example, the "Discuss It" question in "Lesson 1, Session 2" guides teachers on utilizing question prompts with paired discussions and how to address misunderstanding for the particular question.

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

- The materials include "Resources for Assessment and Differentiation," which outlines when each assessment should be administered.
- *i-Ready Success Central* includes a "Manage the Diagnostic" guide in the "Learn the Basics" Section under "Assess and Use Data." The guide explains the various tasks teachers perform before the diagnostic, during the diagnostic, and before the testing window ends, as well as tasks performed after each diagnostic. This PDF includes diagnostic scheduling information and tips for adding buffer time for transitions, logging in, and viewing tutorial videos.
- The materials contain a "Before, During, and After" checklist for the diagnostic assessment teachers administer to students. This checklist provides guidance on when to administer the diagnostic to students, what preparations to make ahead of administration, what to do while students take the assessments, and what to do once they complete the assessment. Teachers can use the checklist to ensure consistent administration and obtain accurate results.
- The materials include guidance to ensure accurate assessment administration of lesson-level assessments, such as the performance tasks in the unit review at the end of each unit. The "Monitor and Guide" Section provides teachers with information for preparing students before they begin working on the performance task, as well as guidance for facilitating student learning while they complete the task.
- The materials include a "Get Good Data" Section within *i-Ready Success Central* that provides articles such as "Prepare and Proctor" and "Introduce the Diagnostic to Students." Additionally, the materials include tools such as the "Get Good Data Action Plan" and the "Administer the Diagnostic Checklist."
- The materials include a unit assessment scoring guide that guides multiple methods of scoring, including scoring by item points and scoring by the rubric.

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

- The materials include a diagnostic assessment that is aligned to the TEKS and objectives of the course. The materials provide the teacher with vertically aligned TEKS that students are ready to utilize based on their responses.
- The materials include an "*i-Ready* Diagnostic TEKS Performance Report" that uses the results to assess mastery of 100% of grade-level TEKS. The "TEKS Performance" table uses a skill summary to display the results. This table lists the TEKS and score by using a rubric displaying the number of students "likely to understand the skill," "partially understand the skill," or "likely to not understand skills" aligned to the TEKS.
- The materials include a prerequisite guide aligned to each unit and lesson objectives, which teachers can use to determine necessary whole-group instructional adjustments based on student diagnostic assessment results.
- The materials include formative assessments as additional practice, "Exit Tickets," and checks for understanding, and are aligned with the course, unit, and lesson objectives. For example, "Lesson 16, Session 1" includes the language objective "Explain the relationship between graphs, points, verbal descriptions, and equations that model linear functions." "Lesson 16, Session 1" includes a variety of assessment questions. The session begins with a formative assessment where students determine whether four equations are the same or different. Next, students engage in a partner discussion, matching two equations to their graphed lines and discussing the numbers they used to do so. The "Exit Ticket" asks students to explain which model they would rather use to find the price of a pizza and then explain their reasoning. The varied questions relate to explaining the relationship between graphs, points, verbal descriptions, and equations that model linear functions by having students look at them in different ways.
- The materials include lesson quizzes and unit assessments that serve as summative assessments. These summative assessments are aligned with the course, unit, and lesson objectives. For example, the "Lesson 16" quiz aligns with the objectives of writing an equation for a linear relationship, and offers five questions: one multiple-choice, three open-ended, and one fill-in-the-blank question.
- The materials provide formative and summative assessments throughout the materials that are not aligned to the TEKS. They are aligned with the Standards for Mathematical Practice (SMP).
- The materials in the *Teacher's Guide* provide the answer keys for every unit assessment and lesson check but do not provide a TEKS correlation.

Instructional assessments include standards-aligned items at varying levels of complexity.

- The materials include instructional assessments with varying levels of complexity. These instructional assessments are not aligned with the state standards.
- The materials include a variety of assessments that contain at least two levels of complexity. The unit assessments and lesson quizzes list the depth of knowledge (DOK) levels next to each item. Most items are at a DOK level of either 1 or 2. For example, the quiz for Lesson 21 has five questions: two at the DOK 1 level and three at the DOK 2 level.

- The materials include assessments with more than two levels of complexity. The performance tasks in each unit review contain DOK levels of 3. The formative assessments, such as the “Apply It,” “Model It,” and “Explore” Sections, contain items that have DOK levels at 1, 2, and 3.
- The materials include unit assessments with items that vary in rigor and format. For example, the Unit 4 assessment includes five DOK 1 questions, six DOK 2 questions, and one DOK 3 question, while the unit review also includes a DOK 3 performance task.
- The materials include digital comprehension checks that include a variety of technology-enhanced items, such as inline choice and open-response. For example, the grade 8 comprehension check "Find Rational Approximations of Irrational Numbers" includes multiple-choice, drag-and-drop, match-table-grid, and open-response items.

Progress Monitoring

2.2	Data Analysis and Progress Monitoring	4/4
2.2a	Instructional assessments and scoring information provide guidance for interpreting and responding to student performance.	**2/2**
2.2b	Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.	**1/1**
2.2c	Materials include tools for students to track their own progress and growth.	**1/1**

The Instructional assessments and scoring information provide guidance for interpreting and responding to student performance. Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments. Materials include tools for students to track their own progress and growth.

Evidence includes, but is not limited to:

Instructional assessments and scoring information provide guidance for interpreting and responding to student performance.

- The materials provide guidance to teachers for interpreting student responses from assessments. Formative assessments, such as the "Apply It" and "Model It" Sections, provide misconceptions students might have based on potential responses to questions within those sections. For example, the "Picture It" and "Model It" Sections in "Lesson 3, Session 2" ask students to draw models of transformation on separate coordinate planes. Suggestions are provided for scaffolds, such as analyzing the key features of the models and connecting them to the models shown in class. When analyzing the graphs and tables, prompting questions are provided to help guide students through the learning process.
- The materials provide summative assessments, such as lesson quizzes and unit assessments, that include a rationale and potential misconceptions for questions and answer choices. For example, the "Lesson 6" quiz includes a rationale for each correct and incorrect answer for the multiple-choice questions, a rubric for evaluating student responses on open-ended questions, and suggestions for potential strategies that could be used or retaught for students who might need additional assistance.
- The materials provide a section called "Responding to Student Needs" in the *Teacher's Guide*, next to each unit assessment. This section provides suggested areas of learning gaps and materials to support instruction for students who may need reteaching. It also includes extension activities for students who exceed proficiency on the unit assessment.
- The materials suggest activities teachers can provide to students based on their performance. These are found in a small box in the *Teacher's Guide* under each lesson quiz.
- The materials in the *Teacher's Guide* provide a comprehensive answer key for each lesson quiz that explains correct and incorrect answer choices. For example, the answer key for the "Lesson 6" quiz explains one method that students could use to correctly answer problem

number five, which asks students to determine the value of *x* that would show the lines are parallel within the given diagram. The answer key then goes on to explain why each alternative answer choice is not correct. The rationale for answer choice A states, "A is not correct. The answer represents the solution to 2x + 30 = 90."

- The materials in the *Teacher's Guide* explain how to utilize formative assessments to monitor and adjust instruction. For example, "Model It" from "Lesson 2" explains how to assess conceptual understanding by asking students to create and analyze a model.
- The "Data Analysis Guide" in *i-Ready Classroom* has a section in question-and-answer format outlining how to use class data from the diagnostics and other assessments. The materials guide teachers on using data to group students and plan their instructional priorities, strategically adding teacher-assigned lessons, or using additional practice worksheets from the "Teacher Toolbox."
- The materials include a "Reports" Section for the diagnostic assessment which offers an instructional grouping section. Students are grouped based on overall placement and scale score. A grouping description provides an indicator of below grade level, at grade level, or above grade level in each specific standard. Additional differentiated instruction is outlined based on instructional priorities. An example states, "Students with a low score in Number and Operations are probably most challenged by fractions. They will need to focus on foundational fraction concepts." The report offers recommendations for teacher-led instruction and provides tools for instruction for the recommendations.

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

- The materials guide when and how to use the included tasks and activities when responding to students' performance on formative assessments. Next to various questions throughout the materials, there are breakout boxes that indicate to a teacher when a reteach, a reinforcement, or an extension may be needed. The materials guide teachers in facilitating students' learning with these tasks. For example, in "Lesson 10, Session 1," a visual model activity is provided for reteaching or reinforcing how to use a hangar diagram to help them understand the problem involving writing equations to represent real-world problems.
- The materials include reteach activities along with each lesson of *i-Ready Classroom* which is recommended for use when students do not succeed on a lesson quiz or unit assessment. For example, the reteach recommendations for the "Lesson 14" quiz on representing and solving problems with systems of linear equations include activities designed to support students in strengthening three key prerequisite skills: "Relate Independent and Dependent Variables," "Write Equations to Solve Problems," and "Solve Systems of Equations by Substitution."

Materials include tools for students to track their own progress and growth.

- The materials include a "Personalized Instruction Progress and Reflection" template for students within the *i-Ready Classroom*. Students use the chart to track their progress on "*i-Ready* Personalized Instruction." Once a lesson is completed, students record the date and the lesson name, then click boxes to represent their lesson score.

- The materials include pledge templates within *i-Ready Success Central* that students fill out with their pledge goals to do their best on *i-Ready*, allowing students to set goals and measure progress. A “Mathematics Bucket List” template is also included for students to set academic goals throughout their learning.
- The materials include daily learning reflection templates in “Build Classroom Culture” within *i-Ready Success Central*. Students reflect on their strengths and areas for growth and write any lingering questions on the day’s lesson.
- The materials include several tools within *i-Ready Success Central* that utilize assessment data to facilitate student-centered goal-setting. For example, "Tips to Engage Students in Data Chats" provides questions to ask students during student-teacher conferences to help them track their progress and growth.
- The materials provide end-of-unit materials including a “Student Self-Reflection” activity that summarizes the key concepts and skills that students learned throughout the unit and guides them through evaluating their understanding of each.

Supports for All Learners

3.1	Differentiation and Scaffolds	8/8
3.1a	Materials include teacher guidance for differentiated instruction, activities, and/or paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.	**3/3**
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)	**2/2**
3.1c	Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.	**3/3**

The 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. Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.

Evidence includes, but is not limited to:

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

- The materials include a "Yearly Pacing Prerequisites" document that guides teachers on differentiating whole-group and small-group instruction for students who have not yet mastered the prerequisite skills embedded within the grade-level content. The documents also provide guidance for teachers on which prerequisite lessons to use and where they can be integrated into the pacing calendar. The materials break down this information in the "Unit and Lesson Support" document, which details what exact skills will be addressed.
- At the beginning of each unit, the materials include a "Unit Resources" document that lists the activities the teacher can use to differentiate before, during, and after the lesson. Within the unit overview, materials include teacher guidance by providing "Reteach or Reinforce" activities under the lesson-level "Differentiation" tab. Each lesson consists of sessions, and within each session, pop-out boxes provide the teacher with activities to reinforce or reteach the grade-level material should students need additional support to master the grade-level content. For example, in "Lesson 17, Session 1," "Differentiation: Reteach or Reinforce" reads, "If students are unsure about how to find the number or weeks when the amounts are the same, then use this activity to model the situation." Additionally, after each lesson quiz and unit assessment, there are activities provided for the teacher to reteach, reinforce, or extend student learning based on student mastery of concepts.
- The lesson overview in the *Teacher's Guide* includes a "Differentiation" Section. This section provides a "Reteach or Reinforce" component that offers suggestions such as using a visual

model, hands-on activities, or fluency and skills practice for students who have not yet reached proficiency.

- In the "Prerequisite Report Overview," the materials provide a report that groups students based on the content support they need. The materials support teachers by guiding the concepts and lessons students in each group are ready to begin working on. Under the "Reinforce" tab within the "Teacher Toolkit," the materials include center activities that are scaffolded for on-level students, below-level students, and above-level students. Under the "Refine" Section of the *Teacher's Guide*, the materials also provide guidance for teachers on how to scaffold instruction based on student needs. For example, in "Lesson 14, Session 4," the "Refine" tab reads, "Identify grouping for differentiation based on the Start and problems 1. A recommended sequence of activities for each group is suggested below."
- Each lesson within the materials includes "Differentiation" and "Reteach or Reinforce" components. This text feature provides guidance on differentiating lessons for students who have not reached proficiency yet. For example, a "Visual Model" for "Lesson 28, Session 2" explains how to use graph paper to create a visual model that supports student understanding of vertical and horizontal distances.
- The materials provide frequent guidance regarding common misconceptions. For example, the "Common Misconception" box for the "Lesson 28" "Discuss It" Section warns that students may use the wrong coordinates when computing distances. It then recommends strategies to help avoid this misconception.
- *i-Ready Success Central* includes a "Differentiate" Section that provides a *Planning and Teaching with i-Ready Classroom Mathematics to Accelerate Learning* guide. This guide offers specific recommendations in sections titled, "Know the Content," "Know Your Students," and "Make a Plan and Teach." The guide also includes ideas on structuring instructional time for whole-class instruction, rotations for differentiated support, and opportunities for additional support. At the end, the guide includes a small group differentiation template to help determine and plan the number of groups and rotations used.
- *i-Ready Success Central* provides teachers with a "Personalized Instruction Worksheet" to plan action steps for setting up online lessons based on students' data from the diagnostic assessment.

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

- The interactive tools in the "Teacher Toolkit" provide pop-ups for academic vocabulary that students will see throughout the activity. These pop-ups include definitions and examples. The tools also include text-to-speech embedded within each problem and the option to provide closed captions for students who need them. The *Teacher's Guide* provides resources for supporting students with unfamiliar academic vocabulary in the "Develop Academic Language" Sections. These are embedded throughout each lesson and designed to support students' understanding of the academic vocabulary. For example, "Lesson 15, Session 2" reads, "Why? Build listening skills by asking students to paraphrase to confirm understanding. How? Ask students to share ways they try to understand another person's ideas during a discussion." The "Prepare For" Section of the materials includes a subsection called "Support Vocabulary Development" that lists the vocabulary in the lesson and has students use a

graphic organizer to define the vocabulary in their own words and provide examples. The *Teacher's Guide* provides guidance on implementing the activity with students. For example, in "Lesson 15, Session 1," the guidance reads, "Ask students to consider the term rate of change. Have students talk about what it would mean to have a constant rate of change. Have students work individually to complete the graphic organizer."

- The materials utilize the three-read model to help students make sense of unfamiliar references in various texts. Additionally, the materials provide images to help students make sense of some of the non-academic references made in the text. For example, the "Lesson 16, Session 4" "Try It" Section reads, "Before students work on Try It, use Three Reads to help them make sense of the problem."
- The *Teacher's Guide* provides guidance on differentiating instruction for emergent bilingual students. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. For example, "Lesson 28, Session 2," "Levels 1–3: Reading/Speaking" advises, "Use a co-constructed word bank to help students connect Model It and Analyze It."
- Each lesson begins with a list of relevant vocabulary words that are new to the lesson, as well as a list of previously introduced vocabulary words. Additionally, "Develop Academic Language" boxes are distributed throughout the lesson. These boxes include guidance for supporting students in mastering specific vocabulary words necessary for that lesson.
- The "Lesson Overview" in the "Teacher Toolbox" includes a "Connect to Language" Section for supporting Emergent bilingual students. Three levels of support include "Levels 1–3: Speaking/Listening," "Levels 2–4: Speaking/Listening," and "Levels 3–5: Speaking/Listening." Each section provides specific instructions for scaffolding the language in each session. For example, "Lesson 1," "Understand Rigid Transformations and Their Properties," "Levels 1–3: Speaking/Writing" asks teachers to, "Read Model It problem 4 aloud. Support students in writing a response by providing index cards. Display these phrases: same size, same shape, different location, different orientation, turn, and flip. Have students copy one phrase per card and use one card as a figure. Draw a T-chart labeled Rotation and Reflection. Have students trace the card, rotate it, and trace the final position."
- The "Lesson Overview" provides a "Start" Section, which includes a short activity to help students connect to prior knowledge. For example, in "Lesson 1, Session 1," "Explore Rigid Transformations," students analyze a graphic organizer composed of parallel, intersecting, and perpendicular line segments to determine which representations do not belong. Possible student solutions are included with this activity. This activity supports students' ability to analyze and describe the relative position of line segments.
- The "Lesson Overview" includes a page with an assignment that supports vocabulary development. For example, "Lesson 1, Session 1," "Prepare for Rigid Transformations" includes a graphic organizer that helps students organize their information about the math term *parallel lines*. The words *parallel lines* are in the middle of the page. Four boxes branch out from the words *parallel lines,* forming subheadings. The first box is "In My Own Words," in which students define the term in their own words. In the "My Illustration" box, students sketch and label examples of parallel lines, and in the last two boxes, students provide real-world examples and non-examples of parallel lines. Teachers can pair students to complete the graphic organizer and then share their work with the class. This leads to a comparative discussion of the words, illustrations, examples, and non-examples given.

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

- The materials guide teachers in grouping students based on their responses to the "Warm-up" or "Exit Ticket" and provide resources for differentiating instructions for each group. Teachers design three different pathways based on the student's level of success: approaches proficiency, meets proficiency, or extends beyond proficiency. For example, in "Lesson 8, Session 4," the "Group and Differentiate" Section reads, "Identify grouping for differentiation based on the Start and problems 1. A recommended sequence of activities for each group is suggested below."
- The materials include extensions designed to deepen students' understanding of the concepts they are learning. The end of each unit offers "Math in Action" extensions where students utilize new skills by applying them to real-world scenarios.
- The *Teacher's Guide* includes a "Lesson Quiz Differentiation" Section, which provides enrichment activities for students after each lesson quiz. The materials also provide enrichment activities after each unit assessment. The "Teacher Toolkit" offers enrichment activities for each lesson and an answer key that includes sample student responses.
- The materials include "Challenge" activities within each unit that extend student learning. Additionally, practice problems are rated "Basic," "Medium," or "Challenge," so educators can differentiate instruction based on demonstrated proficiency.
- The "Lesson Overview" provides a differentiated "Extend" activity for students who demonstrate proficiency in grade-level content and skill. For example, in "Lesson 2, Session 2," "Develop Performing a Reflection in the Coordinate Plane," students deepen their understanding by applying the structure of coordinates for a reflection across the y-axis. The activity prompts students to reflect the original figure in "Picture It" across the y-axis and label the coordinates.
- The "Reinforce" tab in the "Teacher Toolbox" provides on-level and above-level hands-on math center activities to reinforce the concept. In "Lesson 2," "Work with Single Rigid Transformations on the Coordinate Plane," the on-level activity is called "Hidden Transformations." In the "What You Do" Section, students playing in two teams perform a rotation, a reflection, and a translation of triangle A. They draw all three images on the grid and record the coordinates in a table. Students take turns asking yes-or-no questions to determine the coordinates of the other team's three images. In the "Check for Understanding" Section, students analyze a transformation to determine the single rigid transformation that occurred. In the "Go Further" Section, students play another round using grid paper. The instructions list the materials needed to complete the activity.
- The "Extend" tab offers enrichment activities for each lesson in a unit. For example, "Tangram Transformations" is the enrichment activity in "Lesson 2," "Work with Single Rigid Transformations on the Coordinate Plane." The challenge is to identify a single rigid transformation that maps each tangram onto its image in "Quadrant I" to form the square shape given. Students record the transformation rule for each tangram.

Supports for All Learners

3.2	Instructional Methods	13/13
3.2a	Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).	**6/6**
3.2b	Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.	**4/4**
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.	**3/3**

The materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concepts to be learned explicitly. Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. Materials support multiple types of practice, such as guided, independent, and collaborative, and include guidance for teachers and recommended structures, such as whole group, small group, and individual to support effective implementation.

Evidence includes, but is not limited to:

Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).

- The materials provide prompts and guidance to support the teacher in modeling concepts with students using concrete models within the differentiation boxes found throughout each lesson. For example, in "Lesson 8, Session 4," the "Differentiation: Reteach or Reinforce" boxes use geoboards to develop an understanding of slope.
- The materials provide prompts and guidance to support the teacher in explaining concepts directly and explicitly to students in the "Refine" Section of the *Teacher's Guide*. For example, in "Lesson 8, Session 4," the following guidance is provided to teachers: "Guide students in understanding the example. Ask: What is the horizontal change, or run, between the two points?" In the "Connect It" Section of the materials, prompts and guidance are provided for teachers to explain the concepts presented in the "Model It" Section and to help students make connections between these concepts and their learning. The *Teacher's Guide* provides sample responses for each question to support teachers in knowing how students should respond to the materials.
- In the "Develop," "Picture," and "Model It" Sections of the materials, prompts and guides are provided to teachers to communicate concepts students will learn. The materials guide the teacher in selecting samples of students' work and offer prompts on communicating to students, including questions to ask and samples of the types of responses teachers should hear. For example, in "Lesson 8, Session 3," the following guidance is given to teachers: "Use Act It Out to help students illustrate the meaning of reversing and reversed. Have students turn to a partner to work on pair-share."

- The "Facilitate Whole Class Discussion" component of each lesson explains how to use classroom dialogue to communicate concepts students will learn. This box explains in detail what to ask and what to listen for.
- Each lesson includes components titled, "Differentiation: Reteach or Reinforce" or "Differentiation: Extend." These text features explain how to use models to extend and reinforce learning. For example, the "Differentiation: Reteach or Reinforce" "Visual Model" for "Lesson 28, Session 2" explains how to use graph paper to create a visual model to support student understanding of vertical and horizontal distances.
- The "Tools for Instruction" activities located in the "Reteach" tab offer guidance and prompts to support the teacher in explaining the concepts to be learned explicitly. The "Reinforce" activity, "Rigid Transformations," includes "Step by Step" and "Checking for Understanding" Sections as students perform and describe translations, reflections, and rotations of figures on a grid. The first task in the "Step by Step" Section is to translate a figure on a grid. The next step states, "Ask the student to choose a vertex on the original figure and compare it to the corresponding vertex on the translated figure. (Possible answer: The distance and direction of movement for the vertex is the same as for the whole figure.)"
- The "Lesson Overview" in the "Teacher Toolkit" includes prompts to support the teacher in communicating the concepts explicitly. The "Lesson Overview" consistently establishes instructional routines by using clear headings and labels to support the teacher in differentiating between the different groupings. For example, "Lesson 28, Session 2," "Develop Using Supplementary and Vertical Angles," includes headings such as "Facilitate Whole Class Discussion" and "Support Partner Discussion."

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

- The "Prepare for Unit 2" activity includes teacher guidance and recommendations for effective lesson facilitation using a variety of instructional approaches. The "Prepare for Transformations and Similarity" activity uses a graphic organizer where students write what they know about sequences of transformations. The activity offers both teacher guidance and recommendations. For example, the beginning instructs teachers to read the directions and the headings in the boxes or have a student do so. Then, it asks teachers to call on volunteers to explain the task in their own words. The activity includes another opportunity to build academic vocabulary by advising teachers to display academic terms used throughout the unit. Teachers use the "Academic Vocabulary" routine to provide explicit instruction and active engagement throughout the activity.
- The "Lesson Overview" for "Lesson 4, Session 1," "Explore Dilations and Similarity," includes teacher guidance and recommendations to explore and understand that a dilation is a transformation that makes a scale copy of a figure by using a variety of instructional approaches. For example, the "Start" activity activates prior knowledge and engages students in mathematical reasoning and discourse by analyzing four L-shaped figures for similarities and differences. Students try the activity on their own or with a partner before discussing it with the class. The "Discuss It" Section offers guidance on partner discussion and facilitating whole class discussion. Prompts such as, "Ask: How are the sides of figure A related to the corresponding sides of figures B and C?" guide the discussions. The lesson closes with an

"Exit Ticket" where students reflect on the difference between rigid transformations and dilations.

- The materials include "Discuss It" boxes which provide instructions on using peer discussions of central ideas as an instructional approach. For example, the "Discuss It" box in "Lesson 28, Session 1" asks students to explain to their partner how they got started on the problem, and it advises teachers to listen for specific phrases that indicate student understanding.
- The "Math Toolkit" icon supports hands-on learning by recommending math manipulatives relevant to the concepts addressed in the lesson.
- The *Teacher's Guide* provides guidance on differentiating instruction for Emergent bilingual students. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. For example, "Lesson 28, Session 2," "Levels 1–3: Reading/Speaking" advises, "Use a co-constructed word bank to help students connect Model It and Analyze It."
- The materials provide guidance on supporting students by using graphic organizers to develop an understanding of various academic concepts and vocabulary. Throughout each session, "Discuss It" boxes guide the teacher in facilitating think-pair-share. Additional scaffolded questions are provided to ask pairs that need extra support. Each session begins with a "Start" Section. This serves as the entrance ticket or warm-up and comes in a variety of formats such as "Same and Different," "Always, Sometimes, Never," "Which One Doesn't Belong," and "Check for Understanding."
- The materials guide teachers in facilitating instruction using strategies such as three-reads to help students make sense of the problem. As students read through the problems, the materials prompt teachers to ask students the following questions: "What is the problem about? What are you trying to find out? And what are the important quantities in the problem?" Additionally, each lesson begins with an "Explore" component, which provides teachers guidance on supporting students through it. Students complete it either individually or with a partner. Each lesson contains a "Deepen Understanding" Section that guides teachers in developing students' problem-solving and reasoning skills. The "Math in Action" Section guides teachers in helping students apply multiple skills from the unit to solve real-world problems.

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 multiple types of practice for students. The "Model It" and "Discuss It" Sections allow students to engage in guided practice and collaborative learning. The differentiation boxes help teachers facilitate guided practice using hands-on activities. The "Apply It" and "Additional Practice" Sections are designed for students to work collaboratively or independently. The practice activities expose students to various question types such as multiple choice, open-ended, numeric response, and multiple select.
- The materials, through the "Unit Resources" Section within the *Teacher's Guide*, provide teachers guidance on using the different types of practice with students. It lists the types of print and digital resources and guides the teacher on which are best for guided practice, collaborative practice, or independent practice. The *Teacher's Guide* offers prompts to teachers to guide them on supporting students as they work through each type of practice.

- The materials provide the teacher with recommended structures as students complete each type of practice. The "Model It" Sections are designed to be completed by the whole group as guided practice. The "Apply It" and "Develop" Sections are designed to be completed in pairs or small groups as students begin to apply their learning. The "Practice" and "Additional Practice" Sections are designed to be completed individually by students. The "Refine" Section guides teachers in grouping students into small groups and providing differentiated instruction to each group. Several documents in the *i-Ready Success Central* guide teachers in planning for small groups, such as "FAQ" and "Small Group Teacher Tool."
- The materials utilize a three-stage lesson routine: "Try It," "Discuss It," and "Connect It." During the "Try It" phase of each lesson, students make sense of problems, practice solving problems, and are encouraged to show the models and strategies they use. The "Discuss It" phase allows students to share their thinking with a partner and compare their problem-solving strategies with their classmates. "Connect It" provides opportunities for students to make connections and apply their thinking to new problems. This routine typically takes 3–5 sessions. Students focus on exploration in "Session 1," development in "Sessions 2–4," and refinement in the final session.
- The materials recommend structures that support effective implementation, including partner discussions, whole group discussions, and opportunities for individual reflection. Each lesson includes teacher guidance to support multiple types of classroom dialogue, including "Facilitate Whole Group Discussion" and "Discuss It" partner discussions. Additionally, each lesson includes a set of practice problems to support independent practice.
- *i-Ready Success Central* includes a guide to small-group instruction. The guide includes multiple videos and planning tools that explain how to use small group instruction to simultaneously facilitate independent reinforcement, student-centered practice, and teacher-led instruction.
- The materials include a "High-Quality Practice Opportunities" document providing multiple types of practice that engage and reinforce students' mathematical thinking. These practices support conceptual understanding, develop fluency, and provide opportunities to apply their learning. Lesson-level practice in the *Student Worktext* includes "Apply It" problems, "Additional Practice," and "Refine" Sessions. "Online Practice Opportunities" include fluency and skills practice, leveled math center activities, and assignable interactive practice. The practice opportunities at the unit level offer unit games, unit reviews, and cumulative practice. Students have additional online practice opportunities through learning games such as "Hungry Fish," "Match," and "Cloud Machine."
- Materials include the "Try-Discuss-Connect" instructional framework to support the effective implementation of the course's mathematical concepts. With this framework, teachers deliver discussion-based mathematics instruction, which provides students with opportunities to engage in individual think time, partner talk, independent writing, and whole class discourse.
- The materials include a *Student Handbook* that aids teachers in designing a learning environment that helps students focus on the content. The specific purpose of the handbook is for students to create mathematical habits of mind as they think about math ideas and solve problems. For example, "Habit 1" is to make sense of and solve problems. This habit encourages students to look for information in the problem, try different ways to find a

solution, and think about which way works best. The handbook also includes a "Mathematical Language Reference Tool," which provides sentence frames to help students talk and write about math. For example, to ensure active listening, students are encouraged to show they are listening by facing the speaker and nodding when they understand.

Supports for All Learners

3.3	Supports for Emergent Bilingual Students	8/11
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.	**0/2**
3.3b	Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.	**0/1**
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.	**8/8**
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.	**Not scored**

The materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency. The materials do not include a correlation with the English Language Proficiency Standards (ELPS). The materials do not include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs. 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.

Evidence includes, but is not limited to:

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 are not aligned with the English Language Proficiency Standards (ELPS). The materials do include guidance for teachers in providing linguistic accommodations to students. At the beginning of each unit, a section called "Supporting Math and Academic Vocabulary Development" provides an outline of the available resources and their intended purpose. The "Language Expectations" Section of each lesson contains a set of language expectations that teachers can use to support student learning.
- The *Teacher's Guide* provides suggestions on differentiating instruction for Emergent bilingual students. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. It also explains how to use different strategies to meet the language needs of students at varying levels of English proficiency. For example, "Lesson 28, Session 2," "Levels 1–3: Reading/Speaking" advises, "Use a co-constructed word bank to help students connect Model It and Analyze It."
- The program implementation materials include a variety of resources to engage students in using increasingly complex academic language. For example, the materials provide discourse

cards and a discourse cube to facilitate partner dialogue, available in both English and Spanish. Additionally, the materials provide graphic organizers in both English and Spanish and academic vocabulary glossaries in multiple languages.
- The *i-Ready Math* curriculum embeds the WIDA English Language Proficiency Standards throughout its materials. For example, each lesson includes a "Connect to Culture" Section, which activates students' background knowledge as they connect to diverse backgrounds and experiences. Each lesson also offers guidance on differentiated instruction for Emergent bilingual students based on students' individualized language development levels.

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

- The materials are aligned to the WIDA English Language Development standards but are not directly aligned to the English Language Proficiency Standards (ELPS) to use in state-approved bilingual and ESL programs.
- *i-Ready Success Central* provides a "Classroom Mathematics Reference Sheet: Supporting Student Needs," which includes a page on supporting Emergent bilingual students. The reference page provides ideas for differentiated instruction activities for Emergent bilingual students, guides teachers in the "Connect Mathematics and Language Development" Section, and notes the use of "Bilingual and Multilingual Glossaries" to support speaking, listening, reading, and writing.
- *i-Ready Success Central* includes a "Supports for English Learners" reference sheet that helps teachers locate resources within the materials they can use to implement them effectively in bilingual and ESL programs.
- *Connect Language Development to Mathematics* summarizes the language expectations of each unit for students at varying levels of English proficiency. Additionally, language objectives within each lesson explain what students should be able to say and do linguistically by the end of the lesson.
- The program overview and user guide contain three sections that outline support provided for Emergent bilingual students: "Resources for Language Development," "Language Development and Discourse Support," and "Integrate Language and Mathematics." The materials also contain Spanish-translated versions of all resources in the Teacher Toolkit.

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 "Prepare For" Sections embed guidance for teachers to support emergent bilingual students in academic vocabulary by using graphic organizers. The beginning of some units includes an academic vocabulary routine for teachers to pre-teach vocabulary with students. For example, the "Unit 1" academic vocabulary routine begins with, "Present the words or phrases. Assess prior knowledge by asking students to rate their knowledge of each term."
- The "Teacher Toolkit" includes multilingual glossaries in Arabic, Chinese, French, Haitian Creole, Portuguese, Russian, Tagalog, Urdu, Vietnamese, and Spanish.

- The materials include guidance for increasing student comprehension using the three-reads strategy and providing opportunities to differentiate various questions using additional reading, writing, listening, and speaking supports for students.
- The materials include guidance for supporting emergent bilingual students in building background knowledge by using the academic vocabulary routines at the beginning of each unit and the graphic organizer in the "Prepare For" Section of each lesson.
- The materials include guidance for supporting emergent bilingual students in making cross-linguistic connections by using the "Cognate Support" routine at the beginning of each unit. For example, the "Unit 1" "Cognate Support" routine starts with, "Ask students to identify the terms that look or sound similar to words in their home language."
- The materials include discourse cards and cubes that provide sentence starters and questions to initiate, deepen, and extend conversations with partners, small groups, or the whole class.
- *i-Ready Success Central* includes a "Supports for English Learners" reference sheet that helps teachers locate resources to implement the materials effectively in bilingual and ESL programs. The reference sheets summarize core components of the materials. One of the core components is *Connect Language Development to Mathematics,* which summarizes the language expectations of each unit for students at varying levels of English proficiency. The language objectives within each lesson explain what students should be able to say and do linguistically by the end of the lesson. *Connect to Community and Cultural Responsiveness* ensures that the material is culturally relevant to all students, and *Connect to Language Development* provides specific scaffolds that teachers can use to support language development within each lesson. "Additional Practice for Vocabulary Development" provides graphic organizers to support language acquisition. "Develop Language" boxes throughout each lesson provide guidance on supporting language development at the phrase, sentence, and discourse level. The "Discuss It" boxes provide guidance on facilitating academic discourse between peers, and "Language Routines" summarizes classroom routines teachers can utilize to support academic language development. These components also include "Discourse Cards" and "Discourse Cubes" to facilitate dialogue during partner discussions, a "Multilingual Glossary of Math Terms" available in ten languages, and an "Academic Vocabulary Glossary" available in both English and Spanish that shows students how to use new vocabulary words within a complete sentence.
- The lesson overview provides a differentiated "Extend" activity for students who demonstrate proficiency in grade-level content and skill. For example, in "Lesson 1," "Understand Rigid Transformations and Their Properties," "Levels 1–3: Speaking/Writing," teachers are instructed to, "Read Model It problem 4 aloud. Support students in writing a response by providing index cards. Display these phrases: same size, same shape, different location, different orientation, turn, and flip. Have students copy one phrase per card and use one card as a figure. Draw a T-chart labeled Rotation and Reflection. Have students trace the card, rotate it, and trace the final position."
- The "Lesson Overview" includes a page with an assignment that supports vocabulary development. For example, in "Prepare for Unit 1," "Prepare for Rigid Transformations and Congruence," students label the items in the coordinate plane using the choices in the box. Students share their work with a partner and discuss any items or labels they do not agree

with. The activity also includes a chart with Spanish cognates for the academic vocabulary in the unit and each lesson. Teachers use the "Cognate Support" routine to support students whose primary language is Spanish.

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

- The materials are not designed for a dual language immersion program but do include resources to support students with language support. Each lesson includes several boxes titled "Differentiation: English Learners." The guidance in these boxes frequently provides opportunities for metalinguistic transfer from English to partner languages by referring to cognates and previously learned vocabulary terms.
- Each lesson includes "Differentiation: Reteach or Reinforce" and "Differentiation: Extend" boxes that support metalinguistic transfer.

Depth and Coherence of Key Concepts

4.1	Depth of Key Concepts	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.	**1/1**
4.1b	Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.	**2/2**

The 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. Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.

Evidence includes, but is not limited to:

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 align to the grade-level TEKS, such as in the "Lesson 25, Session 4" "Math Journal," where students generate an example of a non-perfect square and then show how to find the approximate value of the square root to the nearest tenth. Lesson quizzes contain questions of varying complexity where students solve problems within mathematical and real-world contexts.
- The materials include guidance designed to help teachers develop depth of understanding. For example, in "Deepen Understanding" of "Lesson 8, Session 3" teachers ask questions designed to help students understand that increasing vertically and horizontally on the coordinate plane is equivalent to decreasing the same amounts vertically and horizontally. This depth of questioning allows students to understand that the slope is the same for any two points on the same line (TEKS 8.4A).
- Practice opportunities vary in complexity, as illustrated by the depth-of-knowledge levels provided in the materials for "Apply It" problems. For example, in "Lesson 11, Session 4," "Apply It" includes questions of varying depths of knowledge. While "Problems 1 and 2" are considered depth-of-knowledge level 1, "Question 3" is considered depth-of-knowledge level 3. This variety in rigor ensures that students achieve a depth of understanding of multi-step equations (TEKS 8.8C).
- The materials identify concepts and guide teachers and students to solve real-world, relevant tasks, as well as provide problem-solving situations that align to the TEKS. For example, in "Lesson 4," the materials provide problem situations with real-world connections in the lessons, such as, "In woodworking class, Eduardo makes a pattern for the top of a wooden box. He uses scale copies of figure J. The center of dilation is point M. Eduardo uses a scale factor of 2 to draw figure K. Complete figure K by drawing the missing sides."
- Practice opportunities in the materials engage students in the appropriate level of rigor identified in the TEKS. For example, in grade 8, "Lesson 5," students describe dilating figures

using vocabulary such as length, scale factor, enlargement, and reduction in speaking and writing. Students perform dilations in the coordinate plane and describe how to find the coordinates of the vertices of the image of the dilation to their group. Students use the "Notice and Wonder" strategy to make sense of word problems in the "Try It," "Discuss It," and "Connect It" Sections as they describe and compare sequences of transformations that map a figure onto a similar figure.

Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.

- The materials include scaffolding questions that connect concepts within and across lessons, modules, and units. For example, in "Lesson 3," students use their knowledge of single rigid transformations to perform and describe sequences of two or more rigid transformations in the coordinate plane. Questions in the tasks include: "How did you decide whether pentagon ABCDE and A'B'C'D'E' are the same size and shape?" "How do you know that the figure does not change size and shape when it is transformed?" and "How did you decide whether both sequences map figure T onto the same final image?"
- The materials include embedded questions that demonstrate a strategic learning progression so new understanding is built on previous foundations. In "Lesson 5," students use prior knowledge of rigid transformations and dilations to perform and describe dilations and sequences of transformations in the coordinate plane. Later in the year, students will use rigid transformations to identify congruent angle relationships when parallel lines are cut by a transversal.
- The questions and tasks included in the materials progressively increase in rigor and complexity. For example, "Lesson 9, Session 1" develops the concept of slope-intercept form by first activating students' prior knowledge of proportional linear relationships; students begin by calculating the rate of change of a proportional relationship ($y = kx$) from its graph. Next, the materials explain how the slope formula can determine the slope of both proportional and non-proportional linear relationships. In "Session 2," the materials use vertical translations of linear functions to explain how to write the equation of a line when the y-intercept is not located at (0,0). Therefore, students develop a formal understanding of the terms *slope* and *y-intercept* and how these describe the graph of a function, as required by TEKS 8.4C.
- The materials include various tasks within each lesson that progressively increase in rigor and complexity. For example, in "Lesson 26," students learn about the Pythagorean Theorem. The sessions begin by having students explore the Pythagorean Theorem through hands-on and pictorial models. The materials then have students develop academic vocabulary and draw on prior knowledge by using graphic organizers. In later sessions, students analyze various models to develop a deeper understanding of the Pythagorean Theorem. At the end of the lesson, students work through sessions to apply the concepts introduced throughout the lesson.
- The materials include various questions that progressively increase in rigor and complexity. For example, in "Lesson 27, Session 3," the practice notes the levels of complexity next to each question within the *Teacher's Guide*, showing the progression of question difficulty from "Basic" to "Medium" to "Challenge." Students recall basic facts about the problem in "Basic"

questions. Students solve problems within mathematical and real-world situations that have one or two steps in "Medium" questions. Students solve problems with multiple steps or apply more abstract reasoning skills to determine solutions to "Challenge" questions.

Depth and Coherence of Key Concepts

4.2	Coherence of Key Concepts	12/12
4.2a	Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.	**2/2**
4.2b	Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.	**3/3**
4.2c	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.	**3/3**
4.2d	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.	**4/4**

The materials demonstrate coherence across grade bands through a logically sequenced and connected scope and sequence. Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts. Materials demonstrate coherence across units by connecting the content and language learned in previous grade levels and what will be learned in future grade levels to the content to be learned in the current grade level. Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade levels to new mathematical knowledge and skills.

Evidence includes, but is not limited to:

Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.

- The "Math Background" document at the beginning of each unit helps teachers unpack the learning progression and make connections between key concepts. The "Math Background" Section summarizes the major themes of the unit and explicitly explains how the unit's themes are connected to prior and future grades. For example, in "Unit 1," students will build on prior understandings of graphing in the coordinate plane and properties of angles, line segments, and parallel lines. The first unit theme states, "Rigid transformations are slides, flips, or turns that change the location or orientation of a figure but not its size or shape. You can use the coordinate plane to explore how transformations affect the coordinates of a figure's vertices." In another example, the "Math Background" Section for "Unit 3" explains that students will build on prior understandings of proportional relationships and solving equations. A major theme of "Unit 3" is, "A linear equation in two variables has a graph that is a straight line. Knowing about proportional relationships can help you make sense of the slope and y-intercept of a line."
- The materials provide a vertical alignment or progression of mathematical concepts from grades K–12. For example, in "Lesson 8," students interpret the unit rate proportional relationship as the slope of its graph. They find that the slope is the same between any two

points on a line, or between two related pairs of values in a table of values. Previously, in grade 7, students learned how to tell if quantities are in a proportional relationship. Proportional relationships are represented with tables, diagrams, equations, verbal descriptions, and graphs. Earlier in grade 8, students learned about similar triangles having corresponding congruent angles and proportional corresponding sides. Later in grade 8, students will explore non-proportional relationships using the equations y = mx+b.

- The "Lesson Progression" at the beginning of each unit summarizes the progression of concepts and skills addressed in the unit. It illustrates how they are connected to topics studied in prior and future grade levels. For example, the "Unit 3" "Lesson Progression" explains how ideas across grade bands build upon each other: grade 7, "Lesson 3" builds to grade 7, "Lesson 4," which then builds to grade 8, "Lesson 8," and then grade 8, "Lessons 9, 16, and 17."
- The materials include a table of contents at the beginning of each volume that outlines the order and sequence of each unit as it relates to the course and outlines each theme addressed in the unit. Additionally, at the start of each unit, a "Lesson Progression" shows where that lesson falls within the scope of the course and grade bands from grade 3 through Algebra 1. Each lesson breaks this down further by summarizing what students have learned before that lesson, what students will learn in that lesson, and how students will apply the concepts learned in future lessons.

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

- At the beginning of each unit, a video outlines the unit flow and progression for that unit and connects the patterns learned in that unit to patterns learned in both previous and future units. For example, the "Unit Flow and Progressions" video for "Unit 3" outlines how students will use patterns discovered in "Units 1 and 2" from transformations and angle relationships to make connections and develop an understanding of slope and linear relationships.
- The materials include a "Math Background" Section at the beginning of each unit that shows how various big ideas are connected across units. The "Math Background" Section clearly shows how the lessons in units build on one another and spiral concepts throughout the year. For example, "Unit 5" shows how the big idea of integer exponents will impact student learning as they progress to solving problems about square roots and volume in later units. In "Unit 1," students see that rigid transformations preserve side lengths, angle measures, parallel lines, and area but may change position and orientation. In this unit, students connect rigid transformations to congruence. The section further states, "Looking ahead to the next unit, they will extend this understanding to make connections between nonrigid transformations and similarity."
- The "Lesson Progression" at the beginning of each unit summarizes the progression of concepts and skills addressed in the unit. It illustrates how they are connected to topics of study from prior and future grade levels. The "Learning Progression" explicitly outlines connections between the big ideas of the current unit and past and future units. For example, the "Learning Progression" in "Lesson 9" explains that in grade 7, students learned that the unit rate of a proportional relationship determines the steepness of its graph. In the current lesson,

students will derive the equations y = mx and y = mx+b. The materials also explain that later in grade 8, students will solve linear equations in one variable.

- The "Teacher Toolbox" includes an "Understanding Content Across Grades" document. The chart provides insight into the progression of previous, current, and future lessons to help students make connections and understand mathematical relationships more deeply. For example, in "Unit 2," students build upon grade 7 lessons on involving scale, representing proportional relationships, and grade 8 lessons on rigid transformations and their properties as they deepen their understanding of dilations and similarity. Students are preparing for a grade 8 lesson on performing and describing transformations involving dilations. These lead to high school Geometry lessons on similarity, right triangles, and Trigonometry.

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 units continue to reinforce and build upon content that is vertically aligned and learned previously, reinforcing vocabulary and academic language to that strand. For example, the "Unit Overview" for "Unit 1" includes the new vocabulary, review vocabulary, and the academic vocabulary needed for each lesson. "Lesson 1" includes new vocabulary such as *center of rotation*, *corresponding angles*, *corresponding sides*, *image*, *line of reflection*, *reflection*, *rigid transformation*, *rotation*, *transformation*, and *translation*. The academic language used in this lesson includes *clockwise* and *counterclockwise*. Most, if not all, of these words will be seen in "Lesson 2," where teachers will review *the center of rotation*, *degree*, *vertex*, *x-coordinate*, and *y-coordinate*. The new academic language in this lesson is *map onto*.
- The materials include conceptual, pictorial, and abstract representations supporting the content and language applicable to previous and future content. For example, the "Unit Flow and Progression" video for grade 8, "Unit 3" "Linear Relationships," explains that students use what they know about proportional relationships as they investigate slope. Students learn that slope is the steepness of a line and learn to use formulas to calculate slope. Students can use what they know about transformations from previous grade 8 lessons to understand that the slope of a line is constant by using any two points from the line.
- The materials include a component titled "Connect to Prior Knowledge," which guides teachers in recognizing connections between the academic language that students used in previous courses and the language that students will need for the current unit of study. For example, the "Connect to Prior Knowledge" for "Lesson 6, Session 2" activates prior knowledge by asking students to explain how the terms *reflection*, *rotation*, *translation*, and *dilation* are the same and how they are different.
- The "Learning Progression" coherently connects current units, past units, and future units. For example, the "Learning Progression" in "Lesson 9" explains that in grade 7, students learned that the unit rate of a proportional relationship determines the steepness of its graph. The materials add that in the current lesson, students will derive the equations y = mx and y = mx+b. They then explain that later in grade 8, students will solve linear equations in one variable.

- The materials demonstrate coherence across units by connecting content learned in previous and future courses to the content learned in the current course. At the beginning of each unit, the *Teacher's Guide* provides a lesson progression chart with outlines where each lesson in that unit falls within the course progression. For example, the "Lesson Progression" for "Unit 6" on real numbers shows the previous course lessons, both current and previous grade levels that the lessons in this unit are building upon, along with the future lessons students are preparing for.
- The materials demonstrate coherence across units by connecting language learned across courses through the "Prepare For" Sections at the beginning of each lesson. In these sections, students use familiar vocabulary to review important prerequisite knowledge. The materials also include an academic vocabulary routine and cognate support routine to guide teachers in helping students make connections between language learned in previous courses and grades. For example, students begin the academic vocabulary and cognate routines in "Unit 1" by accessing prior knowledge and making connections with the vocabulary they already know that looks similar to the new academic vocabulary.

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 include guidance for teachers on how to scaffold students' prior knowledge of concepts from the current and previous grade levels to the skills learned throughout the current unit and lesson. At the beginning of each lesson, the "Lesson Progression" shows what students have learned before the current lesson and what future lessons this lesson will impact. For example, the "Unit 6, Lesson 23" "Learning Progression" details what students have learned in grades 6 and 7 that supports the current lesson. It also describes how this lesson will impact the next lesson. The materials include a "Prior Knowledge" Section at the beginning of each lesson that provides bulleted information to the teacher about concepts and skills that students should already be familiar with. For example, the "Unit 6, Lesson 23" "Prior Knowledge Section" states that before starting this lesson, students should have an understanding of evaluating expressions with exponents and using a formula for finding the area of a square.
- The materials include guidance for teachers on how to scaffold students' prior knowledge of procedures from the current and previous grade levels to concepts learned throughout the unit. For example, each unit suggests prerequisite lessons that can be incorporated throughout the unit, along with pacing adjustment recommendations found in the *i-Ready* "Teacher Toolkit." Each lesson begins with an "Explore" Section where students apply skills from the current and previous grade levels to the skills learned in that unit. For example, in the "Lesson 23, Session 1" "Explore" Section, students use procedures they previously learned about powers of various numbers and apply them to the new skill of identifying square roots. Additionally, each lesson includes a "Connect to Prior Knowledge" Section where students apply procedures they learned earlier in the course or at a previous grade level. For example, in "Lesson 29, Session 1," students compare four different triangles and use the procedures for identifying what is the same or different about each one, which the student learned earlier in the course and will apply again in this lesson.

- The materials intentionally connect students' prior knowledge from previous grades to new mathematical knowledge and skills addressed in the current course. For example, in the "Connect to Prior Knowledge" Section for "Lesson 6, Session 2," students activate their prior knowledge by explaining how the terms *reflection*, *rotation*, *translation*, and *dilation* are the same and how they are different.
- The materials intentionally connect students' prior knowledge from previous lessons to new mathematical knowledge and skills addressed in the current lesson. For example, "Lesson 5, Session 3" includes a "Deepen Understanding" extension, in which students utilize their understanding of reflections to explore the meaning of congruence within the context of a series of rigid transformations.
- "Understanding Content Across Grades" in the "Teacher Toolbox" displays a chart that provides insight into the progression of previous, current, and future lessons. This insight helps students make connections from previous lessons to understand current mathematical ideas more deeply, as well as prepares students for future lessons. For example, in "Unit 7," students build upon grade 6, "Lesson 28;" grade 8, "Lesson 16;" and grade 8, "Lesson 18." In the current grade 8, "Lesson 29," students construct and analyze two-variable data displays, model linear patterns in a two-variable data set, and use the model to make predictions. The progression of these lessons prepares students for future lessons on statistics, probability, and interpreting categorical and quantitative data.
- The "Teacher Toolbox" provides a student activity that uses prior knowledge of vocabulary to prepare for the unit. For example, in "Unit 1," students find and label one example of each item from the vocabulary box in the image on the coordinate grid.

Depth and Coherence of Key Concepts

4.3	Spaced and Interleaved Practice	8/8
4.3a	Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.	**4/4**
4.3b	Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.	**4/4**

The materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units. Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.

Evidence includes, but is not limited to:

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

- The materials provide spaced retrieval opportunities with previously learned skills across units and lessons. For example, in "Lesson 18, Session 3," the "Teacher Toolkit" includes fluency and skills practice for finding the whole given the percent and the part. The "Teacher Toolkit" includes a variety of interactive games for students to practice skills. For example, in "Unit 1, Lesson 6," two games engage students with building fluency in the prerequisite skills of identifying multiples and factors of various numbers, along with games for greatest common factor and least common multiple to build fluency with the grade level skills in that unit.
- The materials provide spaced retrieval opportunities with previously learned skills across lessons. For example, in "Unit 1," students build upon the knowledge of using pictorial and concrete models and strategies based on place value to add and subtract decimals. In the current lessons, students continue to build on these strategies while adding new strategies to develop fluency with standard algorithms. To add and subtract decimals, students use zeros as placeholders to align numbers by place value and regroup as needed. These concepts are incorporated in the "Prepare," "Reteach," "Reinforce," and "Extend" Sections throughout the unit. The unit also provides interactive tutorials for subtracting decimals, multiplying a decimal by a decimal, and adding decimals.
- The materials provide spaced retrieval opportunities with previously learned concepts within the units and lessons. For example, in "Lesson 18, Session 1," students use previously learned information about representing percents from "Lesson 17" and apply it to solving problems where they find missing percents and make comparisons. Additionally, in "Lesson 18, Session 3," students apply concepts from "Session 2" on using double number lines to solve percent proportions.
- Both the *Teacher's Guide* and the *Student Worktext* provide cumulative practice at the back of the book that is broken up into sets tied to specific lessons within the materials, allowing students to engage in spaced retrieval opportunities at the teacher's discretion. For example, in "Unit 5, Set 5," the cumulative practice on equivalent ratios allows students to practice with concepts previously learned in "Lesson 13."

- The *i-Ready* online learning platform includes a variety of tools that facilitate spaced retrieval. "Learning Games" help students master prerequisite skills, "Interactive Practice" provides students with additional digital practice opportunities, and "Cumulative Practice" allows teachers to assign content from previous units.
- The materials include opportunities for spaced retrieval throughout each unit. For example, "Problem 4" of "Lesson 4, Session 2" requires students to use their prior knowledge of parallelograms to write algebraic expressions. In this way, the materials require students to practice applying concepts from past lessons in the current lesson, which is focused on algebraic expressions.
- The materials include routines that require students to use previously learned skills throughout the lessons. For example, in "Lesson 12," the "Start" activity prepares students to explore ratios by accessing prior knowledge of multiplicative comparison. In the "Discuss It" Section, students compare and connect the different ways ratios are written, which is prior knowledge from a previous lesson. Students are also given the opportunity for extra practice through the "Prepare for Understanding of Ratio Concepts" activity where students complete a graphic organizer for the academic word *compare*.

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

- The materials provide interleaved practice opportunities for students to engage with previously learned skills across units and lessons. For example, in "Lesson 7," students use what they know to solve the problem in the "Try It" Section. The problem asks, "What is his total time for the two laps?" Students can solve using base-ten blocks, base-ten grid paper, number lines, or a place value chart. Students can use these same strategies in the "Additional Practice" Section of the lesson.
- The "Unit Review" at the end of each unit provides additional practice for students to use what they have learned, including various math tools to complete the problems. For example, in the "Unit Review" for "Unit 1," students solve a problem by using the formula for the area of a triangle. Students complete a problem by matching algebraic expressions that represent the same value. Students use the order of operations to simplify and find the value of an expression.
- Each unit includes interleaved practice opportunities linking current content to previously learned skills and concepts. For example, "Lesson 2, Session 4" requires students to apply their knowledge of previously studied polygons to calculate the areas of composite figures.
- The materials provide interleaved practice opportunities for students to engage with previously learned concepts across lessons and units with the "Math in Action" lessons at the end of each unit. These lessons allow students to review and apply unit content while learning how to develop complete responses to performance tasks. For example, "Unit 1" has two different "Math in Action" lessons where students apply the concepts of area, surface area, and algebraic expressions to solve real-world scenarios of buying hens and designing an outdoor classroom.
- The materials provide interleaved practice opportunities for students to engage with previously learned skills across units and lessons. Each lesson contains a practice section where students determine which session strategy to apply to solve each question. For

example, in the "Lesson 30, Session 3" "Practice" Section, students solve problems to determine whether a dot plot or a histogram is the best strategy to represent the problem. The "Unit Review" at the end of each unit allows students to engage in interleaved practice on skills learned throughout the unit. The *Texas Ready* materials of the *i-Ready* "Teacher Toolkit" provide interleaved TEKS practice in the *Ready Instruction* book for the skills learned in that lesson. For example, in the "Lesson 5" TEKS practice, students decide which strategy they should use to determine the solution to problems involving percentages.

Balance of Conceptual and Procedural Understanding

5.1	Development of Conceptual Understanding	18/18
5.1a	Questions and tasks require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations.	**12/12**
5.1b	Questions and tasks require students to create a variety of models to represent mathematical situations.	**2/2**
5.1c	Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.	**4/4**

The questions and tasks require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations. Questions and tasks require students to create a variety of models to represent mathematical situations. Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

Evidence includes, but is not limited to:

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

- The materials provide questions and tasks that prompt students to engage with a variety of models and representations to interpret, analyze, and evaluate concepts. For example, in "Lesson 1, Session 2," the "Model It" problem shows a preimage and image of a six-sided figure on grid paper. The problem asks, "Is figure PQRSTU a translation, reflection, or rotation? Explain your reasoning." Students use their knowledge of transformations from "Session 1" to determine their answers. Students model on the grid how they know the image is a reflection, then identify corresponding sides and angles.
- Within the materials, the first lessons that cover a concept start with models to build conceptual understanding. For example, in "Lesson 4, Session 1," students explore the idea that a dilation makes an image that has the same shape as the original but not the same size. Students use grid paper to understand that a dilation is a transformation that makes a scale copy of a figure by multiplying the original side length by the scale factor. In later problems, students will multiply the coordinates of the vertices of the figure by the scale factor and connect back to this activity.
- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, Lesson 26 includes at least 5 different models that represent the Pythagorean theorem. The *Teacher Guide* includes guiding questions for teachers to help students interpret and analyze these models. For example, "How can you prove that each angle of this shape measures 90 degrees?" "How do you know that the sides of the unshaded shape are congruent?" and "How do Figures 1 and 2 prove the Pythagorean Theorem?"
- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, in "Lesson 11, Session 1" students make

connections between the processes used to solve multi-step equations by using hanger diagrams and algebra tiles.

- Each lesson contains a family letter suggesting how students can apply what they are learning with their families at home. The tasks outlined in the family letter require students to interpret various models and representations of mathematical concepts and situations. For example, the "Lesson 23" family letter has students interpret the use of visual models to find the square root of numbers. Students help their families interpret the properties by asking questions like, "What other problems might you solve by finding a square root?"
- Within the "Prepare For" Sections of the materials, students analyze models and representations to develop a deeper understanding of academic vocabulary. For example, in "Lesson 23, Session 1" students use visual illustrations of unit squares to analyze the concept of finding products.
- The materials include tasks and questions where students analyze mathematical concepts and situations using models. For example, the "Reinforce" Section of the *i-Ready* "Teacher Toolkit" includes differentiation tasks for teachers to use in math centers. In "Lesson 26," the math center tasks include questions where students use different visual models to analyze the properties of the Pythagorean Theorem.
- Throughout each lesson, students encounter a variety of questions and tasks that require them to evaluate models and visual representations of mathematical concepts and real-world situations. For example, in "Lesson 4, Session 2," students use visual representations, like shapes drawn on grid paper, and concrete models, like tangrams, to evaluate dilations of similar figures.

Questions and tasks require students to create a variety of models to represent mathematical situations.

- The lessons include questions that require students to create a variety of models to represent mathematical situations. For example, in "Lesson 23, Session 1," students use prior knowledge about powers to solve the "Try It" question. Students are given the area of a small tile and put tiles together to make larger squares. The questions ask, "Which areas listed below are possible areas of the larger squares Miguel can make? What side length will each of those larger squares have?" To solve the problem, students create models of their work using grid paper, unit tiles, or the formula for the area of a square.
- The lessons include tasks that require students to create a variety of models to represent mathematical situations. For example, in "Lesson 23, Session 2," students explore and develop different ways to find a square root to solve a problem. Students can solve the problem using an equation, create a table of perfect squares, or model the problem on grid paper.
- The lessons include tasks that require students to create models to represent mathematical concepts. For example, in "Lesson 7, Session 3," students model the relationship between the corresponding angles of similar triangles by cutting out triangles from paper and using the physical models to confirm that corresponding angles are congruent.
- The lessons include tasks that require students to create models to represent mathematical concepts. For example, in "Lesson 10, Session 3," students use algebra tiles to model solving equations with variables on both sides.

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

- The materials include real-world situations that provide opportunities for students to apply conceptual understanding. For example, in "Lesson 23, Session 3," the first "Try It" problem prompts students to design a storage case for some large fossils at a museum. The case needs to be a cube with a volume of 27 ft^3 and asks, "What edge length should the case have?" Students can choose to use unit cubes to model and solve the problem or use the formula for the volume of a cube.
- The materials include opportunities for students to choose models or representations to justify their reasoning. For example, in "Lesson 23, Session 3," the "Apply It" Section has additional problems where students can use a model or an equation to support their thinking. The problems include real-world applications and appear in open-ended and multiple-choice type questions.
- The materials include tasks that allow students to apply their knowledge to real-world problem situations. For example, in the "Lesson 10, Session 3" "Apply It" problem, students use their knowledge of multi-step equations to plan a trip for a group of friends to a water park.
- The materials include tasks that allow students to apply their knowledge to real-world problem situations. For example, in "Lesson 10, Session 4," the "Refine" task asks students to use their knowledge of multi-step equations to determine the perimeter of a regular pentagon, given an equation that relates the perimeter of the pentagon to the perimeter of an equilateral triangle.

Balance of Conceptual and Procedural Understanding

5.2	Development of Fluency	12/12
5.2a	Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks.	**2/2**
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.	**3/3**
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.	**6/6**
5.2d	Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.	**1/1**

The materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks. Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit. Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit. Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.

Evidence includes, but is not limited to:

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

- The materials provide quick daily math routines such as the "Start" activity that reinforces key skills. For example, in "Lesson 23, Session 1," students analyze four numbers to determine how they are the same and different. This activity uses students' prior knowledge of factors of numbers, including a whole number times itself, or if a number has more than one factor and what those factors are.
- The materials include an online platform where students build math fluency through interactive exercises and games. The "Teacher Toolbox" includes "Fluency and Skills Practice" with options for teachers to assign online or print a PDF version of the assignment. Additional practice is included in the "Digital Interactive Practice," which includes learning games such as "Match," "Zoom," or "Hungry Fish." These activities engage and reinforce students' mathematical understanding through practice.
- The *i-Ready* online learning platform includes a variety of tools that promote the development of fluency and automaticity. "Learning Games" help students master essential skills, "Interactive Practice" provides students with additional digital practice opportunities, and "Cumulative Practice" allows teachers to assign content from previous units.
- The materials include "Fluency and Skills Practice" activities. These activities provide additional practice that supports students in developing fluency with essential skills.

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 include daily numeracy warm-up exercises that reinforce and apply previously learned procedures. For example, in "Lesson 22, Session 1," the "Start" activity uses students' prior knowledge on evaluating exponents to answer "Which Would You Rather?" questions. This activity reinforces what the powers of 10 represent, which students will develop more through the "Scientific Notation" Section.
- The materials provide opportunities for students to practice the application of flexible mathematical procedures within the lesson. For example, in "Lesson 22, Session 1," students use prior knowledge of powers of 10 to solve the "Try It" problem. The question asks, "How can you write 9.296×10^7 in standard form?" Students can evaluate and multiply that with 9.296 x 10,000,000, or students can use the exponent to move the decimal to the right.
- The materials provide opportunities for students to practice utilizing procedures efficiently. For example, the "Facilitate Whole Class Discussion" Section of "Lesson 22, Session 1" directs teachers to call on students to share different strategies. Then, students are prompted to connect two different strategies and explain how the two strategies give the same solution.
- The materials encourage students to use flexibility in applying procedures. For example, the "Connect It" Section of "Lesson 6, Session 1" emphasizes that there are many different ways that students can use angle relationships formed by parallel lines and transversals to compare angle measurements. The *Teacher Guide* guides teachers in facilitating a whole class discussion that supports multiple correct solution paths.

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 flexibility within the lesson. For example, in "Lesson 16, Session 1," students use prior knowledge of linear relationships to solve the "Try It" problem. The problem asks, "Which equation and which line model the price of a small pizza? Which equation and which line models the price of a large pizza?" Students can use the coordinate of the y-intercept to determine which pizza is small and which is large. Students can also use the slope formula to determine the unit cost of toppings for small and large pizzas.
- Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency throughout a lesson. For example, in "Lesson 16, Session 5," students' answers reflect a specific type of linear representation requested in the problem. In these problems, students write an equation from a verbal description, use the slope formula to write an equation in a problem situation, use the slope formula and y-intercept of the line on the graph to write an equation, or analyze a slope-intercept form equation to determine what the initial value of the function represents.
- The materials encourage students to evaluate their procedures and strategies for efficiency and flexibility. For example, the "Facilitate Whole Class Discussion" of "Lesson 10, Session 2" directs teachers to ask, "Did one of the Model Its have fewer steps or seem to be a more efficient solution method? Explain." It then suggests listening for a student's answer such as,

"There is only a difference of one step. One Model It has whole numbers after the first step, and the other has simple fractions. Both methods are fairly efficient."

- The materials encourage students to evaluate their procedures and strategies for reasonableness and accuracy. For example, the "Differentiation: English Learners" Section in "Levels 2–4" of "Lesson 16, Session 1" suggests having partners write using the stem, "The equation is reasonable because _____."

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

- The materials provide support for teachers in understanding strategies developed within the materials. For example, in "Online Educator Learning," teachers can access a 40-minute course on "Elevating Mathematical Discourse." Teachers learn techniques to support discourse skills, including "Individual Think Time," "Turn and Talk," and the "Four Rs". Teachers will create an action plan to ensure student engagement in thinking and talking about key mathematical ideas.
- The materials provide support for teachers in the trajectory of learning from less efficient to more efficient strategies. For example, in "Online Educator Learning," teachers can access a 45-minute course on "Establishing Routines through Lesson 0." Teachers learn how to facilitate "Lesson 0" in their classroom. "Lesson 0" introduces students to the "Try–Discuss–Connect" routine to build a foundation for mathematical discourse throughout the year.
- The materials support teachers in guiding students toward efficiency. For example, in "Lesson 9, Session 4," the "Model It" and "Solve It" Sections suggest that teachers should ask, "Why is it efficient to use points with one coordinate equal to 0 when graphing the equation?" This guiding question helps students see how x- and y-intercepts can be used efficiently to write the equation of a linear relationship when given its graph.
- The materials include guidance that teachers can use to help students develop efficiency in their mathematical strategies. For example, the notes for "Lesson 13, Session 3" "Problem 2" explain that "students may recognize that elimination is an efficient choice because the coefficients of the x-terms are opposites." In this way, the materials help teachers highlight the benefits of specific mathematical strategies in terms of problem-solving efficiency.

Balance of Conceptual and Procedural Understanding

5.3	Balance of Conceptual Understanding and Procedural Fluency	16/16
5.3a	Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.	**2/2**
5.3b	Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations.	**6/6**
5.3c	Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.	**8/8**

The materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed. Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations. Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.

Evidence includes, but is not limited to:

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

- The "Teacher Toolkit" includes a resource called "Answering the Demands of the TEKS with Ready Texas Mathematics," which explicitly states how the materials address both the conceptual and procedural emphasis of the TEKS.
- The *Teacher Guide* explains how the materials should be used to develop conceptual understanding and build procedural fluency. For example, the front matter includes a "Supporting Research" component that explicitly addresses both conceptual and procedural learning. "Supporting Research" states, "Conceptual understanding is meaningful knowledge of mathematical concepts and relationships and understanding of why math processes and rules work." It then provides specific examples of how the materials support conceptual understanding. Similarly, "Supporting Research" explains, "Procedural fluency and skills are the ways students use their knowledge to accurately, flexibly, and efficiently apply mathematical procedures and options." It then outlines two specific examples of support for procedural fluency from the materials.
- The materials include "Yearly Pacing Guidance for Ready Texas Math" with a scope and sequence that explicitly maps out how each lesson, activity, or resource aligns with specific TEKS.

Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations.

- The lessons include hands-on activities with models or manipulatives that represent mathematical concepts. For example, "Lesson 1, Session 1" and "Lesson 1, Session 2,"

"Understand Rigid Transformation and Their Properties," provide a hands-on activity that uses trangrams to model transformations as a "Reteach" or "Reinforce" activity.

- The lessons incorporate detailed drawings and visual representations to illustrate mathematical concepts. For example, in "Lesson 1, Session 2," "Develop Understanding of Rigid Transformations and Their Properties," the "Model It" problems include coordinate grid drawings of reflection and rotation. Students use these drawings to identify the corresponding sides and angles of a figure and its image after a transformation. Students understand that the measures and relative positions of angles and sides of a geometric figure do not change under rigid transformations.
- The materials include both concrete models and pictorial representations. For example, "Lesson 6, Session 4" represents angle relationships physically with tracing paper and pictorially with diagrams.
- The materials include abstract representations that are appropriate for the grade level. For example, "Lesson 6, Session 4" begins with concrete and pictorial representations of angle relationships and then progresses to abstract representation with algebraic equations.
- The materials provide teachers guidance on including concrete models, representational models, and abstract representations for each concept. The "Math Background" Section incorporates detailed drawings, visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts like proportional relationships.

Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.

- The lesson materials provide students an opportunity to build automaticity with fluency skills necessary to complete grade-level tasks. For example, in "Lesson 8, Session 2," "Graph Proportional Relationships and Define Slope," students practice choosing two pairs of points on a line and calculating the slope to show that the slope of the line is constant. This prepares students for writing equations of lines in slope-intercept form.
- The lesson materials provide students with multiple practice opportunities consisting of standards-aligned tasks to work towards mastery of grade-level content. In "Success Central" under "Plan and Teach," the "Support Student Practice" Section provides a "Practice Opportunities Reference Sheet," which is an overview of the variety of practice opportunities and their location. For example, the student texts include lesson-level and session-level practice opportunities such as "Apply It" problems and the "Practice Pages" in the "Explore" and "Develop" Sections. The "Teacher Toolbox" provides "Fluency and Skills Practice" activities that can be printed or assigned digitally.
- The materials support students in connecting pictorial models to abstract concepts. For example, "Lesson 10, Session 1" uses hanger diagrams to illustrate the concept of equivalence when solving multi-step equations. The materials explicitly explain how inverse operations can be used to demonstrate algebraically that the left side of an equation is always equal in value to the right side.
- The materials support students in connecting concrete models to abstract concepts. For example, the "Lesson 6, Session 4" "Visual Model" begins by using tracing paper to model angle relationships formed by parallel lines and transversals. The materials then explain how algebraic equations can be used to describe relationships between supplementary and

congruent angles. This progression allows students to generalize their conceptual understanding of angle relationships; students are encouraged to apply the knowledge they gained by analyzing a specific set of concrete models to make conjectures about any set of parallel lines intersected by a transversal.

Balance of Conceptual and Procedural Understanding

5.4	Development of Academic Mathematical Language	14/14
5.4a	Materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies.	**3/3**
5.4b	Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.	**2/2**
5.4c	Materials include embedded guidance for the teacher 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.	**9/9**

The materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies. Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context. Materials include embedded guidance for the teacher to support the application of appropriate mathematical language including 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.

Evidence includes, but is not limited to:

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

- Materials provide opportunities for students to develop their academic mathematical language using other language development strategies. For example, in "Unit 1," "Prepare for Rigid Transformations and Congruence," students use their prior knowledge of representing relationships and information in the coordinate plane. The activity guides teachers to display academic terms used throughout this unit and to use the "Academic Vocabulary" routine described in the "Unit 1" "Professional Learning" Section to provide explicit instruction and active engagement. The word chart in the activity includes Spanish cognates for academic vocabulary. When supporting students whose primary language is Spanish, teachers use the "Cognate Support" routine described in the "Unit 1" "Professional Learning" Section. Teachers support students as they move from informal language to formal academic language by using the "Collect and Display" routine. Students refer to this chart during discussion and writing.
- Each "Unit Overview" highlights the mathematical vocabulary introduced and practiced in the lesson and includes learning goals to develop mathematical vocabulary. For example, in "Lesson 1," "Understand Rigid Transformations and Their Properties," the "Unit Overview" includes "Math Vocabulary" and "Academic Vocabulary" Sections on the first page that list the

words and definitions used in the unit. The "Language Objectives" Section states that students will "Describe translations, reflections, and rotations using lesson vocabulary and the verbs turn, slide, and flip. Describe the size, shape, orientation, and location of images using words and symbols."

- The materials include a "Connect to Prior Knowledge" component which guides teachers in recognizing connections between the academic language students used in previous courses and the language students will need for the current unit of study. For example, the "Connect to Prior Knowledge" component for "Lesson 6, Session 2" activates prior knowledge by asking students to explain how the terms *reflection*, *rotation*, *translation*, and *dilation* are the same and how they are different.
- The materials use structured dialogue to develop academic language. For example, "Lesson 10, Session 3" helps students develop formal academic language regarding inverse operations by asking them to verbally justify each step they used in solving a multi-step equation. For example, the "Deepen Understanding" Section includes a series of questions that teachers should verbally ask students, such as "What property allows you to go from the first line of the solution to the second line?" and "What is being shown in the third line of the solution?"

Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.

- The materials provide opportunities for students to develop academic language using visuals. For example, in "Lesson 1, Session 1," "Explore Rigid Transformations," the "Differentiation: English Learners" Section supports the use of the academic vocabulary word *orientation*. Students in "Levels 3–5: Speaking/Writing" read "Model It" problem 4, and discuss as a group what the problem asks them to write. In pairs, students draw a rectangle and perform two transformations, describing the movement and the figures before and after the transformations using the lesson vocabulary.
- The materials provide opportunities for students to develop academic language using manipulatives. For example, in "Lesson 1, Session 1," "Explore Rigid Transformations," the "Hands-On" activity uses tangrams to model transformations. In pairs, students select a tangram shape, trace it on grid paper, and describe a rigid transformation to their partner. The description should include the line of reflection, center of rotation, or distance and direction of translation.
- The materials include guidance that supports teachers in developing academic mathematical vocabulary. For example, the "Differentiation: English Learners" Section for "Lesson 14, Session 1" describes how to use the three-reads protocol to develop an understanding of both the context and the vocabulary for "Apply It" problem 5.
- The materials include dialogue structures that help students verbally practice utilizing new vocabulary. For example, the "Differentiation: English Learners" Section for "Lesson 16, Session 1" provides leveled sentence stems to support mathematical discourse.

Materials include embedded guidance for the teacher 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.

- Materials include guidance for teachers to support the application of appropriate mathematical language to support mathematical conversations, providing opportunities for students to develop their math language toolkit over time. For example, the "Teacher Toolbox" provides teachers with "Math Discourse Cards" that include questions such as, "What is different about your and your partner's strategies?" and sentence starters such as "One thing I like about my strategy is..." to engage all students in meaningful mathematical conversations. The cards help extend conversations with partners, small groups, or the whole class.
- Materials include embedded guidance for the teacher to support the application of appropriate mathematical language to support mathematical conversations, providing opportunities for students to hear math language with peers. *i-Ready Mathematics* uses the "Try–Discuss–Connect instructional routine to help students engage in productive struggle, participate in mathematical discourse, and make connections between different models and solution strategies. When using the "Try–Discuss–Connect" method, teachers guide students toward productive mathematical conversations for learning through language routines, teacher moves, and conversation tips. For example, the "Try It" problem may include "Say It Another Way" for language routines and/or "Turn and Talks" under "Teacher Moves." In the "Discuss" Section, examples of language routines include "Compare and Connect" and "Collect and Display" to promote mathematical conversations.
- The materials include "Language Expectations" for each unit, outlining unit-specific language objectives. These expectations are differentiated by language proficiency level: beginning, intermediate, and advanced/advanced high. This resource also includes guidance regarding academic vocabulary routines, such as accessing prior knowledge, pronouncing the words, defining the words, and using the words.
- The materials include exemplar student responses to tasks. For example, the *Teacher Guide* for the "Lesson 16, Session 1" "Try It" problem provides two samples of ideal student responses.

Balance of Conceptual and Procedural Understanding

5.5	Process Standards Connections	4/6
5.5a	Process standards are integrated appropriately into the materials.	**1/1**
5.5b	Materials include a description of how process standards are incorporated and connected throughout the course.	**1/2**
5.5c	Materials include a description for each unit of how process standards are incorporated and connected throughout the unit.	**1/2**
5.5d	Materials include an overview of the process standards incorporated into each lesson.	**1/1**

The process standards are integrated appropriately into the materials. Materials include a description of how process standards are incorporated. Materials do not include a description of how process standards are connected throughout the course. Materials include a description for each unit of how process standards are incorporated throughout the unit. Materials do not include a description for each unit of how process standards are connected throughout the unit. Materials include an overview of the process standards incorporated into each lesson.

Evidence includes, but is not limited to:

Process standards are integrated appropriately into the materials.

- The materials include a correlation chart document that shows TEKS coverage in the materials, including process standards. The “Ready Texas Mathematics Instruction” column demonstrates that the process standards are incorporated into all lessons.
- The Ready Texas materials include a “Mathematical Process Standards in the TEKS” document to demonstrate how the process standards are integrated into the materials, including the “Mathematical Process Standards (MPS) Tips” callouts in the materials that highlight “. . . special opportunities to reinforce the habits of mind that the Process Standards represent.”
- Each lesson provides a note at the bottom of the lesson introduction which highlights the specific process standards that are the focus of the lesson, though in many cases other process standards can also be connected.
- The materials include all process standards throughout the unit. Process standard 8.1A applies mathematics to problems arising in everyday life, society, and the workplace, and 8.1F analyzes mathematical relationships to connect and communicate mathematical ideas, which are embedded in real-world problem situations in the lessons. For example, in "Lesson 2, Session 2," "Develop Performing a Reflection in the Coordinate Plane," "Apply It" question 7 states, "Isabel is a woodworker. She plans a design that uses different colored wooden triangles. She starts by drawing a triangle JKL in the coordinate plane. She then reflects triangle JKL across the y-axis to form triangle J’K’L’. Draw triangle J’K’L’. What are the coordinates of the vertices of triangle J’K’L’?"

- The materials include all process standards throughout the unit. Process standard 8.1C, requiring students to select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, is embedded in the lessons. For example, in "Lesson 2, Session 1," "Explore Translations in the Coordinate Plane," students use a geoboard to model translations in the "Hands-On Activity." Also, in "Lesson 2, Session 3," "Develop Performing a Rotation in the Coordinate Plane," the "Try It" Section includes a "Math Toolkit" suggesting students use graph paper, tracing paper, or transparency sheets to solve the problem. Teachers can assign online "Learning Games" to reinforce prerequisite skills or assign personalized online instruction to build grade-level skills.

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

- The "Teacher Toolkit" includes "Answering the Demands of the TEKS with Ready Texas Mathematics," a resource that describes how the academic and process standards are incorporated throughout the course and how the process standards support student learning of the content standards. This does not describe how the process standards are connected throughout the course.
- The materials incorporate essential ideas from the process standards throughout the course. For example, the "Unit 3, Session 1" "Math in Action" Section explains how students should make sense of a problem. For example, "Make Sense of the Problem: Presenting the Counting Heartbeats problem and use Three Reads to help students make sense of it. For each read, have a different volunteer read aloud each section of the information. After the first read, be sure students recognize that the target number of heartbeats varies with age and intensity of exercise." There is no evidence of how this process standard is connected to others throughout the course.
- The "Implementation Program" under "Ready Texas" includes "*i-Ready* Classroom Mathematics to the Texas Essential Knowledge and Skills for Mathematics Grade 8." This document shows where each process standard is addressed in the course and demonstrates the program's alignment with the process standards and TEKS. For example, Process Standard 8.1B, using a problem-solving model, is represented in the "Math in Action" Section of "Unit 3, Session 2." Students discuss and choose appropriate models and strategies to plan for and solve the problems.

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

- The "Teacher Toolkit" includes "Answering the Demands of the TEKS with Ready Texas Mathematics," a resource that describes how the academic and process standards are incorporated in the unit. It discusses how the process standards support student learning of the content standards. There is no evidence of how the process standards connect throughout the unit.
- Each "Lesson Overview" lists which "Standards of Mathematical Practice (SMP)" process standards are embedded in each series of lessons within a unit. Listed MPSs make

connections to student engagement protocols throughout the lesson's instructional framework routine. There is no description of how process skills connect throughout the unit.

Materials include an overview of the process standards incorporated into each lesson.

- Each "Ready Texas" lesson in the *i-Ready* materials lists the process standards incorporated into the lesson. Next to the process standards, a note directs teachers to refer to the supplemental materials included in the "Ready Texas" Section of the "Teacher Toolkit" for further guidance on using the mathematical process standards in the lesson.
- The materials include a TEKS integration document that indicates the process standards identification numbers, the component that covers it, the page number, and the lesson reference.
- Each lesson provides a note at the bottom of the lesson introduction which highlights the specific process standards that are the focus of the lesson, though in many cases other process standards can also be connected.

Productive Struggle

6.1	Student Self-Efficacy	15/15
6.1a	Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.	**3/3**
6.1b	Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks.	**6/6**
6.1c	Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.	**6/6**

The materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks. Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.

Evidence includes, but is not limited to:

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

- Materials provide opportunities for students to think mathematically. For example, in "Lesson 26, Session 1," students use what they know about right triangles and angle measures as they learn about legs, hypotenuse, and the formula for Pythagorean Theorem in "Model It" problems 1 and 2. In the "Discuss It" Section, students respond to, "How is a hypotenuse similar to a leg? How is it different?" and in "Facilitate Whole Class Discussion," students are asked, "Why are the sides given special names in a right triangle?" In problem 3, students use a model of the Pythagorean Theorem to help them understand the relationship between the lengths of the sides of a right triangle and the areas of the squares drawn on the side lengths.
- Materials provide opportunities for students to make sense of mathematics. For example, in "Lesson 26, Session 1," "Explore the Pythagorean Theorem," the "Hands-On Activity" has students making additional models of the Pythagorean Theorem on centimeter grid paper.
- The materials include a component titled "Persevere on Your Own," which guides students through independently completing a rigorous, open-ended, real-world mathematical task. For example, the "Persevere on Your Own" activity for "Unit 2" asks students to use their knowledge of angle relationships and ratios to help a client build a set of parallel shelves. The materials support students in completing this task by providing a problem-solving checklist. The *Teacher Guide* also provides helpful facilitation recommendations for teachers, such as the suggestion to utilize the "Three Reads" protocol.
- The *Teacher Guide* includes suggestions to help students make sense of mathematics within each unit. For example, the "Persevere On Your Own" activity for "Unit 2" includes the following note for teachers: "Make Sense of the Problem: Present the Designing Shelves problem and use Three Reads to help students make sense of it. Have different volunteers take turns reading aloud each section of information. Encourage students to closely examine

the diagrams provided with this problem because they contain a great deal of information that will be needed to solve it. Be sure students understand that, although there are two shelves in Isabella's diagram, their diagram must have 4-6 shelves."

- Materials provide opportunities for students to think mathematically. For example, in "Lesson 26, Session 1," "Explore the Pythagorean Theorem," students use what they know about right triangles and angle measures as they learn about legs, hypotenuse, and the formula for Pythagorean Theorem in "Model It" problems 1 and 2. In the "Discuss It" Section, students respond to, "How is a hypotenuse similar to a leg? How is it different?" and in "Facilitate Whole Class Discussion," students are asked, "Why are the sides given special names in a right triangle?" In problem 3, students use a model of the Pythagorean Theorem to help them understand the relationship between the lengths of the sides of a right triangle and the areas of the squares drawn on the side lengths.
- Materials provide opportunities for students to make sense of mathematics. For example, in "Lesson 26, Session 1," "Explore the Pythagorean Theorem," the "Hands-On Activity" has students make additional models of the Pythagorean Theorem on centimeter grid paper.
- The materials provide students with multiple opportunities to think mathematically. In the "Prepare For" Section of each lesson, students use mathematical models, symbols, and academic language to develop an understanding of new concepts and vocabulary. As students move through the lesson's other components, they encounter real-world problems and models that require them to think mathematically to solve them. For example, in "Lesson 8, Session 3," students are asked to think about how the methods for finding slopes are the same and different.
- The materials provide students with opportunities to persevere through problem-solving. The materials provide opportunities for students to develop strategies for persisting through problems. For example, in "Lesson 8, Session 2," if students are unsure about slope being constant on a line, the materials provide them with concrete models to help them persevere through the problem. The practice and quiz portions of each lesson include problems that vary in complexity and offer challenge questions that require students to apply problem-solving strategies. At the end of each unit, the "Math in Action" activity provides students with opportunities to apply the various concepts learned along with problem-solving strategies to develop solutions to real-world issues.
- The materials provide teachers with guidance on supporting students in making sense of mathematics. The "Math Background" Section located at the beginning of each unit provides teachers with insights into what students need to understand conceptually and abstractly. It also provides teachers with models and examples for each concept taught in that unit. Throughout each lesson, teachers are given guidance and prompts on how to respond and approach students based on their current level of understanding. For example, the materials will provide teachers with a question to ask students as well as responses to listen for from students. Students are also provided the opportunity to refine, reinforce, or extend their mathematical thinking throughout each lesson with the differentiation boxes embedded throughout. Here, students use a variety of models and visual representations to deepen their conceptual understanding and make sense of the mathematical concepts being taught in each lesson.

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

- Materials support students in justifying that there can be multiple ways to solve problems. For example, in the "Unit 2, Session 1" "Math in Action" Section, teachers implement the "Three Reads" strategy to help students make sense of the first problem which is about creating an animation logo for the start of a game. After the first read, students recognize triangle ABC represents a logo that forms on the screen at the beginning of the game. After the second read, students discuss finding the coordinates for the starting location of the logo as well as a description of the transformations used to move the logo. After the third read, have students identify the important quantities and relationships in the problem, including any quantities that involve student choice since there can be multiple correct solutions to a problem. Students share their ideas about how they might use concepts from the unit to approach the problem.
- Materials support students in explaining that there can be multiple ways to solve problems. For example, in "Lesson 8, Session 1," students create a graph showing the change in the distance over time to track how fast a whale swims and use unit rates to determine how far it swims in one minute in the first "Try It" question. In question 2c, students learn to use the quotient of the vertical change and the horizontal change between two points on the line to find the slope. Students compare the similarities between unit rates and slope. In "Session 3," students are shown that the vertical change over the horizontal change is also called rise over run and learn how to use the slope formula to determine slope.
- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, "Lesson 26" includes at least five different models that represent the Pythagorean theorem. The *Teacher Guide* includes guiding questions for teachers to help students interpret and analyze these models. For example, "How can you prove that each angle of this shape measures 90 degrees?", "How do you know that the sides of the unshaded shape are congruent?", and "How do Figures 1 and 2 prove the Pythagorean Theorem?"
- The materials support students in explaining that multiple strategies can be used to solve problems. For example, the "Connect It" Section of "Lesson 6, Session 1" emphasizes that there are many different ways that students can use angle relationships formed by parallel lines and transversals to compare angle measurements. The *Teacher Guide* provides guidance for teachers on facilitating a whole class discussion that supports multiple correct solution paths.
- The "Model It" Sections of the materials provide guidance for supporting students in justifying that multiple strategies and models can be used to solve problems. For example, in the "Lesson 8, Session 2" "Model It" Section, students connect models they presented with the models presented in the materials and are asked to justify how transformations and dilations can be used to reveal the slope of a line.
- Throughout each lesson, students are given support with the understanding that there are multiple ways to solve problems and complete tasks. Throughout each session, teachers are provided with guidance on how to support students in using different strategies to solve problems. For example, "Lesson 8, Session 2" provides teachers with guidance on having students reflect on what they have learned by focusing on the various strategies used to solve

the "Try It" problems and discussing their ideas with a partner. The materials also provide tasks that contain questions that can be solved in various ways and provide teachers with guidance in helping students recognize the different approaches they can take. For example, the "Exit Ticket" for "Lesson 8, Session 2" states that students' solutions should show an understanding that the slope of the given graph is not constant.

Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.

- The materials include opportunities for classroom discourse where students discuss their mathematical thinking, share different solution strategies, make connections, and engage in collaborative learning with peers. For example, in "Lesson 4, Session 1," after students complete "Try It" problems 1 and 2, students respond to "Discuss It" questions with their partner. In "Model It" question 3, students complete the problem with a partner. The teachers ask, "How did you determine which figures are dilations of figure P?" Students turn and talk to their partner before sharing ideas with the class.
- The materials integrate writing into the learning process to deepen student learning and understanding of mathematical concepts. For example, in "Unit 2" "Lesson 4, Session 3," students respond to question 9 in their "Math Journal." The problem states, "Keisha says: All congruent figures are similar, but not all similar figures are congruent." Students use the definitions of *congruent figures* and *similar figures* to explain whether this statement is correct. In addition to the journal entry, students use the "Interactive Glossary" to find the entry for *center of dilation* and write a definition that would make sense to a younger student. Students provide an example and label the center of dilation.
- The materials provide opportunities to write about math with their peers. For example, "Differentiation: English Learners" for "Lesson 16, Session 1" provides leveled sentence stems to support mathematical discourse.
- The materials provide opportunities to talk about math with their peers. For example, "Differentiation: English Learners" for "Lesson 2" recommends that teachers utilize the "Turn and Talk" strategy to encourage students to discuss a series of questions about the vertices of triangles with a partner.
- Within the "Differentiation" portions of the materials, students are provided with opportunities to make sense of the mathematical concepts learned by doing math with their peers using various concrete and representational models. For example, in "Lesson 8, Session 2," students are asked to work with a partner to solve problems with slopes using a concrete model of tangrams. The *i-Ready* "Teacher Toolkit" includes reteach activities for teachers to do with students to help them make sense of the mathematical concepts that students are learning. Each reteach opportunity provides prompts and questions for the teacher to ask students as they guide them in making sense of the math.
- The "Prepare For" Sections of the materials provide students with opportunities to make sense of mathematical concepts by writing about math with their peers and teacher. Students use graphic organizers to display information about various concepts and academic vocabulary. For example, in "Lesson 8, Session 1," students develop definitions for *constant of proportionality*, *proportional relationship*, and *unit rate* and create examples of how they can be represented using a graphic organizer. The "Connect It" Sections of each lesson have

students write about connections they make between the current questions and the problem presented on the previous page. The *Teacher Guide* provides teachers with sample student responses to assist teachers with supporting them in their writing.

- The materials provide opportunities throughout for students to make sense of mathematical concepts through structured discussions with teachers and peers. "Discuss It" boxes are embedded throughout each lesson, guiding students in discussing mathematical concepts with their peers. For example, the "Lesson 8, Session 1" "Discuss It" question asks students to discuss the steps they took to find the slope of the graph presented in the problem. Additionally, throughout each lesson, teachers have opportunities to facilitate whole class discussions by providing guidance and prompts to engage students in discussions that help them make sense of the mathematical concepts being learned. For example, "Lesson 8, Session 1" provides teachers with guidance on facilitating a discussion to help students make sense of equivalent expressions.

Productive Struggle

6.2	Facilitating Productive Struggle	10/10
6.2a	Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.	**6/6**
6.2b	Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.	**4/4**

The materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications. Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

Evidence includes, but is not limited to:

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 in reflecting on and explaining their problem-solving approaches through written and oral communication. For each task and question, the materials provide sample responses that teachers should look for within their students' work. Additionally, the materials offer sample questions for teachers to ask students and things to listen for in student responses to assess their understanding of solving the problems. The "Facilitate Whole Class Discussion" Section provides teachers guidance for helping students explain their problem-solving process with prompts. The guidance is located under "ask" and "listen for."
- The materials provide teachers with guidance and prompts to help students reflect on and communicate mathematical arguments. For example, in the "Lesson 8, Session 1" "Prepare For" Section, teachers are provided with sample responses to a question that requires students to develop a mathematical argument for whether or not a given graph shows a proportional relationship. Teachers are also provided with some questions to ask students to help them better communicate their argument to the given audience.
- Within the "Model It" Sections of the materials, teachers are provided with guidance to support students in justifying that multiple strategies and models can be used to solve problems. For example, in the "Lesson 8, Session 2" "Model It" Section, students connect the models they presented with the models presented in the materials. They are asked to justify how transformations and dilations can be used to reveal the slope of a line.
- Materials support teachers in guiding students to share their problem-solving approaches, including explanations. For example, in "Unit 3" "Lesson 8, Session 1," the teacher uses the "Three Reads" strategy to help students make sense of the problem. Students share with their partner in their own words what information is given and what needs to be determined. After students work on the "Try It" problem, they respond to "Discuss It" questions with their partner. The teacher can select two to three samples that represent the range of student thinking in the classroom to discuss as a class the different approaches to the problem.

- Materials support teachers in guiding students to reflect on their problem-solving approaches, including explanations and justifications. For example, in "Unit 3" "Lesson 8, Session 1," students respond to "Reflect" question 3, "How can you find the slope of a line on a graph?" As students respond in their math journals, the teacher looks for an understanding that the slope can be found by dividing the vertical change between two points by the horizontal change between those same two points.
- The materials encourage students to share their procedures and strategies. For example, the "Facilitate Whole Class Discussion" Section of "Lesson 10, Session 2" directs teachers to ask, "Did one of the Model Its have fewer steps or seem to be a more efficient solution method? Explain." It then suggests listening for, "There is only a difference of one step. One Model It has whole numbers after the first step, and the other has simple fractions. Both methods are fairly efficient." In this way, students share their strategies and have the opportunity to learn about their classmates' problem-solving approaches.
- The materials encourage students to reflect on their procedures and strategies. For example, the "Differentiation: English Learners, Levels 2–4" Section of "Lesson 16, Session 1" suggests having partners write using the stem, "The equation is reasonable because _____."

Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

- Within each lesson, students have opportunities to practice solving problems for the concepts addressed in that lesson through both the practice and quiz portions. For both the lesson practice and the quiz, teachers are provided with sample responses to know what type of responses students should be producing, along with additional guidance on other strategies that students could use. For each multiple-choice and multi-select question, teachers are given guidance on potential student mistakes that could have led them to choose an incorrect answer choice.
- The materials provide teachers with anticipated student misconceptions of concepts and provide teachers with guidance on when and how to give feedback to students based on misconceptions. For example, "Lesson 8, Session 1" provides teachers guidance in addressing a misconception about students confusing which change, horizontal or vertical, to place in the dividend and divisor or the slope ratio. Throughout each unit, the "Math Background" Section provides insights into each concept, along with detailed explanations of common misconceptions.
- The *Teacher Guide* includes "Common Misconception" notes throughout each lesson. For example, "Lesson 12, Session 3" provides the following guidance on preventing misconceptions related to graphs of systems of equations: "If students do not recognize that the equations represent a system with one horizontal line and one vertical line, ask them to list and plot three points that satisfy each equation. Encourage students to brainstorm ways to remember that an equation in the form x = a represents a vertical line and an equation of the form y = b represents a horizontal line."
- Each lesson quiz includes an answer key that explains the misconceptions that could have caused a student to choose a specific incorrect answer.
- Materials offer guidance to assist teachers in providing explanatory feedback based on anticipated misconceptions. For example, in "Lesson 1, Session 1," the "Common

Misconception" notes advise, "If students have trouble understanding how reflections and rotations are the same, then have them compare the figures in problems 1, 2, and 3. Use these examples to show that reflections and rotations change the orientation of a figure."

- Materials offer guidance to assist teachers in providing explanatory feedback based on student responses. For example, in "Lesson 1, Session 1," the "Error Alert" Section advises, "If students complete the figure incorrectly, then have them focus on the shortest sides of A and D. Ask them to think about how far figure A was turned in order to get the image."