TEXAS MATH SOLUTION

Grade 6

Skills Program Guide

OUR BLEND OF LEARNING

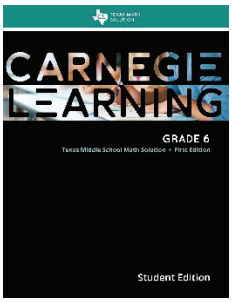
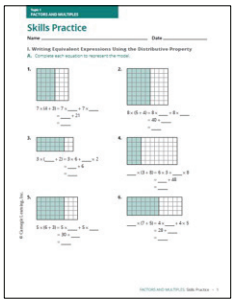
The Texas Math Solution delivers instructional resources that make learning math attainable for all students. Carnegie Learning's Learning Together and Learning Individually resources work in parallel to engage students with various learning experiences they need to understand the mathematics at each grade level.

For **Learning Together**, the student textbook is a consumable resource that empowers students to become creators of their mathematical knowledge. This resource is designed to support teachers in facilitating active learning, so that students feel confident in sharing ideas, listening to each other, and learning together.

Based on recommended pacing, educators will spend approximately 60% of their instructional time teaching collaborative whole-class activities over the course of the year.

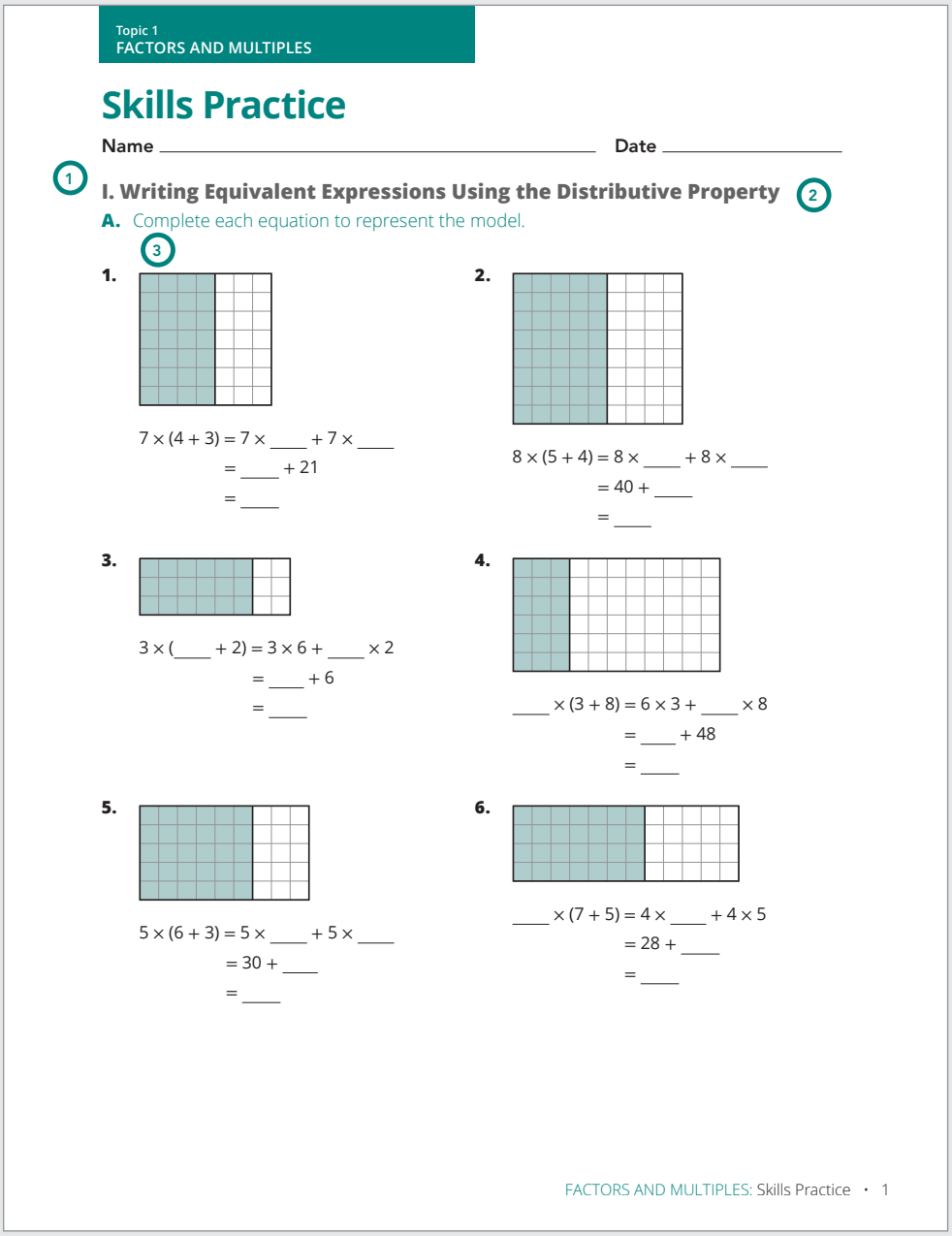
For **Learning Individually**, the student Skills Practice provides students the opportunity to engage with problems that target each lesson's skills, concepts, and applications. This resource is designed to target discrete skills for development and mastery. Therefore, scaffolding and extension opportunities are provided in the problem sets.

Based on recommended pacing, educators will spend approximately 40% of instructional time monitoring students as they work and learn individually over the course of the year.

Learning Together	Learning Individually
	
TEXTBOOK I am a record of student thinking, reasoning, and problem-solving. My lessons allow students to build new knowledge based upon prior knowledge and experiences, apply math to real-world situations, and learn together in a collaborative classroom. My purpose is to create mathematical thinkers who are active learners that participate in class.	**SKILLS PRACTICE** I am targeted practice of each lesson's skills, mathematical concepts, and applications for each topic in the student textbook. My purpose is to provide additional problem sets for teachers to assign, as needed, for additional practice or remediation.

Structure and Alignment

The TEKS-aligned Skills Practice is organized by topic for each course to align with the Carnegie Learning Texas Math Solution student lessons. Key features of the student and teacher's editions of the Skills Practice are noted.



Topic 1
FACTORS AND MULTIPLES

Skills Practice

Name _____ Date _____

(1)

I. Writing Equivalent Expressions Using the Distributive Property (2)

A. Complete each equation to represent the model.

(3)

1.

$7 \times (4 + 3) = 7 \times \_\_\_\_ + 7 \times \_\_\_\_$
$= \_\_\_\_ + 21$
$= \_\_\_\_$

2.

$8 \times (5 + 4) = 8 \times \_\_\_\_ + 8 \times \_\_\_\_$
$= 40 + \_\_\_\_$
$= \_\_\_\_$

3.

$3 \times (\_\_\_\_ + 2) = 3 \times 6 + \_\_\_\_ \times 2$
$= \_\_\_\_ + 6$
$= \_\_\_\_$

4.

$\_\_\_\_ \times (3 + 8) = 6 \times 3 + \_\_\_\_ \times 8$
$= \_\_\_\_ + 48$
$= \_\_\_\_$

5.

$5 \times (6 + 3) = 5 \times \_\_\_\_ + 5 \times \_\_\_\_$
$= 30 + \_\_\_\_$
$= \_\_\_\_$

6.

$\_\_\_\_ \times (7 + 5) = 4 \times \_\_\_\_ + 4 \times 5$
$= 28 + \_\_\_\_$
$= \_\_\_\_$

FACTORS AND MULTIPLES: Skills Practice • 1

The Skills Practice is organized into sections and problem sets.

1. The Skills Practice section number is aligned to the student textbook lesson number of the topic.

2. The Skills Practice section title is named with the subtitle of the corresponding student lesson.

3. Each section consists of one or more problem set(s) that are aligned to the TEKS within the lesson and/or topic. The problem sets are lettered, and directions are provided.

The teacher's edition of Skills Practice has the same structure as the student edition of Skills Practice with some additional features.

4. Each problem set is aligned to the TEKS within the lesson and/or topic and is identified in the teacher's edition of Skills Practice. If any TEKS from a lesson is not included in the corresponding Skills Practice section, it will be covered in another section within the module in which the standard is fully met.

5. In each problem set, the answer key is provided in-line with the problems. When answers vary, a sample answer will be provided.

Topic 1
FACTORS AND MULTIPLES

Skills Practice

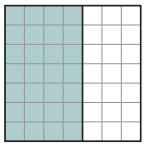
Name _____ Date _____

I. Writing Equivalent Expressions Using the Distributive Property

A. Complete each equation to represent the model.

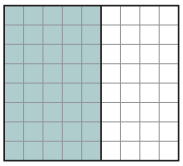
(4) TEKS 6.7D

1.



$7 \times (4 + 3) = 7 \times \underline{4} + 7 \times \underline{3}$
$= \underline{28} + 21$ (5)
$= \underline{49}$

2.

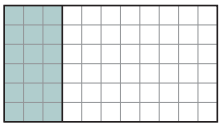


$8 \times (5 + 4) = 8 \times \underline{5} + 8 \times \underline{4}$
$= 40 + \underline{32}$
$= \underline{72}$

3.

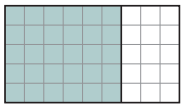
$3 \times (\underline{6} + 2) = 3 \times 6 + \underline{3} \times 2$
$= \underline{18} + 6$
$= \underline{24}$

4.



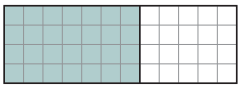
$\underline{6} \times (3 + 8) = 6 \times 3 + \underline{6} \times 8$
$= \underline{18} + 48$
$= \underline{66}$

5.



$5 \times (6 + 3) = 5 \times \underline{6} + 5 \times \underline{3}$
$= 30 + \underline{15}$
$= \underline{45}$

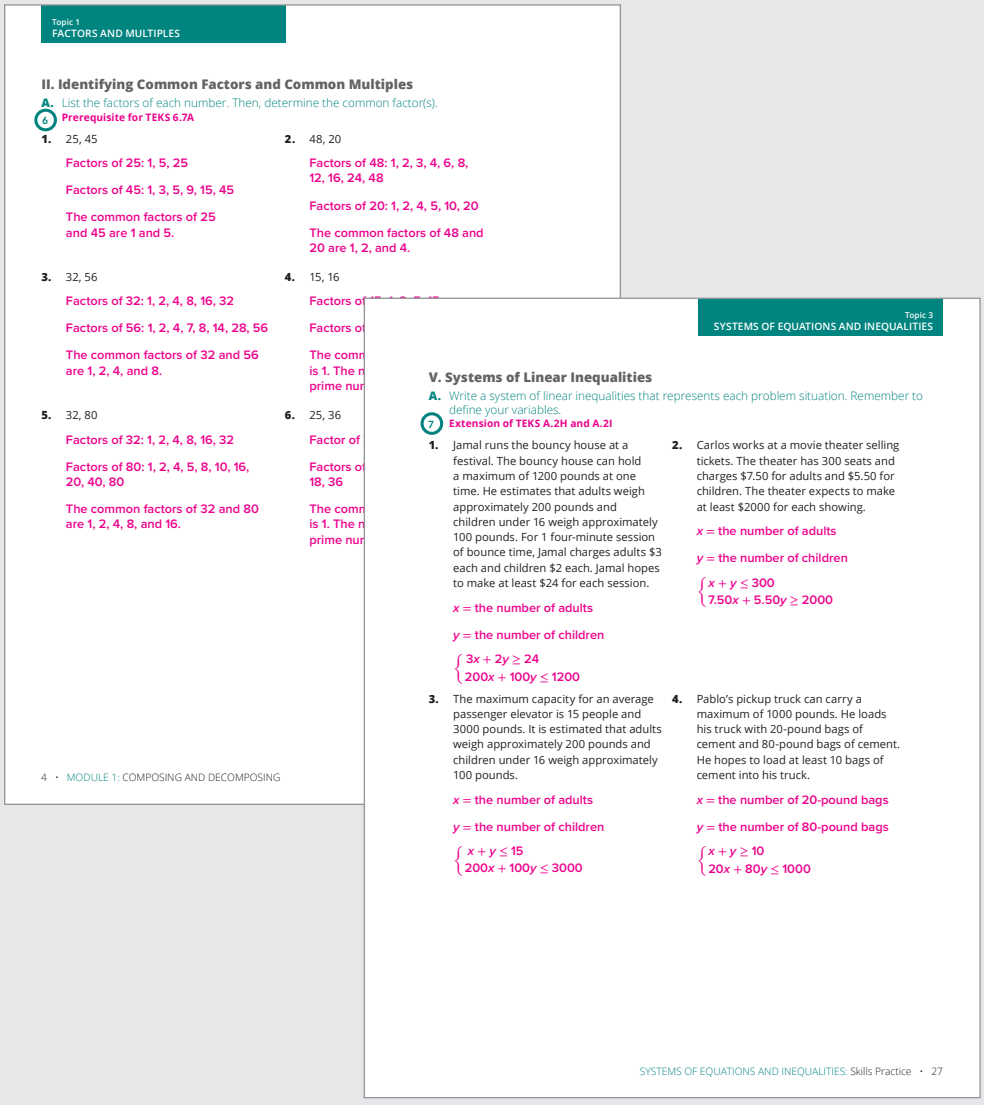
6.



$\underline{4} \times (7 + 5) = 4 \times \underline{7} + 4 \times 5$
$= 28 + \underline{20}$
$= \underline{48}$

FACTORS AND MULTIPLES: Skills Practice • 1

Since this resource is designed to target discrete skills for development and mastery, there are scaffolding and extension opportunities provided in the problem sets that align with the content of the student lesson. Therefore, the TEKS alignments in the teacher's edition of the Skills Practice include wording such as "Prerequisite for TEKS" or "Extension of TEKS."



Topic 1
FACTORS AND MULTIPLES

II. Identifying Common Factors and Common Multiples

A. List the factors of each number. Then, determine the common factor(s).

6 **Prerequisite for TEKS 6.7A**

1. 25, 45

Factors of 25: 1, 5, 25

Factors of 45: 1, 3, 5, 9, 15, 45

The common factors of 25 and 45 are 1 and 5.

2. 48, 20

Factors of 48: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

Factors of 20: 1, 2, 4, 5, 10, 20

The common factors of 48 and 20 are 1, 2, and 4.

3. 32, 56

Factors of 32: 1, 2, 4, 8, 16, 32

Factors of 56: 1, 2, 4, 7, 8, 14, 28, 56

The common factors of 32 and 56 are 1, 2, 4, and 8.

4. 15, 16

Factors of

Factors of

The comm
is 1. The n
prime nur

5. 32, 80

Factors of 32: 1, 2, 4, 8, 16, 32

Factors of 80: 1, 2, 4, 5, 8, 10, 16, 20, 40, 80

The common factors of 32 and 80 are 1, 2, 4, 8, and 16.

6. 25, 36

Factor of

Factors of
18, 36

The comm
is 1. The n
prime nur

4 • MODULE 1: COMPOSING AND DECOMPOSING

Topic 3
SYSTEMS OF EQUATIONS AND INEQUALITIES

V. Systems of Linear Inequalities

A. Write a system of linear inequalities that represents each problem situation. Remember to define your variables.

7 **Extension of TEKS A.2H and A.2I**

1. Jamal runs the bouncy house at a festival. The bouncy house can hold a maximum of 1200 pounds at one time. He estimates that adults weigh approximately 200 pounds and children under 16 weigh approximately 100 pounds. For 1 four-minute session of bounce time, Jamal charges adults $3 each and children $2 each. Jamal hopes to make at least $24 for each session.

x = the number of adults

y = the number of children

$$\begin{cases} 3x + 2y \geq 24 \\ 200x + 100y \leq 1200 \end{cases}$$

2. Carlos works at a movie theater selling tickets. The theater has 300 seats and charges $7.50 for adults and $5.50 for children. The theater expects to make at least $2000 for each showing.

x = the number of adults

y = the number of children

$$\begin{cases} x + y \leq 300 \\ 7.50x + 5.50y \geq 2000 \end{cases}$$

3. The maximum capacity for an average passenger elevator is 15 people and 3000 pounds. It is estimated that adults weigh approximately 200 pounds and children under 16 weigh approximately 100 pounds.

x = the number of adults

y = the number of children

$$\begin{cases} x + y \leq 15 \\ 200x + 100y \leq 3000 \end{cases}$$

4. Pablo's pickup truck can carry a maximum of 1000 pounds. He loads his truck with 20-pound bags of cement and 80-pound bags of cement. He hopes to load at least 10 bags of cement into his truck.

x = the number of 20-pound bags

y = the number of 80-pound bags

$$\begin{cases} x + y \geq 10 \\ 20x + 80y \leq 1000 \end{cases}$$

SYSTEMS OF EQUATIONS AND INEQUALITIES: Skills Practice • 27

6. "Prerequisite for TEKS" is the label for problem sets in which the necessary skills to achieve mastery are foundational, aligned to the content of the corresponding student lesson, and scaffolded to the skills aligned to the grade-level TEKS.

7. "Extension of TEKS" is the label for problem sets in which there are also skills that extend beyond the grade-level TEKS and are considered optional. These skills are included in the Skills Practice because they do align with the extension portion of the corresponding student lesson and provide opportunities for enhanced learning.

Recommended Implementation Practices

Deliberate practice is essential for all students in order to build fluency in mathematics. The goal of our Skills Practice program is to ensure that students receive continual reinforcement that intentionally connects concepts within the TEKS and provides additional opportunity for review within that topic. This ongoing practice increases the likelihood that students will remember the new information rather than just committing it to rote memory. Students benefit the most from practice when teachers provide them with timely and descriptive feedback. Therefore, this resource should be used intentionally by teachers with students.

The Skills Practice should be used on Learning Individually days, which are scheduled within a topic by the teacher at their discretion. There are suggestions for when those days could be scheduled in the topic pacing guides. Generally, the Learning Individually days are recommended to be scheduled after every 2-4 days of Learning Together instruction. Remember, the goal is to use Skills Practice on Learning Individually days to target skills that students still need to practice and develop in order to achieve mastery following a lesson. This allows teachers to provide just-in-time learning and intervention.

The problem sets within a section of Skills Practice scaffold the concepts and skills from the corresponding lesson. While most problem sets meet the TEKS on grade level, similar to the corresponding lesson, some problem sets incorporate prerequisite skills, while others provide opportunities for extension. For this reason, not all sections, problem sets, or individual problems need to be assigned to all students. The teacher should be intentional on assigning specific problem sets to the class, small groups of students, and/or individual students based on data. Data can be collected from the lesson's Talk the Talk activity, or other formative assessment tools such as an exit ticket, student assignment performance, observation of class or small group discussions, and/or one-on-one conversations with students during lesson facilitation. The provided table of contents within this Skills Program Guide will help teachers in strategically selecting which problem sets and problems to assign their students on Learning Individually days. This allows teachers to personalize learning to meet student needs.

Best Practices for Implementation of Skills Practice on Learning Individually Days

- Be intentional about grouping students to work on Skills Practice during Learning Individually days. Student groups need to be productive and not dependent on the teacher to make progress. Consider using small groups in a stations format. The teacher can be positioned at a specific station to facilitate small group instruction, or they can intentionally move around the room to observe student progress and assist small groups as needed.

- Encourage students to show their work and answer questions with complete sentences when appropriate. Complete sentences help students reflect on how they arrived at a solution, make connections between topics, and consider what a solution means both mathematically as well as in context. Having students show their work gives the teacher more information about what a student does and does not know. This can help teachers give specific feedback to students beyond telling them if their answer is correct or incorrect.

- As students work, actively monitor their progress. Provide additional support to those struggling with a problem set. Use pre-scripted questions to help students engage in productive struggle. To help prepare questions, consider the Questions to Ask from the Teacher's Implementation Guide for the corresponding lesson.

- Problems within a set are repetitive by design. Students do not necessarily need to complete all problems within a set. Consider assigning half the problems and then have students check their work. The teacher can give feedback and decide if further practice is needed or if students can move on to practicing another problem set.

- If all students have shown mastery of the content for a particular lesson, do not schedule a Learning Individually day. If some students have shown mastery of the skills for a particular lesson, or have already completed the Skills Practice assigned to them, consider using those students as leaders of a specific group and/or station to help support their peers. This strategy helps students who need extra support while also developing the capacity of the students who provide assistance.

Preparing for Learning Individually with Skills Practice

Teachers should plan for a Learning Individually day just as they would plan for a Learning Together day. When following the topic planning process outlined in the Texas Support Center, at **www.CarnegieLearning.com/texas-help/article/topic-planning**, teachers should use student data to strategically schedule the Learning Individually days. Keep in mind, the topic pacing guide reflects suggestions for the placement of Learning Individually days. Ultimately, the teacher decides when it makes the most sense to schedule these days based on student need. If the class demonstrates mastery of a lesson's concepts and skills, continue to the next lesson, and reserve the Learning Individually day for another time.

Tips for Planning a Learning Individually Day

- Read through the Table of Contents for the specific Topic Skills Practice you are planning.
- Determine which problem sets align with the activities in the corresponding student lesson.
- Using student data, select which problems to assign the class, small groups, and/or individuals so that all students are practicing targeted skills to develop mastery.
- Begin class with a routine, and have a warm-up or other activity to engage students in the learning.
- Set clear expectations for the structure of the Learning Individually day to maximize class time. Set up the classroom environment for stations or small groups, providing space for the teacher or student leaders to circulate around the room to support students.
- Pre-plan student groupings and determine which group(s) of students need the most targeted support.
- After students have been placed in small groups to begin working, determine the teacher's role for supporting students during this time. Some options are:
    - Circulate the room, monitoring small groups and stepping in to provide support as needed.
    - Lead a specific station to provide small group instruction.
- In order to keep from giving students answers, have pre-scripted questions to help them when they get stuck. To help prepare questions, consider the Questions to Ask from the Teacher's Implementation Guide for the corresponding lesson.
- If there are problem sets that the majority of students were assigned, take time to discuss these problems as a class. Select students to share their work and explain their thinking. Allow time for questions and discussion.
- Identify or create a closing activity such as an exit ticket to reassess mastery or a writing activity to reflect on progress.

You Might Be Wondering...

Can we use the Skills Practice in place of the Learning Together lesson from the student textbook?

No, the Skills Practice should not be used in place of the Learning Together lesson from the student textbook. The core instructional resource for learning new concepts and skills is the student textbook, our Learning Together component. The Skills Practice provides students the opportunity to engage with problems that target each lesson's skills, concepts, and applications for development and mastery. There has been a lot of research on the benefits of learning collaboratively (together). Individual practice is necessary for students to become fluent and build automaticity in a skill. A balance of these two components provides students with the opportunity to develop a deep conceptual understanding through collaboration with their peers, while demonstrating their understanding individually.

Do my students have to get through all of the Skills Practice?

No, students do not have to get through all of the Skills Practice. The problem sets within a section of Skills Practice scaffold the concepts and skills from the corresponding lesson. While most problem sets meet the TEKS on grade level, similar to the corresponding lesson, some problem sets incorporate prerequisite skills, while others provide opportunities for extension. And, student data may indicate students have already demonstrated mastery of a particular skill. For these reasons, not all sections, problem sets, or individual problems need to be assigned to all students. The teacher should use student data to strategically assign specific problem sets to the class, small groups, and/or individual students.

If our district purchased MATHia to be used on Learning Individually days, can we still use Skills Practice? If so, how?

Yes, if your district purchased MATHia to be used on Learning Individually days, you can still use Skills Practice. Your district should use MATHia as the Learning Individually resource. Skills Practice offers you another way to re-engage students with specific skills. Use the data from MATHia Reports to determine which skills students still need to master. Then, select specific problems from Skills Practice to assign the class, small groups, and/or individual students to remediate those skills.

We're here for you.

The Carnegie Learning Texas Support Team is available to help with any issue.

Monday–Friday
8:00 am–8:00 pm CT

Email:
help@carnegielearning.com
Phone: 877.401.2527
Live chat available on the Texas Support Center

For additional support with FAQs, follow the code to visit the Student and Caregivers Portal on the Texas Support Center.

TABLE OF CONTENTS

Module 1: Composing and Decomposing

Topic 1: Factors and Multiples

Bold TEKS = Readiness Standard (P) = Prerequisite for TEKS (E) = Extension of TEKS

Topic 2: Positive Rational Numbers

Section	Problem Set	TEKS
I. Dividing a Whole Into Fractional Parts	A. Students are told a glossary is organized into columns of equal width. They use this information to answer questions about what fraction of the page is represented by a certain number of columns in a glossary.	6.4F
	B. Students divide strips into equal parts and shade the strips to determine equivalent fractions.	6.5C
II. Benchmark Fractions	A. Students label a given number line to represent the fractional part provided and plot the given fractions on the number line.	6.4F
	B. Students name the closest benchmark fraction to a given fraction.	6.4F
	C. Students fill in the missing numerator or denominator so that the given fraction is close to but less than $\frac{1}{2}$.	6.4F
	D. Students fill in the missing numerator or denominator so that the given fraction is close to but less than 1.	6.4F
	E. Students rewrite a given expression using benchmark fractions and estimate the sum.	6.4F
III. Multiplying Fractions	A. Students represent a product of two fractions using an area model and then calculate the product.	**6.3E**
	B. Students calculate the product of two fractions and simplify if necessary.	**6.3E**
	C. Students determine if a given factor will increase or decrease when multiplied by a second factor.	6.3B
	D. Students calculate the product of two mixed numbers and write the answer in simplest form.	**6.3E**
IV. Fraction by Fraction Division	A. Students calculate the quotient of two fractions by rewriting the quotient as a multiplication problem and simplify their answer.	6.3A, **6.3E**
	B. Students calculate the quotient of two mixed numbers.	**6.3E**
	C. Students solve real-world fraction division problems.	6.2E, **6.3E**

Bold TEKS = Readiness Standard (P) = Prerequisite for TEKS (E) = Extension of TEKS

Topic 3: Shapes and Solids

Section	Problem Set	TEKS
I. Constructing Triangles Given Sides	A. Students determine if it is possible to form a triangle using segments with given measurements.	6.8A
	B. Students determine if the given information could be used to form a unique triangle, many different triangles, or no triangle and explain their reasoning.	6.8A
II. Triangle Sum Theorem	A. Students determine the unknown angle measure in a given triangle and list the side lengths in order from shortest to longest.	6.8A
	B. Students are given the scenario that they are helping set up for triangular swimming races at camp. They use scale drawings of each swimming course to answer questions related to the scenario.	6.8A
III. Area of Triangles and Quadrilaterals	A. Students identify a base or bases and corresponding height for a given figure. They determine the area of the figure.	6.8B, **6.8D**
	B. Students write an equation and calculate the area of a given figure.	6.8C, **6.8D**
	C. Students use given information to solve area problems in context.	**6.8D**
IV. Deepening Understanding of Volume	A. Students calculate the volume of a given figure.	6.8C, **6.8D**
	B. Students use given information to solve volume problems in context.	**6.8D**

Topic 4: Decimals

Section	Problem Set	TEKS
I. Plotting, Comparing, and Ordering Rational Numbers	A. Students plot a pair of numbers on a number line. Then, they compare the values in each pair using >, <, or =.	6.2C
	B. Students order the values in a given group from least to greatest.	**6.2D**
	C. Students order sets of rational numbers given in context.	**6.2D**
II. Adding and Subtracting Decimals	A. Students calculate sums and differences involving decimal values.	5.3K, (P) **6.3E**
	B. Students solve problems, in context, that involve adding and subtracting decimals.	5.3K, (P) **6.3E**

Bold TEKS = Readiness Standard (P) = Prerequisite for TEKS (E) = Extension of TEKS

Section	Problem Set	TEKS
III. Multiplying Decimals	A. Students write the decimal multiplication shown by the given model and determine the product.	**6.3E**
	B. Students estimate the product of two decimals to the nearest whole number and then calculate the product.	**6.3E**
	C. Students calculate the product of two decimals.	**6.3E**
	D. Students calculate the area or volume of a given figure.	**6.8D**
IV. Dividing Decimals	A. Students estimate the quotient of two decimals to the nearest whole number and then calculate the quotient.	**6.3E**
	B. Students determine the quotient of two decimals.	**6.3E**
	C. Students convert a given fraction to a decimal written to the nearest thousandths place and identify whether the decimal is terminating or repeating.	**6.3E**
	D. Students solve problems, in context, that involve multiplying or dividing decimals.	**6.3E**, **6.8D**

Module 2: Relating Quantities

Topic 1: Ratios

Section	Problem Set	TEKS
I. Introduction to Ratio and Ratio Reasoning	A. Students determine whether a given statement represents additive reasoning or multiplicative reasoning.	6.4A
	B. Students write a part-to-part and a part-to-whole ratio for a given problem situation using words, with a colon, and in fractional form.	6.4E
II. Comparing Ratios to Solve Problems	A. Students use given information to solve ratio problems in context.	**6.4B**
	B. Students compare ratios described in a problem situation.	**6.4B**
	C. Students identify equivalent ratios in a given set.	6.4C, 6.4E

Bold TEKS = Readiness Standard (P) = Prerequisite for TEKS (E) = Extension of TEKS

Topic 1: Ratios continued

Section	Problem Set	TEKS
III. Determining Equivalent Ratios	A. Students draw a model to represent problem situations and answer questions.	**6.4B**, 6.4E
	B. Students scale up or scale down to determine unknown quantities.	**6.4B**, 6.5A
	C. Students use a double number line to solve ratio problems in context.	**6.4B**
IV. Using Tables to Represent Equivalent Ratios	A. Students complete ratio tables.	6.5A
	B. Students use information given in a scenario and a ratio table to answer questions.	**6.4B**, 6.5A
V. Graphs of Ratios	A. Students create a graph that represents the values shown in a ratio table.	6.5A
	B. Students use the graphs they created in part A to write a scenario that could represent the data.	6.4D, **6.6C**
VI. Using and Comparing Ratio Representations	A. Students complete a ratio table to answer questions.	**6.4B**, 6.5A, **6.6C**
	B. Students use a graph to answer questions.	**6.4B**, 6.5A, **6.6C**

Topic 2: Percents

Section	Problem Set	TEKS
I. Percent. Fraction, and Decimal Equivalence	A. Students are given a hundredths grid and write the shaded part as a fraction, decimal, and percent.	6.4E, 6.5C
	B. Students plot and label each of the values from part A on a number line.	6.4F
	C. Students represent a problem situation as a fraction, decimal, and percent to answer questions.	**6.4G**
II. Using Estimation and Benchmark Percents	A. Students order a set of numbers from least to greatest.	**6.2D**
	B. Students calculate percents using benchmark percents.	6.4F
	C. Students are given a scenario and calculate answers to questions using benchmark percents.	6.4F
	D. Students use a table showing medals won by the top three countries in the 2021 Summer Olympics to answer questions.	**6.2D**, **6.4G**

Bold TEKS = Readiness Standard (P) = Prerequisite for TEKS (E) = Extension of TEKS

Section	Problem Set	TEKS
III. Determining the Part and Whole in Percent Problems	A. Students use given information to answer questions involving percents in context.	**6.5B**
	B. Students complete a double number line to answer percent questions.	6.4E, **6.5B**
	C. Students use given information to answer questions involving percents in context.	**6.5B**

Topic 3: Unit Rates and Conversions

Section	Problem Set	TEKS
I. Using Ratios to Convert Units	A. Students use scaling up or down to determine measurement conversions.	**6.4H**
	B. Students multiply by a unit rate to determine measurement conversions using unit analysis.	**6.4H**
	C. Students use a conversion chart to scale up or down and calculate measurement conversions.	**6.4H**
II. Introduction to Unit Rates	A. Students write two different unit rates for a given situation and identify which unit rate is more useful.	6.4D
	B. Students solve problems by determining and comparing the rates in a given situation.	**6.4B**, 6.4D
	C. Students use given information to solve problems in context.	**6.4B**, 6.4D
III. Multiple Representations of Unit Rates	A. Students create a graph of the values shown in a table and use the graph to determine if the ratios are equivalent.	6.5A
	B. Students use a graph to determine the unit rate.	6.4D, 6.5A

Bold TEKS = Readiness Standard (P) = Prerequisite for TEKS (E) = Extension of TEKS

Module 3: Moving Beyond Positive Quantities

Topic 1: Signed Numbers and the Four Quadrants

Section	Problem Set	TEKS
I. Introduction to Negative Numbers	A. Students plot numbers and their opposites on a number line.	6.2B, 6.2C
	B. Students use a thermometer to estimate the temperature in given locations.	6.2C
	C. Students use a number line to answer questions.	6.2C
	D. Students order rational numbers in a given set from least to greatest.	**6.2D**
	E. Students order sets of rational numbers according to the directions given in the problem situation.	**6.2D**
II. Absolute Value	A. Students complete the table for each given point on a number line. Students determine the value of the point, its opposite, its distance from zero, and its absolute value.	6.2B
	B. Students solve absolute value problems.	6.2B
	C. Students write absolute value statements and integers to represent given situations.	6.2B
	D. Students solve absolute value problems given a real-world context.	6.2B
III. Rational Number System	A. Students decide if given numbers are positive integers, negative integers, or not integers.	6.2A
	B. Students place numbers in the correct location in a Venn Diagram and complete a table by checking all sets to which the numbers belong.	6.2A
	C. Students graph rational numbers on a number line and determine a rational number that lies between the given pair of rational numbers.	6.2C

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Section	Problem Set	TEKS
IV. Extending the Coordinate Plane	A. Students use a coordinate plane that represents a map of downtown Mathopolis to explain how they would get from the origin to a given destination. They determine the coordinates of the destination point.	**6.11A**
	B. Students plot given points on the coordinate plane. They determine which quadrant each point is located in or which axis the point lies on.	**6.11A**
	C. Students are given a point and write the coordinates of a point that is reflected across the *x*-axis, across the *y*-axis, and that is reflected across both axes.	**6.11A**
	D. Students are given points *A* and *B* on a coordinate plane. They identify the ordered pair associated with each point and write an absolute value equation to calculate the distance between the two points.	6.2B, **6.11A**

Topic 2: Operating with Integers

Section	Problem Set	TEKS
I. Using Models to Understand Integer Addition	A. Students use a number line to determine the ending position by adding and subtracting indicated steps from each starting position.	6.3C
	B. Students write a number sentence to describe each set of steps forward and backward and use a number line to verify their solution.	6.3C
	C. Students determine a role of two number cubes that will result in a final score of 10. They write number sentences to describe the results of each roll and if needed create a model to verify their number sentences.	6.3C
II. Adding Integers, Part I	A. Students represent sums on a number line and write the sum.	6.3C
	B. Students complete number line models and determine unknown addends.	6.3C

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Topic 2: Operating with Integers continued

Section	Problem Set	TEKS
III. Adding Integers, Part II	A. Students draw a picture with two-color counters to represent and solve given number sentences.	6.3C
	B. Students complete given models and determine unknown addends.	6.3C
	C. Students determine sums of integers.	6.3C
IV. Subtracting Integers	A. Students represent differences on a number line and write the difference.	6.3C
	B. Students draw representations for subtraction problems and calculate the difference.	6.3C
	C. Students calculate differences.	**6.3D**
	D. Students write and solve an equation to answer integer subtraction problems in context.	**6.3D**
V. Multiplying and Dividing Integers	A. Students draw two-color counter models to determine products and describe the expressions in words.	6.3C
	B. Students complete a number line representation to determine products of integers.	6.3C
	C. Students complete fact families.	**6.3D**
	D. Students determine products and quotients of integers.	**6.3D**

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Module 4: Determining Unknown Quantities

Topic 1: Expressions

Section	Problem Set	TEKS
I. Evaluating Numeric Expressions	A. Students write exponent expressions as a product of factors and then evaluate the expression.	(P) **6.7A**
	B. Students write the area or volume of a given figure two ways: as a repeated product and using exponents. Then, students determine the area or volume of the figure.	**6.7A**, **6.8D**
	C. Students evaluate numeric expressions using the Order of Operations.	**6.3D**, **6.7A**
	D. Students write equivalent numeric expressions using prime factorization.	**6.7A**
II. Introduction to Algebraic Expressions	A. Students identify whether the given information represents an expression or an equation.	6.7B
	B. Students define a variable and write an expression to represent a problem situation. Then, they evaluate the expression using the given information.	**6.3D**
	C. Students write the meaning of an algebraic expression and evaluate the expression for a given value.	**6.3D**
III. Equivalent Expressions	A. Students write algebraic expressions to represent a given model and combine like terms, if possible, to create an equivalent expression.	6.7C, **6.7D**
	B. Students write a multiplication expression to represent a given model.	6.7C, **6.7D**
	C. Students rewrite expressions using the distributive property and combine like terms if possible.	**6.7D**
	D. Students rewrite given expressions as a product of two factors so that the coefficient of the variable is 1.	**6.7D**
IV. Verifying Equivalent Expressions	A. Students determine whether two expressions are equivalent. They use a table, a graph, and properties to verify their answer.	**6.3E**, 6.7C, **6.7D**
	B. Students complete steps for simplifying algebraic expressions. Then, they identify the property or operation applied in each step.	**6.7D**
V. Using Algebraic Expressions to Analyze and Solve Problems	A. Students write a set of algebraic expressions to represent given problem situations.	(P) **6.3D**
	B. Students write algebraic expressions to represent a problem situation. They use the algebraic expressions to answer questions.	**6.3D**

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Topic 2: Equations and Inequalities

Section	Problem Set	TEKS
I. Reasoning with Equal Expressions	A. Students determine which value(s), if any, make a given equation true. They determine if the equation has one solution, no solutions, or infinite solutions.	6.10B
	B. Students use a given equation to answer questions.	**6.7D**, (P) 6.9A
	C. Students write the inequality represented by a given graph.	(P) 6.9B
	D. Students graph the solution set for a given inequality.	(P) 6.9B
	E. Students define a variable and write an inequality to represent a given statement. Finally, students sketch a graph of the inequality.	(P) 6.9A, (P) 6.9B
II. Solving One-Step Addition Equations	A. Students create a bar model to solve addition equations.	**6.10A**
	B. Students state the inverse operation needed to isolate the variable. They solve the equation and check their solution.	**6.10A**, 6.10B
	C. Students solve one-step equations.	**6.10A**
III. Solving One-Step Multiplication Equations	A. Students create bar models to solve multiplication equations.	**6.10A**
	B. Students state the inverse operation needed to isolate the variable. They solve the equation and check their solution.	**6.10A**, 6.10B
	C. Students solve one-step equations.	**6.10A**
IV. Solving Equations to Solve Problems	A. Students define the variables for a given problem and write an equation that models the problem situation.	6.9A
	B. Students define variables and write an equation for a given problem situation. They use their equation to answer a given question.	6.9A, **6.10A**
	C. Students write an equation to represent the area or volume of a given figure.	6.8C
	D. Students write a real-world problem that could be solved using a given equation.	6.9C

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Section	Problem Set	TEKS
V. Solving Inequalities with Inverse Operations	A. Students solve an inequality and graph the solution set on a number line. They write a real-world situation that could be modeled by the inequality.	6.9B, 6.9C, **6.10A**
	B. Students solve inequalities and graph the solution sets.	6.9B, **6.10A**
	C. Students consider the list {−2, −1, 0, 1, 2, 3, 4, 5, 6, 7} as possible solutions for each inequality shown. They choose the solution(s) that make the inequality true. Then, they list three additional solutions to the inequality.	6.10B
	D. Students write an inequality to represent a problem situation. Then, they determine and represent the solution(s) on a number line.	6.9A, 6.9B, **6.10A**

Topic 3: Graphing Quantitative Relationships

Section	Problem Set	TEKS
I. Independent and Dependent Variables	A. Students define variables and write an equation for a given problem situation. They identify the independent and dependent quantities.	**6.6C**, (P) 6.6A
	B. Students use a graph or table to identify the independent and dependent quantities and list the independent and dependent values.	6.6A
	C. Students use a table to determine independent and dependent variables, graph the set of ordered pairs, and write an equation to represent the relationship between the variables.	6.6A, 6.6B, **6.6C**
II. Using Graphs to Solve Problems	A. Students are given problem situations. For each situation they write an equation, use a table to create a graph, and solve the equation to answer a given question.	6.6B, **6.6C**
	B. Students write an equation to represent a problem situation and graph. They use the graph and their equation to answer questions.	6.6A, **6.6C**

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Topic 3: Graphing Quantitative Relationships continued

Section	Problem Set	TEKS
III. Multiple Representations of Equations	A. Students complete a table, define variables, and write an equation to solve the given problem.	6.6B, **6.6C**, **6.10A**
	B. Students use a graph to complete a table for a given scenario. They define variables and write an equation to represent the scenario and answer a given question.	6.6B, **6.6C**, **6.10A**
IV. Relating Distance, Rate, and Time	A. Students write a scenario to represent the relationship between the given quantities in a table or graph. They define variables and write an equation that shows the relationship between the two quantities.	6.6B, **6.6C**
	B. Students use a graph to make a table. They define variables and write an equation to represent the relationship between the variables and use their equation to answer a question.	6.6B, **6.6C**, **6.10A**
V. Problem Solving on the Coordinate Plane	A. Students are given a table and must complete a graph, define variables, and write an equation to represent the problem situation. They use the graph or equation to answer questions.	6.6A, **6.6C**, **6.10A**, **6.11A**
	B. Students match a graph to a scenario that it describes and label the independent and dependent quantities on the graph.	6.6A

Topic 4: Financial Literacy: Accounts, Credit and Careers

Section	Problem Set	TEKS
I. Checking Accounts	A. Students use given information to write a check.	(P) 6.14C
	B. Students analyze given account information and determine the final balance.	6.14C
	C. Students use a financial situation to answer questions.	**6.5B**, (P) 6.14A
	D. Students use three checking account descriptions to answer questions.	6.14A

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Section	Problem Set	TEKS
II. Debit Cards vs. Credit Cards	A. Students identify whether a given statement describes a credit card, debit card, or both and explain their reasoning.	6.14B
	B. Students determine whether a credit card, debit card, or both is appropriate for a given situation and explain their reasoning.	6.14B
	C. Students use information about credit cards from financial institutions to answer questions.	6.14A, 6.14B
	D. Students use given information to answer financial questions.	6.14B
	E. Students determine interest rates to the nearest percent.	**6.5B**, 6.14B
III. Understanding Credit Reports	A. Students identify whether a given piece of information is included in a credit report.	6.14E
	B. Students state whether a statement about credit scores is true or false and explain their reasoning.	6.14D, 6.14E, 6.14F
	C. Students are given a circle graph showing credit factors. They use this graph to determine if a person's claim is correct or incorrect and explain their reasoning.	6.14D, 6.14F
	D. Students use given information to answer questions about credit scores and loan risk.	6.14D, 6.14E, 6.14F
IV. Career Exploration	A. Students use a table of information to calculate the new salary in a given problem situation.	6.14H
	B. Students use a given situation to answer salary and income questions.	6.14H
	C. Students use given information to answer questions about income and careers.	6.14H
V. Paying for College	A. Students identify each described method of paying for college as a grant, scholarship, work-study program, student loan, or savings and explain their answer.	6.14G
	B. Students use information about two colleges to answer questions.	6.14G
	C. Students are given a school and information about resident and non-resident costs. They determine the percentage of the tuition that residents pay compared to non-residents.	**6.5B**, 6.14G
	D. Students are given a situation in which a student is considering three different colleges. Students use the information given about each college to answer questions.	6.14G

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Module 5: Describing Variability of Quantities

Topic 1: The Statistical Process

Section	Problem Set	TEKS
I. Understanding the Statistical Process	A. Students determine if each given question is a statistical question. If it is not a statistical question, students rewrite it to make it a statistical question.	6.13B
	B. Students write two statistical questions that could be answered about a given topic by conducting a survey or experiment.	6.13B
	C. Students determine whether a survey, observational study, or an experiment would be the best way to answer a given statistical question.	6.13B
	D. Students determine if each set of given data are categorical or quantitative. If the data are quantitative, they determine whether the data are discrete or continuous.	(P) **6.12D**
	E. Students analyze given graphs to solve problems.	**6.12D**
II. Analyzing Numerical Data Displays	A. Students use dot plots to answer questions.	6.12B
	B. Students classify dot plots as symmetric, left skewed, or right skewed.	6.12B
	C. Students identify clusters, gaps or outliers for each dot plot.	6.12B
	D. Students answer questions about stem-and-leaf plots.	6.12B, **6.13A**
	E. Students create the graphical representation indicated in each problem. Then, they describe the shape of the data distribution in the graphical representation.	6.12A, 6.12B
	F Students use a given graphical representation to answer questions.	6.12B, **6.13A**
III. Using Histograms to Display Data	A. Students use histograms to answer problems.	**6.13A**
	B. Students create histograms based on the data in a given frequency table.	6.12A
	C. Students extend frequency tables from part B to display relative frequencies.	**6.12D**

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Topic 2: Numerical Summaries of Data

Section	Problem Set	TEKS
I. Analyzing Data Using Measures of Center	A. Students use cube stacks to determine the balance point, or center, for each data set. Students move the cubes in the sketch and use words to describe their steps.	**6.12C**
	B. Students use a number line to determine the balance point, or center, for a given data set. They sketch and describe their steps.	**6.12C**
	C. Students determine the mean, median, mode, and range for a given data set. They indicate if there is no mode or more than one mode.	**6.12C**
	D. Students determine the measure of central tendency that was used to describe a given data set.	**6.12C**
	E. Students describe a given data distribution as skewed left, symmetric or skewed right. They determine whether the mean is less than, greater than, or equal to the median.	6.12B
II. Displaying the Five-Number Summary	A. Students determine the minimum, maximum, median, Q1, Q3, and IQR for given data sets.	**6.12C**
	B. Students construct box plots for given data sets.	6.12A
	C. Students determine the range, median, Q1, Q3, and the IQR for each given box plot.	**6.13A**
	D. Students use given information for a given scenario to answer questions. They create box plots and use them to answer questions.	6.12A, **6.12C**, **6.13A**
III. Collecting, Displaying, and Analyzing Data	A. Students analyze a given graph to answer questions.	**6.12D**
	B. Students create a specified graph for each data set.	**6.12D**
	C. Students use given information and percent bar graphs to answer questions.	**6.12D**

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