TCM Teacher Created Materials

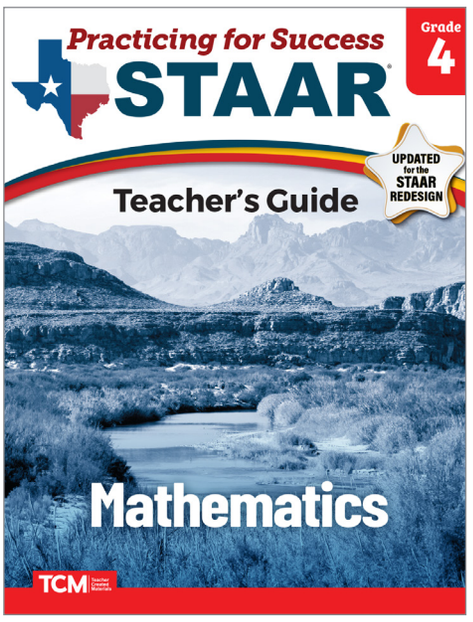
Practicing for Success STAAR

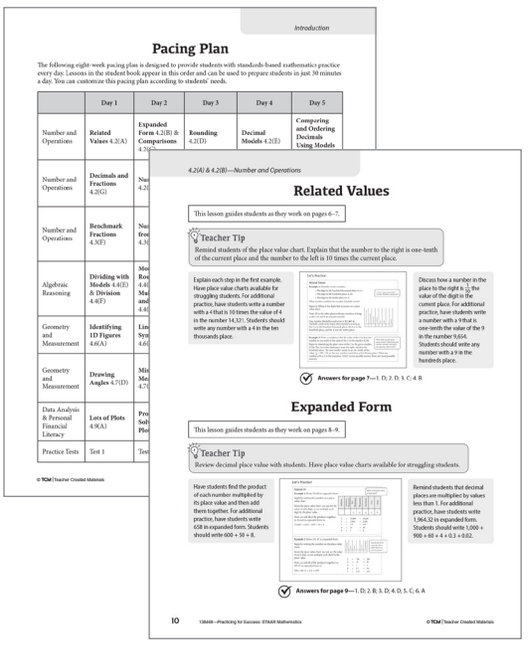
Mathematics

Teacher Book Sample

Grade 4

Table of Contents





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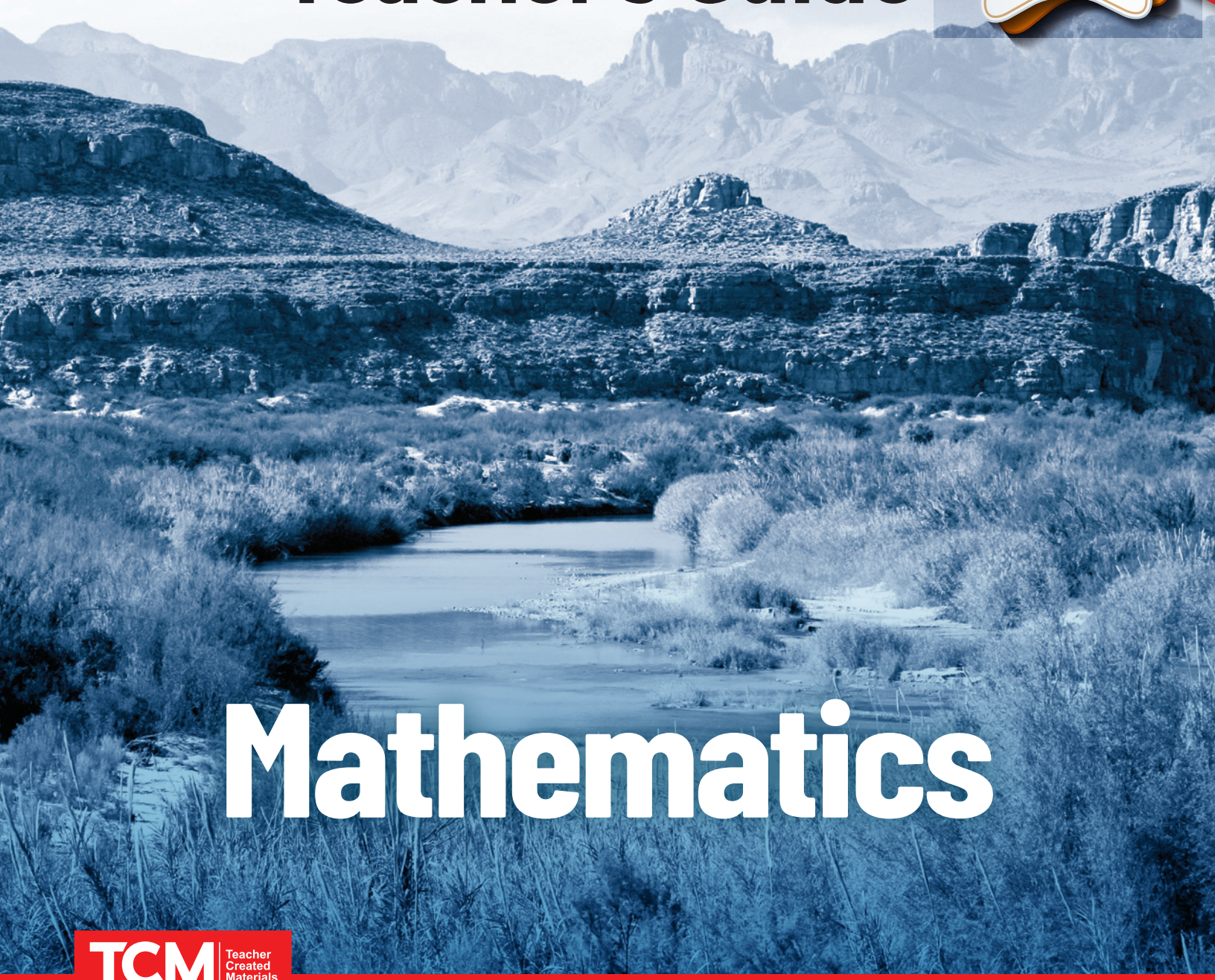
Practicing for Success

STAAR®

Grade 4

UPDATED for the STAAR REDESIGN

Teacher's Guide



Mathematics

TCM Teacher Created Materials

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Pacing Plan

The following eight-week pacing plan is designed to provide students with standards-based mathematics practice every day. Lessons in the student book appear in this order and can be used to prepare students in just 30 minutes a day. You can customize this pacing plan according to students' needs.

	Day 1	Day 2	Day 3	Day 4	Day 5
Number and Operations	**Related Values** 4.2(A)	**Expanded Form** 4.2(B) & **Comparisons** 4.2(C)	**Rounding** 4.2(D)	**Decimal Models** 4.2(E)	**Comparing and Ordering Decimals Using Models** 4.2(F)
Number and Operations	**Decimals and Fractions** 4.2(G)	**Number Lines** 4.2(H)	**Fractions** 4.3(A) & **Decomposing Fractions** 4.3(B)	**Equivalent Fractions** 4.3(C) & **Comparing Fractions** 4.3(D)	**Adding and Subtracting Fractions** 4.3(E)
Number and Operations	**Benchmark Fractions** 4.3(F)	**Number Lines from Zero** 4.3(G)	**Adding and Subtracting with Whole Numbers and Decimals** 4.4(A)	**Multiplying with 10 and 100** 4.4(B) & **Finding Products** 4.4(C)	**Multiplication** 4.4(D)
Algebraic Reasoning	**Dividing with Models** 4.4(E) & **Division** 4.4(F)	**More Rounding** 4.4(G) & **Multiplying and Dividing** 4.4(H)	**Writing Equations with Variables** 4.5(A)	**What's the Rule?** 4.5(B)	**Solving Perimeter and Area Problems** 4.5(D)
Geometry and Measurement	**Identifying 1D Figures** 4.6(A)	**Lines of Symmetry** 4.6(B)	**Triangles** 4.6(C)	**Two-Dimensional Figures** 4.6(D)	**Using a Protractor** 4.7(C)
Geometry and Measurement	**Drawing Angles** 4.7(D)	**Missing Measures** 4.7(E)	**Measurement Units** 4.8(A)	**Converting Units** 4.8(B)	**Problem Solving** 4.8(C)
Data Analysis & Personal Financial Literacy	**Lots of Plots** 4.9(A)	**Problem Solving with Plots** 4.9(B)	**Expenses** 4.10(A)	**Profit** 4.10(B)	**Financial Institutions** 4.10(E)
Practice Tests	Test 1	Test 1 Review	Test 2	Test 2 Review	Celebration

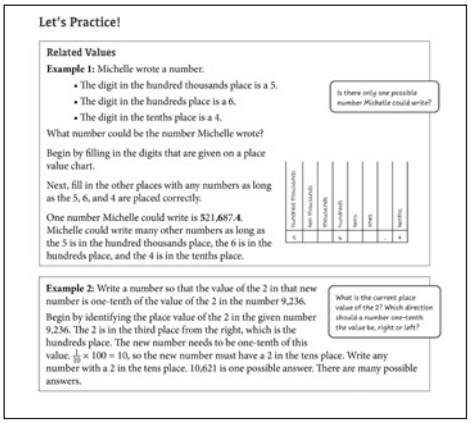
Related Values

This lesson guides students as they work on pages 6–7.

Teacher Tip

Remind students of the place value chart. Explain that the number to the right is one-tenth of the current place and the number to the left is 10 times the current place.

Explain each step in the first example. Have place value charts available for struggling students. For additional practice, have students write a number with a 4 that is 10 times the value of 4 in the number 14,321. Students should write any number with a 4 in the ten thousands place.



Let's Practice!

Related Values

Example 1: Michelle wrote a number.

- The digit in the hundred thousands place is a 5.
- The digit in the hundreds place is a 6.
- The digit in the tenths place is a 4.

What number could be the number Michelle wrote?

Is there only one possible number Michelle could write?

Begin by filling in the digits that are given on a place value chart.

Next, fill in the other places with any numbers as long as the 5, 6, and 4 are placed correctly.

One number Michelle could write is **521,687.4**. Michelle could write many other numbers as long as the 5 is in the hundred thousands place, the 6 is in the hundreds place, and the 4 is in the tenths place.

Example 2: Write a number so that the value of the 2 in that new number is one-tenth of the value of the 2 in the number 9,236.

What is the current place value of the 2? Which direction should a number one-tenth the value be, right or left?

Begin by identifying the place value of the 2 in the given number 9,236. The 2 is in the third place from the right, which is the hundreds place. The new number needs to be one-tenth of this value. $\frac{1}{10} \times 100 = 10$, so the new number must have a 2 in the tens place. Write any number with a 2 in the tens place. 10,621 is one possible answer. There are many possible answers.

Discuss how a number in the place to the right is $\frac{1}{10}$ the value of the digit in the current place. For additional practice, have students write a number with a 9 that is one-tenth the value of the 9 in the number 9,654. Students should write any number with a 9 in the hundreds place.

Answers for page 7—1. D; 2. D; 3. C; 4. B

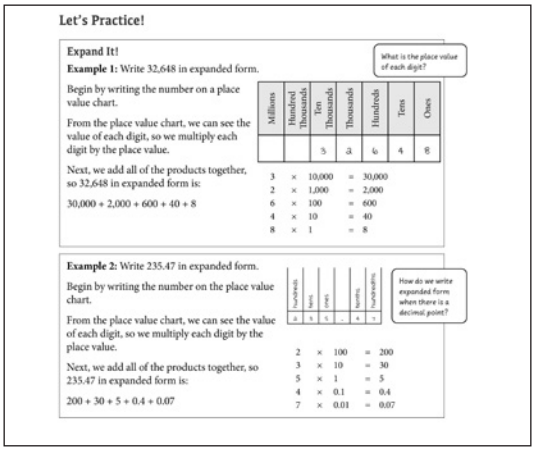
Expanded Form

This lesson guides students as they work on pages 8–9.

Teacher Tip

Review decimal place value with students. Have place value charts available for struggling students.

Have students find the product of each number multiplied by its place value and then add them together. For additional practice, have students write 658 in expanded form. Students should write 600 + 50 + 8.



Let's Practice!

Expand It!

Example 1: Write 32,648 in expanded form.

What is the place value of each digit?

Begin by writing the number on a place value chart.

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
		3	2	6	4	8

From the place value chart, we can see the value of each digit, so we multiply each digit by the place value.

Next, we add all of the products together, so 32,648 in expanded form is:

30,000 + 2,000 + 600 + 40 + 8

3 × 10,000 = 30,000
2 × 1,000 = 2,000
6 × 100 = 600
4 × 10 = 40
8 × 1 = 8

Example 2: Write 235.47 in expanded form.

Begin by writing the number on the place value chart.

Hundreds	Tens	Ones	.	Tenths	Hundredths
2	3	5	.	4	7

How do we write expanded form when there is a decimal point?

From the place value chart, we can see the value of each digit, so we multiply each digit by the place value.

Next, we add all of the products together, so 235.47 in expanded form is:

200 + 30 + 5 + 0.4 + 0.07

2 × 100 = 200
3 × 10 = 30
5 × 1 = 5
4 × 0.1 = 0.4
7 × 0.01 = 0.07

Remind students that decimal places are multiplied by values less than 1. For additional practice, have students write 1,964.32 in expanded form. Students should write 1,000 + 900 + 60 + 4 + 0.3 + 0.02.

Answers for page 9—1. D; 2. B; 3. D; 4. D; 5. C; 6. A

TEKS Correlations

The strategies in the lessons are written to align with each standard as outlined by the TEA. Each lesson strategy corresponds with a skill to be assessed in the STAAR tests.

Lesson	Standard	Description
Related Values	**4.2(A)**	Interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left.
Expanded Form	**4.2(B)**	Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals.
Comparisons	**4.2(C)**	Compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =.
Rounding	**4.2(D)**	Round whole numbers to a given place value through the hundred thousands place.
Decimal Models	**4.2(E)**	Represent decimals, including tenths and hundredths, using concrete and visual models and money.
Comparing and Ordering Decimals Using Models	**4.2(F)**	Compare and order decimals using concrete and visual models to the hundredths.
Decimals and Fractions	**4.2(G)**	Relate decimals to fractions that name tenths and hundredths.
Number Lines	**4.2(H)**	Determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line.
Fractions	**4.3(A)**	Represent a fraction $\frac{a}{b}$ as a sum of fractions $\frac{1}{b}$, where a and b are whole numbers and $b > 0$, including when $a > b$.
Decomposing Fractions	**4.3(B)**	Decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations.
Equivalent Fractions	**4.3(C)**	Determine if two given fractions are equivalent using a variety of methods.
Comparing Fractions	**4.3(D)**	Compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, <, or =.
Adding and Subtracting Fractions	**4.3(E)**	Represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations.

TEKS Correlations *(cont.)*

Lesson	Standard	Description
Benchmark Fractions	**4.3(F)**	Evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1, referring to the same whole.
Number Lines from Zero	**4.3(G)**	Represent fractions and decimals to the tenths or hundredths as distances from zero on a number line.
Adding and Subtracting Whole Numbers and Decimals	**4.4(A)**	Add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.
Multiplying with 10 and 100	**4.4(B)**	Determine the products of a number and 10 or 100 using properties of operations and place value understandings.
Finding Products	**4.4(C)**	Represent the product of two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15.
Multiplication	**4.4(D)**	Use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties.
Dividing with Models	**4.4(E)**	Represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays, area models, or equations.
Division	**4.4(F)**	Use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor.
More Rounding	**4.4(G)**	Round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers.
Multiplying and Dividing	**4.4(H)**	Solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.
Writing Equations with Variables	**4.5(A)**	Represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity.
What's the Rule?	**4.5(B)**	Represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in resulting sequence and their position in the sequence.
Solving Perimeter and Area Problems	**4.5(D)**	Solve problems related to perimeter and area of rectangles where dimensions are whole numbers.

Practice Test Answers and Correlations

Practice Test 1

Question	Answer	Standard	Lesson
1	A	4.10(B)	Profit (page 29)
2	C	4.2(A)	Related Values (page 10)
3	B	4.5(B)	What's the Rule? (page 22)
4	C	4.2(C)	Comparisons (page 11)
5	B	4.4(G)	More Rounding (page 20)
6	B	4.4(F)	Division (page 20)
7	C	4.3(D)	Comparing Fractions (page 15)
8	D	4.2(B)	Expanded Form (page 10)
9	C	4.4(A)	Adding and Subtracting with Whole Numbers and Decimals (page 17)
10	A	4.4(F)	Division (page 20)
11	D	4.2(B)	Expanded Form (page 10)
12	B	4.7(C)	Using a Protractor (page 25)
13	D	4.6(C)	Triangles (page 24)
14	C	4.6(D)	Two-Dimensional Figures (page 24)
15	B	4.3(E)	Adding and Subtracting Fractions (page 16)
16	D	4.4(B)	Multiplying with 10 and 100 (page 18)
17	B	4.2(F)	Comparing and Ordering Decimals Using Models (page 12)
18	D	4.8(A)	Measurement Units (page 26)
19	A	4.8(B)	Converting Units (page 27)
20	A	4.2(A)	Related Values (page 10)
21	C	4.5(D)	Solving Perimeter and Area Problems (page 22)
22	A	4.9(B)	Problem Solving with Plots (page 28)