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**Practicing for Success: STAAR  
Mathematics  
Grade 5**

**This sample includes the following:**

**Teacher's Guide pages** (7 pages)

- Cover and Table of Contents
- Pacing Plan
- Teacher Notes
- TEKS Correlations

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# STAAR<sup>®</sup>

Grade

5



## Teacher's Guide



**UPDATED**  
for the  
**STAAR**  
**REDESIGN**



# Mathematics



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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	<b>Expanded Notation</b> 5.2(A)	<b>Comparing and Ordering Decimals</b> 5.2(B) & <b>Rounding Decimals</b> 5.2(C)	<b>Estimating Solutions</b> 5.3(A)	<b>Multiplying</b> 5.3(B)	<b>Division</b> 5.3(C)
Number and Operations	<b>Decimal Multiplication</b> 5.3(D)	<b>More Decimal Practice</b> 5.3(E)	<b>Quotients</b> 5.3(F)	<b>Decimal Division</b> 5.3(G)	<b>Adding and Subtracting with Fractions</b> 5.3(H)
Number and Operations	<b>Multiplying with Models</b> 5.3(I)	<b>Dividing Fractions and Whole Numbers with Models</b> 5.3(J)	<b>Rational Numbers</b> 5.3(K)	<b>Dividing with Unit Fractions</b> 5.3(L)	<b>Prime vs. Composite</b> 5.4(A)
Algebraic Reasoning	<b>Equations with Variables</b> 5.4(B)	<b>Numerical Patterns</b> 5.4(C)	<b>Patterns</b> 5.4(D)	<b>Grouping Symbols</b> 5.4(E)	<b>Simplifying Expressions</b> 5.4(F)
Geometry and Measurement	<b>Perimeter and Area</b> 5.4(H)	<b>Classifying Figures</b> 5.5(A)	<b>Unit Cubes</b> 5.6(A)	<b>Volume Using Layers</b> 5.6(B)	<b>Conversions</b> 5.7(A)
Geometry and Measurement	<b>Coordinate Plane</b> 5.8(A)	<b>Ordered Pairs</b> 5.8(B)	<b>Graphing Points</b> 5.8(C)	<b>Graphical Representations</b> 5.9(A)	<b>Scatterplots</b> 5.9(B)
Personal Financial Literacy	<b>Solving Problems from Graphs</b> 5.9(C)	<b>Finance Terms</b> 5.10(A)	<b>Types of Income</b> 5.10(B)	<b>Exceeding Income</b> 5.10(E)	<b>Balanced</b> 5.10(F)
Practice Tests	Test 1	Test 1 Review	Test 2	Test 2 Review	Celebration

# Expanded Notation

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



## Teacher Tip

Review place value with students. Display a place value chart for students to reference.

tens 10	ones 1	.	tenths 0.1	hundredths 0.01	thousandths 0.001
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Explain each step in the first example. Review the value of each place on the chart.

For additional practice, have students write the number 541.273 in expanded form. Students should identify the value of each digit before writing the expanded form. The solution is  $(5 \times 100) + (4 \times 10) + (1 \times 1) + (2 \times 0.1) + (7 \times 0.01) + (3 \times 0.001)$ .



**Answers for page 7**—1. B; 2. C; 3. A; 4. C; 5. D; 6. B

### Let's Practice!

#### Writing in Expanded Notation

**Example 1:** A toy box weighed 36.287 pounds. Write the weight of the toy box in expanded notation.

First, place the number in a place value chart to see the value of each digit.

tens 10	ones 1	.	tenths 0.1	hundredths 0.01	thousandths 0.001
3	6	.	2	8	7

Next, multiply each digit by its place value to show the expanded notation.

$$(3 \times 10) + (6 \times 1) + (2 \times 0.1) + (8 \times 0.01) + (7 \times 0.001)$$

What is the place value of the largest digit? What should I multiply the digit by?

**Example 2:** The weight in pounds of a piano is shown in expanded notation.

$$(2 \times 100) + (4 \times 10) + (6 \times 1) + (2 \times 0.1) + (7 \times 0.01)$$

What is the weight in pounds, written as a numeral?

Find each product.

$$2 \times 100 = 200$$

$$4 \times 10 = 40$$

$$6 \times 1 = 6$$

$$2 \times 0.1 = 0.2$$

$$7 \times 0.01 = 0.07$$

Next, add them together.  $200 + 40 + 6 + 0.2 + 0.07 = 226.79$

The piano weighs 226.79 pounds.

Which operation do I complete first: adding or multiplying? Why?

For the second example, stress that students must multiply inside the parentheses first before adding the products together.

# Comparing and Ordering Decimals

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



## Teacher Tip

Have place value charts available so students can practice writing numbers before comparing the numbers.

Remind students that they should look for the largest number with the same place value to determine which number is larger.

### Let's Practice!

#### Comparisons

Which comparison is true?

A.  $1.350 > 1.45$

B.  $6.872 < 6.861$

C.  $0.42 > 0.39$

A.

ones	tenths	hundredths	thousandths
1	3	5	0
1	4	5	

From the chart, we can see that 1.350 is LESS than 1.45, so this choice is false.

B.

ones	tenths	hundredths	thousandths
6	8	7	2
6	8	6	1

From the chart, we can see that 6.872 is GREATER than 6.861 so this choice is false.

C.

ones	tenths	hundredths	thousandths
0	4	2	
0	3	9	

From the chart, we can see that 0.42 is GREATER than 0.39 so this choice is true. C is the correct answer.

Which place value should I compare? Do I always compare the same places?

To find the true comparison, we can use a place value chart for each pair of numbers.

For additional practice, have students write these numbers from least to greatest:

5.467; 6.307; and 5.41

From least to greatest, students should write 5.41; 5.467; and 6.307.



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

# TEKS Correlations

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

Lesson	Standard	Description
Expanded Notation	5.2(A)	Represent the value of the digit in decimals through the thousandths place using expanded notation and numerals.
Comparing and Ordering Decimals	5.2(B)	Compare and order two decimals to the thousandths place, and represent comparisons using the symbols $>$ , $<$ , or $=$ .
Rounding Decimals	5.2(C)	Round decimals to the tenths or hundredths place.
Estimating Solutions	5.3(A)	Estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division.
Multiplying	5.3(B)	Multiply a three-digit number by a two-digit number with fluency using the standard algorithm.
Division	5.3(C)	Solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm.
Decimal Multiplication	5.3(D)	Represent multiplication of decimals with products to the hundredths place using objects and pictorial models, including area models.
More Decimal Practice	5.3(E)	Solve for products of decimals to the hundredths place, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers.
Quotients	5.3(F)	Represent quotients of decimals to the hundredths place, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models.
Decimal Division	5.3(G)	Solve for quotients of decimals to the hundredths place, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including standard algorithm.
Adding and Subtracting with Fractions	5.3(H)	Represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations.
Multiplying with Models	5.3(I)	Represent and solve the multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models.

# TEKS Correlations *(cont.)*

Lesson Title	Standard	Description
Dividing Fractions and Whole Numbers with Models	5.3(J)	Represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction, such as $\frac{1}{3} \div 7$ and $7 \div \frac{1}{3}$ using objects and pictorial models, including area models.
Rational Numbers	5.3(K)	Add and subtract positive rational numbers fluently.
Dividing with Unit Fractions	5.3(L)	Divide whole numbers by unit fractions and unit fractions by whole numbers.
Prime vs. Composite	5.4(A)	Identify prime and composite numbers.
Equations with Variables	5.4(B)	Represent and solve multistep problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity.
Numerical Patterns	5.4(C)	Generate a numerical pattern when given a rule in the form $y = ax$ or $y = x + a$ and graph.
Patterns	5.4(D)	Recognize the difference between additive and multiplicative numerical patterns given in a table or graph.
Grouping Symbols	5.4(E)	Describe the meaning of parentheses and brackets in a numeric expression.
Simplifying Expressions	5.4(F)	Simplify numerical expressions that do not involve exponents, including up to two levels of grouping.
Perimeter and Area	5.4(H)	Represent and solve problems related to perimeter and/or area and related to volume.
Classifying Figures	5.5(A)	Classify two-dimensional figures by attributes and properties.
Unit Cubes	5.6(A)	Recognize a cube with a side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes ( $n$ cubic units) needed to fill it with no gaps or overlaps if possible.
Volume Using Layers	5.6(B)	Determine the volume of a rectangular prism with whole-number side lengths in problems related to the number of layers multiplied by the number of unit cubes in the area of the base.
Conversions	5.7(A)	Calculate conversions within a measurement system, customary or metric.

# TEKS Correlations *(cont.)*

Lesson Title	Standard	Description
Coordinate Plane	5.8(A)	Describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0), the $x$ -coordinate, the first number in an ordered pair, indicates movement parallel to the $x$ -axis starting at the origin, and the $y$ -coordinate, the second number, indicates movement parallel to the $y$ -axis starting at the origin.
Ordered Pairs	5.8(B)	Describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane.
Graphing Points	5.8(C)	Graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table.
Graphical Representations	5.9(A)	Represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem and leaf plots.
Scatterplots	5.9(B)	Represent discrete paired data on a scatterplot.
Solving Problems from Graphs	5.9(C)	Solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem and leaf plot, or scatterplot.
Finance Terms	5.10(A)	Define income tax, payroll tax, sales tax, and property tax.
Types of Income	5.10(B)	Explain the difference between gross and net income.
Exceeding Income	5.10(E)	Describe actions that might be taken to balance a budget when expenses exceed income.
Balanced	5.10(F)	Balance a simple budget.