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# Practicing for Success: STAAR Mathematics Grade 5

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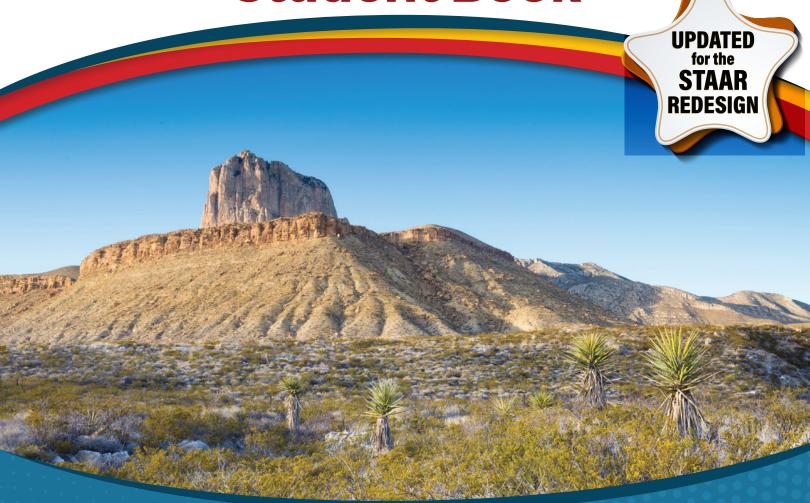
#### Student Book pages (7 pages)

- · Cover and Table of Contents
- Guided Practice pages
- Independent Practice pages



# Practicing for Success STAAR STAAR

**Student Book** 



# Mathematics



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# **Expanded Notation**

#### **Lesson Focus**

I can use expanded form to write decimals.

1. What is expanded notation?

#### What You Need to Know

When writing a number in expanded notation, we write each number according to its place value. Multiply each digit by its place value, and add them together.

42.267 would be written as  $(4 \times 10) + (2 \times 1) + (2 \times 0.1) + (6 \times 0.01) + (7 \times 0.001)$ 

#### 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.

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

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

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

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

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

$$(2 \times 100) + (2 \times 10) + (6 \times 1) + (7 \times 0.1) + (9 \times 0.01)$$

What is the weight in pounds, written as a numeral? Find each product.

$$a \times 100 = a00$$

$$a \times 10 = a0$$

$$6 \times 1 = 6$$

$$7 \times 0.1 = 0.7$$

$$9 \times 0.01 = 0.09$$

Next, add them together. 200 + 20 + 6 + 0.7 + 0.09 = 226.79

The piano weighs 226.79 pounds.

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

# **Independent Practice**

Directions: Read and solve each problem carefully. Record the correct answer on your answer sheet.

- **1** What is the number  $(4 \times 10) + (7 \times 1) + (3 \times 0.1) + (9 \times 0.01)$  written as a numeral?
  - **A** 41.39
  - **B** 47.39
  - **C** 74.39
  - **D** 47.93

- **4** What is the number  $(2 \times 100) + (3 \times 1) + (4 \times 0.1) + (6 \times 0.001)$  written as a numeral?
  - **A** 23.64
  - **B** 23.46
  - **C** 203.406
  - **D** 2003.46
- **2** The weight of a brick is 1.95 pounds. Which of the following is 1.95 in expanded notation?
  - **A**  $(1 \times 1) + (9 \times 5)$
  - **B**  $(1 \times 90) + (5 \times 0.001)$
  - **C**  $(1 \times 1) + (9 \times 0.1) + (5 \times 0.01)$
  - **D**  $(1 \times 10) + (9 \times 1) + (5 \times 0.01)$

- **5** Tonya is donating four bags of clothes to charity. The bags weigh a total of 48.321 pounds. What is the total weight of the donated clothes in expanded notation?
  - **A**  $(48 \times 10) + (32 + 0.01)$
  - **B**  $(4 \times 100) + (8 \times 0.001) + (3 \times 10) + (2 \times 1)$
  - **C**  $(8 \times 10) + (4 \times 1) + (3 \times 100) + (2 \times 0.1) + (1 \times 1)$
  - **D**  $(4 \times 10) + (8 \times 1) + (3 \times 0.1) + (2 \times 0.01) + (1 \times 0.001)$

- Nairobi's cat weighs  $(1 \times 10) + (5 \times 1) + (9 \times 0.1) + (8 \times 0.01)$  pounds. What is the cat's weight in pounds written as a numeral?
  - **A** 15.98
  - **B** 19.85
  - **C** 15.095
  - **D** 15.89

- **6** Johnna's backpack weighs  $(1 \times 10) + (3 \times 1) + (2 \times 0.01)$  pounds. How much does the backpack weigh?
  - **A** 13.2
  - **B** 13.02
  - **C** 13.002
  - **D** 132

# Comparing and Ordering Decimals

#### **Lesson Focus**

I can compare decimals using <, >, and =.

1. How do you decide when one decimal is greater or less than another one?

#### What You Need to Know

When comparing numbers, you must look at each place value. Start with the far left column, and if the digits are the same in one column, move to the next column. Look at the place value chart to see which number is larger.

ones	tenths	hundredths	thousandths
4	1	3	6
4	1	4	

The digits in the ones and tenths places are the same, so we look at the hundredths place. Because the 4 is larger than the 3, the number 4.14 > 4.136.

#### 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
	ı	3	5	0
	ı	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	а
	6	8	6	I

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.

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	а	
	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.

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# **Independent Practice**

**Directions:** Read and solve each problem carefully. Record the correct answer on your answer sheet.

**1** The table shows the times it took four swimmers to finish a race.

Lane	Time (minutes)
1	15.23
2	16.75
3	15.678
4	16.014

Which comparison of these times is **NOT** correct?

- **A** 16.014 < 16.75
- **B** 15.23 > 15.678
- **C** 16.014 > 15.678
- **D** 15.678 < 16.75

**2** Which number can be placed in the box to show the numbers in order from least to greatest?

- **A** 4.001
- **B** 4.87
- **C** 4.45
- **D** 4.987
- **3** Which is **NOT** true?
  - **A** 2.56 = 2.56000
- **C** 2.78 < 2.87
- **B** 9.414 > 9.315
- **D** 3.15 < 3.015

**4** The table shows the weights of four students' backpacks.

Student	Weight of Backpack (pounds)
Niko	11.26
Mya	11.105
Rashad	10.998
Liu	11.35

Which statement is true?

- A The weight of Mya's backpack is greater than the weight of Niko's backpack.
- **B** The weight of Liu's backpack is less than the weight of Mya's backpack.
- C The weight of Rashad's backpack is greater than the weight of Liu's backpack.
- **D** The weight of Niko's backpack is less than the weight of Liu's backpack.
- **5** Which of the comparisons is true?
  - **A** 12.57 > 12.122
  - **B** 5.64 < 5.278
  - **C** 7.15 > 7.154
  - **D** 3.6 < 3.15