



Get Set for

Grade **7**

# Math

NEW YORK

Continental



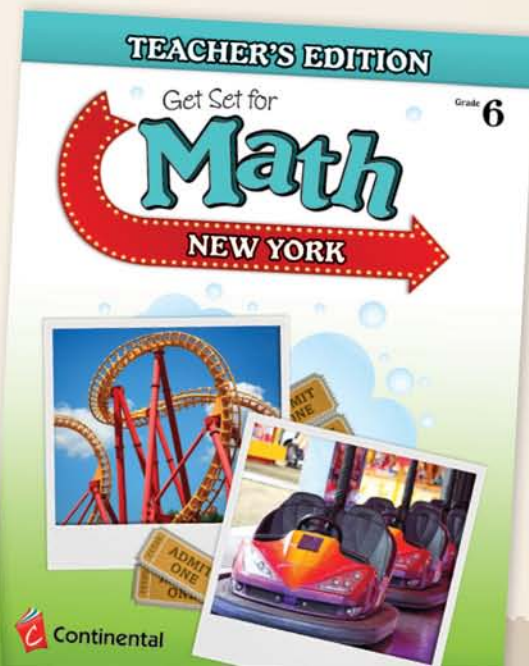
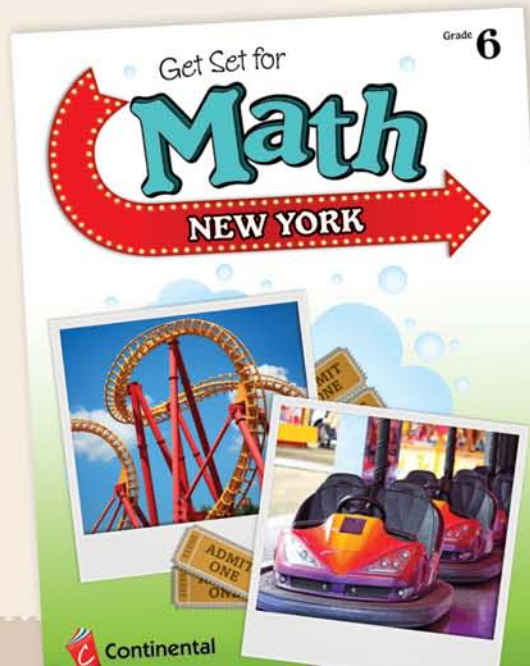
Grades 3–8





## What does this series do?

*Get Set for Math New York* prepares students for the New York State Common Core Test. Lessons review the Common Core Learning Standards (CCLS) and familiarize students with the challenging item types they'll face on test day. Components include student workbooks and annotated teacher's editions.



Grades 3–8



# Connections to the Common Core Learning Standards (CCLS)

- Written directly to the CCLS domains
- Item types on the NY State Common Core Test

### Independent Practice

4 The value of  $n$  is less than 1. For each expression in the table below, mark an X in the box to show whether the expression has a value less than  $n$ , equal to  $n$ , or greater than  $n$ .

Expression	Less Than $n$	Equal to $n$	Greater Than $n$
$\frac{5}{9} \times n$			
$5\frac{5}{9} \times n$			
$\frac{9}{9} \times n$			
$\frac{9}{10} \times n$			

5 A rectangle has a length of  $\frac{2}{3}$  foot and a width of  $\frac{5}{4}$  feet. Which **two** of the following statements are true about the area of the rectangle,  $\frac{2}{3} \times \frac{5}{4}$ ? Select the two that apply.

A The area is less than  $\frac{5}{4}$  ft<sup>2</sup> because the length,  $\frac{2}{3}$  ft, is less than 1.

B The area is greater than  $\frac{2}{3}$  ft<sup>2</sup> because the width,  $\frac{5}{4}$  ft, is greater than 1.

C The area is less than  $\frac{2}{3}$  ft<sup>2</sup> because the width,  $\frac{5}{4}$  ft, is written in fraction form.

D The area is greater than  $\frac{2}{3}$  ft<sup>2</sup> because the area of a rectangle is always greater than either dimension.

E The area is greater than  $\frac{5}{4}$  ft<sup>2</sup> because the area of a rectangle is always greater than either dimension.

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Flash Cards

# Step-By-Step Instruction

Each lesson begins with a focus lesson, which addresses the Standard(s) designated for the lesson. In the sample question that follows, students will work through a sequence of questions that guide their thinking.

Teacher led instruction

Whole class activity

**Lesson 4 Whole-Number Place Value**

**Focus Lesson**

Numbers are made up of **digits**. Each digit has a value, or place, in the number. The **place value** of a digit depends on its position in the number. A digit is 10 times as great as the same digit in the place directly to its right. A digit is also  $\frac{1}{10}$  times as great as the same digit in the place directly to its left.

A place value chart is shown below for the number 6,091,542.

Millions	Thousands	Ones
6	0	9
	9	1
		5
		4
		2

A list of symbols and numbers is shown below.

$\times$     $=$    100   10    $\frac{1}{10}$     $\frac{1}{100}$

Write a symbol and a number on the blank lines below to make a true statement.

280,400 \_\_\_\_\_ = 28,040

- 1 What is the greatest place value of the number 280,400? \_\_\_\_\_
- 2 What is the greatest place value of the number 28,040? \_\_\_\_\_
- 3 Which of these two numbers is greater? \_\_\_\_\_
- 4 How many times greater is that number? \_\_\_\_\_
- 5 For two digits that are the same and next to each other, how many times as great is the digit on the right than the digit on the left? \_\_\_\_\_
- 6 For two digits that are the same and next to each other, how many times as great is

the volume of irregular figures consisting of right rectangular prisms, follow these steps:

- Separate the figure into right rectangular prisms.
- Find the volume of each separate right rectangular prism.
- Add the separate volumes together to get the total volume of the irregular figure.

**★** The figure to the right represents the shape of a building. What is the volume of the entire building?  
\_\_\_\_\_ cubic meters

- 1 What is the formula for the volume of a rectangular prism? \_\_\_\_\_
- 2 How many separate right rectangular prisms can this figure be split into? \_\_\_\_\_
- 3 What are the dimensions of each of the separate right rectangular prisms?  
\_\_\_\_\_  
\_\_\_\_\_
- 4 Write expressions for the volume of each separate right rectangular prism.  
\_\_\_\_\_  
\_\_\_\_\_
- 5 What are the volumes of each separate right rectangular prism?  
\_\_\_\_\_  
\_\_\_\_\_

What is the volume of the entire building? \_\_\_\_\_

# Step-By-Step Instruction

Where appropriate, multiple standards are addressed in a lesson to link major topics at grade level.

Lesson **21** **Volume**



### Focus Lesson

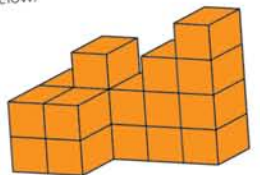
**Volume** is a measure of space inside a solid object. Volume is measured in cubic units.

A **cube** is a 6-sided solid object with edge lengths that are all the same. A **unit cube** is a cube with a side length of 1 unit. The volume of a unit cube is 1 cubic unit.

Unit cubes can be packed inside larger objects to measure their volumes. The total number of unit cubes packed inside a solid object is equal to the volume of the solid object, in cubic units.



A stack of blocks is shown below.



The blocks each have a side length of 1 inch.

Fill in each blank line to make the following statement true.

There are a total of \_\_\_\_\_ blocks in the stack and the stack has a total volume of \_\_\_\_\_ cubic inches.

- How many total blocks are visible from this given view? \_\_\_\_\_
- Does this represent the total number of blocks in the stack? \_\_\_\_\_

Lesson 17	Equations
Lesson 18	Inequalities
Lesson 19	Relationships Between
<b>UNIT 4 Geometry</b>	
6.G.1	Lesson 20 Area
6.G.2	Lesson 21 Volume
6.G.3	Lesson 22 Coordinate Geometry
6.G.4	Lesson 23 Nets and Surface Area
<b>UNIT 5 Data and Statistics</b>	
6.SP.1	Lesson 24 Collecting Data
6.SP.2, 3	Lesson 25 Data Distributions
6.SP.4	Lesson 26 Representing Data
6.SP.5	Lesson 27 Measures of Central Tendency
6.SP.5	Lesson 28 Measures of Variability

# Guided Practice

The guided practice items pose multistep questions with hints to direct students in forming their answers.

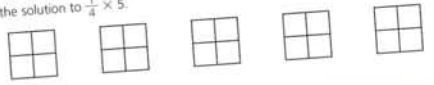
Peer work

## Guided Practice

A large square model consists of four smaller squares. This model represents one whole, as shown here.



In the model shown below, shade in the appropriate smaller squares so the model represents the solution to  $\frac{1}{4} \times 5$ .



1 How many large square models, like the model that is shaded, are shown? \_\_\_\_\_

What part of the expression  $\frac{1}{4} \times 5$  does this represent?

2 Describe in words what  $\frac{1}{4}$  represents in the expression  $\frac{1}{4} \times 5$ ?  
 \_\_\_\_\_  
 \_\_\_\_\_

How many smaller squares are in each large square model?

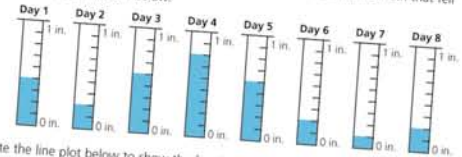
3 How many shaded smaller squares should be shaded in the entire model of blank large squares? \_\_\_\_\_

How many small squares are shaded in 1 blank large square?

Shade in the appropriate smaller squares so the model represents the solution to  $\frac{1}{4} \times 5$ .

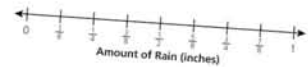
## Guided Practice

In Leo's hometown, it rained 8 days in a row. Leo recorded the amount of rain that fell each of the 8 days, as shown below.



Complete the line plot below to show the fractional amount, in inches, it rained each of these days.

DAILY RAINFALL



1 How many inches of rain fell each of the 8 days?  
 \_\_\_\_\_

What fraction of an inch does each tick mark in the diagrams represent?

2 Describe in words how to plot these data points on the line plot.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

How many total Xs will be marked on the line plot?

Complete the line plot to show the fractional amount, in inches, it rained each of these days.

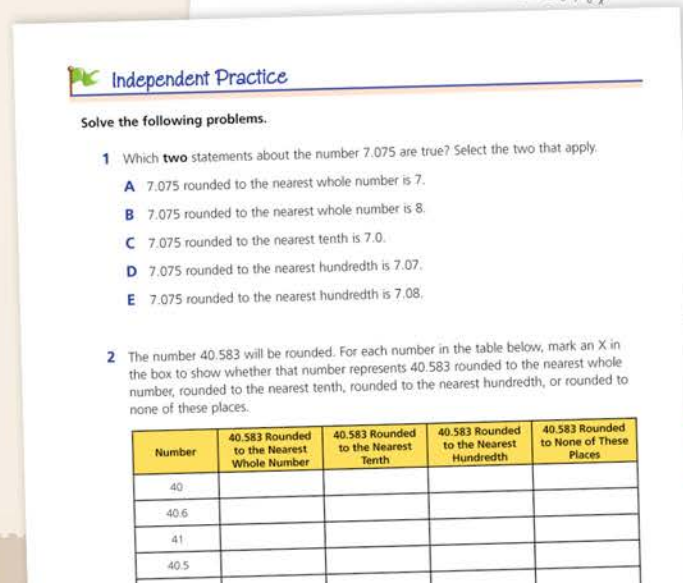
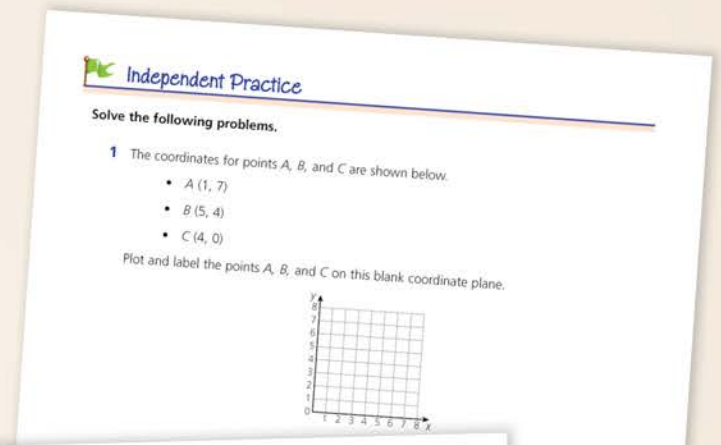


# Independent Practice

The independent practice section features a number of different problem types, including those used in the NY State Common Core Test. Some items require students to perform multiple steps to find the correct answer.

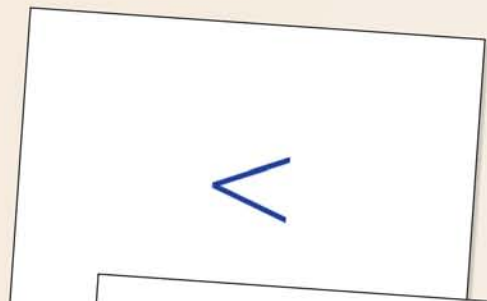
Tasks required of students vary; they may:

- Perform computations
- Plot points on a coordinate plane
- Answer multiple-choice questions with more than one right answer
- Complete a table
- Measure or draw a figure

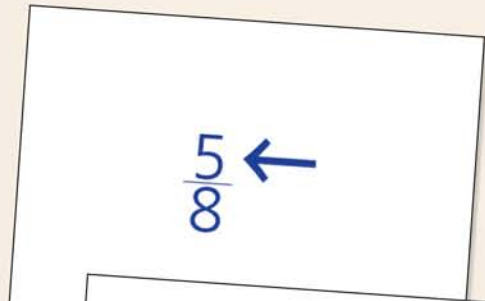


## Flashcards

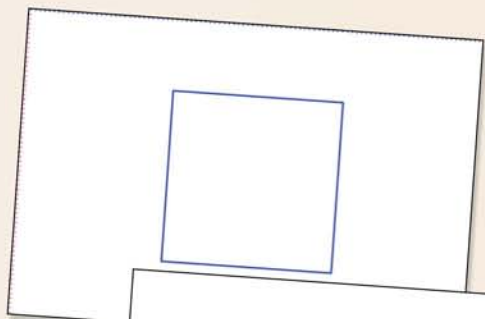
Flashcards in the back of the book help students learn important symbols, formulas, and concepts from the lessons. Blank cards are also provided. Students can work independently or with their class to create new flashcards for challenging topics.



is less than  
symbol



numerator



square



# Teaching Support

The annotated teacher's edition provides comprehensive support from Focus Lessons to Independent Practice.

- NY Common Core Learning Standards and Depth of Knowledge (DOK) correlations
- suggestions for use/teaching strategies
- hands-on extension activities
- annotated student pages with item rationale and commentary

Highlights where students commonly make mistakes.

**Lesson 4 Whole-Number Place Value** Pages 26 and 27

**OBJECTIVE**  
To identify the value of digits in a multi-digit whole number and compare the value of a digit to the other digits' values in the number.

**FOCUS LESSON**  
The Focus Lesson question leads students to complete an equation showing how the value of a whole number changes when a 0 is removed. Students should recognize that 280,400 is greater than 28,040 and that each digit moves one place to the right to make 28,040. This digit moves one place to the right to make 28,040. This digit moves one place to the right to make 28,040. This digit moves one place to the right to make 28,040. Accept either answer as correct.

**GUIDED PRACTICE**  
Students must recognize that the 8s in this number are in the thousands and the hundreds places. Since the hundreds place is one place to the right of the thousands place, an 8 in this place is  $\frac{1}{10}$  of an 8 in the hundreds place. It may be easier for some students to write the values of the digits as 8,000 and 800 in order to recognize how they change.

**Vocabulary**  
**Digit:** one of the numbers 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9

**FOCUS LESSON**  
The Focus Lesson question leads students to complete an equation showing how the value of a whole number changes when a 0 is removed. Students should recognize that 280,400 is greater than 28,040 and that each digit moves one place to the right to make 28,040. This digit moves one place to the right to make 28,040. This digit moves one place to the right to make 28,040. Accept either answer as correct.

**INDEPENDENT PRACTICE**  
1. Write the number 1,234,567. What digit is in the thousands place? **5.NBT.1 DOK: 2**

2. Write the number 1,234,567. What digit is in the hundreds place? **5.NBT.1 DOK: 2**

3. Write the number 1,234,567. What digit is in the tens place? **5.NBT.1 DOK: 2**

4. Write the number 1,234,567. What digit is in the ones place? **5.NBT.1 DOK: 2**

5. Write the number 1,234,567. What digit is in the ten-thousands place? **5.NBT.1 DOK: 2**

6. Write the number 1,234,567. What digit is in the hundred-thousands place? **5.NBT.1 DOK: 2**

7. Write the number 1,234,567. What digit is in the millions place? **5.NBT.1 DOK: 2**

8. Write the number 1,234,567. What digit is in the billions place? **5.NBT.1 DOK: 2**

**Lesson 4 Independent Practice** Pages 28 and 29

**ANSWER RATIONALE**

- The place that is 10 times as great as the ten thousands place is the hundred thousands place. The digit in the hundred thousands place is 9.
- In Verna's number, the digit 6 is in the hundreds place. The place that is 10 times as great as this is the thousands place. Options A and C have the digit 6 in the thousands place, so those options are correct. Options B and E are incorrect because the digit 6 is in the ten-thousands place. Options D and F are incorrect because the digit 6 is in the tens place.
- In the number 52,064, the digit 5 is in the ten thousands place. In the number 519, the digit 5 is in the hundreds place, which is  $\frac{1}{100}$  as great as the ten thousands place. In the number 5,308,241, the digit 5 is in the millions place, which is 100 times as great as the ten thousands place. In the number 5,760, the digit 5 is in the thousands place, which is  $\frac{1}{10}$  as great as the ten thousands place.
- The blue 9 is two places to the right of the red 9, so it is smaller by  $\frac{1}{100}$ .
- In 1,458,936, the 4 is in the hundred thousands place. In 84,059,216, the 4 is one place to the left, so the value of 4 is 10 times its value in 1,458,936. In 710,453, the 4 is three places to the right. The value of 4 is  $\frac{1}{1,000}$  its value in 1,458,936. In 5,423,098, the 4 is in the same place. In 46,823, the 4 is one place to the right, so the value of 4 is  $\frac{1}{10}$  times its value in 1,458,936.
- The digit with the greatest value, 6, must be in the thousands place. The digit 8 is one place to the right of 5 and the digit 3 is one place to the left of 5. So, the 3 is in the hundreds place, the 5 is in the tens place, and the 8 is in the ones place. Therefore the four-digit number is 6,358.

**Common Core Learning Standard**  
**5.NBT.1:** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $\frac{1}{10}$  of what it represents in the place to its left.

**INDEPENDENT PRACTICE**  
1. Write the number 1,234,567. What digit is in the thousands place? **5.NBT.1 DOK: 2**

2. Write the number 1,234,567. What digit is in the hundreds place? **5.NBT.1 DOK: 2**

3. Write the number 1,234,567. What digit is in the tens place? **5.NBT.1 DOK: 2**

4. Write the number 1,234,567. What digit is in the ones place? **5.NBT.1 DOK: 2**

5. Write the number 1,234,567. What digit is in the ten-thousands place? **5.NBT.1 DOK: 2**

6. Write the number 1,234,567. What digit is in the hundred-thousands place? **5.NBT.1 DOK: 2**

7. Write the number 1,234,567. What digit is in the millions place? **5.NBT.1 DOK: 2**

8. Write the number 1,234,567. What digit is in the billions place? **5.NBT.1 DOK: 2**

**INDEPENDENT PRACTICE**  
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5. Write the number 1,234,567. What digit is in the ten-thousands place? **5.NBT.1 DOK: 2**

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7. Write the number 1,234,567. What digit is in the millions place? **5.NBT.1 DOK: 2**

8. Write the number 1,234,567. What digit is in the billions place? **5.NBT.1 DOK: 2**




# Teaching Support

## Reproducibles

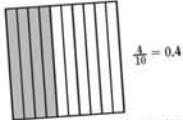
- bonus lessons
- cut-out tools
- reference sheet

### Getting to the Point with Decimals

An odometer records the distance a vehicle has traveled. As the wheels turn, the numbers slowly increase to show how many miles or kilometers the car or truck has gone. At the very right, the numbers change fastest. The smallest place shows tenths of a mile. But the tenths are decimals, not fractions.



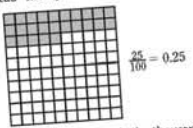
Decimals are fractions written in place-value form. The place the decimal occupies tells you the fractional part, or denominator. It doesn't have to be written. The digit itself tells you the numerator. For example, to write the decimal for  $\frac{4}{10}$  equal parts, or  $\frac{4}{10}$ , you would write 0.4. Read this number as "four tenths" or "zero point four."



A period separates the decimal part of a number from the whole number. It is called a decimal point. Whole numbers are written to the left of the decimal point. Fractional numbers, or those less than one, are written to the right.

The first place to the right of the decimal point is called the tenths place. The second place to the right of the decimal point is the

hundredths place. For example, 0.25 means  $\frac{25}{100}$  and is read "twenty-five hundredths."



The third place to the right is the thousandths place. Just as for whole numbers, each place has a value that is ten times the value of the next place to the right. In other words, 1 tenth, or 0.1, is equal to 10 hundredths, or 0.10.

Decimals are easier to add and subtract than fractions. Just remember to line up the numbers along the decimal points, even if they don't have the same number of decimal places. All the tenths and hundredths and thousandths will then line up, too. Then add or subtract normally. Add hundredths to hundredths, tenths to tenths, ones to ones, and so on. Remember to bring the decimal point straight down into the sum or difference.

$$\begin{array}{r} 12.3 \\ + 4.5 \\ \hline 16.8 \end{array} \qquad \begin{array}{r} 2.56 \\ - 0.2 \\ \hline 2.36 \end{array}$$

If it helps, you can write zeros to the right of a decimal to give the numbers the same number of places.

$$\begin{array}{r} 1.1 \rightarrow 1.100 \\ + 0.256 \\ \hline 1.356 \end{array}$$

Writing zeros at the end of a decimal number does not change its value.

Put an X in the square beside the best answer.

- An odometer is used to keep track of \_\_\_\_\_.
  - time
  - weight
  - distance
  - smells
- The main idea of paragraph 2 is that decimals \_\_\_\_\_.
  - are fractions in place-value form
  - stand for numerators
  - are read the same way as fractions
  - stand for equal parts
- You can decide from the article that 0.80 is the same as \_\_\_\_\_.
  - 8.0
  - 0.8
  - 0.08
  - 0.080
- What is the last step in adding two decimal numbers?
  - Add the places normally, from right to left.
  - Write zeros to make the same number of places.
  - Bring down the decimal point in the sum.
  - Line up the numbers on the decimal points.
- Which of these sentences expresses an opinion?
  - Decimals are easier to add or subtract than fractions.
  - Writing zeros at the end of a decimal number does not change its value.
  - A period separates the decimal part of a number from the whole number.
  - The first place to the right of the decimal point is called the tenths place.
- In paragraph 2, the word occupies means \_\_\_\_\_.
  - keeps busy
  - lives in
  - stands for
  - takes up

.....

Write your answer to the following question on the lines below.

Where are decimal numbers used? Name five different places you see them.

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# Affordable Pricing

## Student Workbook

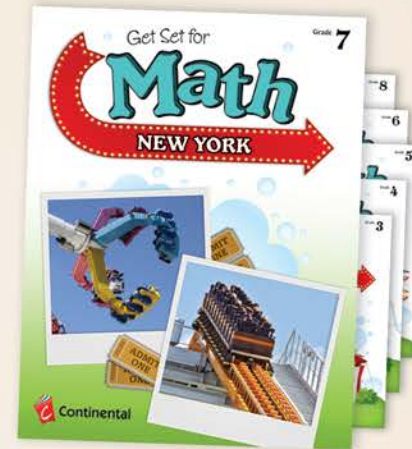
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