

Learn About

Building Number Sense: Place Value and Writing Numbers

Numbers are made up of digits. Each digit in a number has a **place value**. The value of a digit depends on its place in a number. The chart below shows the place values of the digits in the number 2,563,781. The value of the 2 in this number is 2,000,000.

millions (1,000,000)	hundred thousands (100,000)	ten thousands (10,000)	thousands (1000)	hundreds (100)	tens (10)	ones (1)
2	5	6	3	7	8	1

The number 2,563,781 has 2 millions, 5 hundred thousands, 6 ten thousands, 3 thousands, 7 hundreds, 8 tens and 1 one. Numbers can be written in different ways.

- Standard form: 2,563,781
- Word form: two million, five hundred and sixty-three thousand, seven hundred and eighty-one
- Expanded form: $2,000,000 + 500,000 + 60,000 + 3000 + 700 + 80 + 1$

The Hole-in-One sporting goods store sold 1,345,824 golf balls last year. What is the value of the 3 in the number 1,345,824?



The 3 is in the hundred thousands place.
Three hundred thousands is 300,000.
The value of the 3 is **300,000**.



Each digit in a number has a **place value**. The value of a digit depends on its place in a number. Numbers can be written in standard form, in word form or in expanded form.

*Look at the answer choices for each question.
Read why each answer choice is correct or
not correct.*

1. Valerie sells about $\frac{4}{5}$ of the honey that she collects. What percentage of the honey does Valerie sell?

Ⓐ 40%

This is not the correct answer.

The fraction $\frac{4}{5} = \frac{80}{100} = 80\%$, not 40%.

Ⓑ 75%

This is not the correct answer.

The fraction $\frac{4}{5} = \frac{80}{100} = 80\%$, not 75%.

● 80%

This is the correct answer. The fraction

$$\frac{4}{5} = \frac{80}{100} = 80\%.$$

Ⓓ 90%

This is not the correct answer.

The fraction $\frac{4}{5} = \frac{80}{100} = 80\%$, not 90%.

2. Which of these is equal to the number 1,236,734?

Ⓐ one billion, two hundred and thirty-six million, seven thousand, and thirty-four

This is not the correct answer.

The number 1,236,734 does not extend into the billions. The greatest place value in the number is millions.

Ⓑ $1(10^5) + 2(10^4) + 3(10^3) + 6(10^2) + 7(10) + 3(1) + 4(0)$

This is not the correct answer.

The expression $1(10^5)$ is equal to 100,000, not 1,000,000. The powers of ten are incorrect.

Ⓒ $1,000,000 + 20,000 + 30,000 + 7000 + 600 + 30 + 4$

This is not the correct answer. The value of the digit 2 in 1,236,734 is 200,000, not 20,000. The values of the digits 6 and 7 are also switched.

● one million, two hundred and thirty-six thousand, seven hundred and thirty-four

This is the correct answer. The number 1,236,734 equals one million, two hundred and thirty-six thousand, seven hundred and thirty-four.

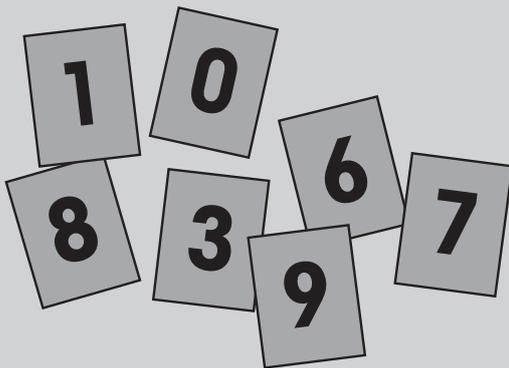
Lesson

8

Read the passage.
Then do Numbers 1–5.

Number Mix

Mr Griffin made ten number cards. He wrote a single digit, 0–9, on each card. He then placed the cards in a bag so that students could not see them. He had ten students each pick one card out of the bag. He then chose a random group of students to stand in line and form a number.



1. Mr Griffin chose seven students. The number formed by the students was 5,804,379. Ben was holding the 3. What was the value of Ben's digit?

- Ⓐ 3
- Ⓑ 300
- Ⓒ 3000
- Ⓓ 300,000

2. Mr Griffin chose eight students the next time. These students formed the number 68,215,470. Rhonda was holding the 6. Which shows the value of Rhonda's digit?

- Ⓐ $6(10^8)$
- Ⓑ $6(10^7)$
- Ⓒ 60,000
- Ⓓ 6

Lesson 13

*Read the passage.
Then do Numbers 1–5.*

The New Bike

Yolanda's old bike was too small for her to ride comfortably. Yolanda had her eye on a new, light blue bike. Her parents said that if she could save \$80, they would pay the rest. Yolanda started to save right away!



1. So far, Yolanda has saved \$20. This is what fraction of the total amount she needs to save?

- (A) $\frac{1}{5}$
- (B) $\frac{1}{4}$
- (C) $\frac{3}{4}$
- (D) $\frac{4}{5}$

2. Two weeks later, Yolanda had saved a total of \$40. This is what percentage of the total amount she needs to save?

- (A) 40%
- (B) 50%
- (C) 75%
- (D) 80%

Self-Assessment 2

Lessons 6–10

Answer these questions after you have completed Lessons 6–10. Before you begin, re-read what you wrote in Self-Assessment 1.

FOCUS on Building Number Sense, Book E

Name _____ Date _____

1. Rate your work in Lessons 6–10. Circle your answer.

successful

somewhat successful

needs improvement

2. Did any of the questions give you trouble? _____

If so, what kind of trouble did you have?

Is this the same kind of trouble you had in Lessons 1–5? _____

3. Did you find the questions easier or more difficult than those in Lessons 1–5?

Why do you think this is so?

4. Did you meet the goal you set for yourself for Lessons 6–10? _____

Why or why not?

5. What is your goal for Lessons 11–15?

Cut along the dotted line.