

Lesson 6: Rounding Big Numbers

Getting Started

? Questions to Explore

- How does place value work?
- How can we use place value to name, create, and compare numbers to a million?
- How do we write and speak in mathematical language?

⦿ Skills

- Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form
- Use place value understanding to round multi-digit whole numbers to any place

✂ Materials

- fine point dry-erase markers (kit)
- whiteboard (kit)

Introduction

Provide time for your child to do the problems at the following web link. They provide her practice with rounding to the nearest 10 and 100. If needed, allow her to refer to the "Rounding Round-Up" sheet in her Interactive Notebook.



Rounding Practice

www.beyondthepage.com/link/8298/

Write 5,632 on the whiteboard, and ask your child to round it to the nearest 10 and 100. (5,630 and 5,600) Now, say, "I wonder what the round number will be if you round this number to the nearest 1,000. Another way to think about this is to picture a number line and to determine whether this number is closer to 5,000 or 6,000." Allow your child to provide an answer. She should note that 5,600 rounds to 6,000. Now, say, "We can round even really big numbers, and we often round big numbers to make our work easier and to communicate when we don't have to be really exact or precise."

Next, give your child the whiteboard and dry-erase markers, and ask her to write the following numbers as you dictate them:

- 3,489
- 45,823
- 595,456

Ask her to round the first number to the nearest thousand. If she uses the method on the "Rounding Round-Up" sheet (from her Interactive Notebook), she would underline the 3 and look at the number to its right (4). Since 4 is less than 5, the underlined number remains the same and the numbers to the right change to zeros (3,000).

Place Value to 1,000,000 — 6: Rounding Big Numbers

Ask her to use the same method to round the second number to the nearest thousand. (46,000) Have her erase and rewrite the number and then round it to the nearest ten thousand (50,000).

Now have her round the third number to the nearest ten thousand. (600,000) This example is a special case. Ask her to explain why this number behaves differently (the 9 rounds to 10, so the 0 goes in the ten thousand place, and the 1 gets added to the hundred thousand place). Another way to think of this is that the number will either round to 500,000 or 600,000, and it is closer to 600,000.

Finally, ask her if this same number can be rounded to the millions place. As needed, explain that even though a digit might not exist in a place (imagine zero there), if the digit to the right of that place is 5 or more, then she can round up to 1 in the place without a digit. Say, "When you look at 595,456, you can ask yourself whether that number is closer to one million or to zero." She should find that the number rounds to 1,000,000.

Activities

Activity 1: More Rounding Practice

Your child will use the "U.S. City Populations for 2019" sheet from Lesson 5 to complete the "Rounding Big Numbers" sheet. After your child completes the page, ask her to explain her answers for the "Think About It!" questions.

"Rounding Big Numbers" Answer Key

City	Population	Rounded to 1,000	Rounded to 10,000	Rounded to 100,000
Houston	2,359,480	2,359,000	2,360,000	2,400,000
Columbus	890,228	890,000	890,000	900,000
San Jose	1,033,519	1,034,000	1,030,000	1,000,000
San Diego	1,453,775	1,454,000	1,450,000	1,500,000
Los Angeles	4,057,841	4,058,000	4,060,000	4,100,000

Think About It!

Can the population of Columbus be rounded to one million? yes

Can the population of San Diego be rounded to two million? no

Activity 2: Basic Skills Review

Your child will complete the "Basic Skills Review #2" sheet. Give her scratch paper to use as needed.

Answer Key:

- Circle the multiples of 7: 14, 24, 35, 42, 50, 57, 63
- Fill in the blanks: 3,700; 3,600; 3,500; 3,400;
3,300; 3,200
- Write the fraction that is shaded. (6/10)
- Shade 3/8. (your child should shade 3 parts)
- What time will it be in 15 minutes? (3:50)
- Circle the area: 42 sq in. OR 26 sq in.
- $7 \times 40 = \underline{280}$
- $50 \times 9 = \underline{450}$

Wrapping Up

To review creating, writing, comparing, and rounding numbers to the millions, ask your child to carefully read the instructions and then complete the "Working With Big Numbers" sheet. As she works, check your child's work for this lesson. Look for patterns in items that she missed, and go over them with her, providing time for her to correct her mistakes.

Answer Key:

1. Write a seven-digit number that has 3 in the hundred thousands place. (answers will vary; an example is 1,300,000)
2. Write a different seven-digit number that has 7 in the ten thousands place. (answers will vary; an example is 1,070,000)
Round this number to the nearest hundred thousand. (the number should be rounded up; for example, 1,070,000 is rounded to 1,100,000)
3. Which list shows the numbers ordered from least to greatest? (b. 999,900; 1,889,882; 2,673,598; 2,673,600)
4. a. Circle the greatest number (7,784,653)
b. Draw a star next to the smallest number (7,224,198)
5. Circle which number shows 3,654,232 rounded to the nearest hundred thousand. (c. 3,700,000)

Learning Gates

Have your child take the [Learning Gates quiz](#) for this lesson.

Rounding Big Numbers

Instructions: Use the 2019 population numbers from the “U.S. City Populations for 2019” sheet to complete the table below.

City	Population	Rounded to 1,000	Rounded to 10,000	Rounded to 100,000
Houston				
Columbus				
San Jose				
San Diego				
Los Angeles				

Think About It!

Can the population of Columbus be rounded to one million? _____

Can the population of San Diego be rounded to two million? _____

 Basic Skills Review #2

1. Circle the multiples of 7:

14, 24, 35, 42, 50, 57, 63

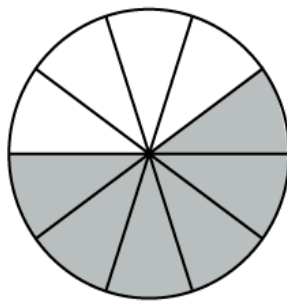
2. Fill in the blanks:

3,700, _____, 3,500,

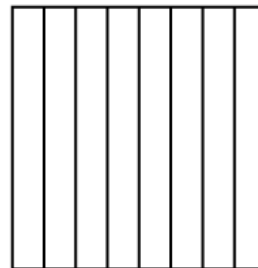
_____, _____, _____

3.

Write the fraction that is shaded.



4. Shade $\frac{3}{8}$.

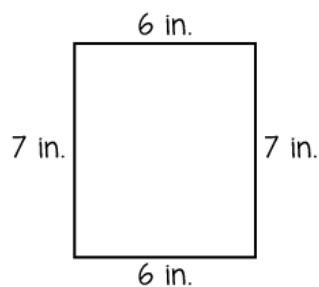


5.

What time will it be in 15 minutes?



6. Circle the area:



42 sq. in.
OR
26 sq. in.

7.

$$7 \times 40 = \underline{\hspace{2cm}}$$

8.

$$50 \times 9 = \underline{\hspace{2cm}}$$

WORKING With BIG NUMBERS

- 1.** Write a seven-digit number that has 3 in the hundred thousands place.

- 2.** Write a different seven-digit number that has 7 in the ten thousands place.

Round this number to the nearest hundred thousand.

- 3.** Which list shows the numbers ordered from least to greatest?

- a. 1,889,882 → 2,673,600 → 999,900 → 2,673,598
b. 999,900 → 1,889,882 → 2,673,598 → 2,673,600
c. 2,673,600 → 2,673,598 → 1,889,882 → 999,900

- 4.** Look at the following numbers:

7,784,653 7,242,122 7,784,635 7,224,198

- a. Circle the greatest number.
b. Draw a star next to the smallest number.

- 5.** Circle which number shows 3,654,232 rounded to the nearest hundred thousand.

- a. 3,650,000
b. 3,600,000
c. 3,700,000
d. 3,660,000

