Round Numbers

(I Can) round numbers to the nearest 10, 100, or 1,000.

Florida's B.E.S.T.

- Number Sense & Operations 4.NSO.1.4
- Mathematical Thinking & Reasoning MTR.1.1, MTR.2.1, MTR.4.1, MTR.5.1



∃ UNLOCK the Problem



One day, the Mount Rushmore National Monument in South Dakota welcomed 8,472 visitors. A website reported that about eight thousand people visited the park during that month. Was the estimate reasonable?

- Underline what you are asked to find.
- Circle the information you will use.

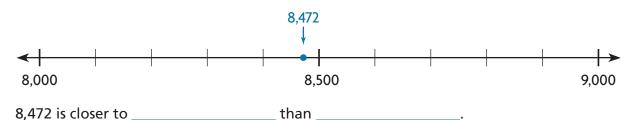
An **estimate** tells you about how many or about how much. It is close to an exact amount. You can **round** a number to find an estimate.

One Way Use a number line.

To round a number to the nearest thousand, find the thousands it is between.

< 8,472 < _____

Use a number line to see which thousand 8,472 is closer to.



So, eight thousand is a reasonable estimate for 8,472.



MTR Engage in discussions on 4.1 mathematical thinking.

How can you use a model to round numbers?

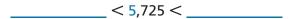
1. What number is halfway between 8,000 and 9,000?

2. How does knowing where the halfway point is help you find which thousand 8,472 is closer to? Explain.

Another Way Use place value.

Mount Rushmore is located 5,725 feet above sea level. About how high is Mount Rushmore above sea level, to the nearest thousand feet?

To round a number to the nearest thousand, find the thousands it is between.



Look at the digit in the place-value position to the right.

5,725

Think: The digit in the hundreds place is 7. So, 5,725 is closer to 6,000 than 5,000.

So, Mount Rushmore is about _____ feet above sea level.



Math

MTR Demonstrate understanding 2.1 in multiple ways.

Explain the difference in using a model and using place value when rounding numbers.

- 3. What number is halfway between 5,000 and 6,000?
- **4.** What is 5,500 rounded to the nearest thousand? Explain.

Math Idea

When a number is exactly halfway between two rounding numbers, round to the greater number.

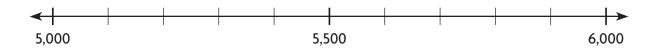
Try This! Round to the place value of the underlined digit.

- **A** 4,999
- **G** 1,499
- **B** 8,562
- **4**,832

Share and Show



1. Suppose 5,113 people go to a concert. Is it reasonable to say that about 6,000 people went to the concert? Use the number line to help you solve the problem. Explain.



Round to the place value of the underlined digit.

- **2.** 4,567
- **⊘ 3**. 2,867

- **4.** 2,3<u>4</u>1
- **⊙ 5**. <u>7</u>,456

On Your Own

6. To the nearest hundred, a factory produced 3,600 jars of applesauce on Thursday and 4,200 jars of applesauce on Friday. To the nearest thousand, how many jars of applesauce did it produce during the two days?

Problem Solving · Applications World



7. The number 2, 00 is missing a digit. The number rounded to the nearest thousand is 3,000. List all of the possibilities for the missing digit. Explain your answer.



- 8. A male elephant weighs 6,728 pounds. A female elephant weighs 5,853 pounds. To the nearest hundred pounds, what is the total weight of the two elephants?
- **9.** About 3,000 people attended a festival. For numbers 9a–9e, choose Yes or No to show whether each number could be the exact number of people that attended the festival.

9a.	3,512
9b.	2,498

9c. 2,523

9d. 3,890

9e. 3,059



O Yes \bigcirc No

O Yes \bigcirc No

O Yes \bigcirc No

O Yes \bigcirc No



Cross-Curricular: Science

Data Gathering

Some scientists count and measure groups of things. Benchmarks can be used to estimate the size of a group or a population. A benchmark is a known number of things that helps you understand the size or amount of a different number of things.

Use the benchmark to find a reasonable estimate for the number of coquina shells it would take to fill a jar.

It would take about 5 times the benchmark to fill the jar.

$$100 + 100 + 100 + 100 + 100 = 500$$

The most reasonable estimate for the number of coquina shells it would take to fill the jar is 500 shells.

MTR Use the benchmark to find a reasonable estimate. Circle the reasonable estimate.



Benchmark 100 shells



200; 500; or 5.000

10.



500 beads



1,500; 2,500; or 3,500

11.



100 pounds of sod



1,000; 5,000; or 10,000

Round Numbers

Go Online Interactive Examples

Round to the place value of the underlined digit.

1. <u>2</u>,840 3,000 2,840

2. 3,<u>4</u>99

3. 2,9<u>4</u>5

Look at the digit to the right.

greater than 5

- If the digit to the right is *less than* 5, the digit in the rounding place stays the same.
- If the digit to the right is 5 or greater, the digit in the rounding place increases by one.
- Write zeros for the digits to the right of the rounding place.
- **4.** <u>9</u>,422

5. 9,<u>7</u>67

6. <u>1</u>,306

7. 6,<u>0</u>98

Problem Solving 👯

Use the table for Problems 8-9.

8. Find the elevation of Red Trail in the table. Round the elevation to the nearest thousand feet.

_____ feet

9. What is the elevation of Blue Trail rounded to the nearest hundred feet?

_____ feet

Hiking Elevations		
Name	Height (feet)	
Red Trail	6,500	
Blue Trail	4,494	

10. WRITE *Math* Diona says to round 3,400 to the nearest thousand, she will round to 4,000. Is she right? Explain.

Lesson Check

- **11.** What is 7,039 rounded to the nearest thousand?
- **12.** To the nearest hundred, the number of visitors at the rodeo was 6,800. What might have been the exact number of visitors at the rodeo?

Spiral Review

- 13. Write the symbol that makes the following number sentence true.
- 14. Pittsburgh International Airport had approximately 714,587 passengers in August 2009. Write a number that is greater than 714,587.

\$546,322 \$540,997

- **15.** Amari made a design with 6 equal tiles. One tile is yellow, 2 tiles are blue, and 3 tiles are purple. What fraction of the tiles are yellow or purple?
- 16. The fourth grade collected 40,583 cans and plastic bottles. Write this number in word form.