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1-800-742-1803
www.achievementsES.com
info@achievementsES.com
1072 Madison Ave. Lakewood, NJ 08701

Cultural Sensitivity Team

Special Edition Director: Rabbi Mordechai Resnick
Project Editorial Manager: Rabbi Levi Friedman
Editor: Mrs. Hinda Frankel
Content and Design: Mrs. Bina Heinemann
Content and Design: Mrs. Faigy Zahn

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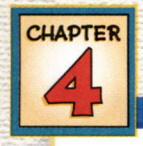

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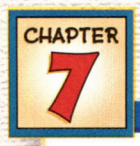

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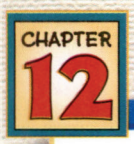


Division by Two-Digit Divisors

Book Resources

CHAPTER 1

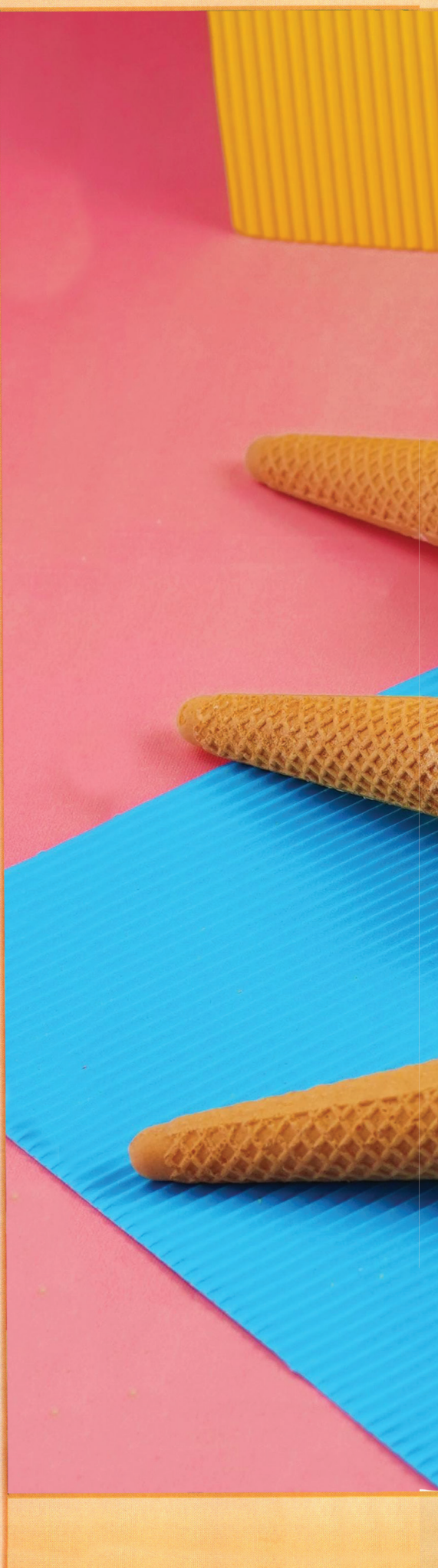
Place Value

Why Learn About Place Value?

Place value can help you understand the meaning of numbers. It can also help you compare and order them.

If you like to collect things, such as rocks, coins, or books, you can use place value to keep track of the number of items in your collection.

Look at the ice cream cones, it's easy to count the number of cones. Place value can help you count the number of sprinkles.



Reading Mathematics

Reviewing Vocabulary

Understanding math language helps you become a successful problem solver. Here are some math vocabulary words you should know.

digit	the symbol used to write a number
place value	the value of a digit determined by its place in a number
is greater than (>)	the symbol used to compare two numbers when the greater number is written first
is less than (<)	the symbol used to compare two numbers when the lesser number is written first
equal to (=)	the symbol used to compare two numbers when the value of each number is the same

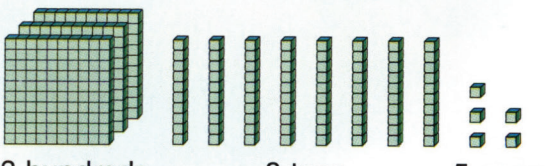
Reading Words and Symbols

When you read mathematics, sometimes you read only words, sometimes you read words and symbols, and sometimes you read only symbols.

Look at the different ways you can describe 385.

- 385 has three digits.
- 385 has 3 hundreds, 8 tens, and 5 ones.
- 385 is read as three hundred eighty-five.
- 385 is between 300 and 400.
- $385 > 384$
- $385 < 386$

hundreds	tens	ones
3	8	5



3 hundreds 8 tens 5 ones

Try These

1. Write each sentence using numbers and symbols.
   - **a.** Eighty-six is greater than eighty-five. _____
   - **b.** Two hundred sixty is equal to two hundred sixty. _____
   - **c.** Four hundred is less than five hundred. _____
   - **d.** Seventy-five is greater than fifty-seven. _____
2. Tell whether the 3 is in the *ones, tens,* or *hundreds* place.

   a. 138 _____ **b.** 370 _____ **c.** 31 _____ **d.** 563 _____

   e. 938 _____ **f.** 83 _____ **g.** 377 _____ **h.** 34 _____

3. Write the numbers in order from least to greatest.

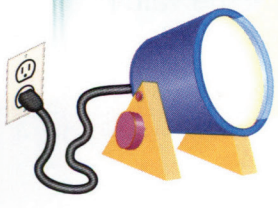
   a. 65 73 45 _____ **b.** 175 204 192 _____

   c. 1,973 1,745 1,945 _____
4. **Circle** *true* or *false* for each sentence.
   - **a.** Ten ones is equal to one ten. ***true / false***
   - **b.** A two-digit number is greater than a three-digit number. ***true / false***
   - **c.** Ten tens is equal to 1,010. ***true / false***
   - **d.** Four hundred thirty-two is greater than four hundred twenty-three. ***true / false***

Upcoming Vocabulary

Write About It **Here are some other vocabulary words** you will learn in this chapter. Watch for these words. Write their definitions in your journal.

round	**one thousand**
expanded form	**ten thousands**
standard form	**hundred thousands**
word form	



LESSON 1

Numbers Through 999

You will learn about place value of numbers to 999.

New Vocabulary
expanded form
standard form
word form

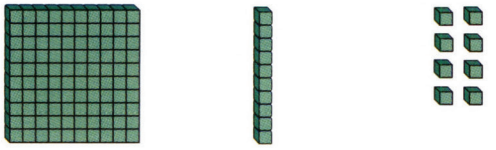
Learn About It

Numbers are made up of digits. The value of each digit depends on its place in a number.

This shoe is 118 inches long. It is the longest shoe in the world! A place-value chart can help you understand the value of each digit in the number 118.

hundreds	tens	ones
1	1	8

The value of the 1 is 100. The value of the 1 is 10. The value of the 8 is 8.



Different Ways to Write a Number

You can use **expanded form.**	You can use **standard form.**	You can use **word form.**
100 + 10 + 8	118	one hundred eighteen

Think About It

►In the number 304, what is the meaning of the zero in the tens place?

Ask Yourself

- What is the value of each digit?
- Do any places have zeros?

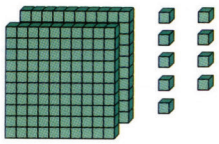
Guided Practice

Write each number in two other ways.
Use standard form, expanded form, and word form.

1. 200 + 40 + 7 _____
2. 300 + 9 _____
3. 465 _____
4. two hundred thirty-eight _____
5. 4 hundreds 9 tens 4 ones _____

Independent Practice

Write each number in standard form.

6. 

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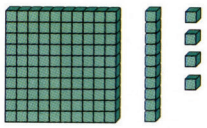
7. 

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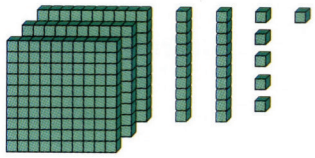
8. 

_____

9. 900 + 80 + 6 _____ **10.** 400 + 20 + 3 _____ **11.** 100 + 50 _____

12. 200 + 60 + 5 _____ **13.** 700 + 3 _____ **14.** 400 + 80 + 1 _____

15. 6 hundreds 8 ones _____ **16.** 5 hundreds 9 tens _____

17. 3 hundreds 5 tens 2 ones _____ **18.** 2 hundreds 3 tens 9 ones _____

Write the place of the underlined digit. Then write its value.

19. 1̲76 _____ **20.** 89̲3 _____ **21.** 31̲0 _____

22. 42̲7 _____ **23.** 5̲51 _____ **24.** 74̲9 _____

25. 2̲67 _____ **26.** 35̲7 _____ **27.** 9̲28 _____

28. 64̲8 _____ **29.** 47̲0 _____ **30.** 56̲6 _____

Problem Solving • Reasoning

Use Data **Use the table for Problems 31–33.**

31. Avi says that the longest bicycle is eight hundred seventy-six inches long. Is he correct? Explain why or why not.

_____

_____

32. How would you write the length of the smallest biplane in expanded form? in word form?

_____

_____

33. **Analyze** Look at the numbers in the table. Which number has the greatest tens digit?

_____

_____

LESSON 2

Round Two-Digit Numbers

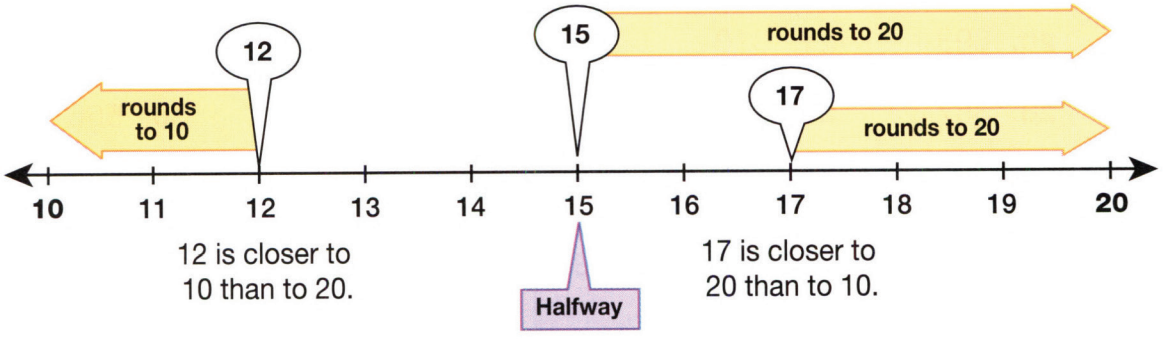
You will learn how to round numbers to the nearest ten.

New Vocabulary
round

Learn About It

The Rand family is riding in a bike-a-thon. The sign shows the distance children, teenagers, and adults will ride. Rounded to the nearest 10 miles, how far will each group ride?

One way to **round** a number is to round it to the nearest ten.



If a number is halfway between two tens, round to the next ten.

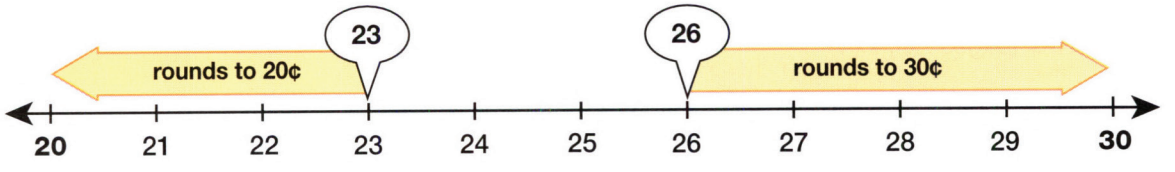
Solution: When rounded to the nearest 10 miles, children will ride 10 miles and teenagers and adults will ride 20 miles.

Another Example

Money

What is 23¢ rounded to the nearest ten cents?

What is 26¢ rounded to the nearest ten cents?

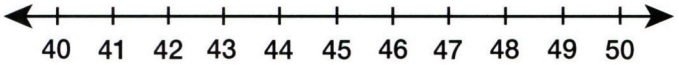


Think About It

- What is the least number that rounds to 20?
- Are rounding rules different when you round money? Explain.

Guided Practice

Round each amount to the nearest ten or ten cents.



1. 41 _____ **2.** 48¢_____ **3.** 43 _____ **4.** 45¢_____

5. 44 _____ **6.** 49 _____ **7.** 45¢_____ **8.** 46 _____

9. 42¢_____ **10.** 47¢ _____

Ask Yourself

- Which ten is the number closest to?
- What do I do if the number is halfway between two tens?

Independent Practice

Round each amount to the nearest ten or ten cents.

11. 81 _____ **12.** 53 _____ **13.** 67 _____ **14.** 47 _____ **15.** 15 _____

16. 73 _____ **17.** 42¢_____ **18.** 68 _____ **19.** 34¢_____ **20.** 75 _____

21. 13¢_____ **22.** 86 _____ **23.** 79¢_____ **24.** 51 _____ **25.** 82¢_____

26. 57¢_____ **27.** 15¢_____ **28.** 93 _____

Problem Solving • Reasoning

29. A park has 38 miles of bike trails. Rounded to the nearest ten miles, how many miles is that?

_____

_____

30. **Analyze** If Sarah rounds the number of hours she biked last month to the nearest ten hours, she would say that she biked for 60 hours. What is the least number of hours she might have biked? How do you know?

_____

_____

31. **Patterns** One week Liba rode her bike 2 miles. The next week she rode it 6 miles. The week after that she rode it 10 miles. If the pattern continued, how many miles did Liba likely ride her bike in the fifth week?

_____

_____

Using Algebra

Copy and complete.

- (A) 246 = 200 + ☐ + 6
- (B) ☐ + 20 + 6 = 726
- (C) 400 + 50 + ☐ = 459
- (D) 307 = 300 + ☐
- (E) 900 + ☐ + 9 = 999

LESSON 3

Round Three-Digit Numbers

You will learn how to round numbers to the nearest hundred or to the nearest ten.

Review Vocabulary
round

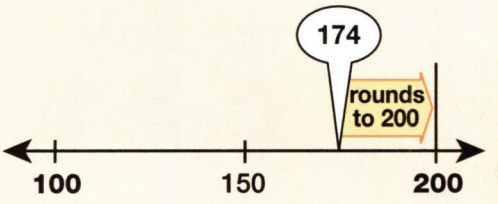
Learn About It

Daniel and Zev have collected 174 pieces of sea glass. Daniel says that there are about 200 pieces. Zev says that there are about 170 pieces. Can they both be right?

When you round a three-digit number, you can **round** to the nearest hundred or to the nearest ten.

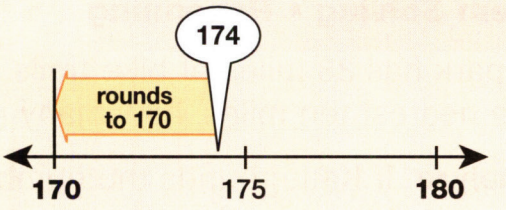
Different Ways to Round

Round 174 to the nearest hundred.



174 is closer to 200 than to 100.

Round 174 to the nearest ten.



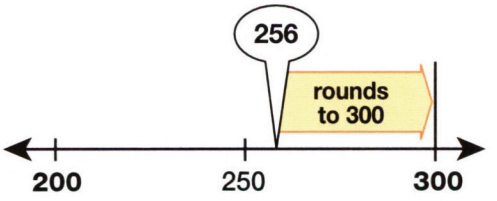
174 is closer to 170 than to 180.

Solution: Yes, both girls are right. 174 rounded to the nearest hundred is 200. 174 rounded to the nearest ten is 170.

Other Examples

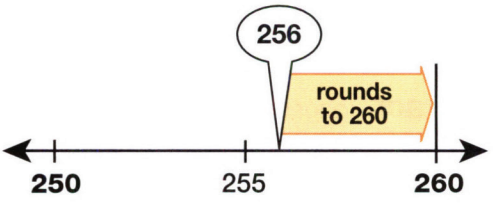
A. Round to the Nearest Dollar

$2.56 rounds to $3.00.



B. Round to the Nearest Ten Cents

$2.56 rounds to $2.60.



Think About It

▶ If you round a number to the nearest ten and the nearest hundred, which gives a better estimate? Will they ever be the same? Explain your answer.

Guided Practice

Round to the nearest hundred or dollar.

1. 743 _____ **2.** $7.68 _____ **3.** 791 _____ **4.** 729 _____

5. 774 _____ **6.** 736 _____ **7.** 705 _____ **8.** $7.50 _____

Ask Yourself

- Which hundred is the number closer to?
- What should I do if the number is halfway between two hundreds?

Independent Practice

Write the two hundreds each number is between.

9. 466 _____ **10.** 735 _____ **11.** 243 _____

12. 588 _____ **13.** 370 _____ **14.** 654 _____

15. 195 _____ **16.** 349 _____

Write the two tens each number is between.

17. 334 _____ **18.** 575 _____ **19.** 601 _____

20. 827 _____ **21.** 853 _____ **22.** 704 _____

23. 496 _____ **24.** 182 _____

Round to the nearest hundred or dollar.

25. 400 _____ **26.** 322 _____ **27.** $3.59 _____ **28.** 361 _____

29. 306 _____ **30.** $3.84 _____ **31.** 338 _____ **32.** $3.50 _____

Round to the nearest ten or ten cents.

33. 889 _____ **34.** $8.94 _____ **35.** 883 _____ **36.** 885 _____

37. $8.81 _____ **38.** 897 _____ **39.** $8.92 _____ **40.** 886 _____

Round to the place of the underlined digit.

41. 6̲55 _____ **42.** 18̲9 _____ **43.** $9̲.27 _____

44. 4̲72 _____ **45.** $7.3̲3 _____ **46.** 35̲7 _____

Problem Solving • Reasoning

Solve. Choose a method.

Computation Methods

• Mental Math • Estimation • Paper and Pencil

47. Esther has 15 rocks in her rock collection. She gives 1 rock to each of 6 friends. How many rocks does she have left?

_____

_____

48. Rochel has 207 coins 119 erasers, and 275 shells. Which of Rochel's collections has about 200 items in it?

_____

_____

49. **Explain** Chaim has 185 glass marbles and 212 plastic marbles. He says that he has about 200 of each kind of marble. Why does he use the same number to tell how many of each kind of marble he has?

_____

_____

50. **Compare** Simcha has a comic-book collection. He has 18 adventure comic books and 23 mystery comic books. Does he have more than 30 comic books?

_____

_____

Logical Thinking

Analogies

Look at the way the first set of numbers is related. Choose the letter that shows a similar relationship for the second pair.

63. **14** is to **8 + 6** as **18** is to ——.

A 8 + 8 **C** 6 + 8

B 9 + 9 **D** 8 + 14

64. **7** is to **12 − 5** as **6** is to ——.

F 11 − 6 **H** 13 − 9

G 14 − 5 **J** 15 − 9

Practice Game

What's My Number?

Use what you know about place value to play this game with a partner.
Try to guess your opponent's number before he or she guesses your number.

What You'll Need

For each player

- *place-value chart*

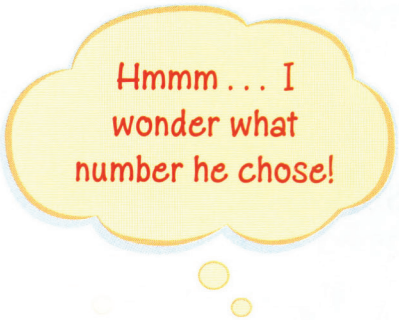
Players
2

Here's What to Do

1. Each player thinks of a 3-digit number and secretly writes it down.
2. Players take turns asking questions that can be answered yes or no to figure out the other number.

   Sample questions

   - Is the number an even number?
   - Is the digit in the hundreds place greater than 5?
3. Players continue asking questions. The first player to figure out the other player's number scores 1 point.
4. Repeat Steps 1 to 3. The first player to score 3 points wins the game.



Share Your Thinking How can the place-value chart help you keep track of the answers to the questions you asked?

LESSON 4

Problem-Solving Skill: Estimated or Exact Amounts

You will learn how to decide if numbers are being used to show an exact amount or an estimated amount.

Sometimes you need to decide if numbers are being used to show an exact amount or an estimated amount.

Ostriches cannot fly, but they can run! Ostriches can run more than 30 miles an hour. They can be up to 8 feet tall. They have 2 toes on each foot. An ostrich egg weighs more than 3 pounds. An empty ostrich egg costs $6.25.

Sometimes numbers are used to show estimates.

Words such as *more than*, *almost*, *over*, *up to*, and *about* tell you that amounts are estimated, not exact.

Do you know exactly how fast an ostrich can run?
No, you know that an ostrich can run *more* than 30 miles an hour.

Do you know exactly how tall an ostrich is?
No, you know that an ostrich can be *up to* 8 feet tall.

Sometimes numbers are used to show exact amounts.

Exact amounts are amounts that have been counted.

Do you know exactly how much an empty ostrich egg costs?
Yes, an empty ostrich egg costs $6.25.

Do you know exactly how many toes an ostrich has on each foot?
Yes, an ostrich has 2 toes on each foot.

Look Back What other estimated amount can you find in the paragraph above on ostriches?

Right: The bald eagle has been the national symbol of the United States since 1782. *Left*: The great blue heron uses its long neck and bill to catch food.

Guided Practice

Solve.

1. Yitzchok counted 15 blue herons in a salt marsh. Is "15 blue herons" an exact amount or an estimated amount?

_____

Think: Did Yitzchok count the herons?

2. Almost 75,000 bald eagles once nested in the United States. Is "almost 75,000" an exact amount or an estimated amount?

_____

Think: Is there a word clue before the number?

Choose a Strategy

Solve. Use these or other strategies.

Problem-Solving Strategies

- **Draw a Picture**
- **Write a Number Sentence**
- **Guess and Check**

3. On a nature hike, Yocheved took 18 pictures of birds. Then she took 10 pictures of other animals. How many pictures of animals did Yocheved take in all?

_____

_____

4. A small and a large eagle poster cost $12 together. A large poster costs $4 more than a small poster. How much does each poster cost?

_____

_____

5. Dan checks out two library books. The book about eagles has 42 pages. The book about ducks has almost 50 pages. Dan says that the books have about 90 pages in all. Is he correct? Explain why or why not.

_____

_____

6. There are three birds' eggs on display. The eggs are lined up in a row. The robin's egg is not next to the ostrich's egg. The blue jay's egg is to the left of the ostrich's egg. In what order are the birds' eggs on display?

_____

_____

7. Penguins can be very heavy. One penguin weighs 53 pounds. Another penguin weighs 71 pounds. What is each penguin's weight to the nearest ten pounds?

_____

_____

_____

8. **Write About It** One day, almost 40 birds came to a bird feeder. The next day, more than 40 birds came to the feeder. On which day did more birds come to the feeder? Explain.

_____

_____

_____