

# Representing Numbers

Use a place-value chart to help you write a number in standard form.

Write four hundred twenty thousand, three hundred fifty-nine in standard form.

**Step 1:** Write 420 in the thousands period.

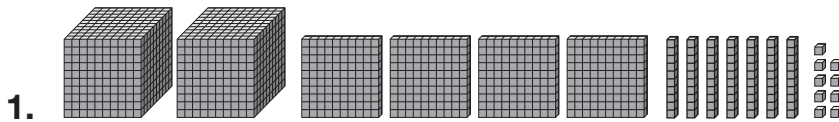
**Step 2:** Write 359 in the ones period.

The standard form is 420,359.

Each digit in 420,359 has a different *place value* and *value*. The *place value* of the digit 3 is the hundreds place. This digit has a *value* of 300.

thousands			ones		
hundred thousands	ten thousands	thousands	hundreds	tens	ones
4	2	0	3	5	9

Write each number in standard form.



2. 7 ten thousands + 5 thousands + 8 hundreds + 1 ten + 0 ones \_\_\_\_\_

Write the word form and tell the value of the underlined digit for each number.

3. 4,632 \_\_\_\_\_  
 \_\_\_\_\_

4. 7,129 \_\_\_\_\_  
 \_\_\_\_\_

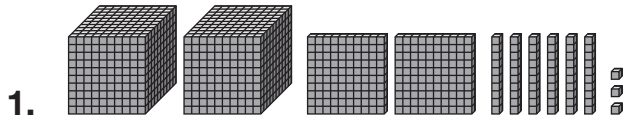
5. 13,572 \_\_\_\_\_  
 \_\_\_\_\_

6. **Number Sense** Write a six-digit number with a 5 in the ten thousands place and a 2 in the ones place. \_\_\_\_\_

Name \_\_\_\_\_

# Representing Numbers

Write each number in standard form.



\_\_\_\_\_

2. 8 ten thousands + 4 thousands +  
9 hundreds + 4 tens + 7 ones

\_\_\_\_\_

Write the word form and tell the value of the underlined digit for each number.

3. 76,239 \_\_\_\_\_

\_\_\_\_\_

4. 823,774 \_\_\_\_\_

\_\_\_\_\_

5. **Number Sense** Write the number that has 652 in the ones period and 739 in the thousands period. \_\_\_\_\_

During a weekend at the Movie Palace Theaters, 24,875 tickets were sold. Add the following to the number of tickets sold.

6. 100 tickets \_\_\_\_\_      7. 1,000 tickets \_\_\_\_\_

8. Which of the following numbers has a 5 in the ten thousands place?

**A** 652,341      **B** 562,341      **C** 462,541      **D** 265,401

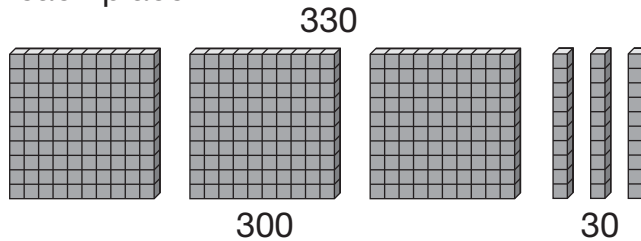
9. **Writing to Explain** Explain how you know the 6 in the number 364,021 is **NOT** in the thousands place.

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\_\_\_\_\_

# Place Value Relationships

In the number 330, what is the relationship between the value of the digit 3 in each place?



The first 3 is in the hundreds place.  
Its value is 300.

The second 3 is in the tens place.  
Its value is 30.

Since 300 is ten times as great as 30, the first 3 is worth 10 times as much as the second 3. When two digits next to each other in a number are the same, the one on the left is always 10 times as great as the one on the right.

Name the values of the given digits in the numbers below.

1. the 4s in 440 \_\_\_\_\_                      2. the 8s in 8,800 \_\_\_\_\_

Write the relationship between the values of the given digits.

3. the 6s in 660

\_\_\_\_\_

4. the 8s in 8,800

\_\_\_\_\_

5. **Reason** In the number 550, is the value of the 5 in the tens place ten times greater than the value of the 5 in the hundreds place? Explain why or why not.

\_\_\_\_\_

6. **Reason** Is the relationship between the 6s in 664 and 668 different in any way? Explain why or why not.

\_\_\_\_\_

Name \_\_\_\_\_

# Place Value Relationships

Name the values of the given digits in the numbers below.

1. the 4s in 244 \_\_\_\_\_
2. the 2s in 2,200 \_\_\_\_\_
3. the 5s in 6,755 \_\_\_\_\_
4. the 7s in 770 \_\_\_\_\_
5. the 6s in 6,600 \_\_\_\_\_
6. the 9s in 3,994 \_\_\_\_\_
7. the 8s in 6,588 \_\_\_\_\_
8. the 3s in 3,312 \_\_\_\_\_
9. the 1s in 5,114 \_\_\_\_\_
10. the 2s in 2,226 \_\_\_\_\_
11. the 7s in 4,777 \_\_\_\_\_
12. the 9s in 39,990 \_\_\_\_\_
13. What is the relationship between the 6s in the number 6,647?
14. What is the relationship between the 3s in the number 9,338?

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15. **Writing to Explain** In your own words, explain the place-value relationship when the same two digits are next to each other in a multi-digit number.

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16. Which of the following names the value of the 5s in the number 1,557?

- A** 50 and 5      **B** 500 and 50      **C** 5,000 and 50      **D** 5,000 and 500

# Comparing Numbers

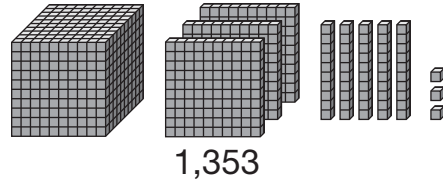
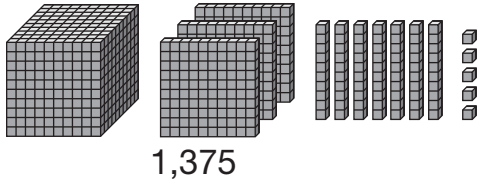
Use these symbols to compare numbers.

**< is less than**

**> is greater than**

**= is equal to**

Compare 1,375 and 1,353.



Both have the same number of thousands and hundreds.  
Compare the tens. 1,375 has more tens.

1,375 is greater than 1,353.

$$1,375 > 1,353$$

Compare the numbers. Use  $<$ ,  $>$ , or  $=$ .

1.  $36 \bigcirc 27$

2.  $278 \bigcirc 285$

3.  $692 \bigcirc 690$

4.  $1,842 \bigcirc 1,824$

5.  $4,669 \bigcirc 4,705$

6.  $7,305 \bigcirc 7,305$

7.  $1,100 \bigcirc 998$

8.  $245,436 \bigcirc 245,436$

9.  $162,323 \bigcirc 162,333$

10. **Number Sense** Write a 3-digit number that is greater than 699.

\_\_\_\_\_

11. Write a 4-digit number that is less than 2,340.

\_\_\_\_\_

12. **Writing to Explain** Every digit in 798 is greater than any digit in 4,325.  
Explain why 4,325 is greater than 798.

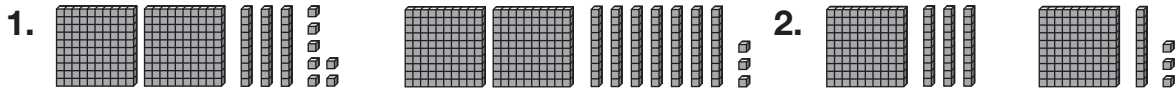
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Comparing Numbers

Compare the numbers. Use  $<$ ,  $>$ , or  $=$ .



237 \_\_\_\_\_ 273

130 \_\_\_\_\_ 113

3. 725 ○ 739

4. 831 ○ 813

5. 926 ○ 926

6. 2,734 ○ 2,347

7. 24,827 ○ 2,583

8. 165,327 ○ 165,372

Use the table for **9** and **10**.

9. Between which pair of cities is the distance the greatest?

\_\_\_\_\_

\_\_\_\_\_

**Distance in Miles**

New York, NY, to Rapid City, SD	1,701
Rapid City, SD, to Miami, FL	2,167
Miami, FL, to Seattle, WA	3,334
Portland, OR, to Little Rock, AR	2,217

10. Which distance is greater, from Rapid City to Miami or from Portland to Little Rock? Which digits did you use to compare?

\_\_\_\_\_

\_\_\_\_\_

**Number Sense** Write the missing digits to make each number sentence true.

11.  $7 \square 7 < 713$

12.  $5,8 \square 5 > 5,889$

13.  $43, \square 64 = 43,2 \square 4$

14. Which number sentence is true?

**A**  $4,375 > 4,722$

**C**  $5,106 = 5,160$

**B**  $6,372 > 6,327$

**D**  $7,095 < 795$

15. Which number is greater than 318,264?

**A** 318,246

**B** 318,255

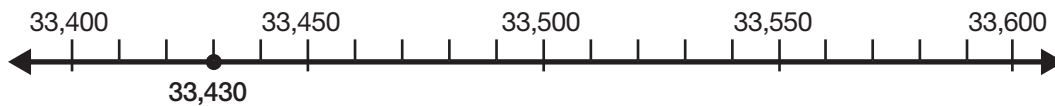
**C** 316,842

**D** 318,295

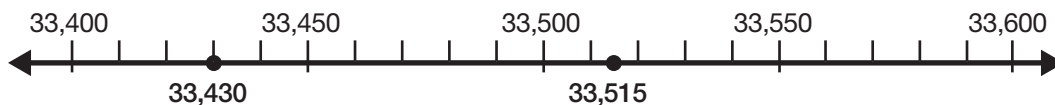
# Ordering Numbers

You can use a number line to compare two numbers. Which is greater, 33,430 or 33,515?

**Step 1** Plot the first number on a number line:



**Step 2** Plot the second number on the same number line:



**Step 3** Compare the numbers. Remember, as you move to the right on a number line, the numbers increase.

Looking at the number line, 33,515 is to the right of 33,430.

So,  $33,515 > 33,430$ .

You can use place value to order numbers from greatest to least. Write the numbers, lining up places. Begin at the left and find the greatest digit. If necessary, continue comparing the other digits:

42,078	Continue comparing	Write from greatest to least
37,544	37,544	42,078
24,532	39,222	39,222
39,222	$39,222 > 37,544$	37,544
		24,532

Compare. Write  $>$  or  $<$  for each  $\bigcirc$ .

1.  $3,211 \bigcirc 4,221$       2.  $35,746 \bigcirc 35,645$       3.  $355,462 \bigcirc 535,845$

4. Order the numbers from greatest to least. 62,500   62,721   63,001   61,435

\_\_\_\_\_ ; \_\_\_\_\_ ; \_\_\_\_\_ ; \_\_\_\_\_

5. **Number Sense** Write 3 numbers that are greater than 12,000, but less than 13,000.

\_\_\_\_\_

Name \_\_\_\_\_

# Ordering Numbers

Compare. Write  $>$  or  $<$  for each  $\bigcirc$ .

1. 854,376  $\bigcirc$  845,763

2. 6,789  $\bigcirc$  9,876

3. 59,635  $\bigcirc$  59,536

4. 374,125  $\bigcirc$  743,225

Order the numbers from least to greatest.

5. 458,592   493,621   439,582

\_\_\_\_\_

6. **Number Sense** Write three numbers that are greater than 543,000 but less than 544,000.

\_\_\_\_\_

7. Put the states in order from the least populated to most populated state.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### The Five Least Populated States

State	Population (2010)
Alaska	721,523
North Dakota	675,905
South Dakota	819,761
Vermont	630,337
Wyoming	568,300

8. Which number has the greatest value?

**A** 865,437

**B** 826,911

**C** 853,812

**D** 862,391

9. **Writing to Explain** Tell how you could use a number line to determine which of two numbers is greater.

\_\_\_\_\_  
\_\_\_\_\_

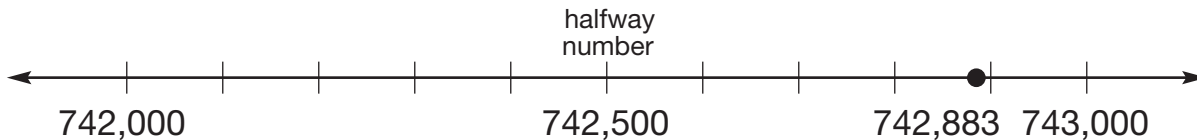


Name \_\_\_\_\_

# Rounding Whole Numbers

Round 742,883 to the nearest thousand.

You can use place value or a number line to help you round numbers. On the number line below, 742,883 is between 742,000 and 743,000. The halfway number is 742,500.



742,883 is closer to 743,000 than to 742,000.

Therefore, 742,883 rounds up to 743,000.

When the number you want to round is greater than or equal to the halfway number, round up.

Round to the nearest hundred thousand. Draw a number line on a separate sheet of paper to help you.

1. 387,422

\_\_\_\_\_

2. 124,607

\_\_\_\_\_

3. 111,022

\_\_\_\_\_

Round to the nearest ten thousand. Use place value to help you.

4. 276,431

\_\_\_\_\_

5. 141,173

\_\_\_\_\_

6. 555,000

\_\_\_\_\_

Round to the underlined place.

7. 654,202

\_\_\_\_\_

8. 297,499

\_\_\_\_\_

9. 722,483

\_\_\_\_\_

Name \_\_\_\_\_

# Rounding Whole Numbers

Round each number to the nearest ten.

1. 16,326

\_\_\_\_\_

2. 412,825

\_\_\_\_\_

3. 512,162

\_\_\_\_\_

4. 84,097

\_\_\_\_\_

Round each number to the nearest hundred.

5. 1,427

\_\_\_\_\_

6. 68,136

\_\_\_\_\_

7. 271,308

\_\_\_\_\_

8. 593,656

\_\_\_\_\_

Round each number to the nearest thousand.

9. 18,366

\_\_\_\_\_

10. 409,614

\_\_\_\_\_

11. 229,930

\_\_\_\_\_

12. 563,239

\_\_\_\_\_

Round each number to the underlined place.

13. 12,108

\_\_\_\_\_

14. 570,274

\_\_\_\_\_

15. 333,625

\_\_\_\_\_

16. 534,307

\_\_\_\_\_

17. What is 681,542 rounded to the nearest hundred thousand?

**A** 600,000

**B** 680,000

**C** 700,000

**D** 780,000

18. **Writing to Explain** Mrs. Kennedy is buying pencils for each of 315 students at Hamilton Elementary. The pencils are sold in boxes of tens. How can she use rounding to decide how many pencils to buy?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Problem Solving: Make an Organized List

**Theme Park** Brian has four passes to a theme park. He could bring himself and three friends. The group of friends for him to choose from includes Art, Ned, Jeff, and Belinda. How many different combinations are possible?

## Read and Understand

### Step 1: What do you know?

There are four friends: Art, Ned, Jeff, and Belinda.

### Step 2: What are you trying to find?

Find out how many different combinations of friends Brian can take.

## Plan and Solve

### Step 3: What strategy will you use?

**Strategy:** Make an Organized List

Brian, Art, Ned, Jeff, and Belinda. Brian has to be in each combination.

### List the choices:

Brian, Art, Ned, Belinda  
Brian, Art, Ned, Jeff  
Brian, Art, Jeff, Belinda  
Brian, Ned, Jeff, Belinda

**Answer:** There are four combinations.

## Look Back and Check

### Is your work correct?

Yes, because each combination uses Brian. The way the list is organized shows that all ways were found.

Finish solving the problem.

- Ann, Mara, Jenny, Tina, and Sue are sisters. Two of the five sisters must help their father at his business each Saturday. How many combinations of two sisters are possible?

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Ann	Mara	Jenny	Tina
Ann	Jenny		

Name \_\_\_\_\_

# Problem Solving: Make an Organized List

Make an organized list to solve each problem. Write each answer in a complete sentence.

1. Tonya and Lauren are designing a soccer uniform. They want to use two colors on the shirt. Their choices are green, orange, yellow, purple, blue, and silver. How many ways can they choose two colors?

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2. Yancey collects plastic banks. He has three different banks: a pig, a cow, and a horse. How many ways can Yancey arrange his banks on a shelf?

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3. Kevin has a rabbit, a ferret, a gerbil, and a turtle. He feeds them in a different order each day. In how many different orders can Kevin feed his pets?

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