

Name: \_\_\_\_\_

Fourth Grade

Required Math  
Summer Packet

**SHOW YOUR WORK!**





# Uses of Numbers

Numbers are used for many different purposes.

Purpose	Examples
• To order	• Emily was the <b>first</b> female class president.
• To position	• John came in <b>third</b> in the relay race.
• To count	• Our team scored <b>18 points</b> . • The hotel has <b>450 rooms</b> .
• To measure	• Ann competed in the <b>200-meter</b> swim race. • I need to be home by <b>8:30</b> .
• To label	• Room <b>14A</b> is the library. • The model number of the sweeper is <b>HJ0013</b> .

Tell how each number is being used.

Write *position, count, measure, or label*.

1. Our cat had 3 kittens.

2. Joe is 10 years old.

3. The flag is 3 feet high.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Meg finished third in the relay race.

5. Mark lives in Apartment 12 F.

6. We live on the second floor.

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\_\_\_\_\_

\_\_\_\_\_

7. Jeff needs 8 hours of sleep each night.

8. Sue has 4 glasses of milk each day.

9. Carlos built an F-15 model plane.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Place Value Through Hundred Thousands

Write the number in the place-value chart in four ways.

Thousands			Ones		
hundred thousands	ten thousands	one thousands	hundreds	tens	ones
4	3	9	1	5	8

<b>Short Word Form</b> 439 thousand, 158	<b>Word Form</b> four hundred thirty-nine thousand, one hundred fifty-eight
<b>Standard Form</b> 439,158	<b>Expanded Form</b> $400,000 + 30,000 + 9,000 + 100 + 50 + 8$

Write each number in three other ways. You can use a place-value chart to help you.

1. 125,312

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2.  $200,000 + 50,000 + 9,000 + 200 + 30 + 7$

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3. 317 thousand, 209

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## How Big Is One Million?

How long will it take you to save a million pennies if you save 10 pennies a day?

Number of Days	Number of Pennies
1 day	$1 \times 10 = 10$ pennies
10 days	$10 \times 10 = 100$ pennies
100 days	$100 \times 10 = 1,000$ pennies
1,000 days	$1,000 \times 10 = 10,000$ pennies
10,000 days	$10,000 \times 10 = 100,000$ pennies
100,000 days	$100,000 \times 10 = 1,000,000$ pennies

**Solution:** At 10 pennies a day it takes 100,000 days!

How long will it take you to save a million pennies if you save 100 pennies a day?

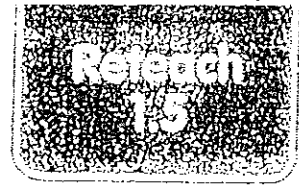
Number of Days	Number of Pennies
1 day	$1 \times 100 = 100$ pennies
10 days	$10 \times 100 = 1,000$ pennies
100 days	$100 \times 100 = 10,000$ pennies
1,000 days	$1,000 \times 100 = 100,000$ pennies
10,000 days	$10,000 \times 100 = 1,000,000$ pennies

**Solution:** At 100 pennies a day it takes 10,000 days!

Use the tables to answer each question.

- How many hundreds are there in 10,000?  
\_\_\_\_\_
- How many tens are there in 10,000?  
\_\_\_\_\_
- How many hundreds are there in 100,000?  
\_\_\_\_\_
- How many tens are there in 100,000?  
\_\_\_\_\_
- How many ten thousands are there in 1,000,000?  
\_\_\_\_\_
- How many hundred thousands are there in 1,000,000?  
\_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_



# Place Value Through Hundred Millions

Millions			Thousands			Ones		
hundred millions	ten millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones
6	2	8	5	3	4	7	8	2
<b>Short Word Form</b> 628 million, 534 thousand, 782				<b>Word Form</b> Six hundred twenty-eight million, five hundred thirty-four thousand, seven hundred eighty-two				
<b>Standard Form</b> 628,534,782				<b>Expanded Form</b> $600,000,000 + 20,000,000 + 8,000,000 + 500,000 + 30,000 + 4,000 + 700 + 80 + 2$				

Write each number in three other ways.

1. 450,870,235

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2.  $30,000,000 + 5,000,000 + 100,000 + 40,000 + 3,000 + 600 + 50$

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3. 615 million, 475 thousand

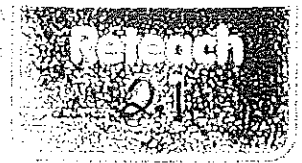
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# Compare Numbers

Compare 41,784 and 41,362.

Ten thousands	Thousands	Hundreds	Tens	Ones
4	1	7	8	4
4	1	3	6	2

Start at the left.

Same number of ten thousands.  $40,000 = 40,000$

Same number of thousands.  $1,000 = 1,000$

Different numbers of hundreds.  $700 > 300$

So,  $41,784 > 41,362$ .

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

1.  $689 \bigcirc 639$

2.  $2,529 \bigcirc 2,578$

3.  $3,983 \bigcirc 3,783$

4.  $6,703 \bigcirc 6,703$

5.  $2,089 \bigcirc 2,980$

6.  $52,808 \bigcirc 52,088$

7.  $14,781 \bigcirc 14,781$

8.  $45,973 \bigcirc 45,973$

9.  $310,365 \bigcirc 310,486$

10.  $285,812 \bigcirc 285,901$

11.  $976,405 \bigcirc 976,045$

12.  $60,000 \bigcirc 600 \text{ thousands}$

13.  $3 \text{ thousands} \bigcirc 3,000$

14.  $100,000 \bigcirc 100 \text{ thousands}$

15.  $4 \text{ ten thousands} \bigcirc 40,000$

16.  $900,000 \bigcirc 9 \text{ thousands}$

17.  $70 \text{ thousands} \bigcirc 7,000$

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**Reteach**  
**2.2**

# Order Numbers

Order 7,011,572, 9,918,369, and 7,926,045 from greatest to least.

**Step 1** Line up the digits. Begin comparing at the greatest place value, the millions.

7,011,572
9,918,369
7,926,045

So, 9,918,369 is the greatest number.

Ordered from greatest to least the numbers are 9,918,369 7,926,045 7,011,572.

**Step 2** Continue comparing. Then order the numbers.

7,011,572
9,918,369
7,926,045

So, 7,926,045 > 7,011,572

Write the numbers in order from least to greatest.

1. 2,380 23,809 3,210

\_\_\_\_\_

\_\_\_\_\_

2. 21,387,291 22,392,275 20,407,976

\_\_\_\_\_

\_\_\_\_\_

3. 2,309,001 2,309,000 2,009,001

\_\_\_\_\_

\_\_\_\_\_

4. 745,764,125 87,990,999 75,764,125

\_\_\_\_\_

\_\_\_\_\_

5. 34,570 36,570 35,903

\_\_\_\_\_

\_\_\_\_\_

6. 182,222 182,220 182,212

\_\_\_\_\_

\_\_\_\_\_

7. 7,543,129 7,542,127 7,643,834

\_\_\_\_\_

\_\_\_\_\_

8. 9,899,900 21,899,900 100,000,000

\_\_\_\_\_

\_\_\_\_\_

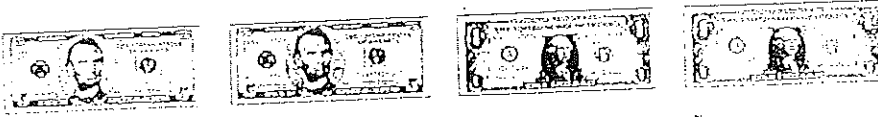


# Compare and Order Money

*Reteach 2.3*

Ray wants to buy a book that costs \$13.04. He has two five-dollar bills, two one-dollar bills, three quarters, three dimes, and three pennies. Does he have enough money to buy the book?

Find the total value of the bills by counting on.



\$5.00 → \$10.00 → \$11.00 → \$12.00

Then find the value of the coins by counting on.



25¢ → 50¢ → 75¢ → 85¢ → 95¢ → \$1.05 → \$1.06 → \$1.07 → \$1.08

Add the value of the bills and the value of the coins.

$$\$12.00 + \$1.08 = \$13.08$$

Compare money amounts.

$$\$13.08 > \$13.04$$

**Solution:** Ray has \$13.08, which is enough to buy the book.

Write each amount. Then write the greatest amount and the least amount.



\_\_\_\_\_

3. 4 one-dollar bills, 2 quarters, 6 dimes

\_\_\_\_\_

\_\_\_\_\_

4. 1 five-dollar bill, 1 dime, 1 nickel

\_\_\_\_\_

5. 2 one-dollar bills, 2 quarters, 3 dimes, 4 pennies

\_\_\_\_\_

6. 3 one-dollar bills, 4 dimes, 1 penny

\_\_\_\_\_

7. Greatest amount: \_\_\_\_\_

8. Least amount: \_\_\_\_\_

*Reteach 2.3*

Name \_\_\_\_\_

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# Make Change

An item costs \$2.79. You pay for it with 1 five-dollar bill. Using the fewest bills and coins, what should you receive in change? How much change should you receive?

To make change, start with the cost. Then count up using the largest possible denominations to the amount given to you.

**\$2.79**

Cost



\$2.80

\$2.90

\$3.00

\$4.00

\$5.00

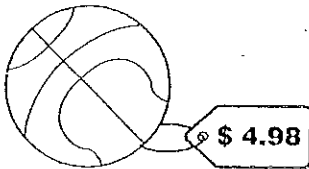
You should receive 1 penny, two dimes, and 2 one-dollar bills in change.

Count the bills and coins to find your change: \$2.21.

A \$10 bill was used to buy the items below.

List the coins and bills you would use to make change.

1.



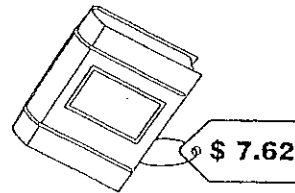
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2.



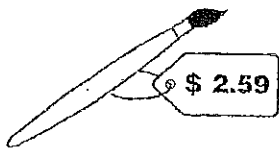
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3.



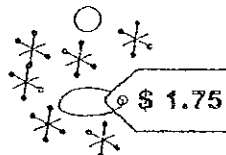
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\_\_\_\_\_  
\_\_\_\_\_

4.



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

5.



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

6.



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

Name \_\_\_\_\_

Date \_\_\_\_\_

3.1

# Addition Properties and Subtraction Rules

## Addition Properties

### Zero Property

$$12 + 0 = 12$$

When you add zero to a number, the sum is that number.

### Commutative Property

$$23 + 45 = 68$$

$$45 + 23 = 68$$

When you change the order of the addends, the sum stays the same.

### Associative Property

$$(6 + 7) + 15 = 28$$

$$6 + (7 + 15) = 28$$

When you change the way the addends are grouped, the sum stays the same.

The problem in parentheses is done first.

## Subtraction Rules—Zeros in Subtraction

$$2 - 0 = 2$$

When you subtract zero from a number, the difference is that number.

$$4 - 4 = 0$$

When you subtract a number from itself, the difference is zero.

Complete each number sentence. Tell which property or rule you used.

1.  $23 + 84 = \underline{\quad} + 23$

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

2.  $76 + 0 = \underline{\quad}$

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

3.  $11 + 24 = \underline{\quad} + 11$

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

4.  $(5 + 3) + 3 = \underline{\quad} + (3 + 3)$

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

5.  $125 - \underline{\quad} = 125$

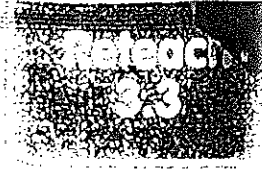
\_\_\_\_\_  
\_\_\_\_\_

6.  $814 - 814 = \underline{\quad}$

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

7.  $5 + (3 + 7) = (\underline{\quad} + 3) + 7$

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



# Estimate Sums and Differences

**Estimate the sum of 477 and 592.**

Round each addend to the nearest hundred.

Then add the rounded numbers.

$$\begin{array}{r} 477 \rightarrow 500 \\ +592 \rightarrow +600 \\ \hline 1,100 \end{array}$$

So,  $477 + 592$  is *about* 1,100.

You can get a closer estimate by rounding to a lesser place value. Round each addend to the nearest ten. Then add the rounded numbers.

$$\begin{array}{r} 477 \rightarrow 480 \\ +592 \rightarrow +590 \\ \hline 1,070 \end{array}$$

So,  $477 + 592$  is *about* 1,070.

Round each number to the nearest ten. Then estimate.

1.  $77 + 28$   
\_\_\_\_\_

2.  $66 - 31$   
\_\_\_\_\_

3.  $196 + 47$   
\_\_\_\_\_

4.  $4,042 - 683$   
\_\_\_\_\_

Round each number to the nearest hundred or dollar. Then estimate.

5.  $429 + 518$   
\_\_\_\_\_

6.  $703 - 492$   
\_\_\_\_\_

7.  $1,443 + 2,689$   
\_\_\_\_\_

8.  $4,872 + 6,228$   
\_\_\_\_\_

9.  $815 - 602$   
\_\_\_\_\_

10.  $545 + 106$   
\_\_\_\_\_

11.  $6,013 - 654$   
\_\_\_\_\_

12.  $7,842 - 2,928$   
\_\_\_\_\_

13.  $273 + 322$   
\_\_\_\_\_

14.  $448 - 252$   
\_\_\_\_\_

15.  $1,399 - 404$   
\_\_\_\_\_

16.  $798 + 136$   
\_\_\_\_\_

17.  $\$2.51$   
 $+ 4.12$   
\_\_\_\_\_

18.  $\$12.95$   
 $- 6.58$   
\_\_\_\_\_

19.  $\$8.15$   
 $- 5.21$   
\_\_\_\_\_

20.  $\$7.12$   
 $+ 2.85$   
\_\_\_\_\_

# Add Whole Numbers

Add  $248 + 87$ .

**Step 1** Add the ones.  
Regroup if necessary.

H	T	O
	1	
2	4	8
+	8	7
		5

8 ones + 7 ones =  
15 ones  
15 ones = 1 ten, 5 ones

**Step 2** Add the tens.  
Regroup if necessary.

H	T	O
1	1	
2	4	8
+	8	7
	3	5

1 ten + 4 tens + 8 tens =  
13 tens  
13 tens = 1 hundred,  
3 tens

**Step 3** Add the hundreds.  
Regroup if necessary.

H	T	O
1	1	
2	4	8
+	8	7
3	3	5

1 hundred +  
2 hundreds = 3 hundreds

Find each sum.

1.  $\begin{array}{r} 754 \\ +336 \\ \hline \end{array}$

2.  $\begin{array}{r} 569 \\ +288 \\ \hline \end{array}$

3.  $\begin{array}{r} 737 \\ +954 \\ \hline \end{array}$

4.  $\begin{array}{r} 2,365 \\ + 988 \\ \hline \end{array}$

5.  $\begin{array}{r} 3,763 \\ +1,688 \\ \hline \end{array}$

6.  $\begin{array}{r} 635 \\ +458 \\ \hline \end{array}$

7.  $\begin{array}{r} 2,085 \\ +2,673 \\ \hline \end{array}$

8.  $\begin{array}{r} 1,978 \\ +7,567 \\ \hline \end{array}$

9.  $\begin{array}{r} 3,575 \\ +4,903 \\ \hline \end{array}$

10.  $\begin{array}{r} 6,328 \\ + 873 \\ \hline \end{array}$

11.  $532 + 328$

12.  $1,268 + 4,193$

13.  $2,358 + 5,476$

# Subtract Whole Numbers

Find  $3,126 - 479$ .

**Step 1.** Subtract ones. Regroup a ten as 10 ones.

$$\begin{array}{r} \phantom{0}116 \\ 3,1\cancel{2}0 \\ - \phantom{0}479 \\ \hline \phantom{0}7 \end{array}$$

**Step 2.** Subtract tens. Regroup a hundred as 10 tens.

$$\begin{array}{r} \phantom{00}11 \\ \phantom{0}0\cancel{1}16 \\ 3,1\cancel{2}0 \\ - \phantom{0}479 \\ \hline \phantom{0}47 \end{array}$$

**Step 3.** Subtract hundreds. Regroup a thousand as 10 hundreds.

$$\begin{array}{r} \phantom{000}1011 \\ 2,0\cancel{1}16 \\ 3,1\cancel{2}0 \\ - \phantom{0}479 \\ \hline \phantom{0}647 \end{array}$$

**Step 4.** Subtract thousands.

$$\begin{array}{r} \phantom{0000}1011 \\ 2,0\cancel{1}16 \\ 3,1\cancel{2}0 \\ - \phantom{0}479 \\ \hline \phantom{0}2,647 \end{array}$$

$$3,126 - 479 = 2,647$$

Subtract. Use addition to check your answer.

1.  $\begin{array}{r} 592 \\ -137 \\ \hline \end{array}$

2.  $\begin{array}{r} 846 \\ -319 \\ \hline \end{array}$

3.  $\begin{array}{r} 4,994 \\ - \phantom{0}564 \\ \hline \end{array}$

4.  $\begin{array}{r} 7,133 \\ -5,636 \\ \hline \end{array}$

5.  $\begin{array}{r} 9,826 \\ -7,737 \\ \hline \end{array}$

6.  $\begin{array}{r} 796 \\ -625 \\ \hline \end{array}$

7.  $\begin{array}{r} 385 \\ -128 \\ \hline \end{array}$

8.  $\begin{array}{r} 3,542 \\ - \phantom{0}727 \\ \hline \end{array}$

9.  $\begin{array}{r} 4,698 \\ -2,314 \\ \hline \end{array}$

10.  $\begin{array}{r} 5,129 \\ -4,632 \\ \hline \end{array}$

11.  $9,128 - 3,549$   
\_\_\_\_\_

12.  $372 - 189$   
\_\_\_\_\_

13.  $9,871 - 4,923$   
\_\_\_\_\_

# Subtract Across Zeros

Subtract  $500 - 216$ .

### Step 1

No ones.  
No tens.  
Regroup the hundreds.

H	T	O
4	10	
<del>5</del>	<del>0</del>	0
- 2	1	6

5 hundreds = 4 hundreds,  
10 tens

### Step 2

Regroup the tens.

H	T	O
	9	
4	<del>10</del>	10
<del>5</del>	<del>0</del>	0
- 2	1	6

10 tens = 9 tens, 10 ones

### Step 3

Subtract the ones, tens,  
and the hundreds.

H	T	O
	9	
4	<del>10</del>	10
<del>5</del>	<del>0</del>	<del>0</del>
- 2	1	6
2	8	4

10 ones - 6 ones =  
4 ones

9 tens - 1 ten = 8 tens

4 hundreds - 2 hundreds  
= 2 hundreds

Subtract. Estimate or add to check.

1.  $605$   
 $-337$

2.  $702$   
 $-397$

3.  $400$   
 $-143$

4.  $506$   
 $-188$

5.  $2,209$   
 $-785$

6.  $4,607$   
 $-1,248$

7.  $7,007$   
 $-5,912$

8.  $3,209$   
 $-2,269$

9.  $9,100$   
 $-7,662$

10.  $8,500$   
 $-6,294$

11.  $800 - 170$

12.  $5,500 - 3,709$

13.  $2,005 - 1,989$

# Add and Subtract Greater Numbers

Add  $38,093 + 82,861$ .

**Step 1**  
Line up the digits  
in the ones place.  
Add ones.  
Regroup if  
necessary.

$$\begin{array}{r} 38,093 \\ +82,861 \\ \hline 4 \end{array}$$

**Step 2**  
Add tens.  
Regroup if  
necessary.

$$\begin{array}{r} \overset{1}{} 38,093 \\ +82,861 \\ \hline 54 \end{array}$$

**Step 3**  
Add hundreds.  
Regroup if  
necessary.

$$\begin{array}{r} \overset{1}{} 38,093 \\ +82,861 \\ \hline 954 \end{array}$$

**Step 4**  
Add thousands and  
ten thousands.  
Regroup  
thousands if  
necessary.

$$\begin{array}{r} \overset{1}{} \overset{1}{} 38,093 \\ +82,861 \\ \hline 120,954 \end{array}$$

Add or subtract. Estimate to check.

1.  $51,392$   
 $-13,097$

2.  $45,846$   
 $+31,329$

3.  $40,944$   
 $-15,564$

4.  $19,132$   
 $-15,636$

5.  $93,806$   
 $+17,987$

6.  $348,932$   
 $-245,871$

7.  $459,092$   
 $+362,932$

8.  $667,732$   
 $+129,009$

9.  $48,321$   
 $-43,929$

10.  $57,129 + 42,632$

\_\_\_\_\_

11.  $96,128 - 63,549$

\_\_\_\_\_

12.  $345,983 + 382,382$

\_\_\_\_\_

13.  $13,871 - 10,923$

\_\_\_\_\_