Houghton Mifflin
Math

Chapter Resources

GRADE 4, CHAPTER 1

Contents

Printed in the U.S.A.

Booklet 1 of 25

Family Letter for Unit 1

Dear Family,

During the next few weeks, our math class will be learning about place value of numbers through hundred millions and about money.

You can expect to see work that provides practice with comparing, ordering, and rounding numbers as well as counting and comparing collections of coins and bills.

As we learn how to round numbers, you may wish to use the following sample as a guide.

Vocabulary

estimate A number close to an exact amount. An estimate tells *about how much* or *about how many.*

rounding To find *about how many* or *about how much* by expressing a number to the nearest ten, hundred, thousand, and so on.

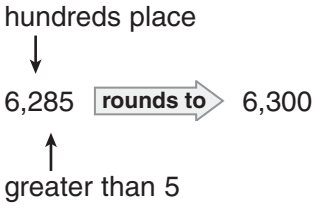
Rounding to the Nearest Hundred

To round a number such as 6,285 to the nearest hundred, first find the digit in the hundreds place (2).

Next look at the digit in the place to the right of the hundreds place (8).

- If this digit is less than 5, do not change the digit in the hundreds place.
- If it is equal to or greater than 5, increase the digit in the hundreds place by 1.
- Then change all of the digits to the right of the hundreds place to zeros.

Since the digit to the right of the hundreds place is 8, and 8 is greater than 5, then 6,285 rounded to the nearest hundred is 6,300.



Knowing about place value can help students understand greater numbers and use them to solve problems.

Sincerely,

Your Child's Teacher

Technology

Check out *Education Place* at **eduplace.com/kids/mw/** for *e*•Glossary, *e*•Word Games, test prep practice, and more.

Name _____ Date _____

Chapter 1 Pretest

Are You Ready?

Write the value of the digit 3 in each number.

1. 237

_____

2. 3,211

_____

Write each number in standard form.

3. five hundred three

_____

4. 7 tens 5 ones

_____

5. 2,000 + 400 + 70

_____

Write each number in word form.

6. 462 _____

7. 3,950 _____

Write the value of the underlined digit.

8. 4<u>3</u>7 _____

9. <u>6</u>,209 _____

Use logical reasoning to solve the problem

10. How many tens are there in 100? Explain your answer.

_____

Go on

Name _____ Date _____

Check What You Know

Tell how each number is being used. Write *position*, *count*, *measure*, or *label*.

1. population: 35,673

_____

2. Allen, TX 75002

_____

3. 6:35 A.M.

_____

4. 23rd person in line

_____

Write each number in standard form.

5. 16 million, 573 thousand _____

6. 400,000 + 90,000 + 3,000 + 800 + 7 _____

7. nine hundred sixty-two thousand, four hundred twelve

_____

Write each number in word form.

8. 613,509 _____

_____

9. 60,000 + 9,000 + 500 _____

Write each number in short word form.

10. 73,105,026 _____

11. 4,000,000 + 500,000 + 30,000 + 800 + 60 + 3

_____

Write each number in expanded form.

12. 36 million, 421 thousand, 75

_____

13. two million, thirty-two thousand, eleven

_____

Go on

Name _____ Date _____

Chapter 1 Pretest continued

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

14. 3<u>0</u>5,247 _____

15. 4,<u>8</u>92,500 _____

16. 5<u>4</u>3,890,127 _____

Write the value of the underlined digit.

17. 628,5<u>4</u>3,107 _____

18. 75<u>0</u>,740,730 _____

Use logical reasoning to solve each problem.

19. Ashley, Marty, and Yoko each have a bike. The bikes are green, blue, and maroon. Ashley's bike is not green. Marty's bike color does not start with the same letter as his name. Yoko's bike is blue. What color is each person's bike?

_____

_____

_____

20. Tina, Cody, Luis, and Robbie each have a different pet. The pets are a bird, a ferret, a dog, and a cat. Luis does not have a bird or a ferret. Robbie does not have a cat. Cody has a dog. Tina does not have ferret. What pet does each person have?

_____

_____

_____

Name _____ Date _____

Reteach 1.1

Uses of Numbers

Numbers are used for many different purposes.

Purpose	Examples
• To show position	• Emily was the **1st** female class president.
• To count	• Our team scored **18 points.** • The hotel has **450 rooms.**
• To measure	• Ann competed in the **200-meter** swim race. • I need to be home by **8:30.**
• To label	• Room **14A** is the library. • The model number of the sweeper is **HJ0013.**

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 3rd in the relay race. _____

5. Mark lives in Apartment 12 F. _____

6. We live on the 2nd floor. _____

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. _____

Name _____ Date _____

Practice 1.1

Uses of Numbers

Tell how each number is being used. Write *position, count, measure, label.*

1. Alex is 25 years old.

_____

2. The meeting is at 4:15.

_____

3. Mark placed fifth in the relay race.

_____

4. Flight 236 was on time.

_____

5. Ann is almost 5 feet tall.

_____

6. Martin lives at 443 Summit Road.

_____

7. Victor was the 1st to get the tickets.

_____

8. Ann got her 5th home run of the season.

_____

9. The apples weighed 4 pounds.

_____

10. There are 26 students in my class.

_____

11. Mark wears number 34 on his uniform.

_____

12. Her little brother is 8 months old.

_____

13. The school bus seats 45 passengers.

_____

14. Tim was born in 1995.

_____

15. Jim rides bus 367 to school.

_____

Test Prep

16. Identify the type of number used in the statement below.

There are 455 students in our school.

A position **C** count

B measure **D** label

17. Which of the numbers in the statement below is being used as a label? Explain how you decided.

Jan bought 36 muffins for $12.89 and took them to the meeting at 349 Pine Street for 25 volunteers

_____

Name _____ Date _____

Enrichment 1.1

Number Hiring Agent

The company *Numbers R Us* is looking for new employees. They have called you to help them out. *Numbers R Us* hires numbers for different jobs. As you know, numbers can show position, count, measure, and label. Numbers are everywhere! You need to find ones for each job.

Below is the chart of how many numbers the company needs for each job. Look through textbooks, encyclopedias, or magazines or surf the Web to find numbers for each job. Be sure to include where you found each number so that the people at *Numbers R Us* can find the numbers you have listed.

Job: To Show Position (3 numbers needed)	**Job: To Label** (5 numbers needed)
Job: To Measure (10 numbers needed)	**Job: To Count** (8 numbers needed)

Name _____ Date _____

Problem Solving 1.1

Uses of Numbers

Read each passage below and circle the numbers in each. Then answer the questions that follow.

Space Exploration The 1st satellite launched into space was Sputnik 1 on October 4, 1957. It was a small ball about 23 inches across and weighing 185 pounds. This began space exploration. On July 20, 1969, *Apollo 11* landed on the moon. This mission and the 5 missions that followed allowed scientists to get samples of moon rocks and measurements of the moon for analysis. The next giant step in space travel may be Mars. A trip to Mars would take about 9 months each way.

1. Which numbers in the paragraph are used to measure? Are the numbers exact amounts or estimates? Explain your reasoning.

2. The number 1 is used twice in the paragraph above. How is it used in each case?

Name _____ Date _____

Homework 1.1

Uses of Numbers

Tell how each number is being used. Write *position*, *count*, *measure*, or *label* for each.

Jennifer lives at 349 Ridge Meadow.

The number 349 is used to **label** or identify Jennifer's house.

1. Michael wears a size 8 pair of tennis shoes.

_____

2. Emily read 35 pages of her new book.

_____

3. John's team had 3 home runs in the game.

_____

4. Jason's phone number is 331-2525.

_____

5. Jenny needs 12 feet of fencing for the pen.

_____

6. Cab #321 picked us up at the airport.

_____

7. Pete was the 6th person in line to get tickets.

_____

8. The puppy weighed 8 pounds.

_____

9. The 747 airplane is roomy and seats a lot of passengers.

_____

10. Jeff got a score of 90% on his math test.

_____

11. The winter storm was the 1st of the season.

_____

12. The singing group's name is *Wink 133*.

_____

13. The plane arrived at Gate 8.

_____

14. A large bag contains 50 mints.

_____

Problem Solving

15. Identify the number used to measure in the statement below.

There are 45 students in our school on the track team. At our 1st meet, Jana came in 2nd in the 200-meter dash.

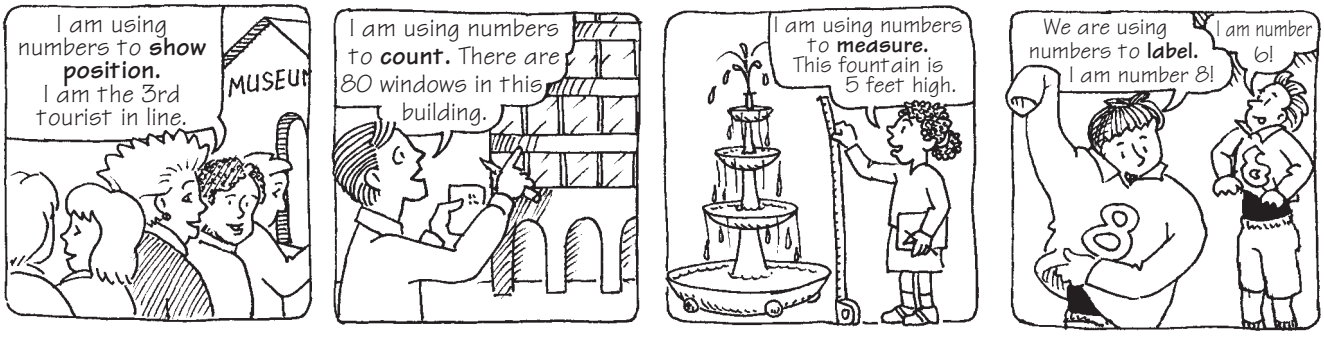
_____

Name _____ Date _____

English Learners 1.1

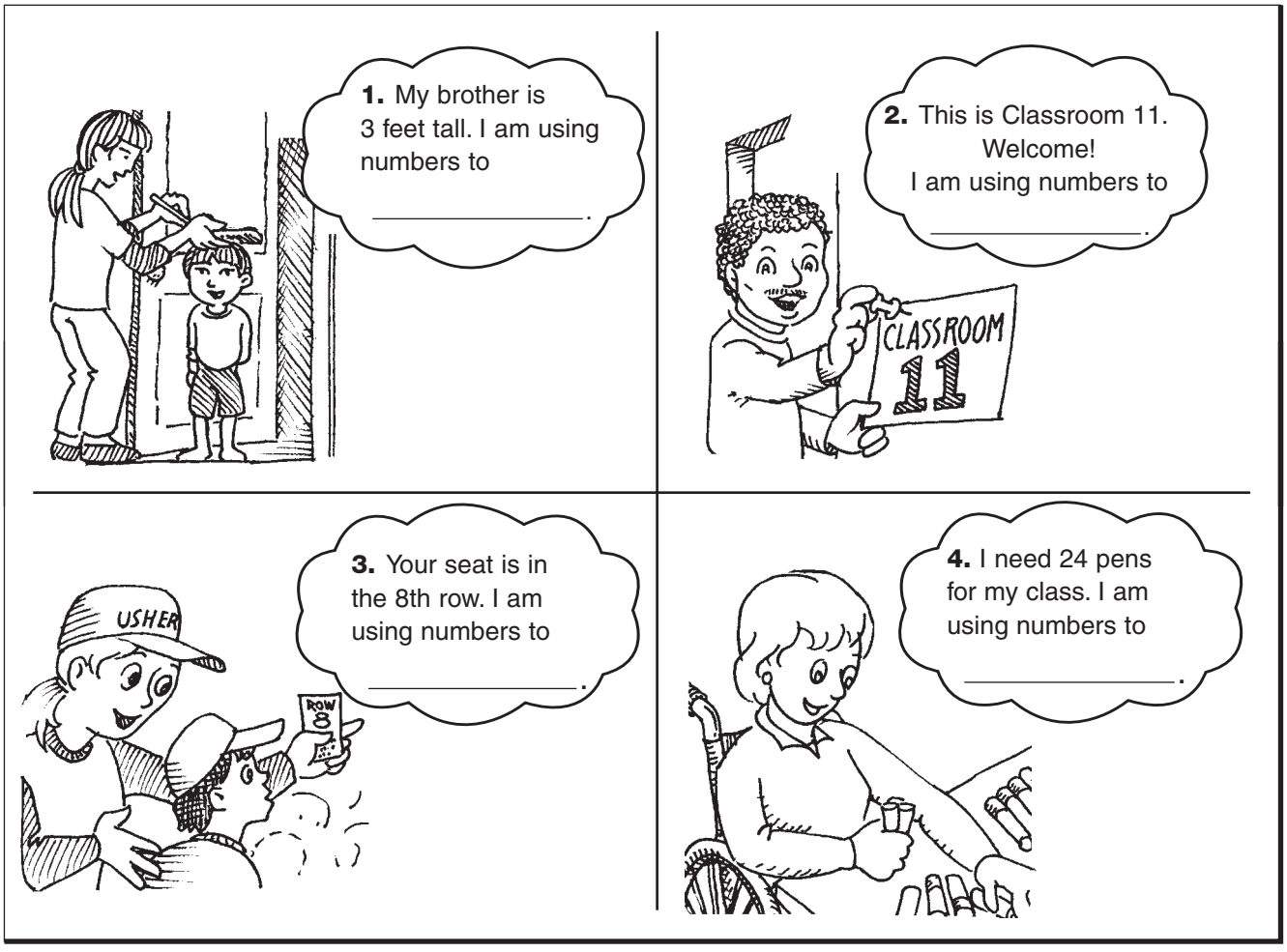
Uses of Numbers

Look at the cartoons. Read the sentences.



Fill each blank with a word from the box.

show position	**count**	**measure**	**label**



Use with text pages 4–5.

Name _____ Date _____

Reteach 1.2

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**

Short Word Form	Word Form
439 thousand, 158	four hundred thirty-nine thousand, one hundred fifty-eight
Standard Form	**Expanded Form**
439,158	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

_____

_____

_____

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

_____

_____

_____

3. 317 thousand, 209

_____

_____

_____

Name _____ Date _____

Practice 1.2

Place Value Through Hundred Thousands

Write each number in short word form.

1. 200,000 + 30,000 + 400 + 50 + 1 _____

Write each number in standard form.

2. six hundred thirteen thousand, five hundred twenty-one _____

Write each number in expanded form.

3. 417,058 _____

Write each number in word form.

4. 137 thousand, 215 _____

_____

Write the value of the underlined digit.

5. 5<u>2</u>8 _____

6. <u>7</u>,854 _____

7. 2<u>3</u>6,064 _____

8. 32,<u>8</u>88 _____

Algebra • Equations Find each missing number.

9. 5,000 + 200 + 60 + ■ = 5,267

10. 6,000 + 700 + ■ = 6,720

Rewrite the number 54,722 to show each change.

11. Increase the number by 10,000. _____

12. Decrease the number by 100. _____

Test Prep

13. What form is used to write the number in the statement below?

About 135 thousand people live in my hometown.

A standard **C** expanded

B short word **D** word

14. What is the value of the digit 5 in 356,017? Explain how you found your answer.

_____

_____

_____

Name _____ Date _____

Enrichment 1.2

Peas in a Pod

Read the numbers on the left side of the page. The numbers are written in standard form, expanded form, short word form, and word form. In each pea pod, write the letters of four equal numbers.

Not every letter will be used.

A. 8,687

B. 800,000 + 60,000 + 800 + 70

C. 80 thousand, 687

D. eight hundred sixty thousand, eight hundred seventy

E. 86 thousand, 870

F. 80,687

G. eight thousand, six hundred eighty-seven

H. 80 thousand, 870

I. 86,870

J. 860,870

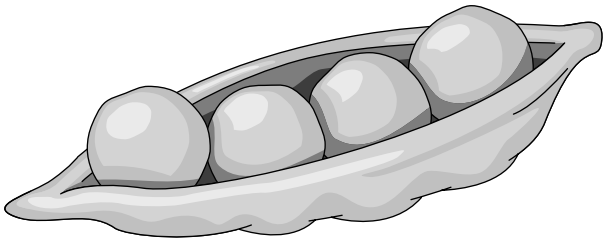
K. 8,000 + 600 + 80 + 7

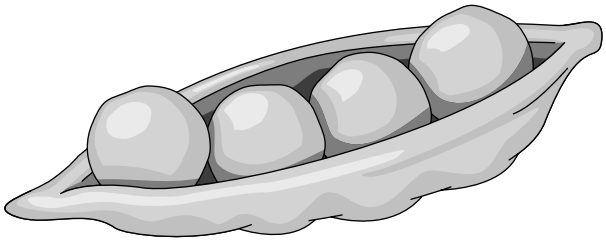
L. eighty thousand, six hundred eighty-seven

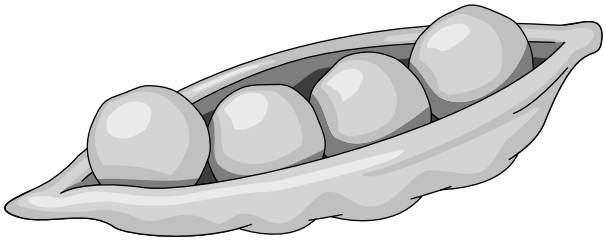
M. 8 thousand, 687

N. 860 thousand, 870

O. 80,000 + 600 + 80 + 7







Name _____ Date _____

Problem Solving 1.2

Place Value Through Hundred Thousands

Use the table to answer each question.

1. What is the area of California? Write this number in word form.

_____

_____

_____

_____

2. Which state has an area that is about one hundred four thousand square miles?

_____

3. Write the area of Alaska in expanded form and short word form.

_____

4. **Predict** The area of Florida is about 100,000 square miles less than the area of California. What is the approximate area of Florida?

_____

5. **Reasoning** Which state on the table has the greatest area? Can you tell by looking at the first digit of each number? Explain your reasoning.

_____

_____

_____

_____

Area of States (square miles)	
State	**Area**
Alaska	587,878
Arizona	114,007
California	158,648
Colorado	104,100
Montana	147,047
Nevada	110,567
New Mexico	121,599
Texas	266,874

Name _____ Date _____

Homework 1.2

Place Value Through Hundred Thousands

Write each number in three other ways.

328 thousand, 514

Word form: three hundred twenty-eight thousand, five hundred fourteen

Expanded form: 300,000 + 20,000 + 8,000 + 500 + 10 + 4

Standard form: 328,514

1. 246,718

2. 300,000 + 40,000 + 2,000 + 100 + 50 + 9

Write the value of the underlined digit.

3. 76,<u>9</u>82 _____

4. 6<u>6</u>,424 _____

5. 925,7<u>3</u>3 _____

Algebra • Equations Find each missing number.

6. 7,000 + ■ + 40 + 5 = 7,845

7. ■ + 8,000 + 900 + 70 + 6 = 18,976

8. 200,000 + 40,000 + 5,000 + 700 + ■ + 3 = 245,783

Problem Solving

9. What is the value of the digit in the hundred thousands place in the number 178,632?

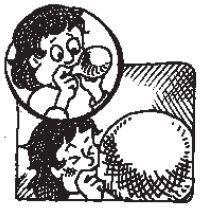
_____

Name _____ Date _____

English Learners 1.2

Place Value Through Hundred Thousands

Read the definitions.



To **increase** means "to make larger." The balloon is **increasing** in size.

To **decrease** means "to make smaller." The snowman is **decreasing** in size.

25¢

10¢

Greater can mean "more" or "larger." A quarter has **greater** value than a dime.

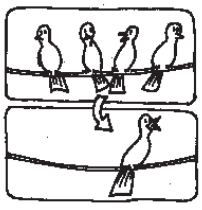
50¢

5¢

Ten times greater means "a value multiplied by 10." A fifty-cent piece has a value **ten times greater** than a nickel.

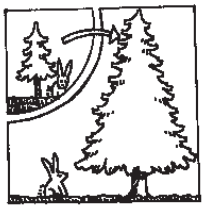
Write *increasing* or *decreasing* below each picture.

1.



_____

2.



_____

3. Circle the stamp with the *greater* value.

4. Circle the piece of money that has a value *ten times greater than* a dime.

1¢

25¢

$1.00

Name _____ Date _____

Reteach 1.3

Problem-Solving Strategy: Use Logical Reasoning

Read It **Look for information.**

Jorge went to the museum 2 days before Louisa. Kevin went to the museum 4 days after Jorge. The children went to the museum Saturday, Monday, and Wednesday. What day did each person go to the museum?

Picture It **Use a model to show when the children visited the museum.**

Jorge		Louisa		Kevin

Each ☐ = 1 day

Solve It **Use the model to solve the problem.**

The model shows that Jorge went to the museum first, Louisa visited the museum second, and Kevin went to the museum last. Based on the information in the problem, you can reason that:

1. Jorge went on _____.

Louisa went on _____.

Kevin went on _____.

Try These! **Use a model to solve each problem. Show your work.**

2. Mr. Stokes' class is in line for lunch. Ming is behind Ramon and in front of Julie. Ken is in front of Ramon. Sue is last in line. What place is Ming in line?

_____

3. Jason, Tori, and Kelly are wearing T-shirts. One is blue, one is red, and one is green. Neither girl is wearing a green shirt. Tori wishes she had worn a blue shirt. What color is each person wearing?

_____

Name _____ Date _____

Practice 1.3

Problem-Solving Strategy: Use Logical Reasoning

Use logical reasoning to solve each problem. **Show your work.**

1. Curtis, Laura, Brian, and Richard are playing a game where they take turns. Laura did not go first or second. Brian went before Curtis. Richard went last. In what order do the players take their turns?

_____

_____

2. Barry, Willis, and Joann each own either a guitar, a drum set, or a keyboard. Barry does not own an instrument with keys. Joann owns a guitar. What instrument does each person own?

_____

_____

_____

3. Melissa, Maura, Anna, and Leslie each have a different favorite ice cream flavor. The ice cream flavors are vanilla, strawberry, chocolate, and mint chocolate chip. Maura does not like chocolate or vanilla. Anna does not like strawberry. Melissa does not like vanilla. Leslie likes mint chocolate chip. What is each person's favorite ice cream flavor?

_____

_____

_____

Name _____ Date _____

Enrichment 1.3

Problem-Solving Strategy: Use Logical Reasoning

Danny and his three friends each have a different sport and team they like to watch. Read the clues below to find their favorite sports and the uniform color of their favorite teams. Write *yes* or *no* in the chart below.

1. Danny's favorite team does NOT wear orange or blue.
2. Fred's favorite sport begins with a "B." The color of his favorite team's uniforms is NOT orange or yellow.
3. The person who likes baseball has a favorite team that wears orange.
4. Cindy's favorite team does NOT wear orange or yellow.
5. Danny and Fred do NOT like to watch hockey.
6. The person who likes basketball has a favorite team that does NOT wear blue.

	Football	Baseball	Hockey	Basketball	Yellow	Blue	Red	Orange
Danny								
Fred								
Maggie								
Cindy								
Yellow								
Blue								
Red								
Orange								

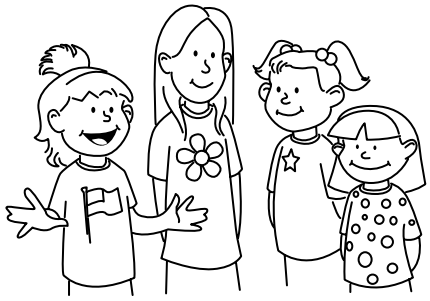
Name	Sport	Uniform Color
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Name _____ Date _____

Problem Solving 1.3

Problem-Solving Strategy: Use Logical Reasoning

Problem The picture shows Amanda and her three sisters, Lori, Becky, and Joni. Amanda does not have a star on her T-shirt. Becky does not have a flower or a flag on her T-shirt. Joni's shirt has polka dots. Lori does not have a flag on her shirt. Label the girls in the picture.



UNDERSTAND

1. Which person can you label using only the information in the problem? What shirt is she wearing?

_____

PLAN

2. When you write *yes* in a square in a row or column, what is true of the rest of the squares in that row or column?

_____

SOLVE

3. Fill in the chart with *yes* or *no*. Then label the drawing above.

	Star	Flower	Flag	Polka Dot
Amanda				
Lori				
Becky				
Joni				

LOOK BACK

4. **Write About It** How can you check your answer?

_____

Name _____ Date _____

Homework 1.3

Problem-Solving Strategy: Use Logical Reasoning

Use logical reasoning to solve each problem.

Blaine, Jorge, Una, and Casey are standing in line. Una is not first. Blaine is fourth. Jorge is directly behind Casey. List the four friends in order from first to fourth.

Use a chart. Fill in what you know. Then use Logical Reasoning to fill in the rest of the chart.

	First	Second	Third	Fourth
Blaine	no	no	no	yes
Jorge	no	yes	no	no
Una	no	no	yes	no
Casey	yes	no	no	no

The four friends in order from first to fourth are Casey, Jorge, Una, Blaine.

1. Ben, Margaret, Tyler, and Jessie are playing a game where they take turns. Tyler did not go last. Jessie went immediately after Ben. Margaret went first. In what order did the players take their turns?

_____

2. Belle, Sebastian, Roy, and May each chose soccer, football, basketball, or baseball as their favorite sport. No two of them chose the same sport. Sebastian does not like soccer or football. Roy does not like soccer. May does not like basketball. Belle chose baseball. What is each person's favorite sport?

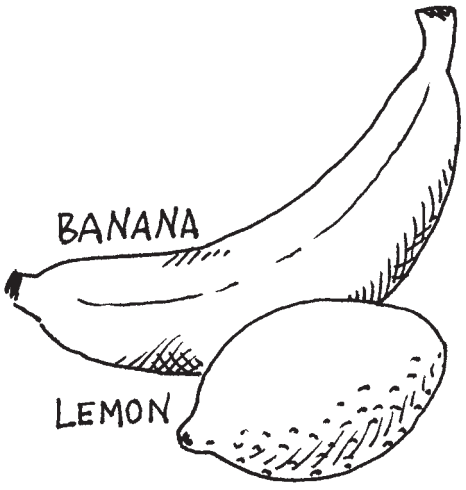
_____

Name _____ Date _____

English Learners 1.3

Problem-Solving Strategy: Use Logical Reasoning

Read each problem. Fill in the blanks.



1. Liza and Kit each have a piece of fruit. No one has a fruit that begins with the first letter of her name.

   So, Liza has a _____. Kit has a _____.

2. Ben and Luke each have a blue or a red flower. Ben's flower is not red.

   So, Ben's flower is _____. Luke's flower is _____.

3. Bela and Anton each own a van or a motorcycle. Bela does not own a vehicle with two wheels.

   So, Anton owns a _____. Bela owns a _____.

4. Marta and Cia are the only people standing in line. Marta is not last.

   So, _____ is in front of _____.

5. Lori and Pam are playing a game. One of them has scored 18 points. The other has scored 13 points. Pam does not have more points than Lori.

   So, Pam has _____ points. Lori has _____ points.

Name _____ Date _____

Reteach 1.4

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.

1. How many hundreds are there in 10,000?

_____

2. How many tens are there in 10,000?

_____

3. How many hundreds are there in 100,000?

_____

4. How many tens are there in 100,000?

_____

5. How many ten thousands are there in 1,000,000?

_____

6. How many hundred thousands are there in 1,000,000?

_____

Name _____ Date _____

Practice 1.4

How Big Is One Million?

A large container of paper clips holds 1,000 paper clips. An office supply store has 1,000 containers of paper clips in stock. How many paper clips is that? Complete the table to show how many paper clips the store has in stock.

	Number of Paper Clip Containers	Number of Paper Clips per Container	Total Number of Paper Clips in Stock
1.	1	1,000	1,000
2.	10		
3.	50		
4.	100		
5.	1,000		

6. How many paper clips does the store have in stock?

_____

Test Prep

7. Which number shows one half of a million?

A 50,000 **C** 500,000

B 5,000 **D** 5,000,000

8. Would you use hundreds, thousands, or millions to count the number of miles from the earth to the sun? Explain your reasoning.

_____

Name _____ Date _____

Enrichment 1.4

How Many for a Million?

Read each statement below and answer the questions.

Jared bikes 10 miles in an hour.

1. How many hours would he have to bike to go 100 miles? _____
2. How many hours would he have to bike to go 1,000 miles? _____
3. How many hours would he have to bike to go 100,000 miles? _____
4. How many hours would he have to bike to go 1,000,000 miles? _____

Patricia has $1 worth of pennies.

5. How many pennies does Patricia have? _____
6. How many pennies equal $100? _____
7. How many pennies equal $1,000? _____
8. How much money would Patricia have if she had 1 million pennies? _____

Darrell read 100 pages in 2 days.

9. How many days would it take Darrell to read 10,000 pages? _____
10. How many days would it take Darrell to read 1 million pages? _____

A stadium holds 250,000 people.

11. How many stadiums would be needed to hold 2 million people? _____

Try These!

- Use a stopwatch or have a friend time you as you write your first name 10 times on a piece of paper. Then, find out how long it would take you to write your name 100, 1,000, 10,000, 100,000, and 1 million times.
- Look through your textbooks or an encyclopedia, or browse the Web to find items listed in the millions. Try to find at least three different things with values of at least 1 million.

Name _____ Date _____

Problem Solving 1.4

How Big is One Million?

Tell whether the value given is in hundreds, thousands, or millions. Explain your choice.

Show your work.

1. The population of Florida is about 16

   _____ people.

2. Pamela is reading a book that is 5

   _____ pages.

3. A local organization held a penny drive and raised $20,000 dollars or 2

   _____ pennies.

Tell if each is less than, equal to, or greater than 1 million.

4. The number of visitors in 1,000 days if 1,000 people visit the park each day.

   _____

5. The number of seconds in 1,000 hours. (hint: 3,600 seconds = 1 hour)

   _____

6. **You Decide** Jessie has a book of 50 stamps. How many books of stamps would she need to have 5,000,000 stamps? Explain.

   _____

   _____

Name _____ Date _____

Homework 1.4

How Big Is One Million?

Use the chart to answer the following questions.

$1 \times 1{,}000{,}000 = 1{,}000{,}000 \longrightarrow$	1 times 1 million = 1 million
$10 \times 100{,}000 = 1{,}000{,}000 \longrightarrow$	10 times 1 hundred thousand = 1 million
$100 \times 10{,}000 = 1{,}000{,}000 \longrightarrow$	100 times 10 thousand = 1 million
$1{,}000 \times 1{,}000 = 1{,}000{,}000 \longrightarrow$	1,000 times 1 thousand = 1 million
$10{,}000 \times 100 = 1{,}000{,}000 \longrightarrow$	10,000 times 1 hundred = 1 million
$100{,}000 \times 10 = 1{,}000{,}000 \longrightarrow$	100,000 times ten = 1 million
$1{,}000{,}000 \times 1 = 1{,}000{,}000 \longrightarrow$	1,000,000 times 1 = 1 million

How many tens are in 1,000,000?
Chart shows 100,000 times ten = 1 million.

There are 100,000 tens in 1,000,000.

1. How many ones are there in 1,000,000? _____

2. How many hundreds are there in 1,000,000? _____

3. How many hundred thousands are in 1,000,000? _____

4. How many ten thousands are there in 1,000,000? _____

5. How many thousands are there in 1,000,000? _____

Use the chart to complete these problems.

6. $1{,}000 \times$ _____ $= 1{,}000{,}000$

7. $10 \times$ _____ $= 1{,}000{,}000$

8. $100 \times$ _____ $= 1{,}000{,}000$

9. $10{,}000 \times$ _____ $= 1{,}000{,}000$

Problem Solving

10. Jack has 1,000,000 pennies. If each roll holds 100 pennies, how many rolls will Jack need for all the pennies?

_____

Name _____ Date _____

English Learners 1.4

How Big Is One Million?

Read the comic strip. Think about the words in bold type.

1.

P: Darren, this book is fun! It has 8 pages of jokes and 4 pages of puzzles.

D: So, it has 12 pages **altogether**.

2.

D: Paul, you have done 3 of the 4 pages of puzzles.

P: Yes, there is 1 **remaining** puzzle page.

3.

D: Have you seen this joke book? I read it **cover to cover** last night.

P: Wow, you read every page!

4.

P: I have an idea! Let's **combine** our favorite jokes into a super joke book!

D: Let's do it! It will be fun to put our jokes together.

Draw lines to connect the words to their meanings.

1. cover to cover	"as a total number"
2. altogether	"put together"
3. remaining	"every page"
4. combine	"not used yet, or still there"

Use the words in the box to complete the sentences below.

cover to cover	**altogether**	**remaining**	**combine**

5. You can _____ red paint and yellow paint to make orange paint.

6. If you have used 4 of 6 paper cups, you have 2 _____.

7. If you have 2 red pens and 3 blue pens, you have 5 pens _____.

8. When you have read all of a book, you have read it _____.

Name _____ Date _____

Reteach 1.5

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**

Short Word Form	Word Form
628 million, 534 thousand, 782	Six hundred twenty-eight million, five hundred thirty-four thousand, seven hundred eighty-two
Standard Form	**Expanded Form**
628,534,782	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

_____

_____

_____

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

_____

_____

_____

3. 615 million, 475 thousand

_____

_____

_____

Name _____ Date _____

Practice 1.5

Place Value Through Hundred Millions

Write the number below in short word form.

1. 200,000,000 + 30,000,000 + 400,000 + 50,000 + 1,000

_____

Write the number below in standard form.

2. 100,000,000 + 80,000,000 + 5,000,000 + 300,000 + 20,000 + 8,000

_____

Write the number below in expanded form.

3. 463 million, 342 thousand, 705

_____

_____

Write the number below in word form.

4. 715,413,068 _____

_____

Write the place of the 2 in each number. Then write its value.

5. 21,547

_____

_____

6. 54,285

_____

_____

7. 67,902

_____

_____

Test Prep

8. Tell what form of the number is being used in the statement below.

Over 10,000,000 tacos sold.

A standard **C** expanded

B short word **D** word

9. Write the value of the underlined digit in the number below.

6<u>4</u>8,396,178

Explain how you found your answer.

_____

_____

Name _____ Date _____

Enrichment 1.5

Millions Puzzle

Use the list of numbers and the clues below to fill in the puzzle. Use each number exactly once.

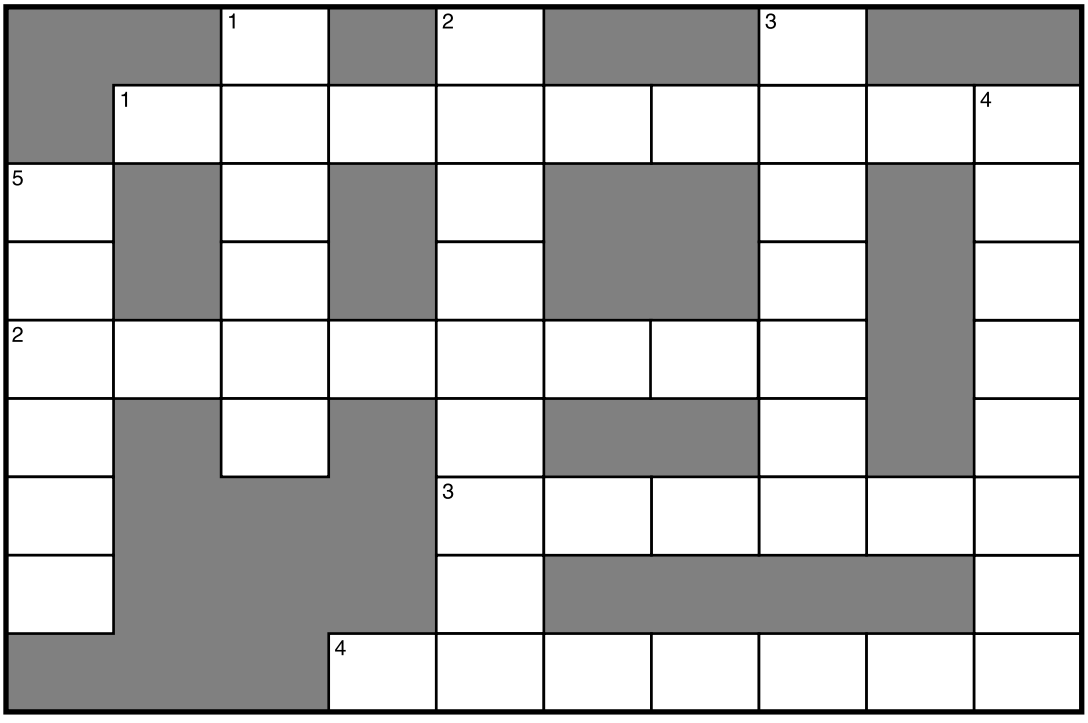
158,207,618	359,652	82,150,325
350,523	14,530,976	1,635,625
141,820	821,408,320	1,043,685

Across

1. A number with a 2 in the hundred thousands place.
2. A number with a 4 in the millions place.
3. A number with a 3 in the ones place.
4. A number greater than 800,000 but less than 1 million 500 thousand.

Down

1. A number greater than 300,000 with a 5 in the tens place.
2. A number greater than eight hundred twenty million.
3. A number with a 3 in the ten thousands place.
4. A number with a 5 in the ten thousands place.
5. A number less than 100 million with an 8 in the hundreds place.



Name _____ Date _____

Problem Solving 1.5

Place Value Through Hundred Millions

The table below shows the estimated number of each type of pet found in the United States. Use the table to answer the following questions.

Pets in the United States					
Pet	**Number**		**Pet**	**Number**
Cat	77,700,000		Reptile	9,000,000
Dog	65,000,000		Saltwater Fish	7,000,000
Freshwater Fish	185,000,000		Small Animal Pet	16,800,000

1. How many cats are in the United States? Write this number in two ways.

2. Which pet populations are greater than ten million?

3. Suppose there are over two hundred twenty-one million cats in the world. Write this number in expanded form.

4. **Write About It** Look at the numbers in the table. In which number does the digit 1 have the greatest value? Explain your answer.

Name _____ Date _____

Homework 1.5

Place Value Through Hundred Millions

Here are four ways to write the same number.

Standard form: 328,541,670

Word form: three hundred twenty-eight million, five hundred forty-one thousand, six hundred seventy

Short word form: 328 million, 541 thousand, 670

Expanded form: 300,000,000 + 20,000,000 + 8,000,000 + 500,000 + 40,000 + 1,000 + 600 + 70

Write each number in word form and short word form.

1. 612,483,125

_____

_____

2. 100,000,000 + 5,000,000 + 600,000 + 2,000 + 900 + 50

_____

_____

Write the number in standard form and expanded form.

3. 411 million, 725 thousand, 600

_____

_____

Problem Solving

4. Write two 8-digit numbers that have a 4 in the millions place, a 6 in the ten thousands place, and a 9 in the ones place.

_____

Name _____ Date _____

English Learners 1.5

Place Value Through Hundred Millions

Standard form is the usual way in which numbers are written. The number in the box is written in standard form: 5,280

Expanded form is a way of writing a number to show the values of its digits. The number in the oval is written in expanded form: 5,000 + 200 + 80

Short word form is a way of writing a number with words and digits. The number on the dotted line is written in short word form: 5 thousand, 280

Word form is writing a number in words. The number in the cloud is written in word form: five thousand, two hundred eighty

Connect the numbers to the forms they are in.

1. one thousand, seven hundred sixty	standard form
2. 1,760	expanded form
3. 1 thousand, 760	short word form
4. 1000 + 700 + 60	word form

Complete these items.

5. Write a digit in each box: ☐☐☐☐☐

6. Write the digits above as a number that is in standard form. _____

7. Write the number above in expanded form. _____

8. Write the number above in short word form.

_____

9. Write the number above in word form.

_____

Name _____ Date _____

Chapter 1 Test

Tell how each number is being used. Write *position*, *count*, *measure*, or *label*.

1. taxi number 288

_____

2. 48 people

_____

3. 19 feet tall

_____

4. 12^{th} place

_____

Write each number in standard form.

5. 42 million, 713 thousand _____

6. 800,000 + 30,000 + 7,000 + 500 + 2 _____

7. four hundred fifty-one thousand, eight hundred eleven

_____

Write each number in word form.

8. 318,407 _____

9. 80,000 + 2,000 + 900 _____

Write each number in short word form.

10. 56,703,094 _____

11. 7,000,000 + 300,000 + 80,000 + 900 + 20 + 5

_____

Write each number in expanded form.

12. 42 million, 642 thousand, 32

_____

13. seven million, eighty-six thousand, twelve

_____

Go on

Name _____ Date _____

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

14. 85<u>0</u>,467 _____

15. 2<u>4</u>,923,200 _____

16. 253,<u>8</u>45,237 _____

Write the value of the underlined digit.

17. 293,<u>4</u>36,703 _____

18. 5<u>0</u>3,780,295 _____

Use logical reasoning to solve each problem.

19. Megan, Ryan, and Jesse each own either a bike, a scooter, or a van. Each person owns a different vehicle. Megan does not own a vehicle with exactly 2 wheels. Jesse owns the scooter. What vehicle does each person own?

_____

_____

_____

20. Andy, Brent, Chen, and Dana each saw a different number of movies last month. Each of them saw 3, 4, 5, or 6 movies. Chen saw 4 movies. Dana did not see 6 movies. Brent did not see more than 4 movies. How many movies did each person see?

_____

_____

Class ______________________ Date ______________

Unit 1 Class Record

Unit 1 Assessment

Student	Chapter 1		Chapter 2		Unit 1 Test	
	Pre-test	Chapter Test	Pre-test	Chapter Test	Form A	Form B

Houghton Mifflin
Math

Chapter Resources

GRADE 4, CHAPTER 1

Contents

Printed in the U.S.A.

Booklet 1 of 25

Family Letter for Unit 1

Dear Family,

During the next few weeks, our math class will be learning about place value of numbers through hundred millions and about money.

You can expect to see work that provides practice with comparing, ordering, and rounding numbers as well as counting and comparing collections of coins and bills.

As we learn how to round numbers, you may wish to use the following sample as a guide.

Vocabulary

estimate A number close to an exact amount. An estimate tells *about how much* or *about how many.*

rounding To find *about how many* or *about how much* by expressing a number to the nearest ten, hundred, thousand, and so on.

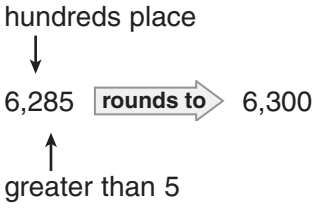
Rounding to the Nearest Hundred

To round a number such as 6,285 to the nearest hundred, first find the digit in the hundreds place (2).

Next look at the digit in the place to the right of the hundreds place (8).

- If this digit is less than 5, do not change the digit in the hundreds place.
- If it is equal to or greater than 5, increase the digit in the hundreds place by 1.
- Then change all of the digits to the right of the hundreds place to zeros.

Since the digit to the right of the hundreds place is 8, and 8 is greater than 5, then 6,285 rounded to the nearest hundred is 6,300.



Knowing about place value can help students understand greater numbers and use them to solve problems.

Sincerely,

Your Child's Teacher

Technology

Check out *Education Place* at **eduplace.com/kids/mw/** for *e*•Glossary, *e*•Word Games, test prep practice, and more.

Name _____ Date _____

Chapter 1 Pretest

Are You Ready?

Write the value of the digit 3 in each number.

1. 237

30

2. 3,211

3,000

Write each number in standard form.

3. five hundred three

503

4. 7 tens 5 ones

75

5. 2,000 + 400 + 70

2,470

Write each number in word form.

6. 462 four hundred sixty-two

7. 3,950 three thousand, nine hundred fifty

Write the value of the underlined digit.

8. 4<u>3</u>7 thirty

9. <u>6</u>,209 six thousand

Use logical reasoning to solve the problem

10. How many tens are there in 100? Explain your answer.

10; 10 × 10 = 100

Go on

Name _____ Date _____

Check What You Know

Tell how each number is being used. Write *position*, *count*, *measure*, or *label*.

1. population: 35,673

count

2. Allen, TX 75002

label

3. 6:35 A.M.

measure

4. 23rd person in line

position

Write each number in standard form.

5. 16 million, 573 thousand 16,573,000

6. 400,000 + 90,000 + 3,000 + 800 + 7 493,807

7. nine hundred sixty-two thousand, four hundred twelve

962,412

Write each number in word form.

8. 613,509 six hundred thirteen thousand, five hundred nine

9. 60,000 + 9,000 + 500 sixty-nine thousand, five hundred

Write each number in short word form.

10. 73,105,026 73 million, 105 thousand, 26

11. 4,000,000 + 500,000 + 30,000 + 800 + 60 + 3

4 million, 530 thousand, 863

Write each number in expanded form.

12. 36 million, 421 thousand, 75

30,000,000 + 6,000,000 + 400,000 + 20,000 + 1,000 + 70 + 5

13. two million, thirty-two thousand, eleven

2,000,000 + 30,000 + 2,000 + 10 + 1

Name _____ Date _____

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

14. 3<u>0</u>5,247 ten thousands; 0

15. 4,<u>8</u>92,500 hundred thousands; 800,000

16. 5<u>4</u>3,890,127 ten millions; 40,000,000

Write the value of the underlined digit.

17. 628,5<u>4</u>3,107 40,000

18. 75<u>0</u>,740,730 0

Use logical reasoning to solve each problem.

19. Ashley, Marty, and Yoko each have a bike. The bikes are green, blue, and maroon. Ashley's bike is not green. Marty's bike color does not start with the same letter as his name. Yoko's bike is blue. What color is each person's bike?

Ashley's bike is maroon; Marty's bike is green; Yoko's bike is blue.

20. Tina, Cody, Luis, and Robbie each have a different pet. The pets are a bird, a ferret, a dog, and a cat. Luis does not have a bird or a ferret. Robbie does not have a cat. Cody has a dog. Tina does not have ferret. What pet does each person have?

Tina has the bird; Cody has the dog; Luis has the cat; Robbie has the ferret.

Name _____ Date _____

Reteach 1.1

Uses of Numbers

Numbers are used for many different purposes.

Purpose	Examples
• To show position	• Emily was the **1st** female class president.
• To count	• Our team scored **18 points.** • The hotel has **450 rooms.**
• To measure	• Ann competed in the **200-meter** swim race. • I need to be home by **8:30.**
• To label	• Room **14A** is the library. • The model number of the sweeper is **HJ0013.**

Tell how each number is being used.
Write *position, count, measure,* or *label.*

1. Our cat had 3 kittens.
   count
2. Joe is 10 years old.
   count
3. The flag is 3 feet high.
   measure
4. Meg finished 3rd in the relay race.
   position
5. Mark lives in Apartment 12 F.
   label
6. We live on the 2nd floor.
   position
7. Jeff needs 8 hours of sleep each night.
   measure or count
8. Sue has 4 glasses of milk each day.
   count
9. Carlos built an F-15 model plane.
   label

Name _____ Date _____

Practice 1.1

Uses of Numbers

Tell how each number is being used. Write *position, count, measure, label.*

1. Alex is 25 years old.

   count

2. The meeting is at 4:15.

   measure

3. Mark placed fifth in the relay race.

   position

4. Flight 236 was on time.

   label

5. Ann is almost 5 feet tall.

   measure

6. Martin lives at 443 Summit Road.

   label

7. Victor was the 1st to get the tickets.

   position

8. Ann got her 5th home run of the season.

   position or count

9. The apples weighed 4 pounds.

   measure

10. There are 26 students in my class.

    count

11. Mark wears number 34 on his uniform.

    label

12. Her little brother is 8 months old.

    count or measure

13. The school bus seats 45 passengers.

    count

14. Tim was born in 1995.

    count or measure

15. Jim rides bus 367 to school.

    label

Test Prep

16. Identify the type of number used in the statement below.

    There are 455 students in our school.

    A position
    B measure
    C count
    D label

    C

17. Which of the numbers in the statement below is being used as a label? Explain how you decided.

    Jan bought 36 muffins for $12.89 and took them to the meeting at 349 Pine Street for 25 volunteers

    349; Explanations may vary.

Name _____ Date _____

Enrichment 1.1

Number Hiring Agent

The company *Numbers R Us* is looking for new employees. They have called you to help them out. *Numbers R Us* hires numbers for different jobs. As you know, numbers can show position, count, measure, and label. Numbers are everywhere! You need to find ones for each job.

Below is the chart of how many numbers the company needs for each job. Look through textbooks, encyclopedias, or magazines or surf the Web to find numbers for each job. Be sure to include where you found each number so that the people at *Numbers R Us* can find the numbers you have listed. **Answers will vary.**

Job: To Show Position (3 numbers needed)	**Job: To Label** (5 numbers needed)
Job: To Measure (10 numbers needed)	**Job: To Count** (8 numbers needed)

Name _____ Date _____

Problem Solving 1.1

Uses of Numbers

Read each passage below and circle the numbers in each. Then answer the questions that follow.

Space Exploration The 1st satellite launched into space was Sputnik 1 on October 4, 1957. It was a small ball about 23 inches across and weighing 185 pounds. This began space exploration. On July 20, 1969, *Apollo 11* landed on the moon. This mission and the 5 missions that followed allowed scientists to get samples of moon rocks and measurements of the moon for analysis. The next giant step in space travel may be Mars. A trip to Mars would take about 9 months each way.

1. Which numbers in the paragraph are used to measure? Are the numbers exact amounts or estimates? Explain your reasoning.

4, 1957, 23, 185, 20, 1969, 9; Oct 4, 1957 and July 20, 1969 are exact amounts; they name a date. "About 23 inches" is an estimate. The measure 185 pounds is exact. 9 months is an estimate because of the word "about".

2. The number 1 is used twice in the paragraph above. How is it used in each case?

It is used as an ordinal number to show position; 1st satellite. It is also used as a number to label; Sputnik 1.

Name _____ Date _____

Homework 1.1

Uses of Numbers

Tell how each number is being used. Write *position*, *count*, *measure*, or *label* for each.

Jennifer lives at 349 Ridge Meadow.

The number 349 is used to **label** or identify Jennifer's house.

1. Michael wears a size 8 pair of tennis shoes.

   measure

2. Emily read 35 pages of her new book.

   count

3. John's team had 3 home runs in the game.

   count

4. Jason's phone number is 331-2525.

   label

5. Jenny needs 12 feet of fencing for the pen.

   measure

6. Cab #321 picked us up at the airport.

   label

7. Pete was the 6th person in line to get tickets.

   position

8. The puppy weighed 8 pounds.

   measure

9. The 747 airplane is roomy and seats a lot of passengers.

   label

10. Jeff got a score of 90% on his math test.

    measure

11. The winter storm was the 1st of the season.

    position

12. The singing group's name is *Wink 133*.

    label

13. The plane arrived at Gate 8.

    label

14. A large bag contains 50 mints.

    count

Problem Solving

15. Identify the number used to measure in the statement below.

    There are 45 students in our school on the track team. At our 1st meet, Jana came in 2nd in the 200-meter dash.

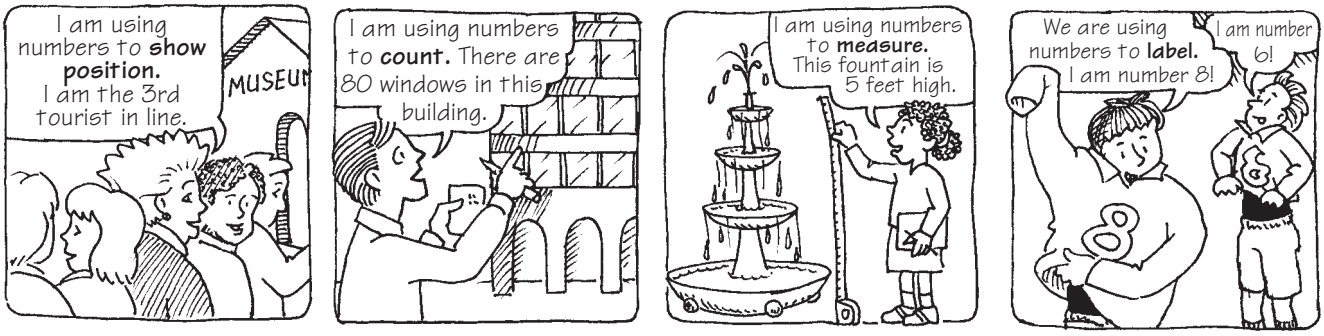
    200

Name _____ Date _____

English Learners 1.1

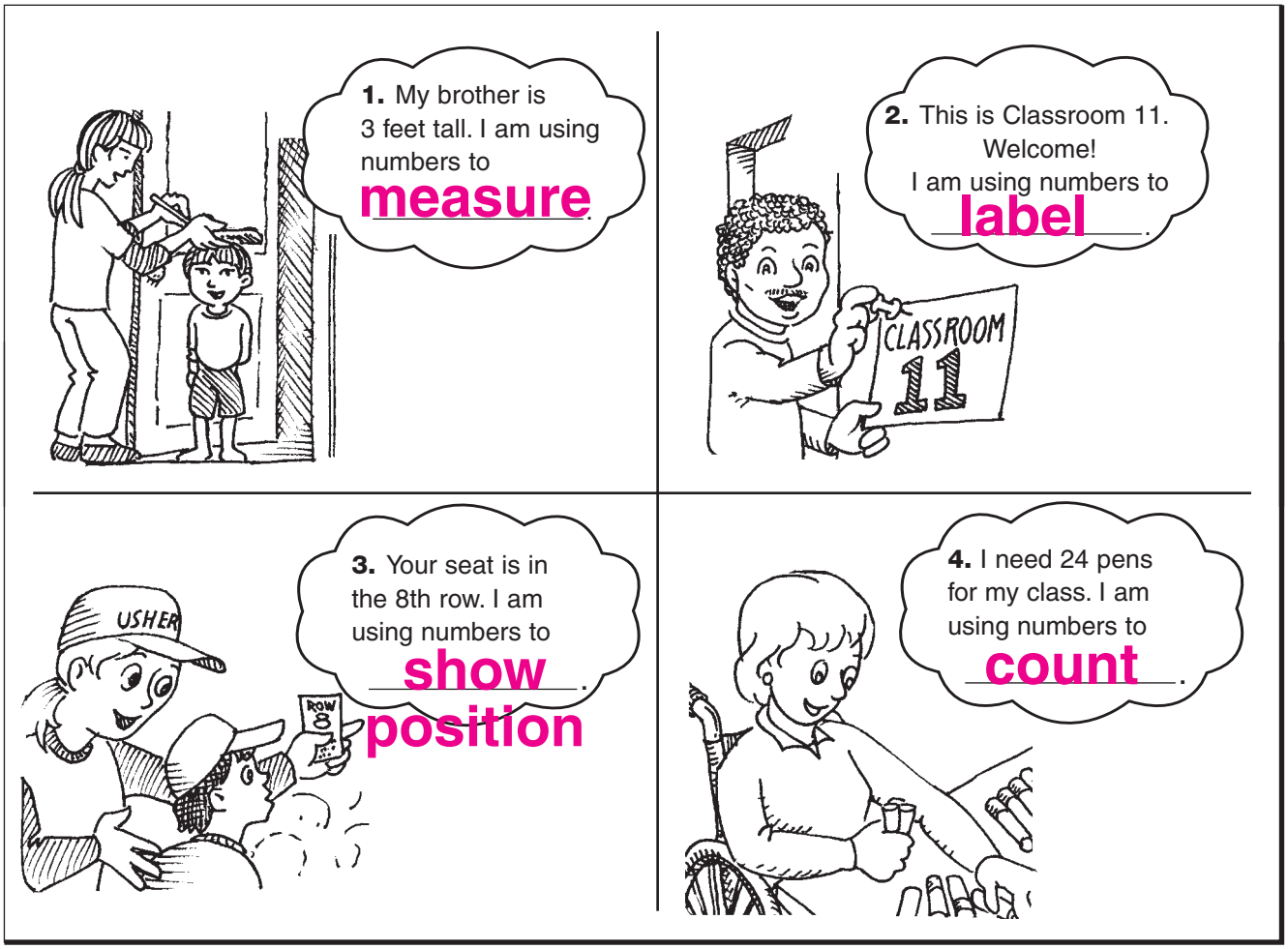
Uses of Numbers

Look at the cartoons. Read the sentences.



Fill each blank with a word from the box.

show position	**count**	**measure**	**label**



Name _____ Date _____

Reteach 1.2

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**

Short Word Form	Word Form
439 thousand, 158	four hundred thirty-nine thousand, one hundred fifty-eight
Standard Form	**Expanded Form**
439,158	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

   125 thousand, 312; 100,000 + 20,000 + 5,000 + 300 + 10 + 2; one hundred twenty-five thousand, three hundred twelve

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

   259,237; 259 thousand, 237; two hundred fifty-nine thousand, two hundred thirty-seven

3. 317 thousand, 209

   317,209; 300,000 + 10,000 + 7,000 + 200 + 9; three hundred seventeen thousand, two hundred nine

Name _____ Date _____

Practice 1.2

Place Value Through Hundred Thousands

Write each number in short word form.

1. 200,000 + 30,000 + 400 + 50 + 1 230 thousand, 451

Write each number in standard form.

2. six hundred thirteen thousand, five hundred twenty-one 613,521

Write each number in expanded form.

3. 417,058 400,000 + 10,000 + 7,000 + 50 + 8

Write each number in word form.

4. 137 thousand, 215 one hundred thirty-seven thousand, two hundred fifteen

Write the value of the underlined digit.

5. 5<u>2</u>8 — 20

6. <u>7</u>,854 — 7,000

7. 2<u>3</u>6,064 — 30,000

8. 32,<u>8</u>88 — 800

Algebra • Equations Find each missing number.

9. 5,000 + 200 + 60 + ■ = 5,267 — 7

10. 6,000 + 700 + ■ = 6,720 — 20

Rewrite the number 54,722 to show each change.

11. Increase the number by 10,000. 64,722

12. Decrease the number by 100. 54,622

Test Prep

13. What form is used to write the number in the statement below?

About 135 thousand people live in my hometown. B

A standard **C** expanded

B short word **D** word

14. What is the value of the digit 5 in 356,017? Explain how you found your answer.

50 thousand or 50,000; *Explanations may vary.*

Name _____ Date _____

Enrichment 1.2

Peas in a Pod

Read the numbers on the left side of the page. The numbers are written in standard form, expanded form, short word form, and word form. In each pea pod, write the letters of four equal numbers.

Not every letter will be used.

A. 8,687

B. 800,000 + 60,000 + 800 + 70

C. 80 thousand, 687

D. eight hundred sixty thousand, eight hundred seventy

E. 86 thousand, 870

F. 80,687

G. eight thousand, six hundred eighty-seven

H. 80 thousand, 870

I. 86,870

J. 860,870

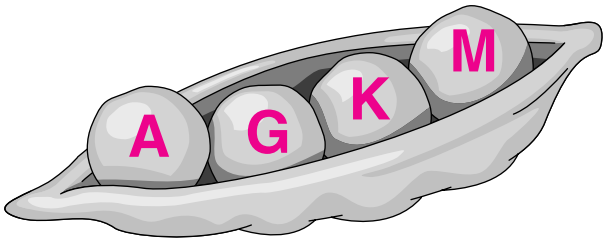
K. 8,000 + 600 + 80 + 7

L. eighty thousand, six hundred eighty-seven

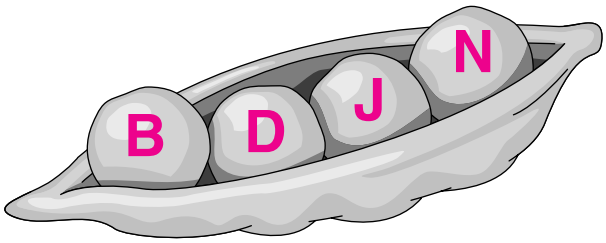
M. 8 thousand, 687

N. 860 thousand, 870

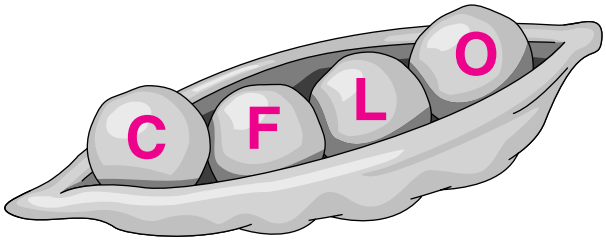
O. 80,000 + 600 + 80 + 7



8,687



860,870



80,687

Name _____ Date _____

Problem Solving 1.2

Place Value Through Hundred Thousands

Use the table to answer each question.

1. What is the area of California? Write this number in word form.

One hundred fifty eight thousand six hundred forty eight square miles.

2. Which state has an area that is about one hundred four thousand square miles?

Colorado

Area of States (square miles)	
State	Area
Alaska	587,878
Arizona	114,007
California	158,648
Colorado	104,100
Montana	147,047
Nevada	110,567
New Mexico	121,599
Texas	266,874

3. Write the area of Alaska in expanded form and short word form. 500,000 + 80,000 + 7,000 + 800 + 70 + 8; 587 thousand, 878

4. **Predict** The area of Florida is about 100,000 square miles less than the area of California. What is the approximate area of Florida?

58,600 square miles

5. **Reasoning** Which state on the table has the greatest area? Can you tell by looking at the first digit of each number? Explain your reasoning.

Alaska; possible answer: You can look at the first digit because all first digits are in the hundred thousands place and 5 is the greatest first digit.

Name _____ Date _____

Homework 1.2

Place Value Through Hundred Thousands

Write each number in three other ways.

328 thousand, 514

Word form: three hundred twenty-eight thousand, five hundred fourteen

Expanded form: 300,000 + 20,000 + 8,000 + 500 + 10 + 4

Standard form: 328,514

1. 246,718

246 thousand, 718; 200,000 + 40,000 + 6,000 + 700 + 10 + 8; two hundred forty-six thousand, seven hundred eighteen

2. 300,000 + 40,000 + 2,000 + 100 + 50 + 9

342,159; 342 thousand, 159; three hundred forty-two thousand, one hundred fifty-nine

Write the value of the underlined digit.

3. 76,<u>9</u>82 900

4. 6<u>6</u>,424 6,000

5. 925,7<u>3</u>3 30

Algebra • Equations Find each missing number.

6. 7,000 + ■ + 40 + 5 = 7,845 800

7. ■ + 8,000 + 900 + 70 + 6 = 18,976 10,000

8. 200,000 + 40,000 + 5,000 + 700 + ■ + 3 = 245,783 80

Problem Solving

9. What is the value of the digit in the hundred thousands place in the number 178,632?

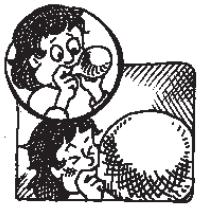
100,000

Name _____ Date _____

English Learners 1.2

Place Value Through Hundred Thousands

Read the definitions.



To **increase** means "to make larger." The balloon is **increasing** in size.

To **decrease** means "to make smaller." The snowman is **decreasing** in size.

25¢

10¢

Greater can mean "more" or "larger." A quarter has **greater** value than a dime.

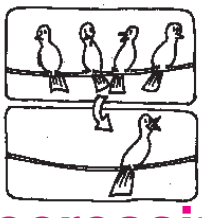
50¢

5¢

Ten times greater means "a value multiplied by 10." A fifty-cent piece has a value **ten times greater** than a nickel.

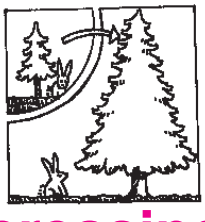
Write *increasing* or *decreasing* below each picture.

1.



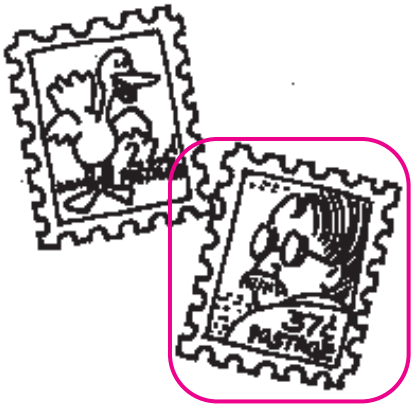
decreasing

2.



increasing

3. Circle the stamp with the *greater* value.



4. Circle the piece of money that has a value *ten times greater than* a dime.

1¢

25¢

$1.00

Name _____ Date _____

Reteach 1.3

Problem-Solving Strategy: Use Logical Reasoning

Read It **Look for information.**

Jorge went to the museum 2 days before Louisa. Kevin went to the museum 4 days after Jorge. The children went to the museum Saturday, Monday, and Wednesday. What day did each person go to the museum?

Picture It **Use a model to show when the children visited the museum.**

Jorge		Louisa		Kevin

Each ☐ = 1 day

Solve It **Use the model to solve the problem.**

The model shows that Jorge went to the museum first, Louisa visited the museum second, and Kevin went to the museum last. Based on the information in the problem, you can reason that:

1. Jorge went on Saturday.

   Louisa went on Monday.

   Kevin went on Wednesday.

Try These! Use a model to solve each problem. Show your work.

2. Mr. Stokes' class is in line for lunch. Ming is behind Ramon and in front of Julie. Ken is in front of Ramon. Sue is last in line. What place is Ming in line?

   Ming is 3rd in line.

3. Jason, Tori, and Kelly are wearing T-shirts. One is blue, one is red, and one is green. Neither girl is wearing a green shirt. Tori wishes she had worn a blue shirt. What color is each person wearing?

   Jason-green, Tori-red, Kelly-blue

Name _____ Date _____

Practice 1.3

Problem-Solving Strategy: Use Logical Reasoning

Use logical reasoning to solve each problem. **Show your work.**

1. Curtis, Laura, Brian, and Richard are playing a game where they take turns. Laura did not go first or second. Brian went before Curtis. Richard went last. In what order do the players take their turns?

   Brian, Curtis, Laura, Richard

2. Barry, Willis, and Joann each own either a guitar, a drum set, or a keyboard. Barry does not own an instrument with keys. Joann owns a guitar. What instrument does each person own?

   Barry = drum set;
   Willis = keyboard;
   Joann = guitar

3. Melissa, Maura, Anna, and Leslie each have a different favorite ice cream flavor. The ice cream flavors are vanilla, strawberry, chocolate, and mint chocolate chip. Maura does not like chocolate or vanilla. Anna does not like strawberry. Melissa does not like vanilla. Leslie likes mint chocolate chip. What is each person's favorite ice cream flavor?

   Melissa = chocolate; Maura = strawberry; Anna = vanilla; Leslie = mint chocolate chip

Name _____ Date _____

Enrichment 1.3

Problem-Solving Strategy: Use Logical Reasoning

Danny and his three friends each have a different sport and team they like to watch. Read the clues below to find their favorite sports and the uniform color of their favorite teams. Write *yes* or *no* in the chart below.

1. Danny's favorite team does NOT wear orange or blue.
2. Fred's favorite sport begins with a "B." The color of his favorite team's uniforms is NOT orange or yellow.
3. The person who likes baseball has a favorite team that wears orange.
4. Cindy's favorite team does NOT wear orange or yellow.
5. Danny and Fred do NOT like to watch hockey.
6. The person who likes basketball has a favorite team that does NOT wear blue.

	Football	Baseball	Hockey	Basketball	Yellow	Blue	Red	Orange
Danny	Yes	No	No	No	Yes	No	No	No
Fred	No	No	No	Yes	No	No	Yes	No
Maggie	No	Yes	No	No	No	No	No	Yes
Cindy	No	No	Yes	No	No	Yes	No	No
Yellow	Yes	No	No	No				
Blue	No	No	Yes	No				
Red	No	No	No	Yes				
Orange	No	Yes	No	No				

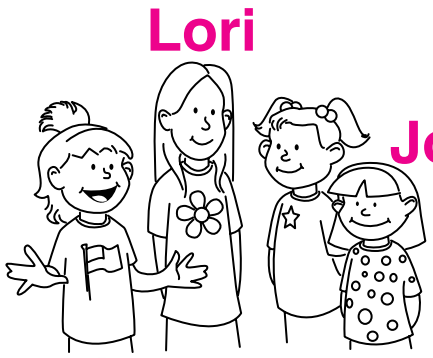
Name	Sport	Uniform Color
Danny	football	yellow
Fred	basketball	red
Maggie	baseball	orange
Cindy	hockey	blue

Name _____ Date _____

Problem Solving 1.3

Problem-Solving Strategy: Use Logical Reasoning

Problem The picture shows Amanda and her three sisters, Lori, Becky, and Joni. Amanda does not have a star on her T-shirt. Becky does not have a flower or a flag on her T-shirt. Joni's shirt has polka dots. Lori does not have a flag on her shirt. Label the girls in the picture.



UNDERSTAND

1. Which person can you label using only the information in the problem? What shirt is she wearing?

Joni; polka dots

PLAN

2. When you write *yes* in a square in a row or column, what is true of the rest of the squares in that row or column? You can write no in all the other squares in that row or column.

SOLVE

3. Fill in the chart with *yes* or *no*. Then label the drawing above.

	Star	Flower	Flag	Polka Dot
Amanda	no	no	yes	no
Lori	no	yes	no	no
Becky	yes	no	no	no
Joni	no	no	no	yes

LOOK BACK

4. **Write About It** How can you check your answer? Read the problem and make sure the facts match my solution.

Name _____ Date _____

Homework 1.3

Problem-Solving Strategy: Use Logical Reasoning

Use logical reasoning to solve each problem.

Blaine, Jorge, Una, and Casey are standing in line. Una is not first. Blaine is fourth. Jorge is directly behind Casey. List the four friends in order from first to fourth.

Use a chart. Fill in what you know. Then use Logical Reasoning to fill in the rest of the chart.

	First	Second	Third	Fourth
Blaine	no	no	no	yes
Jorge	no	yes	no	no
Una	no	no	yes	no
Casey	yes	no	no	no

The four friends in order from first to fourth are Casey, Jorge, Una, Blaine.

1. Ben, Margaret, Tyler, and Jessie are playing a game where they take turns. Tyler did not go last. Jessie went immediately after Ben. Margaret went first. In what order did the players take their turns?

Margaret, Tyler, Ben, Jessie

2. Belle, Sebastian, Roy, and May each chose soccer, football, basketball, or baseball as their favorite sport. No two of them chose the same sport. Sebastian does not like soccer or football. Roy does not like soccer. May does not like basketball. Belle chose baseball. What is each person's favorite sport?

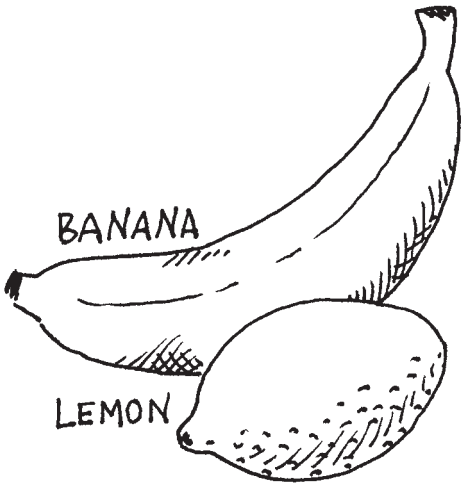
Belle = baseball,
Sebastian = basketball,
Roy = football, May = Soccer

Name _____ Date _____

English Learners 1.3

Problem-Solving Strategy: Use Logical Reasoning

Read each problem. Fill in the blanks.



1. Liza and Kit each have a piece of fruit. No one has a fruit that begins with the first letter of her name.

   So, Liza has a banana. Kit has a lemon.

2. Ben and Luke each have a blue or a red flower. Ben's flower is not red.

   So, Ben's flower is blue. Luke's flower is red.

3. Bela and Anton each own a van or a motorcycle. Bela does not own a vehicle with two wheels.

   So, Anton owns a motorcycle. Bela owns a van.

4. Marta and Cia are the only people standing in line. Marta is not last.

   So, Marta is in front of Cia.

5. Lori and Pam are playing a game. One of them has scored 18 points. The other has scored 13 points. Pam does not have more points than Lori.

   So, Pam has 13 points. Lori has 18 points.

Name _____ Date _____

Reteach 1.4

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.

1. How many hundreds are there in 10,000?

   100 hundreds

2. How many tens are there in 10,000?

   1,000 tens

3. How many hundreds are there in 100,000?

   1,000 hundreds

4. How many tens are there in 100,000?

   10,000 tens

5. How many ten thousands are there in 1,000,000?

   100 ten thousands

6. How many hundred thousands are there in 1,000,000?

   10 hundred thousands

Name _____ Date _____

Practice 1.4

How Big Is One Million?

A large container of paper clips holds 1,000 paper clips. An office supply store has 1,000 containers of paper clips in stock. How many paper clips is that? Complete the table to show how many paper clips the store has in stock.

	Number of Paper Clip Containers	Number of Paper Clips per Container	Total Number of Paper Clips in Stock
1.	1	1,000	1,000
2.	10	1,000	10,000
3.	50	1,000	50,000
4.	100	1,000	100,000
5.	1,000	1,000	1,000,000

6. How many paper clips does the store have in stock?

1 million or 1,000,000

Test Prep

7. Which number shows one half of a million?

C

A 50,000 **C** 500,000

B 5,000 **D** 5,000,000

8. Would you use hundreds, thousands, or millions to count the number of miles from the earth to the sun? Explain your reasoning.

millions; *Explanations may vary.*

Name _____ Date _____

Enrichment 1.4

How Many for a Million?

Read each statement below and answer the questions.

Jared bikes 10 miles in an hour.

1. How many hours would he have to bike to go 100 miles? 10 hours
2. How many hours would he have to bike to go 1,000 miles? 100 hours
3. How many hours would he have to bike to go 100,000 miles? 10,000 hours
4. How many hours would he have to bike to go 1,000,000 miles? 100,000 hours

Patricia has $1 worth of pennies.

5. How many pennies does Patricia have? 100 pennies
6. How many pennies equal $100? 10,000 pennies
7. How many pennies equal $1,000? 100,000 pennies
8. How much money would Patricia have if she had 1 million pennies? $10,000

Darrell read 100 pages in 2 days.

9. How many days would it take Darrell to read 10,000 pages? 200 days
10. How many days would it take Darrell to read 1 million pages? 20,000 days

A stadium holds 250,000 people.

11. How many stadiums would be needed to hold 2 million people? 8 stadiums

Try These!

- Use a stopwatch or have a friend time you as you write your first name 10 times on a piece of paper. Then, find out how long it would take you to write your name 100, 1,000, 10,000, 100,000, and 1 million times.

- Look through your textbooks or an encyclopedia, or browse the Web to find items listed in the millions. Try to find at least three different things with values of at least 1 million.

Check students' work.

Name _____ Date _____

Problem Solving 1.4

How Big is One Million?

Tell whether the value given is in hundreds, thousands, or millions. Explain your choice. *For 1–3, explanations may vary.*

Show your work.

1. The population of Florida is about 16 million people.

2. Pamela is reading a book that is 5 hundred pages.

3. A local organization held a penny drive and raised $20,000 dollars or 2 million pennies.

Tell if each is less than, equal to, or greater than 1 million.

4. The number of visitors in 1,000 days if 1,000 people visit the park each day.

   equal

5. The number of seconds in 1,000 hours. (hint: 3,600 seconds = 1 hour)

   greater than

6. **You Decide** Jessie has a book of 50 stamps. How many books of stamps would she need to have 5,000,000 stamps? Explain.

   100,000 books; 10 books = 500 stamps, 100 books = 5,000 stamps, 1,000 books = 50,000 stamps, 10,000 books = 500,000 stamps, 100,000 books = 5,000,000 stamps

Name _____ Date _____

Homework 1.4

How Big Is One Million?

Use the chart to answer the following questions.

$1 \times 1{,}000{,}000 = 1{,}000{,}000 \longrightarrow$	1 times 1 million = 1 million
$10 \times 100{,}000 = 1{,}000{,}000 \longrightarrow$	10 times 1 hundred thousand = 1 million
$100 \times 10{,}000 = 1{,}000{,}000 \longrightarrow$	100 times 10 thousand = 1 million
$1{,}000 \times 1{,}000 = 1{,}000{,}000 \longrightarrow$	1,000 times 1 thousand = 1 million
$10{,}000 \times 100 = 1{,}000{,}000 \longrightarrow$	10,000 times 1 hundred = 1 million
$100{,}000 \times 10 = 1{,}000{,}000 \longrightarrow$	100,000 times ten = 1 million
$1{,}000{,}000 \times 1 = 1{,}000{,}000 \longrightarrow$	1,000,000 times 1 = 1 million

How many tens are in 1,000,000?
Chart shows 100,000 times ten = 1 million.

There are 100,000 tens in 1,000,000.

1. How many ones are there in 1,000,000? 1,000,000 ones
2. How many hundreds are there in 1,000,000? 10,000 hundreds
3. How many hundred thousands are there in 1,000,000? 10 hundred thousands
4. How many ten thousands are there in 1,000,000? 100 ten thousands
5. How many thousands are there in 1,000,000? 1,000 thousands

Use the chart to complete these problems.

6. $1{,}000 \times$ 1,000 $= 1{,}000{,}000$
7. $10 \times$ 100,000 $= 1{,}000{,}000$
8. $100 \times$ 10,000 $= 1{,}000{,}000$
9. $10{,}000 \times$ 100 $= 1{,}000{,}000$

Problem Solving

10. Jack has 1,000,000 pennies. If each roll holds 100 pennies, how many rolls will Jack need for all the pennies?

10,000 rolls

Name _____ Date _____

English Learners 1.4

How Big Is One Million?

Read the comic strip. Think about the words in bold type.

1.

P: Darren, this book is fun! It has 8 pages of jokes and 4 pages of puzzles.

D: So, it has 12 pages **altogether**.

2.

D: Paul, you have done 3 of the 4 pages of puzzles.

P: Yes, there is 1 **remaining** puzzle page.

3.

D: Have you seen this joke book? I read it **cover to cover** last night.

P: Wow, you read every page!

4.

P: I have an idea! Let's **combine** our favorite jokes into a super joke book!

D: Let's do it! It will be fun to put our jokes together.

Draw lines to connect the words to their meanings.

1. cover to cover	"as a total number"
2. altogether	"put together"
3. remaining	"every page"
4. combine	"not used yet, or still there"

Use the words in the box to complete the sentences below.

cover to cover	**altogether**	**remaining**	**combine**

5. You can **combine** red paint and yellow paint to make orange paint.

6. If you have used 4 of 6 paper cups, you have 2 **remaining**.

7. If you have 2 red pens and 3 blue pens, you have 5 pens **altogether**.

8. When you have read all of a book, you have read it **cover to cover**.

Name _____ Date _____

Reteach 1.5

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

Short Word Form	Word Form
628 million, 534 thousand, 782	Six hundred twenty-eight million, five hundred thirty-four thousand, seven hundred eighty-two
Standard Form	**Expanded Form**
628,534,782	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. 450,870,235 450 million, 870 thousand, 235; 400,000,000 + 50,000,000 + 800,000 + 70,000 + 200 + 30 + 5; four hundred fifty million, eight hundred seventy thousand, two hundred thirty-five

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

   35,143,650; 35 million, 143 thousand, 650; thirty-five million, one hundred forty-three thousand, six hundred fifty

3. 615 million, 475 thousand 615,475,000; 600,000,000 + 10,000,000 + 5,000,000 + 400,000 + 70,000 + 5,000; six hundred fifteen million, four hundred seventy-five thousand

Name _____ Date _____

Practice 1.5

Place Value Through Hundred Millions

Write the number below in short word form.

1. 200,000,000 + 30,000,000 + 400,000 + 50,000 + 1,000

230 million, 451 thousand

Write the number below in standard form.

2. 100,000,000 + 80,000,000 + 5,000,000 + 300,000 + 20,000 + 8,000

185,328,000

Write the number below in expanded form.

3. 463 million, 342 thousand, 705

400,000,000 + 60,000,000 + 3,000,000 + 300,000 + 40,000 + 2,000 + 700 + 5

Write the number below in word form.

4. 715,413,068 seven hundred fifteen million, four hundred thirteen thousand, sixty-eight

Write the place of the 2 in each number. Then write its value.

5. 21,547 ten thousands place; 20,000

6. 54,285 hundreds place; 200

7. 67,902 ones place; 2

Test Prep

8. Tell what form of the number is being used in the statement below. A

Over 10,000,000 tacos sold.

A standard **C** expanded

B short word **D** word

9. Write the value of the underlined digit in the number below.

6<u>4</u>8,396,178

Explain how you found your answer.

40 million or 40,000,000; explanations may vary

Name _____ Date _____

Enrichment 1.5

Millions Puzzle

Use the list of numbers and the clues below to fill in the puzzle. Use each number exactly once.

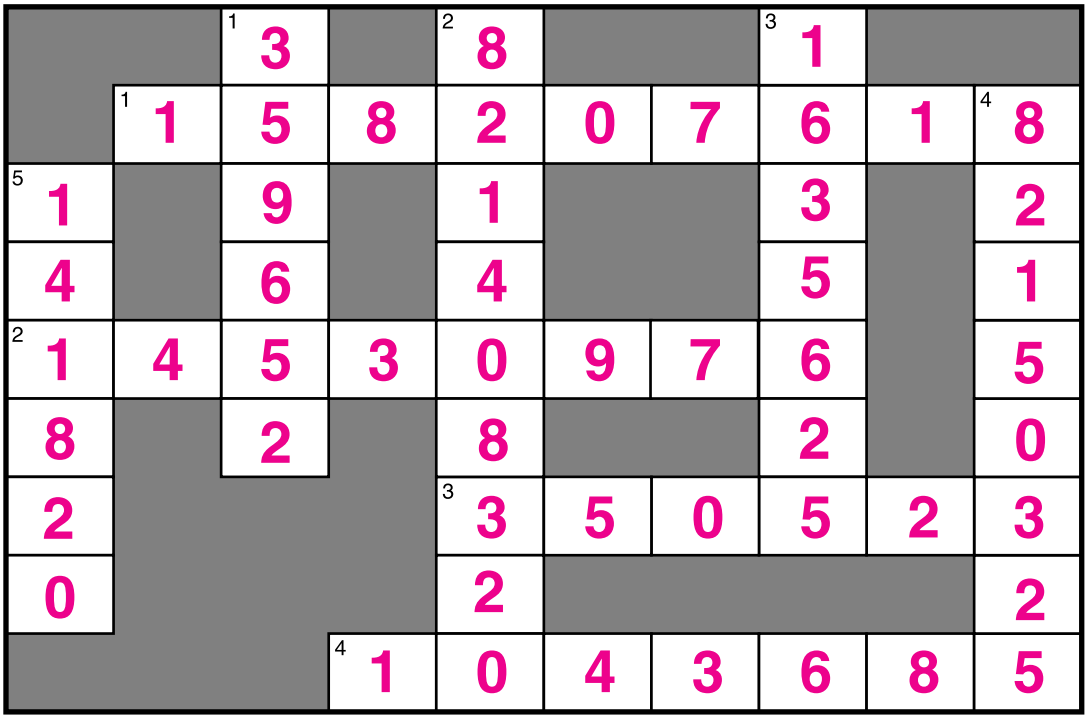
158,207,618	359,652	82,150,325
350,523	14,530,976	1,635,625
141,820	821,408,320	1,043,685

Across

1. A number with a 2 in the hundred thousands place.
2. A number with a 4 in the millions place.
3. A number with a 3 in the ones place.
4. A number greater than 800,000 but less than 1 million 500 thousand.

Down

1. A number greater than 300,000 with a 5 in the tens place.
2. A number greater than eight hundred twenty million.
3. A number with a 3 in the ten thousands place.
4. A number with a 5 in the ten thousands place.
5. A number less than 100 million with an 8 in the hundreds place.



Name _____ Date _____

Problem Solving 1.5

Place Value Through Hundred Millions

The table below shows the estimated number of each type of pet found in the United States. Use the table to answer the following questions.

Pets in the United States			
Pet	**Number**	**Pet**	**Number**
Cat	77,700,000	Reptile	9,000,000
Dog	65,000,000	Saltwater Fish	7,000,000
Freshwater Fish	185,000,000	Small Animal Pet	16,800,000

1. How many cats are in the United States? Write this number in two ways.

   Possible answers: 77,700,000; seventy-seven million, seven hundred thousand; 70,000,000 + 7,000,000 + 700,000

2. Which pet populations are greater than ten million?

   cat, dog, freshwater fish, small animal pet

3. Suppose there are over two hundred twenty-one million cats in the world. Write this number in expanded form.

   200,000,000 + 20,000,000 + 1,000,000

4. **Write About It** Look at the numbers in the table. In which number does the digit 1 have the greatest value? Explain your answer. Possible answer: The numbers for freshwater fish and small animal pet have a 1. The 1 in freshwater fish has a value of 100 million, and the 1 in the small animal pet has a value of 10 million. The freshwater fish has a larger value.

Name _____ Date _____

Homework 1.5

Place Value Through Hundred Millions

Here are four ways to write the same number.

Standard form: 328,541,670

Word form: three hundred twenty-eight million, five hundred forty-one thousand, six hundred seventy

Short word form: 328 million, 541 thousand, 670

Expanded form: 300,000,000 + 20,000,000 + 8,000,000 + 500,000 + 40,000 + 1,000 + 600 + 70

Write each number in word form and short word form.

1. 612,483,125 six hundred twelve million, four hundred eighty-three thousand, one hundred twenty five; 612 million, 483 thousand, 125

2. 100,000,000 + 5,000,000 + 600,000 + 2,000 + 900 + 50 one hundred five million, six hundred two thousand, nine hundred fifty; 105 million, 602 thousand, 950

Write the number in standard form and expanded form.

3. 411 million, 725 thousand, 600

411,725,600; 400,000,000 + 10,000,000 + 1,000,000 + 700,000 + 20,000 + 5,000 + 600

Problem Solving

4. Write two 8-digit numbers that have a 4 in the millions place, a 6 in the ten thousands place, and a 9 in the ones place.

Answers may vary.

Name _____ Date _____

English Learners 1.5

Place Value Through Hundred Millions

Standard form is the usual way in which numbers are written. The number in the box is written in standard form: 5,280

Expanded form is a way of writing a number to show the values of its digits. The number in the oval is written in expanded form: 5,000 + 200 + 80

Short word form is a way of writing a number with words and digits. The number on the dotted line is written in short word form: 5 thousand, 280

Word form is writing a number in words. The number in the cloud is written in word form: five thousand, two hundred eighty

Connect the numbers to the forms they are in.

1. one thousand, seven hundred sixty
2. 1,760
3. 1 thousand, 760
4. 1000 + 700 + 60

- standard form
- expanded form
- short word form
- word form

Complete these items.

5. Write a digit in each box: ☐☐☐☐☐

5–9: Answers will vary.

6. Write the digits above as a number that is in standard form. _____
7. Write the number above in expanded form. _____
8. Write the number above in short word form.

_____

9. Write the number above in word form.

_____

Name _____ Date _____

Chapter 1 Test

Tell how each number is being used. Write *position*, *count*, *measure*, or *label*.

1. taxi number 288 — label
2. 48 people — count
3. 19 feet tall — measure
4. 12th place — position

Write each number in standard form.

5. 42 million, 713 thousand — 42,713,000
6. 800,000 + 30,000 + 7,000 + 500 + 2 — 837,502
7. four hundred fifty-one thousand, eight hundred eleven — 451,811

Write each number in word form.

8. 318,407 — three hundred eighteen thousand, four hundred seven
9. 80,000 + 2,000 + 900 — eighty-two thousand, nine hundred

Write each number in short word form.

10. 56,703,094 — 56 million, 703 thousand, 94
11. 7,000,000 + 300,000 + 80,000 + 900 + 20 + 5 — 7 million, 380 thousand, 925

Write each number in expanded form.

12. 42 million, 642 thousand, 32 — 40,000,000 + 2,000,000 + 600,000 + 40,000 + 2,000 + 30 + 2
13. seven million, eighty-six thousand, twelve — 7,000,000 + 80,000 + 6,000 + 10 + 2

Go on

Name _____ Date _____

Chapter 1 Test continued

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

14. 85<u>0</u>,467 thousands; 0

15. 2<u>4</u>,923,200 millions; 4,000,000

16. 253,<u>8</u>45,237 hundred thousands; 800,000

Write the value of the underlined digit.

17. 293,<u>4</u>36,703 400,000

18. 5<u>0</u>3,780,295 0

Use logical reasoning to solve each problem.

19. Megan, Ryan, and Jesse each own either a bike, a scooter, or a van. Each person owns a different vehicle. Megan does not own a vehicle with exactly 2 wheels. Jesse owns the scooter. What vehicle does each person own?

Megan owns the van;
Ryan owns the bike;
Jesse owns the scooter.

20. Andy, Brent, Chen, and Dana each saw a different number of movies last month. Each of them saw 3, 4, 5, or 6 movies. Chen saw 4 movies. Dana did not see 6 movies. Brent did not see more than 4 movies. How many movies did each person see?

Andy saw 6 movies; Brent saw 3 movies;
Chen saw 4 movies; Dana saw 5 movies.

STOP

Class ____________________ Date ____________

Unit 1 Class Record

Unit 1 Assessment

Student	Chapter 1		Chapter 2		Unit 1 Test	
	Pre-test	Chapter Test	Pre-test	Chapter Test	Form A	Form B