School-Home Letter

Dear Family,

During the next few weeks, our math class will be learning how to use and represent whole numbers through the millions period. We will focus on building upon and extending the place-value system that students are already familiar with.

You can expect to see homework that provides practice with naming numbers in different ways, as well as rounding and estimating greater numbers.

Here is a sample of how your child will be taught to write numbers in different forms.

Vocabulary

million The counting number after 999,999; 1,000 thousands; written as 1,000,000.

period Each group of three digits separated by commas in a multi-digit number

millions The period after thousands

estimate A number that is close to the exact amount

round To replace a number with another number that tells about how many or how much

🔑 MODEL Place Value through Millions

This is how we will be writing numbers in different forms.

MILLIONS			THOUSANDS			ONES		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones
	4	7,	2	8	1,	3	6	5

STANDARD FORM:

47,281,365

WORD FORM:

forty-seven million, two hundred eighty-one thousand, three hundred sixty-five

EXPANDED FORM:

40,000,000 + 7,000,000 + 200,000 + 80,000 + 1,000 + 300 + 60 + 5

Tips

Rounding Greater Numbers

When rounding, first find the place to which you want to round. Then, look at the digit to the right. If the digit to the right is *less than* 5, the digit in the rounding place stays the same. If the digit is 5 *or greater*, the digit in the rounding place increases by 1. All the digits to the right of the rounding place change to zero.

Carta para la casa

Vocabulario

millón El número natural que le sigue a 999,999; 1,000 miles se escribe 1,000,000.

periodo En un número de varios dígitos, cada grupo de tres dígitos separado por comas

millones El periodo que le sigue a los millares.

estimación Un número que se aproxima a una cantidad exacta.

redondear Reemplazar un número con otro que muestra una aproximación de cuánto o cuántos.

Querida familia,

Durante las próximas semanas, en la clase de matemáticas aprenderemos cómo usar y representar números enteros hasta los millones. Nos concentraremos en desarrollar y extender el sistema de valor posicional con el que los estudiantes ya están familiarizados.

Llevaré a la casa tareas que sirven para practicar diferentes maneras de expresar los números, además de redondear y estimar números mayores.

Este es un ejemplo de la manera como aprenderemos a expresar números de diferentes formas.

🔑 MODELO Valor posicional hasta los millones

Así es como escribiremos números de diferentes formas.

MILLONES			MILLARES			UNIDADES		
Centenas	Decenas	Unidades	Centenas	Decenas	Unidades	Centenas	Decenas	Unidades
	4	7,	2	8	1,	3	6	5

FORMA NORMAL:

47,281,365

EN PALABRAS:

cuarenta y siete millones, doscientos ochenta y un mil, trescientos sesenta y cinco

FORMA DESARROLLADA:

40,000,000 + 7,000,000 + 200,000 + 80,000 + 1,000 + 300 + 60 + 5

Pistas

Redondear números grandes

Cuando se redondea, primero se halla el lugar al que se quiere redondear. Después, se debe mirar el dígito que está a la derecha. Si el dígito a la derecha es *menor que* 5, el dígito en el lugar del redondeo se queda igual. Si el dígito es 5 o *mayor*, el dígito en el lugar del redondeo aumenta en 1. Todos los dígitos a la derecha del lugar del redondeo cambian a cero.

Name _____

Represent Millions

Tell whether the number is great enough to be in the millions or more. Write *yes* or *no*. If no, what period would the number be in?

1. the number of people living in Florida

_____ **yes** _____

2. the number of students in your school

_____

3. the number of miles between Florida and Georgia

_____

4. the number of drops of water in the ocean

_____

5. the number of times your heart beats each year

_____

6. the number of breaths you take each day

_____

7. the number of insects on Earth

_____

8. the number of mammals in a zoo

_____

9. the number of pages in your math textbook
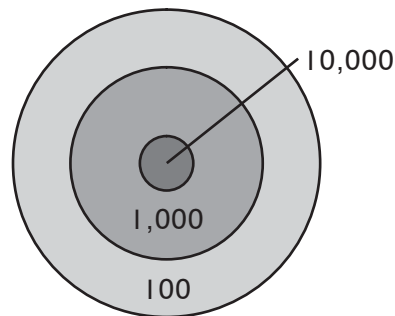
_____

Problem Solving REAL WORLD

10. Tara colors in the following array on a sheet of grid paper.
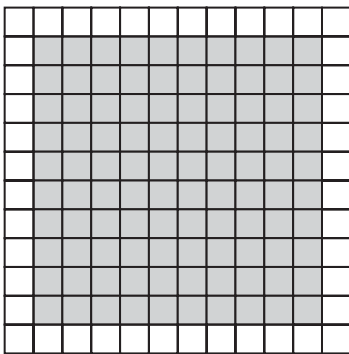
How many arrays like the one above would Tara have to create if she wants to color in 1,000,000 of the small squares?

_____

11. Manuel is playing a game using the dart board below.

How many times must Manuel hit the center circle with his dart to score 1,000,000 points?

_____

Lesson Check (MA.4.A.6.1)

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

   (A) 100,000

   (B) 10,000

   (C) 1,000

   (D) 100

2. There are 100 centimeters in 1 meter, 1000 centimeters in 10 meters, and 10 000 centimeters in 100 meters. How many centimeters are in 1000 meters?

   (F) 100 000   (H) 1000

   (G) 10 000   (I) 10

Review Grade 4 (MA.4.A.6.1)

3. A company is preparing to ship 100,000 bottles of water. A pallet holds 100 bottles. How many pallets will be needed to ship 100,000 bottles?

   (A) 10   (C) 1,000

   (B) 100   (D) 10,000

4. Evan attended a sporting event. The stadium was filled to capacity with 10,000 fans. If each section of the stadium holds 1,000 people, how many sections are in the stadium?

   (F) 10   (H) 1,000

   (G) 100   (I) 10,000

Look Back (MA.3.A.6.1, MA.4.A.6.1)
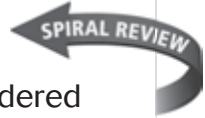
5. Natasha made the following table to show how many dimes are in certain dollar amounts.

   Money Equivalents

Dollar Amount	Number of Dimes
$1	10
$10	100
$100	1,000
$1,000	10,000

   How many dimes would you expect to be in $10,000?

   (A) 100,000   (C) 1,000

   (B) 10,000   (D) 100

6. Loomis County School District ordered 57,825 packages of applesauce and 68,965 fruit cups. How many packages of applesauce and fruit cups did they order in all?

   (F) 11,140

   (G) 115,780

   (H) 126,690

   (I) 126,790

Place Value Through Ten Millions

MA.4.A.6.1 Use and represent numbers through millions in various contexts, including estimation of relative sizes of amounts or distances.

Read and write each number in two other forms.

1. twenty-three million, six hundred ninety-two thousand, four

standard form: 23,692,004; expanded form: 20,000,000 + 3,000,000 + 600,000 + 90,000 + 2,000 + 4

2. 50,314,207

_____

_____

_____

_____

_____

_____

3. 70,000,000 + 600,000 + 80,000 + 10

_____

_____

_____

_____

_____

_____

Use the number 14,903,256.

4. Write the name of the period that has the digits 14.

_____

5. Write the digit in the ten millions place.

_____

6. Write the value of the digit 9.

_____

Problem Solving REAL WORLD

Use the table for 7 and 8.

Population in 2008

State	Population
Florida	18,328,340
California	36,756,666
Texas	24,326,974

7. Which state had a population of thirty-six million, seven hundred fifty-six thousand, six hundred sixty-six?

_____

8. What is the value of the digit 1 in Florida's population?

_____

Lesson Check (MA.4.A.6.1)

1. At its closest approach, Venus is approximately twenty-three million, seven hundred thousand miles from Earth. What is this number written in standard form?

(A) 23,700,000

(B) 23,070,000

(C) 2,370,000

(D) 237,000

2. What is the value of the digit 4 in the number 84,230,195?

(F) 4,000

(G) 400,000

(H) 4,000,000

(I) 40,000,000

Review Grade 4 (MA.4.A.6.1)

SPIRAL REVIEW

3. How many place values does the number sixty-one million, four thousand, two have?

(A) 8

(B) 7

(C) 5

(D) 4

4. How many thousands are in the number 1,000,000?

(F) 100

(G) 1,000

(H) 10,000

(I) 100,000

Look Back (MA.3.A.6.1, MA.4.A.6.1)

SPIRAL REVIEW

5. Which of the following is true?

(A) 34,658 > 34,609

(B) 52,084 < 52,480

(C) 16,327 > 29,954

(D) 71,637 < 71,609

6. Vince's family traveled from Jacksonville, FL, to San Diego, CA, on vacation. They drove 2,092 miles. What is this number written in word form?

(F) twenty thousand, ninety-two

(G) two thousand, nine hundred two

(H) two thousand, ninety-two

(I) two hundred ninety-two

Build Millions

Write each number in two other forms.

1. 4,520,696

four million, five hundred twenty thousand, six hundred ninety-six;

4,000,000 + 500,000 + 20,000 + 600 + 90 + 6

2. thirty-one million, six thousand, one hundred fifty

_____

_____

_____

_____

_____

3. 800,000,000 + 40,000 + 900 + 60

_____

_____

_____

_____

_____

Write the value of the underlined digit.

4. <u>4</u>,520,696

_____

5. <u>7</u>89,241,043

_____

6. <u>2</u>,138,824

_____

7. <u>6</u>03,446,364

_____

Problem Solving REAL WORLD

8. During one decade, the total number of visitors to an annual arts festival was 84,303,912. Write this number in two other ways using numbers, words, or operation signs.

_____

_____

_____

9. In 2007, the population of the United States was estimated to be 301,139,947. Which place value does the digit 0 represent in this number?

_____

_____

_____

Lesson Check (MA.4.A.6.1)

1. In the 2006–2007 growing season, Florida produced 129,000,000 boxes of oranges. What is the value of the digit 2 in the number 129,000,000?

   (A) 200,000,000   (C) 2,000,000

   (B) 20,000,000   (D) 20,000

2. Which shows the number 300,590,020 written in expanded form?

   (F) 300 + 590 + 20

   (G) 300,000,000 + 50,000 + 9,000 + 20

   (H) 300,000,000 + 500,000 + 90,000 + 20

   (I) 3,000,000 + 59,000 + 20

Review Grade 4 (MA.4.A.6.1)

3. The table below lists the best estimate of different pets in the United States in 2006.

   2006 Pet Estimates

Pet	Number
Dog	73,000,000
Cat	90,000,000
Fish	148,000,000
Reptile	11,000,000

   Which type of pet was there at least one hundred million of in 2006?

   (A) dog   (C) fish

   (B) cat   (D) reptile

4. An amusement park had the following attendance totals for each of four different years.

   Amusement Park Attendance

Year	Attendance
2004	9,817,356
2005	11,409,945
2006	14,421,586
2007	14,875,825

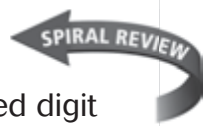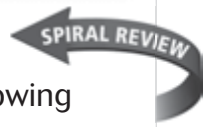   Which amount has the digit 1 in the millions place?

   (F) 9,817,356   (H) 14,421,586

   (G) 11,409,945   (I) 14,875,825

Look Back (MA.3.A.6.1, MA.4.A.6.1)

5. What is the standard form of the number 30,000 + 7,000 + 400 + 20 + 5?

   (A) 307,425

   (B) 37,425

   (C) 37,245

   (D) 34,725

6. What is the value of the underlined digit in the number 2̲58,064?

   (F) 200

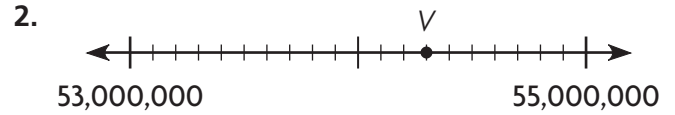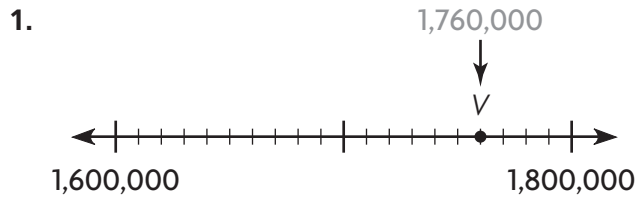   (G) 2,000

   (H) 20,000

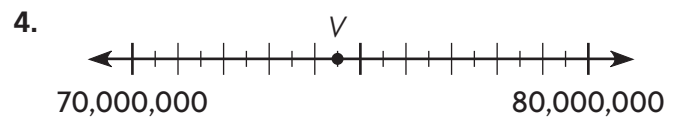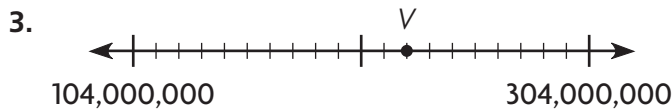   (I) 200,000

Name _____

Relative Size

MA.4.A.6.1 Use and represent numbers through millions in various contexts, including estimation of relative sizes of amounts or distances.
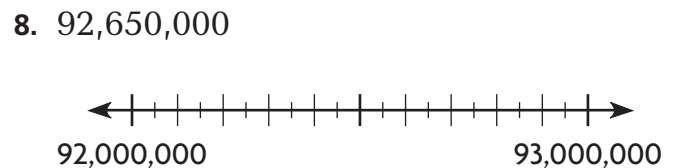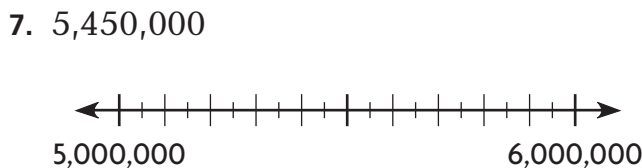
Find the number that point V represents on the number line.

1.

1,760,000

↓

V

←|+++++++|+++++●++|→

1,600,000   1,800,000

Count on 100,000 to 1,700,000. Then count on by 10,000s to 1,760,000.

2.

V

←|++++++++|++●+++++|→

53,000,000   55,000,000

_____

3.

V

←|+++++++|+●++++++|→

104,000,000   304,000,000

_____

4.

V

←|+++++++●++++++++|→

70,000,000   80,000,000

_____

Locate each number and label the point C on the number line.

5. 38,600,000

←|+++++++|++++++++|→

37,300,000   39,300,000

6. 6,070,000

←|+++++++++|++++++++|→

5,900,000   6,100,000

7. 5,450,000

←|+++++++|+++++++++|→

5,000,000   6,000,000

8. 92,650,000

←|+++++++++|++++++++|→

92,000,000   93,000,000
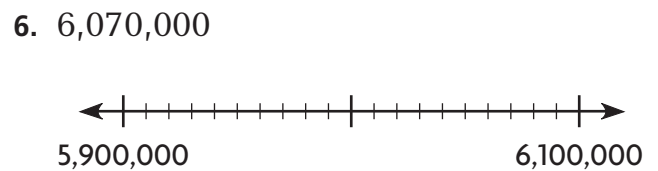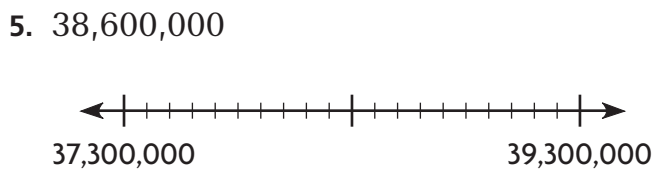
Problem Solving REAL WORLD

9. Suppose you wanted to place 1,000,000 pennies in large coin banks. If you put 50,000 pennies in each bank, in which bank would you find the 678,230th penny?

_____

10. Suppose a bead maker wants to separate 10,000,000 beads into boxes. She will put 100,000 beads into each box. Into which box would she put the 4,358,216th bead?

_____

Lesson Check

1. Which number does point A represent on the number line below?

A
4,000,000   6,000,000

(A) 4,300,000   (C) 5,300,000

(B) 4,800,000   (D) 5,400,000

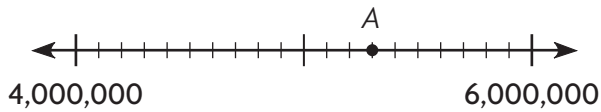2. The space shuttles that launch from the Kennedy Space Center each weigh about 4,474,574 pounds. Between which two numbers is this number located?

(F) 3,000,000 and 4,000,000

(G) 3,500,000 and 4,500,000

(H) 4,500,000 and 5,500,000

(I) 5,000,000 and 6,000,000

Review Grade 4

SPIRAL REVIEW

3. In the number 847,209,334, which period has the digits 847?

(A) ones   (C) millions

(B) thousands   (D) billions

4. How many tens are in 1,000,000?

(F)   100   (H)   10,000

(G)   1,000   (I) 100,000

Look Back

SPIRAL REVIEW

5. On Monday, web site A had 35,971 visits and web site B had 14,786. How many visits did the web sites have in all on Monday?

(A) 40,757

(B) 40,657

(C) 50,657

(D) 50,757

6. Which represents the number 108,362 written in expanded form?

(F) 100,000 + 8,000 + 300 + 60 + 2

(G) 100,000 + 80,000 + 300 + 60 + 2

(H) 10,000 + 8,000 + 300 + 60 + 2

(I) 108 + 362

Name _____

Estimates Through Millions

Round each number to the place value of the underlined digit.

1. 8<u>6</u>2,840,900   **860,000,000**   **2.** 12<u>3</u>,499   **3.** <u>5</u>52,945,040

8<u>6</u>2,840,900

↑

less than 5

- Look at the digit to the right. If the digit to the right is *less than* 5, the digit in the rounding place stays the same.

- Change all the digits to the right of the rounding place to zero.

4. 3,0<u>8</u>9,422   **5.** <u>2</u>09,767   **6.** 19<u>1</u>,306,087   **7.** <u>6</u>6,098,911

_____   _____   _____   _____

Decide whether you need an estimate or an exact amount.
Write *estimate* or *exact amount*.

8. length of rope for a jump rope

9. size to cut glass for window pane

10. cups of flour to use in a recipe

11. amount of dirt to fill a flower bed

_____   _____   _____   _____

_____   _____   _____   _____

Problem Solving REAL WORLD

Underline the words or phrases that indicate an estimate.
Circle the numbers that are exact amounts.

12. There are 2 living species of alligators. The American Alligator can grow between 13 to 14 feet in length. It has 5 claws on each front foot. The American Alligator may live for 30 or more years.

13. Each week, Ben buys about 3 magazines. Each magazine costs $1.25. The magazines range from 40 to 60 pages long. Ben can fit 25 magazines in his recycling bin.

Lesson Check (MA.4.A.6.6)

1. Which number is 47,039,524 rounded to the nearest million?

   (A) 50,000,000   (C) 47,000,000

   (B) 48,000,000   (D) 7,000,000

2. To the nearest million, the population of the United States was estimated to be about 306,000,000 people in January 2009. Which might have been the exact population of the United States in January 2009?

   (F) 305,647,986   (H) 305,237,999

   (G) 305,479,627   (I) 304,000,000

Review Grade 4 (MA.4.A.6.1)

SPIRAL REVIEW

3. Veronique begins counting with the number 998,950 and counts by 10s. How many numbers will she say before she says "one million"?

   (A) 1,050

   (B)   105

   (C)   15

   (D)   5

4. Orlando International Airport had approximately 36,478,885 passengers in 2007. Which number is greater than 36,478,885?

   (F) 36,478,855

   (G) 36,409,885

   (H) 35,478,985

   (I) 36,548,211

Look Back (MA.3.A.6.1, MA.4.A.6.6)

SPIRAL REVIEW

5. Parkside Elementary collected 3,462 cans during a food drive. What is 3,462 rounded to the nearest hundred?

   (A) 4,000

   (B) 3,500

   (C) 3,400

   (D) 3,000

6. Which point on the number line below represents the number 36,500?

   (F) A

   (G) B

   (H) C

   (I) D

Make a List • **Numbers Through Millions**

MA.4.A.6.1 Use and represent numbers through millions in various contexts, including estimation of relative sizes of amounts or distances.

Solve each problem.

1. How many seven-digit numbers less than 1,048,000 can be made using the digits 0, 1, 4, 6, 7, 8, and 9? Think: Make a list of possible ways to represent your seven-digit numbers.

   A   B
   1,047,■■■   1,046,■■■

   twelve
   _____

2. Tenecia is thinking of a number with 8 place values. The digit in the thousands place is 5. The digits in the hundred thousands and hundreds place are both an odd number greater than 7. The digit in each other place value is one less than the digit in the thousands place. What is the number?

   _____

3. The United States Mint produced 69,360,000 nickels, 211,000,000 quarters, 634,800,000 pennies, and 120,000,000 dimes in the first three months of 2009. Order the numbers of coins produced from greatest to least.

   _____

4. What are the next two numbers in the pattern below likely to be?
   999,800; 999,900; 1,000,000; 1,000,100;
   _____; _____

   _____

5. There are four children in the Johnson family. Nathan is not the oldest. Michelle is not the youngest. Rick is older than Hannah and Nathan. Michelle was born after Nathan. What is the order of the Johnson children from oldest to youngest?

   _____

Lesson Check (MA.4.A.6.1)

1. Valeria stands in a line to ride a new ride at an amusement park. There are 614 people in line before Valeria. If 50 people get on the ride at a time, in which group of riders would Valeria be when she gets on the ride?

(A) 6th   (C) 12th

(B) 7th   (D) 13th

2. Help Ruben find the mystery digit.

5_,642,089

The mystery digit does not appear in any other place value of the number. When rounded to the nearest ten millions place, the number is 60,000,000. What is the mystery digit?

(F) 1   (H) 7

(G) 3   (I) 9

Review Grade 4 (MA.4.A.6.6)

3. Which of the following would require an exact amount?

(A) bags of sand to fill a sandbox

(B) gallons of water to fill a pool

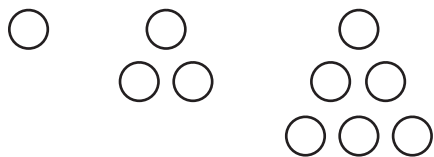(C) cost of a picture frame

(D) length of string to make a necklace

4. Terry's teacher asked him to change one digit in the number 38,209,367 so that it rounds to 30,000,000. Which digit should Terry change?

(F) 0   (H) 3

(G) 2   (I) 8

Look Back (MA.3.A.6.2, MA.4.A.6.1)

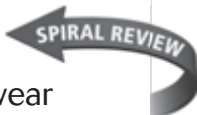**5.** Look at the pattern below.

If the pattern continues, how many circles will likely be in the next figure?

(A) 10   (C) 6

(B) 7   (D) 4

6. For softball practice, Anita must wear a uniform and a cap. Anita has a white uniform and a blue uniform. She also has a cap with the team's name on it and a plain cap. How many different ways can Anita get dressed for softball practice?

(F) 1   (H) 4

(G) 2   (I) 6

Name _____

Chapter 1 Extra Practice

Lesson 1.2 (pp. 9–12)

Write each number in two other forms.

1. sixty-three million, three hundred four thousand

_____

_____

_____

_____

2. 34,208,561

_____

_____

_____

_____

_____

_____

_____

3. twenty-five million, eight hundred thousand, seven hundred fifty-three

_____

_____

_____

4. 2,000,000 + 40,000 + 6,000 + 800 + 30 + 9

_____

_____

_____

Use the number 39,751,486 for 5–8.

5. Write the name of the period that has the digits 486.

_____

6. Write the name of the period that has the digits 751.

_____

7. Write the digit in the millions place.

_____

8. Write the value of the digit 3.

_____

9. The 2011 projected population for Broward County is two million, four hundred fifty-five thousand, three hundred. What is this number in standard form?

_____

10. A few years ago, Florida had 8,533,419 housing units. What is the value of the digit 8?

_____

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Lesson 1.3 (pp. 13–16)

Write each number in two other forms.

1. 7,009,030

_____

_____

_____

2. four hundred seven million, one hundred two

_____

_____

_____

Write the value of the underlined digit.

3. <u>7</u>3,960,233

_____

_____

4. <u>8</u>56,473,904

_____

_____

Solve.

5. The total length of the Mississippi-Missouri River is 3,740 miles, or 19,747,200 feet. What is the value of the digit 9?

_____

6. In 2007, the number of birds owned as pets in the United States was eleven million, one hundred ninety-nine thousand. What is this number in standard form?
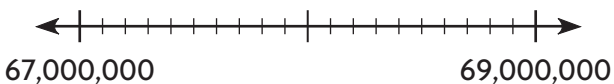
_____

Lesson 1.4 (pp. 17–20)
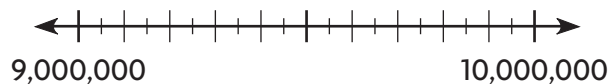
Find the number that point _G_ represents on the number line.

1.

G

17,000,000   19,000,000

_____

2.

G

234,000,000   434,000,000

_____
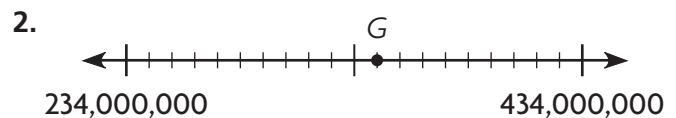
Locate each number and label it _B_ on the number line.

3. 68,300,000

67,000,000   69,000,000

4. 9,750,000

9,000,000   10,000,000

Lesson 1.5 (pp. 23–26)

Round each number to the place value of the underlined digit.

1. 28<u>6</u>,476

2. 28<u>9</u>,342

3. 2,0<u>4</u>5,001

4. <u>1</u>,833,002

_____   _____   _____   _____

5. 7,5<u>2</u>3,345

6. <u>8</u>,636,919

7. 324,1<u>6</u>7,262

8. <u>6</u>43,098,221

_____   _____   _____   _____

Decide whether you need an estimate or an exact amount.
Write *estimate* or *exact amount*.

9. number of people attending a baseball game

10. number of players in a football line-up

11. length and width of house for installing house siding

12. temperature of a refrigerator freezer

_____   _____   _____   _____

_____   _____   _____   _____

13. distance from school to community center

14. amount of flour for a homemade cake

15. amount of money to pay for lunch at a restaurant

16. number of weekly visitors at the aquarium

_____   _____   _____   _____

_____   _____   _____   _____

Underline the words or phrases that indicate an estimate.
**Circle the numbers that are exact amounts.**

17. At least 80 winter coats were cleaned and pressed for a coat collection drive. More than 6 schools participated in the collection drive. The Martinson School collected 28 coats.

18. The number of pet dogs in the United States is about 75,000,000. Pet owners take their pet to the veterinary at least 2 to 3 times a year. In 2007, the number of households owning dogs is 43,021,000.

Lesson 1.6 (pp. 27–30)

1. The length of a National Football League field is 360 feet. The width is 160 feet. What is the perimeter of the field?
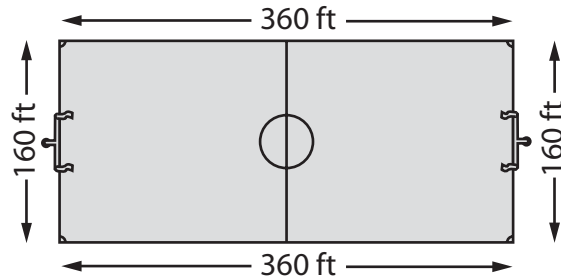
2. The overall paid attendance in the National Football League for one football season was 16,913,584. In the American Football Conference, 8,504,227 people attended the games. How many more people attended the National Football Conference games?

3. Eddie is thinking of a number between 149,000 and 150,000. His number has a tens digit that is 7 more than its ones digit. The sum of the tens and ones digit is 9. The hundreds digit is zero. What is Eddie's number?

4. Abby, Gracie, and Lee sold raffle tickets to raise money for a new playground. Abby sold 152 tickets. Gracie sold 10 more tickets than Abby. Lee sold 10 more tickets than Gracie. How many tickets did they sell in all?

5. In the United States, about 251,770,000 pounds of pepperoni are consumed yearly. What are two ways to represent 251,770,000?

6. In 2000, the population of Broward County was 1,623,018. That same year, 896,344 people lived in Orange County, and Miami-Dade County's population was 2,253,362. Order the populations of these counties from least to greatest.

7. Which is greater, the number that is 1,000,000 less than 16,892,000, or the number that is 10,000,000 less than 26,892,000? What is the number?