EUREKA MATH PUSD

A Story of Units

Pleasanton UNIFIED SCHOOL DISTRICT Mathematics Curriculum

Grade 4 • MODULE 1

Place Value, Rounding, and Algorithms for Addition and Subtraction

Homework

Video tutorials: http://embarc.online

Info for parents: http://bit.ly/pusdmath

Version 3

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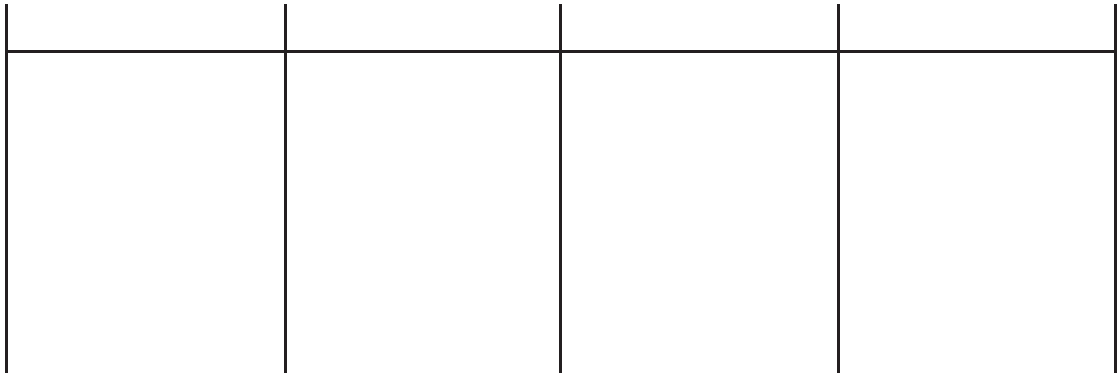
GRADE 4 • MODULE 1

Place Value, Rounding, and Algorithms for Addition and Subtraction

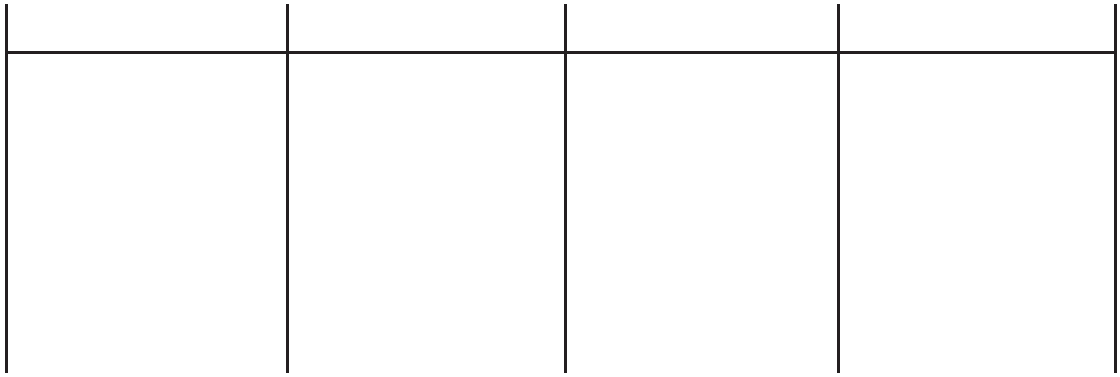
Name _____ Date _____

1. Label the place value charts. Fill in the blanks to make the following equations true. Draw disks in the place value chart to show how you got your answer, using arrows to show any regrouping.

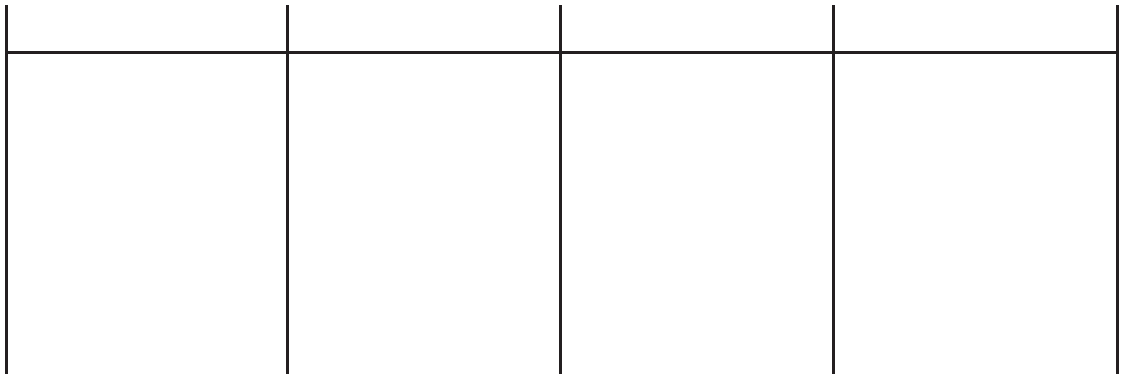
   a. 10 × 4 ones = _____ ones = _____



   b. 10 × 2 tens = _____ tens = _____



   c. 5 hundreds × 10 = _____ hundreds = _____



2. Complete the following statements using your knowledge of place value:

   a. 10 times as many as 1 hundred is _____ hundreds or _____ thousand.

   b. 10 times as many as _____ hundreds is 60 hundreds or _____ thousands.

   c. _____ as 8 hundreds is 8 thousands.

   d. _____ hundreds is the same as 4 thousands.

   Use pictures, numbers, or words to explain how you got your answer for Part (d).

3. Katrina has 60 GB of storage on her tablet. Katrina's father has 10 times as much storage on his computer. How much storage does Katrina's father have? Use numbers or words to explain how you got your answer.

4. Katrina saved $200 to purchase her tablet. Her father spent 10 times as much money to buy his new computer. How much did her father's computer cost? Use numbers or words to explain how you got your answer.

5. Fill in the blanks to make the statements true.

   a. 4 times as much as 3 is _____.

   b. 10 times as much as 9 is _____.

   c. 700 is 10 times as much as _____.

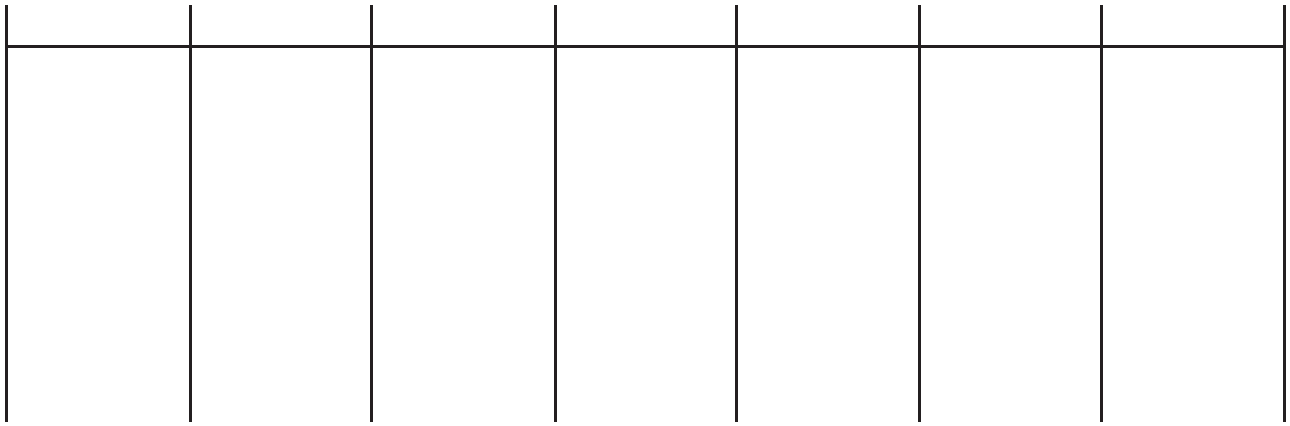
   d. 8,000 is _____ as 800.

6. Tomas's grandfather is 100 years old. Tomas's grandfather is 10 times as old as Tomas. How old is Tomas?

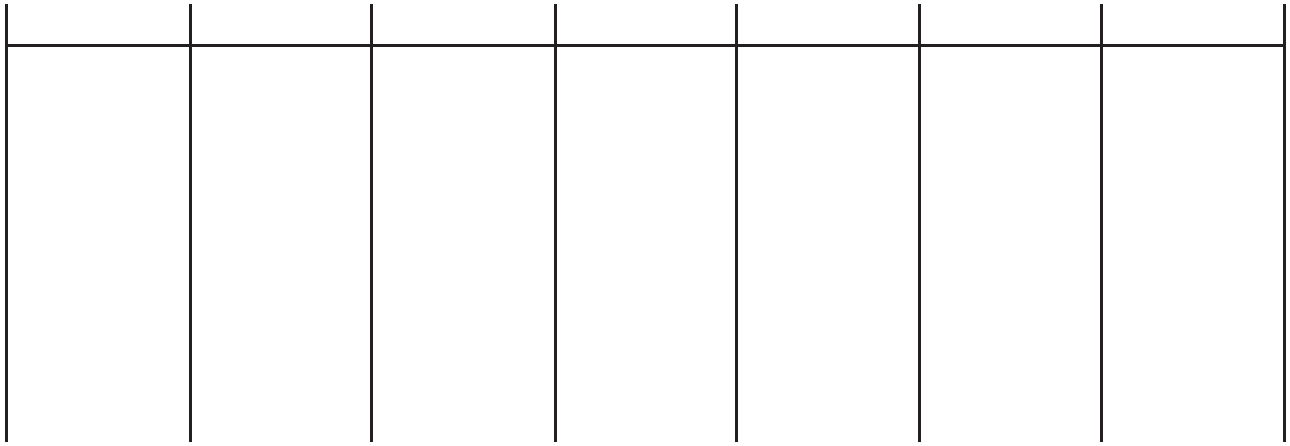
Name _____ Date _____

1. As you did during the lesson, label and represent the product or quotient by drawing disks on the place value chart.

   a. 10 × 4 thousands = _____ thousands = _____



   b. 4 thousands ÷ 10 = _____ hundreds ÷ 10 = _____



2. Solve for each expression by writing the solution in unit form and in standard form.

Expression	Unit Form	Standard Form
10 × 3 tens		
5 hundreds × 10		
9 ten thousands ÷ 10		
10 × 7 thousands		

3. Solve for each expression by writing the solution in unit form and in standard form.

Expression	Unit Form	Standard Form
(2 tens 1 one) × 10		
(5 hundreds 5 tens) × 10		
(2 thousands 7 tens) ÷ 10		
(4 ten thousands 8 hundreds) ÷ 10		

4. a. Emily collected $950 selling Girl Scout cookies all day Saturday. Emily's troop collected 10 times as much as she did. How much money did Emily's troop raise?

b. On Saturday, Emily made 10 times as much as on Monday. How much money did Emily collect on Monday?

Name _____ Date _____

1. Rewrite the following numbers including commas where appropriate:

   a. 4321 _____ b. 54321 _____

   c. 224466 _____ d. 2224466 _____

   e. 10010011001 _____

2. Solve each expression. Record your answer in standard form.

Expression	Standard Form
4 tens + 6 tens	
8 hundreds + 2 hundreds	
5 thousands + 7 thousands	

3. Represent each addend with place value disks in the place value chart. Show the composition of larger units from 10 smaller units. Write the sum in standard form.

   a. 2 thousands + 12 hundreds = _____

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones

b. 14 ten thousands + 12 thousands = _____

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones

4. Use digits or disks on the place value chart to represent the following equations. Write the product in standard form.

a. 10 × 5 thousands = _____

How many thousands are in the answer? _____

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones

b. (4 ten thousands 4 thousands) × 10 = _____

How many thousands are in the answer? _____

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones

c. (27 thousands 3 hundreds 5 ones) × 10 = _____

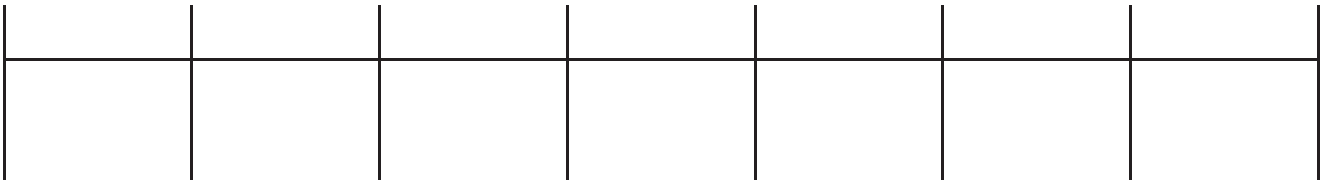
How many thousands are in your answer? _____

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones

5. A large grocery store received an order of 2 thousand apples. A neighboring school received an order of 20 boxes of apples with 100 apples in each. Use disks or disks on a place value chart to compare the number of apples received by the school and the number of apples received by the grocery store.

Name _____ Date _____

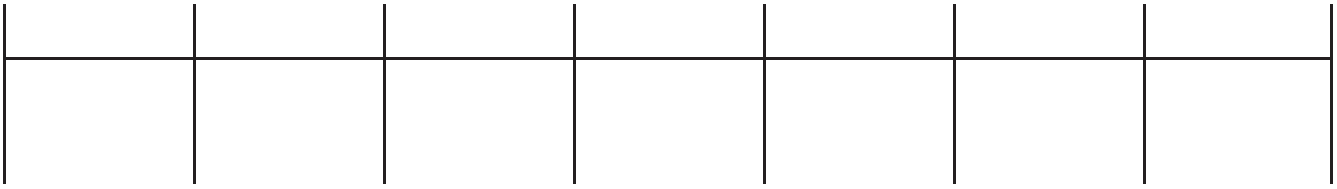
1. a. On the place value chart below, label the units, and represent the number 50,679.



b. Write the number in word form.

c. Write the number in expanded form.

2. a. On the place value chart below, label the units, and represent the number 506,709.



b. Write the number in word form.

c. Write the number in expanded form.

3. Complete the following chart:

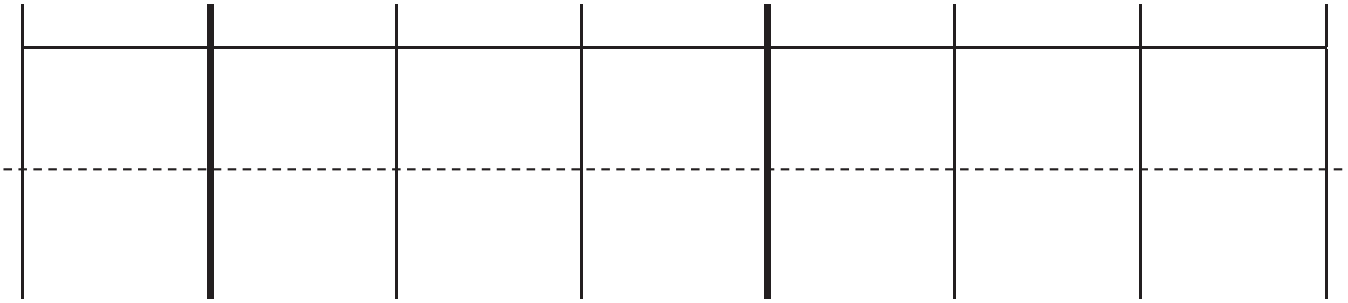
Standard Form	Word Form	Expanded Form
	five thousand, three hundred seventy	
		50,000 + 300 + 70 + 2
	thirty-nine thousand, seven hundred one	
309,017		
770,070		

4. Use pictures, numbers, and words to explain another way to say sixty-five hundred.

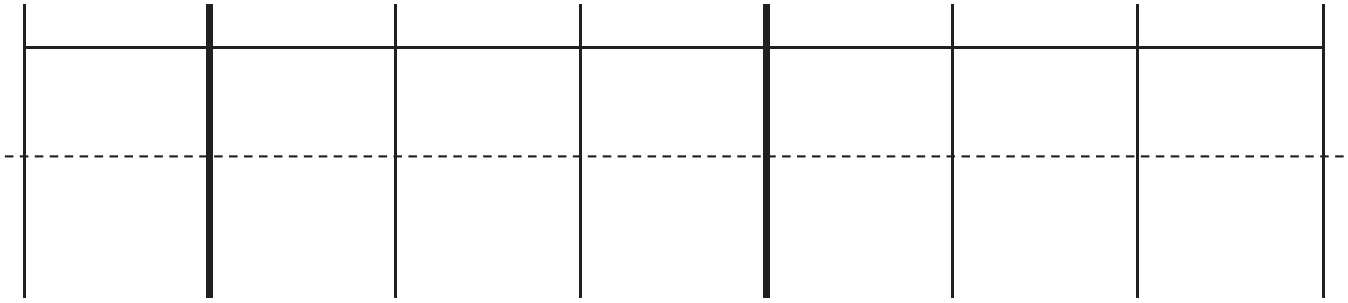
Name _____ Date _____

1. Label the units in the place value chart. Draw place value disks to represent each number in the place value chart. Use <, >, or = to compare the two numbers. Write the correct symbol in the circle.

a. 909,013 ◯ 90,013



b. 210,005 ◯ 220,005



2. Compare the two numbers by using the symbols <, >, and =. Write the correct symbol in the circle.

   a. 501,107 ◯ 89,171

   b. 300,000 + 50,000 + 1,000 + 800 ◯ six hundred five thousand, nine hundred eight

   c. 3 hundred thousands 3 thousands 8 hundreds 4 tens ◯ 303,840

   d. 5 hundreds 6 ten thousands 2 ones ◯ 3 ten thousands 5 hundreds 1 one

3. Use the information in the chart below to list the height, in feet, of each skyscraper from shortest to tallest. Then, name the tallest skyscraper.

Name of Skyscraper	Height of Skyscraper (ft)
Willis Tower	1,450 ft
One World Trade Center	1,776 ft
Taipei 101	1,670 ft
Petronas Towers	1,483 ft

4. Arrange these numbers from least to greatest: 7,550 5,070 750 5,007 7,505

5. Arrange these numbers from greatest to least: 426,000 406,200 640,020 46,600

6. The areas of the 50 states can be measured in square miles.

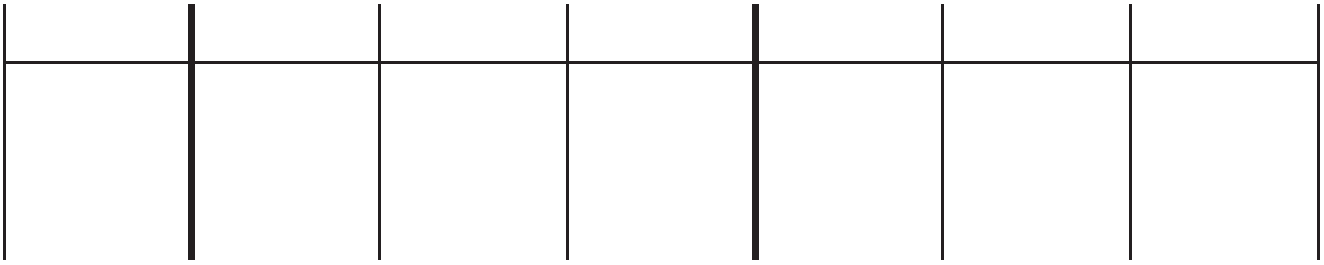
   California is 158,648 square miles. Nevada is 110,567 square miles. Arizona is 114,007 square miles. Texas is 266,874 square miles. Montana is 147,047 square miles, and Alaska is 587,878 square miles.

   Arrange the states in order from least area to greatest area.

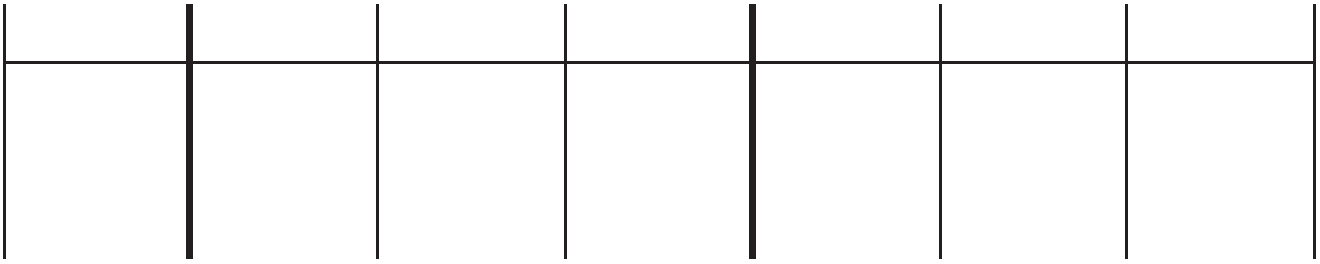
Name _____ Date _____

1. Label the place value chart. Use place value disks to find the sum or difference. Write the answer in standard form on the line.

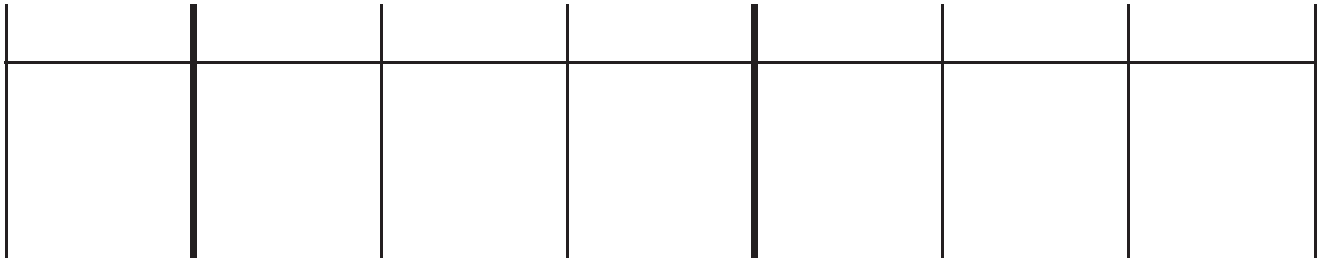
   a. 100,000 less than five hundred sixty thousand, three hundred thirteen is _____.



   b. Ten thousand more than 300,000 + 90,000 + 5,000 + 40 is _____.



   c. 447,077 is _____ than 347,077.



2. Fill in the blank for each equation:

   a. 100,000 + 76,960 = _____

   b. 13,097 – 1,000 = _____

   c. 849,000 – 10,000 = _____

   d. 442,210 + 10,000 = _____

   e. 172,090 = 171,090 + _____

   f. 854,121 = 954,121 – _____

3. Fill in the empty boxes to complete the patterns.

a.

145,555		147,555		149,555	

Explain in pictures, numbers, or words how you found your answers.

b.

	764,321	774,321			804,321

Explain in pictures, numbers, or words how you found your answers.

c.

125,876	225,876		425,876		

Explain in pictures, numbers, or words how you found your answers.

d.

	254,445			224,445	214,445

Explain in pictures, numbers, or words how you found your answers.

4. In 2012, Charlie earned an annual salary of $54,098. At the beginning of 2013, Charlie's annual salary was raised by $10,000. How much money will Charlie earn in 2013? Use pictures, words, or numbers to explain your thinking.

Name _____ Date _____

1. Round to the nearest thousand. Use the number line to model your thinking.

a. 5,900 ≈ _____

b. 4,180 ≈ _____

c. 32,879 ≈ _____

d. 78,600 ≈ _____

e. 251,031 ≈ _____

f. 699,900 ≈ _____

2. Steven put together 981 pieces of a puzzle. About how many pieces did he put together? Round to the nearest thousand. Use what you know about place value to explain your answer.

3. Louise's family went on vacation to Disney World. Their vacation cost $5,990. Sophia's family went on vacation to Niagara Falls. Their vacation cost $4,720. Both families budgeted about $5,000 for their vacation. Whose family stayed closer to the budget? Round to the nearest thousand. Use what you know about place value to explain your answer.

4. Marsha's brother wanted help with the first question on his homework. The question asked the students to round 128,902 to the nearest thousand and then to explain the answer. Marsha's brother thought that the answer was 128,000. Was his answer correct? How do you know? Use pictures, numbers, or words to explain.

Name _____ Date _____

Complete each statement by rounding the number to the given place value. Use the number line to show your work.

1. a. 67,000 rounded to the nearest ten thousand is _____.

b. 51,988 rounded to the nearest ten thousand is _____.

c. 105,159 rounded to the nearest ten thousand is _____.

2. a. 867,000 rounded to the nearest hundred thousand is _____.

b. 767,074 rounded to the nearest hundred thousand is _____.

c. 629,999 rounded to the nearest hundred thousand is _____.

3. 491,852 people went to the water park in the month of July. Round this number to the nearest hundred thousand to estimate how many people went to the park. Use a number line to show your work.

4. This number was rounded to the nearest hundred thousand. List the possible digits that could go in the ten thousands place to make this statement correct. Use a number line to show your work.

$$1\_9{,}644 \approx 100{,}000$$

5. Estimate the sum by rounding each number to the given place value.

$$164{,}215 + 216{,}088$$

   a. Round to the nearest ten thousand.

   b. Round to the nearest hundred thousand.

Name _____ Date _____

1. Round to the nearest thousand.

   a. 6,842 ≈ _____

   b. 2,722 ≈ _____

   c. 16,051 ≈ _____

   d. 706,421 ≈ _____

   e. Explain how you found your answer for Part (d).

2. Round to the nearest ten thousand.

   a. 88,999 ≈ _____

   b. 85,001 ≈ _____

   c. 789,091 ≈ _____

   d. 905,154 ≈ _____

   e. Explain why two problems have the same answer. Write another number that has the same answer when rounded to the nearest ten thousand.

3. Round to the nearest hundred thousand.

   a. 89,659 ≈ _____

   b. 751,447 ≈ _____

   c. 617,889 ≈ _____

   d. 817,245 ≈ _____

   e. Explain why two problems have the same answer. Write another number that has the same answer when rounded to the nearest hundred thousand.

4. Solve the following problems using pictures, numbers, or words.
   a. At President Obama's inauguration in 2013, the newspaper headlines stated there were about 800,000 people in attendance. If the newspaper rounded to the nearest hundred thousand, what is the largest number and smallest number of people who could have been there?

   b. At President Bush's inauguration in 2005, the newspaper headlines stated there were about 400,000 people in attendance. If the newspaper rounded to the nearest ten thousand, what is the largest number and smallest number of people who could have been there?

   c. At President Lincoln's inauguration in 1861, the newspaper headlines stated there were about 30,000 people in attendance. If the newspaper rounded to the nearest thousand, what is the largest number and smallest number of people who could have been there?

Name _____ Date _____

1. Round 845,001 to the nearest

   a. thousand: _____.

   b. ten thousand: _____.

   c. hundred thousand: _____.

2. Complete each statement by rounding the number to the given place value.

   a. 783 rounded to the nearest hundred is _____.

   b. 12,781 rounded to the nearest hundred is _____.

   c. 951,194 rounded to the nearest hundred is _____.

   d. 1,258 rounded to the nearest thousand is _____.

   e. 65,124 rounded to the nearest thousand is _____.

   f. 99,451 rounded to the nearest thousand is _____.

   g. 60,488 rounded to the nearest ten thousand is _____.

   h. 80,801 rounded to the nearest ten thousand is _____.

   i. 897,100 rounded to the nearest ten thousand is _____.

   j. 880,005 rounded to the nearest hundred thousand is _____.

   k. 545,999 rounded to the nearest hundred thousand is _____.

   l. 689,114 rounded to the nearest hundred thousand is _____.

3. Solve the following problems using pictures, numbers, or words.

   a. In the 2011 New York City Marathon, 29,867 men finished the race, and 16,928 women finished the race. Each finisher was given a t-shirt. About how many men's shirts were given away? About how many women's shirts were given away? Explain how you found your answers.

   b. In the 2010 New York City Marathon, 42,429 people finished the race and received a medal. Before the race, the medals had to be ordered. If you were the person in charge of ordering the medals and estimated how many to order by rounding, would you have ordered enough medals? Explain your thinking.

   c. In 2010, 28,357 of the finishers were men, and 14,072 of the finishers were women. About how many more men finished the race than women? To determine your answer, did you round to the nearest ten thousand or thousand? Explain.