Use the disks in the place value chart below to complete the following problems.

1. Label the place value chart.

2. Tell about the movement of the disks in the place value chart by filling in the blanks to make the following equation match the drawing in the place value chart.

4 hundreds \times 10 = \ 40 \ \text{hundreds} = 4 \ \text{thousands}

3. Write a statement about this place value chart using the words “10 times as many.”

Ten times as many as 400 (4 hundreds) is 40 hundreds or 4 thousands.

10 \times 4 \ \text{hundreds} = 40 \ \text{hundreds} \ or \ 4 \ \text{thousands}
1. Fill in the blank to make a true number sentence. Use standard form.
   a. \((4 \text{ ten thousands } 6 \text{ hundreds}) \times 10 = \underline{406,000}\)
   b. \((8 \text{ thousands } 2 \text{ tens}) \div 10 = \underline{802}\)

2. The Carson family saved up $39,580 for a new home. The cost of their dream home is 10 times as much as they have saved. How much does their dream home cost?

   \[
   \$ \ 39,580 \times 10 = \$ \ 395,800
   \]

   Their dream home would cost \$395,800.
Name ____________________________ Date __________________

1. In the spaces provided write the following units in standard form. Be sure to place commas where appropriate.
   a. 9 thousands 3 hundreds 4 ones _______ 9,304 _______
   b. 6 ten thousands 2 thousands 7 hundreds 8 tens 9 ones _______ 62,789 _______
   c. 1 hundred thousand 8 thousands 9 hundreds 5 tens 3 ones _______ 108,953 _______

2. Use digits or disks on the place value chart to write 26 thousands 13 hundreds.

<table>
<thead>
<tr>
<th>millions</th>
<th>hundred thousands</th>
<th>ten thousands</th>
<th>thousands</th>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

   How many thousands are in the number you have written? _______ 6 _______
1. Use the place value chart below to complete the following:

<table>
<thead>
<tr>
<th>M</th>
<th>HTh</th>
<th>TTh</th>
<th>Th</th>
<th>H</th>
<th>T</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

a. Label the units on the chart.

b. Write the number 800,000 + 6,000 + 300 + 2 in the place value chart.

c. Write the number in word form.

\[ \text{Eight hundred six thousand, three hundred two} \]

2. Write one hundred sixty thousand, five hundred eighty-two in expanded form.

\[ 100,000 + 60,000 + 500 + 80 + 2 \]
1. Four friends played a game. The player with the most points wins. Use the information in the table below to order the number of points each player earned from least to greatest. Then name the person who won the game.

<table>
<thead>
<tr>
<th>Player Name</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amy</td>
<td>2,398 points</td>
</tr>
<tr>
<td>Bonnie</td>
<td>2,976 points</td>
</tr>
<tr>
<td>Jeff</td>
<td>2,709 points</td>
</tr>
<tr>
<td>Rick</td>
<td>2,699 points</td>
</tr>
</tbody>
</table>

* Bonnie won the game.

2. Use each of the digits 5, 4, 3, 2, 1 exactly once to create two different five-digit numbers.

a. Write each number on the line and compare the two numbers by using the symbols < or >. Write the correct symbol in the circle.

   \[ 35,214 \quad \text{\textcolor{red}{\textgreater}} \quad 21,354 \]

* Sample answer
(answers will vary)

b. Use words to write a comparison statement for the problem above.

   35,214 has a three in the ten thousands place and 21,354 has a two in the ten thousands place. As a result, 35,214 is greater than 21,354.
1. Fill in the empty boxes to complete the pattern.

\[
\begin{array}{cccccc}
\end{array}
\]

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

The thousands digit increased by 1 as you move to the right. All other digits remained the same.

2. Fill in the blank for each equation.

a. \(1,000 + 56,879 = \underline{57,879}\)
b. \(324,560 - 100,000 = \underline{224,560}\)
c. \(456,080 - 10,000 = \underline{446,080}\)
d. \(10,000 + 786,233 = \underline{796,233}\)

3. The population of Rochester, NY in the 1990 Census was 219,782. The 2000 Census found that the population decreased by about 10,000. How many people lived in Rochester in 2000?

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

\[
\begin{array}{cccc}
219,782 & \underline{-10,000} & 209,782 \\
1990 & 2000 \\
\end{array}
\]

I subtracted 10,000 from the 1990 census total of 219,782 and got the 2000 census total of 209,782.
1. Round to the nearest thousand. Use the number line to model your thinking.

   a. $7,621 = 8,000$
   b. $12,502 = 13,000$
   c. $324,087 = 324,000$

2. It takes 39,090 gallons of water to manufacture a new car. Sammy thinks that rounds up to about 40,000 gallons. Susie thinks it is about 39,000 gallons. Who rounded to the nearest thousand, Sammy or Susie? Use pictures, numbers, or words to explain.

   It appears that Sammy rounded to the nearest ten thousand and Susie rounded to the nearest thousand.
1. Round to the nearest ten thousand. Use the number line to model your thinking.

   \[
   \begin{align*}
   &\text{a. } 35,124 = 40,000 \\
   &\text{b. } 981,657 = 980,000
   \end{align*}
   \]

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

   \[
   \begin{align*}
   &\text{a. } 89,678 = 100,000 \\
   &\text{b. } 999,765 = 1,000,000
   \end{align*}
   \]

3. Estimate the sum by rounding each number to the nearest hundred thousand.

   \[
   257,098 + 548,765 \approx 800,000
   \]

   \[
   \begin{align*}
   \text{300,000} \\
   + 500,000 \\
   \hline
   \text{800,000}
   \end{align*}
   \]
1. Round 765,903 to the given place value:

   Thousand: 760,000
   Ten thousand: 770,000
   Hundred thousand: 800,000

2. There are 16,850 Star coffee shops around the world. Round the number of shops to the nearest thousand and ten thousand. Which answer is more accurate? Explain your thinking using pictures, numbers, or words.

   Nearest ten thousand → 20,000
   Nearest thousand → 17,000

   Rounding to the nearest thousand is more accurate.
1. There are 598,500 Apple employees in the United States.
   a. Round the number of employees to the given place value.
      
      thousand: 599,000
      ten thousand: 600,000
      hundred thousand: 600,000

   b. Explain why two of your answers are the same.

      The 9 in the ten thousands place rounds to 10, which must be traded in for another hundred thousand, making 600,000. The 5 in the hundred thousands place gets rounded up to 6 because of the 9 in the ten thousands place when rounding to the nearest hundred thousand.

2. A company developed a student survey so that students could share their thoughts about school. In 2011, 78,234 students across the United States were administered the survey. In 2012, the company planned to administer the survey to 10 times as many students as were surveyed in 2011. About how many surveys should the company have printed in 2012? Explain how you found your answer.

   \[78,234 \approx 80,000\]

   \[80,000 \times 10 = 800,000\]

   I rounded to the nearest ten thousand before multiplying by 10.
1. Solve the addition problems below using the standard algorithm.

   a. \[
   \begin{array}{c}
   23,607 \\
   + 2,307 \\
   \hline
   25,914
   \end{array}
   \]

   b. \[
   \begin{array}{c}
   3,948 \\
   + 278 \\
   \hline
   4,226
   \end{array}
   \]

   c. \[
   \begin{array}{c}
   5,983 \\
   + 2,097 \\
   \hline
   8,080
   \end{array}
   \]

2. The office supply closet had 25,473 large paperclips, 13,648 medium paperclips, and 15,306 small paperclips. How many paperclips were in the closet?

\[
\begin{array}{c}
25,473 \\
+ 13,648 \\
+ 15,306 \\
\hline
54,427 
\end{array}
\]

paper clips
Model the problem with a tape diagram. Solve and write your answer as a statement.

In January, Scott earned $8,999. In February, he earned $2,387 more than in January. In March, Scott earned the same amount as in February. How much did Scott earn altogether during those three months? Is your answer reasonable? Explain.

\[
\begin{align*}
\text{Estimates} & \\
\text{Jan} & \quad \$9,000 \\
\text{Feb} & \quad \$11,000 \\
\text{March} & \quad \$11,000 \\
\hline
\text{Actual} & \\
\$8,999 & \\
11,386 & \\
+11,386 & \\
\hline
\$31,771 & \\
\end{align*}
\]

Yes, it is reasonable. My estimate and my actual answer are relatively close.
1. Use the standard algorithm to solve the following subtraction problems.

   a. \[ \begin{array}{c}
   8,512 \\
   -2,501 \\
   \hline
   6,011
   \end{array} \]

   b. \[ \begin{array}{c}
   18,042 \\
   -4,122 \\
   \hline
   13,920
   \end{array} \]

   c. \[ \begin{array}{c}
   8,072 \\
   -1,564 \\
   \hline
   6,508
   \end{array} \]

Draw a tape diagram to represent the following problem. Use numbers to solve. Write your answer as a statement. Check your answer.

2. What number must be added to 1,575 to result in a sum of 8,625?

\[ \begin{array}{c}
8,625 \\
\hline
1,575
\end{array} \]
Name _________________________________ Date ____________________

Use the standard algorithm to solve the following subtraction problems.

1. \[
\begin{array}{c}
8,124.10 \\
- 5,761
\end{array}
\]
\[
\begin{array}{c}
13,589
\end{array}
\]

2. \[
\begin{array}{c}
32,010 - 2,546 = 29,464
\end{array}
\]

Draw a tape diagram to represent the following problem. Use numbers to solve, and write your answer as a statement. Check your answer.

3. A doughnut shop sold 1,232 doughnuts in one day. If they sold 876 doughnuts in the morning, how many doughnuts were sold during the rest of the day?

\[
\begin{align*}
1,232 - 876 &= 356 \\
\hline
\end{align*}
\]
Draw a tape diagram to model each problem and solve.

1. \[956,204 - 780,169 = 176,035\]

   \[
   \begin{array}{c}
   956,204 \\
   \hline
   -780,169 \\
   \hline
   176,035
   \end{array}
   \]

2. A construction company was building a stone wall on Main Street. 100,000 stones were delivered to the site. On Monday, they used 15,631 stones. How many stones remain for the rest of the week? Write your answer as a statement.

   \[
   \begin{array}{c}
   100,000 \\
   \hline
   -15,631 \\
   \hline
   84,369
   \end{array}
   \]

   There are 84,369 stones remaining for the rest of the week.
Quarterback Brett Favre passed for 71,838 yards between the years 1991 and 2011. His all-time high was 4,413 passing yards in one year. In his second highest year, he threw 4,212 passing yards.

1. About how many passing yards did he throw in the remaining years? Estimate by rounding each value to the nearest thousand and then compute.

\[
\begin{align*}
71,838 &\approx 72,000 \\
4,413 &\approx 4,000 \\
4,212 &\approx 4,000
\end{align*}
\]

\[
\begin{align*}
\text{\textbf{72,000}} &
\end{align*}
\]

2. Exactly how many passing yards did he throw in the remaining years?

\[
\begin{align*}
\text{71,838} \\
\text{4,413} \\
\text{4,212}
\end{align*}
\]

\[
\begin{align*}
\frac{67,425}{63,213}
\end{align*}
\]

3. Assess the reasonableness of your answer in (b). Use your estimate from (a) to explain.

My actual answer for the remaining years was 63,213 yards in part (b). In part (a) my estimated answer was 64,000 yards. My answer is reasonable.
Draw a tape diagram to represent each problem. Use numbers to solve, and write your answer as a statement.

A mixture of 2 chemicals measures 1,034 milliliters. It contains some of Chemical A and 755 milliliters of Chemical B. How much less of Chemical A than Chemical B is in the mixture?

\[
\begin{align*}
&\text{1,034 mL} \\
&\text{A} \quad \text{B} \\
&\text{755 mL} \\
&\text{?} \\
&\frac{1034}{755} \\
&\frac{279 \text{ mL}}
\end{align*}
\]

\[6.14 \text{ mL} \]

\[
\begin{align*}
&\text{755 mL} \\
&\text{Chemical B} \\
&\text{279 mL} \\
&\text{?} \\
&\frac{758}{279} \\
&\frac{476 \text{ mL}}
\end{align*}
\]

There are 476 mL less of Chemical A in the mixture than Chemical B.
1. What is the area of all three parks?

A: 4,926 km²
B: 3,081 km²
C: 8,932 km²

\[
\begin{array}{c}
4,926 \text{ km}^2 \\
\hline
3,081 \text{ km}^2 \\
1,845 \text{ km}^2 \\
\hline
4,926 \text{ km}^2 + 3,081 \text{ km}^2 + 8,932 \text{ km}^2 = 16,939 \text{ km}^2
\end{array}
\]

2. Assess the reasonableness of your answer.

A: 4,926 km² ≈ 5,000 km

B: 4,926 - 1,845 = 3,081 km² ≈ 3,000 km

C: 4,926 + 4,006 = 8,932 km² ≈ 9,000 km

Estimate: 5,000 + 3,000 + 9,000 = 17,000 km²

17,000 km² is a reasonable estimate for 16,939 km²