End-of-Year Assessment

$$
\begin{array}{r}
\scriptstyle 2 \\
\scriptstyle 4 \quad \scriptstyle 1 \\
3\ 7\ 2 \\
*\quad\ \ 1\ 4\ 6 \\
\hline
2\ 2\ 3\ 2 \\
1\ 4\ 8\ 8\ 0 \\
+\quad 3\ 7\ 2\ 0 \\
\hline
2\ 0,\ 8\ 3\ 2
\end{array}
$$

1 Darlene solved a multiplication problem using U.S. traditional multiplication. Her work is shown at the right.

a. Make an estimate for Darlene's problem. Does her answer make sense? Explain.

_____

_____

_____

_____

b. Explain Darlene's mistake.

_____

_____

_____

_____

c. Solve the problem using U.S. traditional multiplication. Show your work.

$$
\begin{array}{r}
3\ 7\ 2 \\
*\ \ 1\ 4\ 6 \\
\hline
\end{array}
$$

End-of-Year Assessment (continued)

(2) **a.** Jerome is helping pack canned goods into boxes for the food pantry. There are 647 cans of food. He can put 16 cans in each box. How many boxes does Jerome need?

Jerome needs _____ boxes.

b. Explain how you solved this problem.

_____

_____

_____

_____

(3) **a.** Write the value of the **2** in each of the following numbers.

3**2**,048.671 _____   **2**14.9 _____

406.97**2** _____   0.0**2**8 _____

b. Look carefully at your answers to Part a. How does the value of the 2 change as it shifts one place to the left? To the right?

_____

_____

_____

c. Use the information in Parts a and b to write a rule about the value of any digit when it moves one place to the left or one place to the right in a number.

_____

_____

_____

_____

End-of-Year Assessment (continued)

4 **a.** $36 * 10^6 =$ _____

     b. $184.72 \div 10^2 =$ _____

  c. $0.973 * 10^{\square} = 9{,}730$

     d. $150 * 10^{\square} = 15{,}000{,}000$

  e. Explain how you solved Part a.

_____

_____

_____

_____

  f. Explain how you solved Part b.

_____

_____

_____

_____

5 Fill in the blanks with $>$, $<$, or $=$.

  a. 2.781 _____ 58.6

     b. 5.081 _____ 5.008

  c. 6 _____ 6.000

     d. 72.3 _____ 72.289

End-of-Year Assessment (continued)

Make an estimate and then solve Problems 6–8.
Show your work on the computation grid below.
Use your estimate to check whether your answer makes sense.

(6) $15.8 + 6.97 =$ _____

     Estimate: _____

(7) $38.4 - 12.88 =$ _____

     Estimate: _____

(8) $184 - 65.27 =$ _____

     Estimate: _____

(9)   Explain how you solved Problem 8.

_____

_____

_____

_____

End-of-Year Assessment (continued)

(10) Gary walked $2\frac{1}{3}$ miles on Monday, $3\frac{1}{2}$ miles on Tuesday, and $1\frac{3}{4}$ miles on Wednesday. How many miles did he walk in the three days?

Gary walked _____ miles.

(11) Angela was trying to find a fraction equivalent to $\frac{5}{6}$.
She showed the following work:

$$\frac{5 * 100}{6 * 100} = \frac{500}{600}$$

a. Is $\frac{500}{600}$ equivalent to $\frac{5}{6}$? Explain how you know.

_____

_____

_____

_____

b. Would Angela get an equivalent fraction if she multiplied $\frac{5}{6}$ by $\frac{250}{250}$?
Why or why not?

_____

_____

_____

_____

End-of-Year Assessment (continued)

12 Reed's class is painting a giant chessboard on the playground.
A chessboard consists of 64 squares arranged in 8 rows and 8 columns.
His class is making each square $\frac{1}{3}$ m by $\frac{1}{3}$ m.

a. What will be the length and width of the chessboard in meters? Show your work.

Length: _____ meters   Width: _____ meters

b. What will be the area of the completed chessboard? Show your work.
Give your answer in square meters.

Number model: _____

Area: _____

c. How could you use the number of squares on the chessboard to find
the area of the chessboard in square meters?

_____

_____

_____

_____

13 Mrs. Donlon is preparing pieces of string for her art class. She has 10 feet of string.
She wants each of the 23 students in her class to get the same amount of string.
How many inches of string will each student get? Show your work.

Each student will get _____ inches of string.

End-of-Year Assessment (continued)

(14) Hudson and Molly both solved the problem $12.8 * 6.4 = ?$. Here is their work.

Hudson's work
Estimate: $15 * 6 = 90$

```
  1  4
  1  3
  1  2  8
*       6  4
     5  1  2
+ 7  6  8  0
  8,  1  9  2
```

$12.8 * 6.4 = 81.92$

Molly's work
$12.8 * 10 = 128$ $6.4 * 10 = 64$

```
  1  4
  1  3
  1  2  8
*       6  4
     5  1  2
+ 7  6  8  0
  8,  1  9  2
```

$8,192 \div 10^2 = 81.92$
$12.8 * 6.4 = 81.92$

a. Explain Hudson's method of multiplying.

_____

_____

_____

b. Explain Molly's method of multiplying.

_____

_____

_____

c. Use Hudson's method or Molly's method to multiply $27.2 * 8.8$.
Explain why you chose that method.

$27.2 * 8.8 =$ _____

Explanation: _____

_____

_____

End-of-Year Assessment (continued)

(15) **a.** Solve. Show your work.

$64.8 \div 1.8 = ?$

$64.8 \div 1.8 =$ _____

b. Explain how you solved the problem.

_____

_____

_____

(16) Graham has $\frac{1}{3}$ box of food for his iguana that needs to last 6 days. How much food should he give his iguana each day so that it gets the same amount every day?

Number model: _____

Answer: _____ box of food

(17) Benjamin has 15 feet of ribbon to cut into $\frac{1}{3}$-foot sections for a scrapbooking project. If he needs 48 pieces of ribbon to complete the project, does he have enough ribbon? Show your work and explain your answer.

Number model: _____

Answer: _____

_____

End-of-Year Assessment (continued)

(18) $\frac{5}{8}$ of the students in Siena's class have brown eyes. $\frac{2}{3}$ of the students with brown eyes are girls. What fraction of the students in Siena's class are girls with brown eyes?

Number model: _____

Answer: _____ of the students in Siena's class are girls with brown eyes.

(19) Jeanne's parents bought a new refrigerator.
It is 30 inches long, 18 inches wide, and 60 inches high.
What is the volume of the refrigerator? Remember to include the units.

The volume of the refrigerator is _____.

End-of-Year Assessment (continued)

20 Marlena is running errands. She needs to go to the bakery (*B*), the pet store (*P*), the dry cleaner (*D*), and the grocery store (*G*).
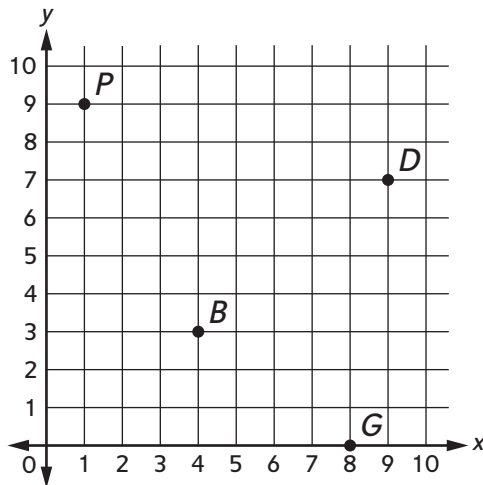
a. Write the coordinates of each location shown on the map above.

bakery (*B*): _____   pet store (*P*): _____

dry cleaner (*D*): _____   grocery store (*G*): _____

b. Marlena's house (*H*) is located at (0, 6).
Plot and label the location of Marlena's house on the grid.

c. On the map, each square side represents one block. If Marlena decides to ride her bike from home to the pet store, the dry cleaner, the grocery store, the bakery, and back home (in that order), how many blocks will she ride?

_____

d. If each block is $\frac{1}{8}$ mile, how many miles will she be riding to finish all her errands?

Number model: _____

Answer: _____