Practice These Problems as You Prepare for Friday’s Math Test

Write each number in standard notation.

1. \(10^6 \quad 1,000,000\)
2. \(3 \times 10^6 \quad 3,000,000\)
3. \(10^3 \quad 1,000\)
4. \(24 \times 10^3 \quad 24,000\)

Write each number in exponential notation.

5. \(30,000 \quad 3 \times 10^4\)
6. \(70,000,000 \quad 7 \times 10^7\)

Renee is in charge of the school carnival for 380 students. She has 47 boxes of prizes. Each box has 22 prizes. She wants to make sure she has enough prizes for each student to win 2 prizes.

1. Does Renee have enough prizes? **Yes**
   
   Explain how you solved the problem.
   
   **Renee has 1,034 prizes.** She only needs 762 prizes.

2. Does Renee have enough prizes for each student to win 3 prizes? **No**
   
   Every student would get 3 prizes, winning a total of 1,140 prizes. She only has 1,034 prizes.

Write each number in expanded form.

3. \(397 \quad 300 + 90 + 7\)
4. \(1,268 \quad 1,000 + 200 + 60 + 8\)
5. \(4,082 \quad 4,000 + 0 + 80 + 2\)
6. \(29,141 \quad 20,000 + 9,000 + 100 + 40 + 1\)
Make an estimate and solve.

3. \(70 \times 20 = 1400\)

Estimate: 1400

\[ \begin{array}{c}
 \times 70 \\
 7 \quad 8 \\
 \times 2 \quad 3 \\
 \hline
 20 \quad 4 \\
 1 \quad 3 \quad 6 \quad 0 \\
 \hline
 1 \quad 5 \quad 6 \quad 4 \\
\end{array} \]

Solve using any method you wish

4. \(300 \times 15 \quad (15 \times 3 = 45)\)

Estimate: 4500

\[ \begin{array}{c}
 \times 300 \\
 2 \quad 7 \quad 8 \\
 \times 1 \quad 5 \\
 \hline
 1 \quad 3 \quad 9 \quad 0 \\
 2 \quad 7 \quad 8 \times \\
 \hline
 4 \quad 1 \quad 7 \quad 0 \\
\end{array} \]

(3) \(931 \div 12 \rightarrow ?\)

\[ \begin{array}{c}
 931 \\
 \underline{-84} \\
 \hline
 89 \quad 7 \\
 \underline{-84} \\
 \hline
 5 \quad 7 \\
\end{array} \]

Quotient: 7 Remaider: 10 (or \(\frac{10}{20}\))

Answer: I need 8 bins.

Circle what you did with the remainder.

Ignored it

Why?

If I use 7 bins I will not have enough bins for all the books.

Your classroom received 150 books. You are placing them in bins. Each bin holds 20 books. How many bins do you need?

\[ \begin{array}{c}
 150 \\
 \underline{-140} \\
 \hline
 \frac{10}{20} \quad \frac{15}{20} \quad \frac{5}{20} \\
\end{array} \]

\[ \frac{15}{20} \quad \frac{5}{20} \]

150 Books ÷ 20 How many books each bin holds.