

## Warm Up

9/4/18

1. Order the following from least to greatest:

~~0.55~~, ~~0.32~~,  $\frac{1}{2}$ , ~~0.5~~,  $\frac{3}{8}$ , ~~-0.2~~

0.5

0.375

0.550  
~~0.500~~  
0.555

-0.2, 0.32,  $\frac{3}{8}$ ,  $\frac{1}{2}$ , 0.55, 0.5

2. Simplify:  $|-10 + 8| - |3 + 9|$

$|-2| - |12|$

$2 - 12$   
 $2 + (-12)$   
-10

3. Simplify:  $|12 + 5| + |-4 + -3| - 1$

$|17| + |-7| - 1$

$17 + 7 - 1$

$24 - 1$   
23

# **Rational Number APPLICATION**

Ray went to Pac Sun to buy a jacket. The jacket costs \$60. There is a 15% sale going on and the jacket is on sale. How much will the jacket cost after the discount?

$$\begin{array}{r}
 \$60 \quad 15\% \text{ off} \quad 85\% \text{ on} \\
 \quad \quad \quad 0.85 \\
 \begin{array}{r}
 0.85 \\
 \times 60 \\
 \hline
 51.00 \\
 \hline
 51.00
 \end{array}
 \end{array}$$

**\$51.00**

James buys a video game for his Xbox for \$49.99, a controller for \$34.95, and a walk through manual for \$19.99. The sales tax in his area is 8.25%. What will be the total cost of his purchase?

$$\begin{array}{r}
 49.99 \\
 + 34.95 \\
 + 19.99 \\
 \hline
 104.93
 \end{array}$$

$$.0825$$

$$\begin{array}{r}
 104.93 \\
 \times .0825 \\
 \hline
 8394400 \\
 + 8209860 \\
 \hline
 8.656725
 \end{array}$$

$$\begin{array}{r}
 \$8.66 \text{ TAX} \\
 + \$104.93 \\
 \hline
 \boxed{\$113.59} \\
 \text{TOTAL}
 \end{array}$$

A rectangular room has an area of  $131\frac{1}{4}$  square feet. The length of the room is  $12\frac{1}{2}$  feet. What is the width of the room?  $A = lw$

$$\begin{array}{r} 131 \\ \times 4 \\ \hline 524 \end{array}$$

$$\frac{\text{Area}}{\text{length}} = \text{width}$$

$$131\frac{1}{4} \div 12\frac{1}{2}$$

$$\frac{525}{4} \div \frac{25}{2} = \frac{525}{4} \left( \frac{2}{25} \right)$$

$$\text{width} = \frac{21}{2} \rightarrow 10\frac{1}{2} \text{ ft}$$

At a store Susan selected a pumpkin that weighed 35.2 ounces. Pumpkins cost \$1.80 per pound and there are 16 ounces in 1 pound. How much did Susan's pumpkin cost?

$$35.2 \div 16 = 2.2 \text{ lbs}$$

$$\begin{array}{r} 2.2 \\ 16 \overline{) 35.2} \\ \underline{32} \downarrow \\ 32 \\ \underline{32} \\ 0 \end{array} + \begin{array}{r} 1.80 \\ \times 2.2 \\ \hline 360 \\ 3600 \\ \hline 3960 \end{array}$$

$$\boxed{\$3.96}$$



A recipe requires  $\frac{1}{4}$  lb of onions to make 3 servings of soup. Mark has  $1\frac{1}{2}$  lb of onions. How many servings can Mark make?

$$1\frac{1}{2} \div \frac{1}{4}$$



$$\frac{3}{2} \left( \frac{4}{1} \right) = \frac{12}{2} = 6$$

18  
servings

The price of a theater ticket increased from \$7.50 to \$7.75. The theater sold 315 tickets at the higher price. With the price increase, how much more did the theater earn on the tickets?

$$\begin{array}{r} 7.75 \\ - 7.50 \\ \hline \$0.25 \end{array}$$

$$\begin{array}{r} \overset{2}{3}15 \\ \times .25 \\ \hline 1575 \\ 6300 \\ \hline 78.75 \end{array}$$

\$78.75

The distance from Charlotte, NC to Morgantown, WV is 376.43 miles and the distance from Charlotte, NC to Columbus, OH is 426.5 miles. What is the difference in distance?

$$\begin{array}{r} 426.50 \\ - 376.43 \\ \hline 50.07 \end{array}$$

$$50.07 \text{ mi}$$

The length of rectangular prism is  $\frac{3}{5}$  inches where the width of the same prism is  $2\frac{4}{7}$  inches. If the volume of the prism is  $4\frac{53}{70}$ , what is the height of the prism?

$$V = lwh$$

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$$\frac{3}{5} \cdot 2\frac{4}{7} = \frac{3}{5} \cdot \frac{18}{7} = \frac{54}{35}$$

$$4\frac{53}{70} \div \frac{54}{35}$$

$$\begin{array}{r} 108 \\ \times 3 \\ \hline 324 \end{array}$$

$$\frac{333}{70} \div \frac{54}{35} = \frac{333}{70} \cdot \frac{35}{54}$$

$$3\frac{9}{108} \text{ in}$$

$$\frac{333}{108}$$

$$3\frac{1}{12} \text{ in}$$