Pre-Algebra Workbook

Ratio and proportion

krista king MATH

RATIO AND PROPORTION

■ 1. Solve for the variable.

$$\frac{2}{5} = \frac{x}{20}$$

■ 2. Solve for the variable.

$$\frac{6}{10} = \frac{m}{15}$$

■ 3. Solve for the variable.

$$\frac{d}{7} = \frac{14}{49}$$

■ 4. Solve for the variable.

$$\frac{5}{v} = \frac{25}{40}$$

■ 5. Solve for the variable.

$$\frac{22}{30} = \frac{33}{t}$$

■ 6. Solve for the variable.

$$\frac{8}{12} = \frac{20}{x}$$

■ 7. Complete the statement.

The reason we multiply the left and right side by the same number when we cross multiply is because, when we're solving equations, we must keep both sides _____.

UNIT PRICE

■ 1. Complete the statement.

Unit price means _____ per _____.

■ 2. If we can purchase 2 oranges for $\$0.20$, how many oranges can we purchase for $\$2.00$?

■ 3. If we purchase 2 oranges for $\$0.20$, how much will it cost to purchase 5 oranges?

■ 4. Sally went to the candy store and bought 40 jelly beans for $\$0.50$. How much would 60 jelly beans cost her?

■ 5. Sally went to the candy store and bought 40 jelly beans for $\$0.50$. How many jelly beans can she buy for $\$1$?

■ 6. While Steven is at the grocery store, he's trying to determine which bag of popcorn is the better deal. The first bag is a 10-ounce bag of

popcorn for $1.59. The second bag is a 15-ounce bag of popcorn for $1.89. Which bag is the better deal? Why?

■ 7. Justine is comparing prices to determine where to buy hardwood flooring for her kitchen. The first store charges $15 for 2 square feet of flooring, while the second store charges $40 for 5 square feet of flooring. Which store is offering the better deal? Why?

■ 8. We can purchase 15 pencils for $4. If we want to find the price per pencil, we would divide _____ by _____.

■ 9. We can purchase 15 pencils for $4. If we want to find the number of pencils we can buy per dollar, we would divide _____ by _____.

UNIT MULTIPLIERS

■ 1. When we're setting up a unit multiplier, the units we want to keep need to be placed in the _____ of the fraction.

■ 2. Convert 5 feet into inches.

■ 3. Convert 8 yards to inches.

■ 4. Convert 4 square feet to square inches.

■ 5. Convert 144 square inches to square feet.

■ 6. Convert $4{,}320$ cubic inches to cubic feet.

■ 7. Jason is converting $4{,}536$ cubic feet to cubic yards. His work is shown below. Did he solve the problem correctly? Why or why not?

$$4{,}536 \text{ cubic feet} \cdot \frac{3 \text{ feet}}{1 \text{ yard}} \cdot \frac{3 \text{ feet}}{1 \text{ yard}} \cdot \frac{3 \text{ feet}}{1 \text{ yard}} = 122{,}472 \text{ cubic yards}$$

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