

LESSON
8-3
Solving Proportions with Cross Products

Use cross multiplication to solve these proportions.



Example: $\frac{4}{6} = \frac{p}{15}$

$$15 * 4 = \underline{\quad\quad\quad} = 6 * p$$

$$15 * 4 = 6 * p$$

$$60 = 6p$$

$$\frac{60}{6} = p$$

$$10 = p$$

1. $\frac{3}{6} = \frac{y}{10}$ _____

2. $\frac{7}{21} = \frac{3}{c}$ _____

3. $\frac{m}{20} = \frac{2}{8}$ _____

4. $\frac{2}{10} = \frac{5}{z}$ _____

5. $\frac{9}{15} = \frac{12}{k}$ _____

6. $\frac{10}{12} = \frac{d}{9}$ _____

For each problem on the next page, set up a proportion and solve it using cross multiplication. Then write the answer.

Example: Jessie swam 6 lengths of the pool in 4 minutes. At this rate, how many lengths will she swim in 10 minutes?

Proportion: $\frac{6 \text{ lengths}}{4 \text{ minutes}} = \frac{n \text{ lengths}}{10 \text{ minutes}}$

Solution: $\frac{6}{4} = \frac{n}{10}$

$$10 * 6 = \underline{\quad\quad\quad} = 4 * n$$

$$10 * 6 = 4 * n$$

$$60 = 4n$$

$$\frac{60}{4} = n$$

$$15 = n$$

Answer: Jessie will swim _____ lengths in 10 minutes.

LESSON

8-3

Solving Proportions with Cross Products *continued*

7. Belle bought 8 yards of ribbon for \$6.
How many yards could she buy for \$9?

Solution:



$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Answer: Belle could buy _____ yards of ribbon for \$9.

8. Before going to France, Maurice exchanged \$25 for 20 euros. At that exchange rate, how many euros could he get for \$80?

Solution:

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Answer: Maurice could get _____ euros for \$80.

9. One gloomy day, 4 inches of rain fell in 6 hours. At this rate, how many inches of rain had fallen after 4 hours?

Solution:

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Answer: _____ inches of rain had fallen in 4 hours.

10. Adelio's apartment building has 9 flights of stairs. To climb to the top floor, he must go up 144 steps. How many steps must he climb to get to the fifth floor?

Solution:

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Answer: Adelio must climb _____ steps.

11. At sea level, sound travels 0.62 mile in 3 seconds.
What is the speed of sound in miles per hour?
(Hint: First find the number of seconds in 1 hour.)

Solution:

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Answer: Sound travels at the rate of _____ miles per hour.