Proportions

Solve each proportion.

$$\frac{3}{7} = \frac{x}{49} \qquad\qquad 3 \cdot 49 = 7x$$

$$\frac{147}{7} = \frac{7x}{7} \qquad\qquad 21 = x$$

1. $\frac{8}{6} = \frac{m}{27}$

2. $\frac{z}{3} = \frac{8}{15}$

3. $\frac{16}{40} = \frac{24}{c}$

4. $\frac{9}{p} = \frac{5}{2}$

5. $\frac{1.8}{x} = \frac{3.6}{2.4}$

6. $\frac{4}{5} = \frac{0.8}{y}$

7. $\frac{x}{2} = \frac{15}{5}$

8. $\frac{18}{12} = \frac{24}{x}$

9. $\frac{18}{15} = \frac{6}{x}$

10. $\frac{121}{x} = \frac{220}{100}$

11. $\frac{1.6}{x} = \frac{14}{21}$

12. $\frac{x}{168} = \frac{66\frac{2}{3}}{100}$

13. $\frac{x}{32} = \frac{37\frac{1}{2}}{100}$

14. $\frac{16}{48} = \frac{x}{100}$

15. $\frac{0.12}{.25} = \frac{x}{100}$

16. $\frac{1.5}{x} = \frac{0.07}{0.14}$

Problems Using Proportions

Three loaves of bread cost $3.87. How much do 2 loaves cost?

$$\dfrac{\text{number of loaves}}{\text{cost}}$$

$$\dfrac{3}{3.87} = \dfrac{2}{x}$$

$$3x = 2 \cdot 3.87$$
$$\dfrac{3x}{3} = \dfrac{7.74}{3}$$
$$x = 2.58$$

2 loaves cost $2.58

1. If 64 feet of rope weigh 20 pounds, how much will 80 feet of the same type of rope weigh?

2. If a 10 pound turkey takes 4 hours to cook, how long will it take a 14 pound turkey to cook?

3. An 18 ounce box of cereal costs $2.76. How many ounces should a box priced at $2.07 contain?

4. Mike and Pat traveled 392 miles in 7 hours. If they travel at the same rate, how long will it take them to travel 728 miles?

5. If 2 pounds of turkey costs $1.98, what should 3 pounds cost?

6. If 2 liters of fruit juice cost $3.98, how much do 5 liters cost?

7. A 12 ounce box of cereal costs $.84. How many ounces should be in a box marked $.49?

8. Janie saw an advertisement for a 6 ounce tube of toothpaste that costs $.90. How much should a 4 ounce tube cost?