

# Ratios

Reduce each ratio to lowest terms.

1. 6 to 12      20 to 4      24 to 30      5 to 75      8 to 18

2. 9 : 3      45 : 100      7 : 42      16 : 160      35 : 14

3.  $\frac{5}{15}$        $\frac{8}{2}$        $\frac{66}{3}$        $\frac{40}{80}$        $\frac{7}{28}$

Solve for the unknown.

4.  $\frac{3}{4} = \frac{b}{24}$        $\frac{2}{7} = \frac{6}{m}$        $\frac{r}{9} = \frac{3}{27}$        $\frac{1}{2} = \frac{t}{48}$        $\frac{5}{w} = \frac{4}{12}$

5.  $\frac{8}{3} = \frac{24}{c}$        $\frac{f}{6} = \frac{3}{1}$        $\frac{60}{g} = \frac{10}{100}$        $\frac{3}{5} = \frac{p}{30}$        $\frac{s}{5} = \frac{100}{20}$

Solve these problems. Show your work.

6. The car dealer discovered that 3 of every 5 cars sold are black. If the dealer sold 35 cars last month, how many cars were black?
7. Maya can drive her SUV 96 miles on 8 gallons of gas. Maya plans to travel 240 miles tomorrow. How many gallons of gas will she use?
8. When making spaghetti, Enzo uses 3 pounds of hamburger for every 8 cups of tomatoes. When Enzo uses 12 pounds of hamburger, how many cups of tomatoes will he use?
9. The city hires 18 lifeguards for every mile of beach. If the city has 11 miles of beach, how many lifeguards must it hire?
10. Henry usually earns \$60 in tips when he works a 4-hour shift. Next weekend he will work 12 hours. How much does he expect to earn in tips?
11. The distance on the map between New Orleans, Louisiana, and Boston, Massachusetts, is 6 inches. If each inch represents 225 miles, about how far is it from New Orleans to Boston?

# Ratios

Reduce each ratio to lowest terms.

1. 6 to 12  
 $1:2$

20 to 4  
 $5:1$

24 to 30  
 $4:5$

5 to 75  
 $1:15$

8 to 18  
 $4:9$

2. 9 : 3  
 $3:1$

45 : 100  
 $9:20$

7 : 42  
 $1:6$

16 : 160  
 $1:10$

35 : 14  
 $5:2$

3.  $\frac{5}{15}$   $\frac{1}{3}$

$\frac{8}{2}$  4

$\frac{66}{3}$  22

$\frac{40}{80}$   $\frac{1}{2}$

$\frac{7}{28}$   $\frac{1}{4}$

Solve for the unknown.

4.  $\frac{3}{4} = \frac{b}{24}$

$\frac{2}{7} = \frac{6}{m}$

$\frac{r}{9} = \frac{3}{27}$

$\frac{1}{2} = \frac{t}{48}$

$\frac{5}{w} = \frac{4}{12}$

5.  $\frac{8}{3} = \frac{24}{c}$

$\frac{f}{8} = \frac{3}{1}$

$\frac{60}{8} = \frac{10}{100}$

$\frac{3}{5} = \frac{p}{30}$

$\frac{s}{5} = \frac{100}{20}$

Solve these problems. Show your work.

6. The car dealer discovered that 3 of every 5 cars sold are black. If the dealer sold 35 cars last month, how many cars were black?

$$\frac{3}{5} = \frac{x}{35} \quad x = 21$$

7. Maya can drive her SUV 96 miles on 8 gallons of gas. Maya plans to travel 240 miles tomorrow. How many gallons of gas will she use?

$$\frac{1}{12} = \frac{8}{96} = \frac{x}{240} \quad x = 20$$

8. When making spaghetti, Enzo uses 3 pounds of hamburger for every 8 cups of tomatoes. When Enzo uses 12 pounds of hamburger, how many cups of tomatoes will he use?

$$\frac{3}{8} = \frac{12}{x} \quad x = 32$$

$$3x = 96$$

9. The city hires 18 lifeguards for every mile of beach. If the city has 11 miles of beach, how many lifeguards must it hire?

$$\frac{18}{1} = \frac{x}{11} \quad x = 18 \cdot 11 = 198$$

10. Henry usually earns \$60 in tips when he works a 4-hour shift. Next weekend he will work 12 hours. How much does he expect to earn in tips?

$$\frac{60}{4} = \frac{x}{12} \quad 4x = 7200 \quad x = 180$$

11. The distance on the map between New Orleans, Louisiana, and Boston, Massachusetts, is 6 inches. If each inch represents 225 miles, about how far is it from New Orleans to Boston?

$$\frac{225}{1} = \frac{x}{6} \quad x = 6 \cdot 225 = 1350$$