

Solving Proportions

Solve each proportion.

1) $\frac{10}{8} = \frac{n}{10}$

2) $\frac{7}{5} = \frac{x}{3}$

3) $\frac{9}{6} = \frac{x}{10}$

4) $\frac{7}{n} = \frac{8}{7}$

5) $\frac{4}{3} = \frac{8}{x}$

6) $\frac{7}{b+5} = \frac{10}{5}$

7) $\frac{6}{b-1} = \frac{9}{7}$

8) $\frac{4}{m-8} = \frac{8}{2}$

9) $\frac{5}{6} = \frac{7n+9}{9}$

10) $\frac{4}{9} = \frac{r-3}{6}$

Solving Proportions

Solve each proportion.

1) $\frac{10}{8} = \frac{n}{10}$

$$\frac{100}{8} = \frac{8n}{8}$$

$$12.5 = n$$

2) $\frac{7}{5} = \frac{x}{3}$

$$\frac{5x}{5} = \frac{21}{5}$$

$$x = 4.2$$

3) $\frac{9}{6} = \frac{x}{10}$

$$\frac{90}{6} = \frac{6x}{6}$$

$$x = 15$$

4) $\frac{7}{n} = \frac{8}{7}$

$$\frac{49}{8} = \frac{8n}{8}$$

$$n = 6.125$$

5) $\frac{4}{3} = \frac{8}{x}$

$$\frac{4x}{4} = \frac{24}{4}$$

$$x = 6$$

6) $\frac{7}{b+5} = \frac{10}{5}$

$$\begin{array}{r} 35 = 10b + 50 \\ -50 \quad -50 \end{array}$$

$$\frac{-15}{10} = \frac{10b}{10}$$

$$b = -1.5$$

7) $\frac{6}{b-1} = \frac{9}{7}$

$$6 \cdot 7 = 9(b-1)$$

$$42 = 9b - 9$$

$$\begin{array}{r} +9 \quad +9 \end{array}$$

$$51 = 9b$$

$$b = \frac{17}{3} \text{ or } 5.\bar{7}$$

9) $\frac{5}{6} = \frac{7n+9}{9}$

$$45 = 6(7n+9)$$

$$45 = 42n + 54$$

$$\begin{array}{r} -54 \quad -54 \end{array}$$

$$\frac{-9}{42} = \frac{42n}{42}$$

$$n = -\frac{3}{14}$$

8) $\frac{4}{m-8} = \frac{8}{2}$

$$8 = 8(m-8)$$

$$8 = 8m - 64$$

$$\begin{array}{r} +64 \quad +64 \end{array}$$

$$\frac{72}{8} = \frac{8m}{8}$$

$$m = 9$$

10) $\frac{4}{9} = \frac{r-3}{6}$

$$24 = 9(r-3)$$

$$24 = 9r - 27$$

$$\begin{array}{r} +27 \quad +27 \end{array}$$

$$\frac{51}{9} = \frac{9r}{9}$$

$$r = 5.7$$