

Solving Equations with Fractions

Solve

$$\begin{array}{ll} \text{(a)} \frac{x+2}{5} = 4 & \text{(b)} \frac{x-1}{6} = 2 \\ \text{(c)} \frac{6x+3}{9} = 1 & \text{(d)} \frac{5x-6}{4} = 1 \\ \text{(e)} \frac{2x+10}{5} = 4 & \text{(f)} \frac{2x-1}{8} = 3 \\ \text{(g)} 1 = \frac{2x-1}{5} & \text{(h)} 9 = \frac{5x-3}{3} \end{array}$$

$$\begin{array}{l} \text{(a)} x=18 \\ \text{(b)} x=13 \\ \text{(c)} x=1 \\ \text{(d)} x=2 \\ \text{(e)} x=5 \\ \text{(f)} x=12.5 \\ \text{(g)} x=3 \\ \text{(h)} x=6 \end{array}$$

Solve

$$\begin{array}{ll} \text{(a)} \frac{2x+3}{5} = x & \text{(b)} \frac{4x-7}{2} = x \\ \text{(c)} \frac{x+3}{5} = \frac{x-1}{3} & \text{(d)} \frac{2x+1}{4} = \frac{3x-1}{2} \\ \text{(e)} \frac{4x}{7} = \frac{2x-1}{5} & \text{(f)} \frac{5x+3}{5} = \frac{x+3}{2} \end{array}$$

$$\begin{array}{ll} \text{(a)} x=1 & \text{(b)} x=3.5 \\ \text{(c)} x=7 & \text{(d)} x=0.75 \\ \text{(e)} x=\frac{-7}{6} & \text{(f)} x=1.8 \end{array}$$

Solve

$$\begin{array}{ll} \text{(a)} \frac{x}{5} - 2 = 3 & \text{(b)} \frac{x}{4} + 7 = 5 \\ \text{(c)} \frac{x+1}{4} - 1 = 5 & \text{(d)} \frac{x-2}{3} + 2 = 6 \\ \text{(e)} \frac{2x+8}{5} - 7 = 1 & \text{(f)} 1 = \frac{3x}{4} + 7 \end{array}$$

$$\begin{array}{ll} \text{(a)} x=25 & \text{(b)} x=-8 \\ \text{(c)} x=23 & \text{(d)} x=14 \\ \text{(e)} x=16 & \text{(f)} x=-8 \end{array}$$

Ben is x cm tall. Talia is 8 cm taller than Ben. Belle is 2 cm shorter than Ben. Their mean height is 160 cm. Find Ben's height.

$$\frac{x+x+8+x-2}{3} = 160$$

$$\frac{3x+6}{3} = 160 \quad x=158 \text{ cm}$$

A triangle has base $(2x+9)$ cm and height 4 cm. Its area is 42 cm^2 . Find the value of x and hence the base of the triangle.

$$42 = \frac{1}{2} \times 4 \times (2x+9)$$

$$42 = 4x+18$$

$$x=6$$

$$\text{Base} = 21 \text{ cm}$$