

## More Solving Equations

1. Solve each equation.

a)  $\frac{4}{3}x = \frac{1}{2}$

b)  $\frac{5}{2}x = 4$

c)  $\frac{3}{4}k = \frac{1}{6} - \frac{5}{2}$

d)  $3x = \frac{2}{3} + \frac{3}{4}$

2. Solve each equation.

a)  $3x - (x + 2) = 4$       b)  $3(x - 4) = 2 - x$

c)  $\frac{1}{3}x + 2 = \frac{5}{4}$       d)  $\frac{7}{4}(x + 3) = \frac{2}{3}x$

# More Solving Equations

1. Solve each equation.

a)  $\frac{4}{3}x = \frac{1}{2}$  LCD=6      b)  $\frac{5}{2}x = 4$  LCD=2

$$6\left(\frac{4}{3}x\right) = 6\left(\frac{1}{2}\right)$$

$$2\left(\frac{5}{2}x\right) = 2(4)$$

$$\frac{8x}{8} = \frac{3}{8}$$

$$\frac{5x}{5} = \frac{8}{5}$$

$$x = \frac{3}{8}$$

$$x = \frac{8}{5}$$

c)  $\frac{3}{4}x = \frac{1}{6} - \frac{5}{2}$  LCD=12      d)  $3x = \frac{2}{3} + \frac{3}{4}$  LCD=12

$$12\left(\frac{3}{4}x\right) = 12\left(\frac{1}{6}\right) - 12\left(\frac{5}{2}\right)$$

$$12(3x) = 12\left(\frac{2}{3}\right) + 12\left(\frac{3}{4}\right)$$

$$9x = 2 - 30$$

$$36x = 8 + 9$$

$$\frac{9x}{9} = \frac{-28}{9}$$

$$\frac{36x}{36} = \frac{17}{36}$$

$$x = -\frac{28}{9}$$

$$x = \frac{17}{36}$$

2. Solve each equation.

$$\begin{aligned} \text{a) } 3x - (x+2) &= 4 \\ 3x - x - 2 &= 4 \end{aligned}$$

$$\begin{array}{r} 2x - 2 = 4 \\ +2 \quad +2 \\ \hline \end{array}$$

$$\frac{2x}{2} = \frac{6}{2}$$

$$x = 3$$

$$\text{b) } 3(x-4) = 2-x$$

$$\begin{array}{r} 3x - 12 = 2 - x \\ +x \qquad +x \\ \hline \end{array}$$

$$\begin{array}{r} 4x - 12 = 2 \\ +12 \quad +12 \\ \hline \end{array}$$

$$\frac{4x}{4} = \frac{14}{4}$$

$$x = \frac{7}{2}$$

$$\text{c) } \frac{1}{3}x + 2 = \frac{5}{4} \quad \text{LCD}=12 \quad \text{d) } \frac{7}{4}(x+3) = \frac{2}{3}x \quad \text{LCD}=12$$

$$12\left(\frac{1}{3}x\right) + 12(2) = 12\left(\frac{5}{4}\right)$$

$$\begin{array}{r} 4x + 24 = 15 \\ -24 \quad -24 \\ \hline \end{array}$$

$$\frac{4x}{4} = \frac{-9}{4}$$

$$x = -\frac{9}{4}$$

$$12\left(\frac{7}{4}\right)(x+3) = 12\left(\frac{2}{3}x\right)$$

$$21(x+3) = 8x$$

$$\begin{array}{r} 21x + 63 = 8x \\ -8x \qquad -8x \\ \hline \end{array}$$

$$\begin{array}{r} 13x + 63 = 0 \\ -63 \quad -63 \\ \hline \end{array}$$

$$\frac{13x}{13} = \frac{-63}{13}$$

$$x = -\frac{63}{13}$$

$$\begin{array}{r} 12 \\ -24 \\ \hline -15 \\ 9 \end{array}$$