

ADDITION, MULTIPLICATION AND DISTRIBUTIVE PROPERTY:

$$\begin{array}{r} \textcircled{1} \quad x - 2 = 6 \\ + 2 = 2 \\ \hline \boxed{x = 8} \end{array}$$

$$\begin{array}{r} \textcircled{2} \quad x + \frac{7}{12} = \frac{1}{2} \\ - \frac{7}{12} \quad - \frac{7}{12} \\ \hline x = \frac{1}{2} - \frac{7}{12} = \frac{6}{12} - \frac{7}{12} = \boxed{-\frac{1}{12}} \end{array}$$

$$\textcircled{3} \quad \text{Solve } -\frac{3}{4}x = 12$$

$$\begin{array}{r} \textcircled{4} \quad -4x = -9 \\ -4 \quad -4 \\ \hline \boxed{x = \frac{9}{4}} \end{array}$$

$$\begin{array}{r} \left(-\frac{4}{3}\right) \left(-\frac{3}{4}\right)x = \left(-\frac{4}{3}\right)(12) \\ 1x = -16 \\ \boxed{x = -16} \end{array}$$

$$\begin{array}{r} \textcircled{5} \quad \text{Solve } 6x - 8 = 3x + 7 \\ -3x \quad -3x \\ \hline 3x - 8 = 7 \\ +8 \quad +8 \\ \hline 3x = 15 \\ \frac{3x}{3} = \frac{15}{3} \\ \boxed{x = 5} \end{array}$$

$$\begin{array}{r} \textcircled{6} \quad \text{Solve } 3x - 5 = x + 2 - 7x \\ 3x - 5 = -6x + 2 \\ 6x \quad 6x \\ \hline 9x - 5 = 2 \\ +5 \quad +5 \\ \hline 9x = 7 \\ \frac{9x}{9} = \frac{7}{9} \\ \boxed{x = \frac{7}{9}} \end{array}$$

$$\begin{array}{r} \textcircled{7} \quad \text{Solve } 3(x-2) + 3 = 2(6-x) \\ 3x - 6 + 3 = 12 - 2x \\ 3x - 3 = 12 - 2x \\ 2x \quad +2x \\ \hline 5x - 3 = 12 \\ +3 \quad +3 \\ \hline 5x = 15 \\ \frac{5x}{5} = \frac{15}{5} \\ \boxed{x = 3} \end{array}$$

$$\begin{array}{r} \textcircled{8} \quad \text{Solve } \frac{x}{2} - \frac{7}{9} = \frac{x}{6} + \frac{2}{3} \\ \text{LCM of } 2, 9, 6, 3 \rightarrow 18 \\ 18\left(\frac{x}{2} - \frac{7}{9}\right) = 18\left(\frac{x}{6} + \frac{2}{3}\right) \\ \frac{18x}{2} - \frac{18 \cdot 7}{9} = \frac{18x}{6} + \frac{18 \cdot 2}{3} \\ 9x - 14 = 3x + 12 \\ -3x \quad -3x \\ \hline 6x - 14 = 12; 6x = \frac{26}{6} \\ \boxed{x = \frac{13}{3}} \end{array}$$