

2-5 Solve Literal Equations

Solve for x:

$$1. \quad \begin{array}{r} 3x - 4n = 12 \\ + 4n \quad + 4n \\ \hline 3x = 12 + 4n \\ \frac{3x}{3} = \frac{12 + 4n}{3} \\ \boxed{x = \frac{12 + 4n}{3}} \quad \left(\text{or } x = 4 + \frac{4}{3}n \right) \end{array}$$

$$2. \quad \begin{array}{r} x(r-2) = 16 \\ \frac{x(r-2)}{r-2} = \frac{16}{r-2} \\ \boxed{x = \frac{16}{r-2}} \end{array}$$

$$3. \quad \begin{array}{r} x+1 = 3y-4 \\ \frac{x+1}{4} = 3y-4 \\ x+1 = 12y \\ -1 \quad -1 \\ \hline \boxed{x = 12y - 1} \end{array}$$

$$4. \quad \begin{array}{r} 5h - 2f = 2x + f \\ \frac{5h - 2f}{2} = \frac{2x + f}{2} \\ \frac{5h - 3f}{2} = \frac{2x}{2} \\ \boxed{x = \frac{5h - 3f}{2}} \end{array}$$

5. Solve the following equation for y:

$$\begin{array}{r} 2x - 5y = 10 \\ -2x \quad -2x \\ \hline -5y = -2x + 10 \\ \frac{-5y}{-5} = \frac{-2x + 10}{-5} \\ \boxed{y = \frac{2}{5}x - 2} \end{array}$$