

# Variables, Expressions, and Equations

Evaluate the expressions given  $x = 4$ .

$$\begin{array}{l} x + 5 \\ + 5 \end{array}$$

$$\begin{array}{l} 2x - 9 \\ 2( ) - 9 \\ - 9 \end{array}$$

$$\begin{array}{l} 3x^2 - 17 \\ 3( )^2 - 17 \\ 3 \cdot \quad - 17 \\ - 17 \end{array}$$

$$\begin{array}{l} 3 \cdot 16 \\ 16 \cdot 3 \\ 16 + 16 + 16 \\ 30 + 18 \\ 48 \end{array}$$

Evaluate the expressions given  $x = 3$  and  $y = -1$ .

$$\begin{array}{c} x + y \\ \swarrow \quad \searrow \\ + ( \quad ) \\ - \end{array}$$

$$\begin{array}{c} 2x - y \\ \swarrow \quad \searrow \\ \underline{2( \quad ) - ( \quad )} \\ - ( \quad ) \\ + \end{array}$$

$$\begin{array}{c} \frac{3x - y^2}{2xy} \\ 3( \quad ) - ( \quad )^2 \\ \hline 2( \quad )( \quad ) \\ 3( \quad ) - \end{array}$$

$$\frac{\quad}{\quad}$$

Is  $x = 5$  a solution to the following equations?

$$\begin{array}{l} x + 2 = 6 \\ \downarrow \\ + 2 = 6 \\ \\ = 6 \end{array}$$

$$\begin{array}{l} 2x + 2 = x^2 - 13 \\ \downarrow \qquad \downarrow \\ \underline{2(\quad)} + 2 = \underline{(\quad)^2} - 13 \\ \\ + 2 = \quad - 13 \\ \\ = \end{array}$$