

Name _____

Date _____

Evaluating Expressions Using Variables

A **variable** is a value that stands for an unknown. In the expression $3x + 1$, x is the variable.

To evaluate an expression with a variable, use **substitution** to replace the variable with a number. Then use the order of operations to simplify.

Consider the expression $3x + 1$. You can evaluate this expression for different values of x . Evaluate $3x + 1$ for:

$$\begin{array}{l} x = 2 \\ 3(2) + 1 \\ 6 + 1 \\ 7 \end{array}$$

$$\begin{array}{l} x = 4 \\ 3(4) + 1 \\ 12 + 1 \\ 13 \end{array}$$

$$\begin{array}{l} x = 5 \\ 3(5) + 1 \\ 15 + 1 \\ 16 \end{array}$$

Evaluate each expression for the three different values of the variable.

Evaluate $60 - y$ for:

$$y = 15$$

$$y = 30$$

$$y = 48$$

Evaluate $4h - 6$ for:

$$h = 3$$

$$h = 7$$

$$h = 11$$

Evaluate $14k$ for:

$$k = 3$$

$$k = 8$$

$$k = 10$$

Evaluate $10a \div 5$ for:

$$a = 5$$

$$a = 6$$

$$a = 9$$

Evaluate $4(p + 6)$ for:

$$p = 1$$

$$p = 6$$

$$p = 12$$

Evaluate $72 \div v^2$ for:

$$v = 2$$

$$v = 3$$

$$v = 6$$