

## 1.2: Functions and Function Notation

Standard Notation

vs.

Function Notation

$$y = x + 3$$

Solve for y when  $x = 1$ .

$$y = 1 + 3$$

$$y = 4$$

$$f(x) = x + 3$$

Find  $f(1)$ .

$$f(1) = 1 + 3$$

$$= 4$$

Note:  $f$  is not a variable.

$f(x)$  does not mean  $f$  times  $x$ .

It means: What is the value of the function,  $f$ , when  $x$  equals a certain value?

Ex. For each Function, determine the values indicated

1. If  $f(x) = 3x^2 - 2x + 1$  , find  $f(-1)$ .      2. If  $f(x) = -3x + 2$  , find  $x$  if  $f(x) = 0$ .

3. If  $f(x) = x^2 - 6x$  , find  $x$  if  $f(x) = 16$ .

4. If  $f(x) = 2x^2 - 3x$  :

a) find  $3f(2)$

b)  $f(m+1)$

c)  $f(f(x))$