

## Function Notation

When a function can be written as an equation, the symbol  $f(x)$  replaces  $y$  and is read as "the value of  $f$  at  $x$ " or simply "f of  $x$ ."

i.

**REMEMBER\*\*\***

$f(-3)$  means  $-3$  is your input and you plug it in for  $x$

$f(x) = -3$  means that your whole function is  $=$  to  $-3$  and you plug into the  $y$ .

**This does NOT mean  $f$  times  $x$ .**

Replacing  $y$  with  $f(x)$  is called writing a function in **function notation**.

Examples:

If  $f(x) = 2x - 3$ , find the following:

a.  $f(-2)$

b.  $f(7)$

c.  $f(-4)$

If  $k(x) = -7x + 1$ , find the following:

d.  $k(0)$

e.  $k(-1)$

f.  $k(5)$

1. Evaluate the following expressions given the functions below:

$$g(x) = -3x + 1$$

$$f(x) = x^2 + 7$$

$$h(x) = \frac{12}{x}$$

$$j(x) = 2x + 9$$

a.  $g(10) =$

f.  $g(b+c)$

b.  $f(3) =$

g.  $f(h(x))$

c.  $h(-2) =$

h.  $j(f(x))$

d.  $j(7) =$

i.  $g(3) + j(-8)$

e.  $h(a)$

j.  $f(h(-4))$