FUNCTION NOTATION PRACTICE: ~Key~

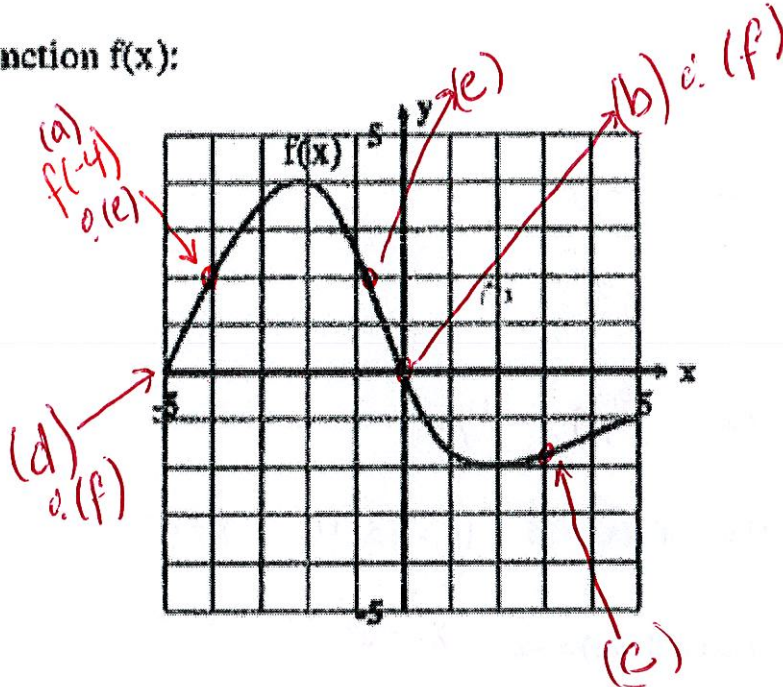**Write in function notation** (vs. an equation with 2 variables as shown below)

1) Y = 5x + 3   2) c = 12n - 100

$f(x) = 5x + 3$ $c(n) = 12n - 100$

3. Given this graph of the function f(x):

Find:

a. f(–4) = 2   b. f(0) = 0   c. f(3) ≈ –1.8   d. f(-5) 0

e. x when f(x) = 2   f. x when f(x) = 0
   ≈ –.8 ¿ –4   0 ¿ –5

Fill in the Missing Table Numbers:

4. $y = \frac{1}{2}x$

X	Y
10	5
–1	–$\frac{1}{2}$
6	3
–10	·5

$y = \frac{1}{2}x$

5. $y = \frac{x}{4} - 3$ $\frac{8}{4} - 3$

X	Y
8	–1
0	–3
–8	–5
1	–2$\frac{3}{4}$

$y = \frac{x}{4} - 3$

6. 3y = 4x + 1 $y = \frac{4}{3}x + \frac{1}{3}$

X	Y
12$\frac{1}{2}$	17
0	$\frac{1}{3}$
–1	–1
–4	–5

$3y = 4x + 1$

1. Evaluate the following expressions given the functions below:

$g(x) = -3x + 1$ $f(x) = x^2 + 7$ $h(x) = \dfrac{12}{x}$ $j(x) = 2x + 9$

 a. $g(10) =$ **-29**

 b. $f(3) =$ **16**

 c. $h(-2) =$ **-6**

 d. $j(7) =$ **23**

 e. $h(a)$ **$\dfrac{12}{a} = \dfrac{12}{a}$**

 f. Find x if $g(x) = 16$ **$16 = -3x + 1$ $x = 5$**

 g. Find x if $h(x) = -2$ **$x = -6$**

 h. Find x if $f(x) = 23$ **$x = \pm 4$**

CHALLENGE:

 i. $g(b + c) =$ **$-3(b + c) + 1 = -3b - 3c + 1$**

 j. $f(h(x)) =$ **$\left(\dfrac{12}{x}\right)^2 + 7 = \dfrac{144}{x^2} + 7$**

8). Translate into coordinate form: a. $f(-1) = 1$ **$(-1, 1)$**   b. $h(2) = 7$ **$(2, 7)$**   c. $g(1) = -1$ **$(1, -1)$**

9). Given the function $f(x) = -3x^2 + 5x$, is the point (-1, 2) on the graph?
$-3(-1)^2 + 5(-1) = -1, 8$ NO, y would need to equal 2

10).

Using the table of values, find the following:

x	0	9	8	-3	2	-5	20
f(x)	-1	4	4	2	9	8	0

 a. f(-3) **$= 2$**

 b. f(20) **$= 0$**

 c. f(8) **$= 4$**

 ✱ d. f(-1) **Need to determine function type & get equation from table**

 e. If f(x) = 9, what is x? **$= 2$**

 f. If f(x) = 4, what is x? **$= 8$**