

1.2 Function Notation Extra Practice

1. Evaluate the following expressions given the functions below:

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

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

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

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

$$h(0) = \frac{12}{0}$$

a. $g(10) =$

b. $f(3) =$

c. $h(-2) =$

$$h(0) = \frac{12}{0}$$

d. $j(7) =$

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

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

h. Find x if $g(x) = 16$

i. Find x if $h(x) = -2$

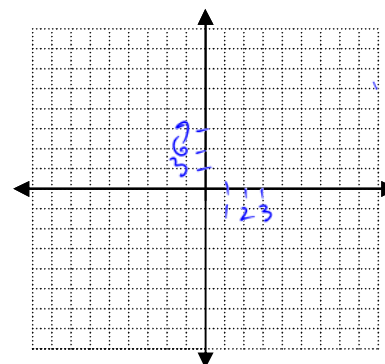
j. Find x if $f(x) = 23$

$$16 = -3x + 1 \quad \frac{15}{-3} = x$$

$$15 = -3x \Rightarrow x = -5$$

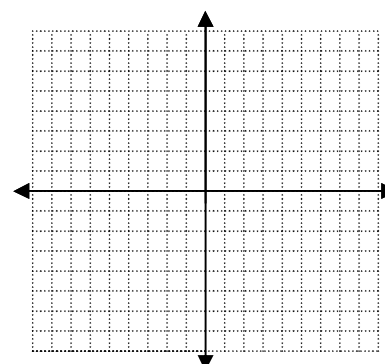
2. Given $f(x) = 3 - 4x$. Fill in the table and then sketch a graph.

x	$f(x)$
-6	
-3	
0	
1	
	-5



3. Given $f(x) = \sqrt{x+1}$. Fill in the table and then sketch a graph.

x	$f(x)$
3	
0	
-10	
2	
	6



4. Translate the following statements into coordinate points, then plot them!

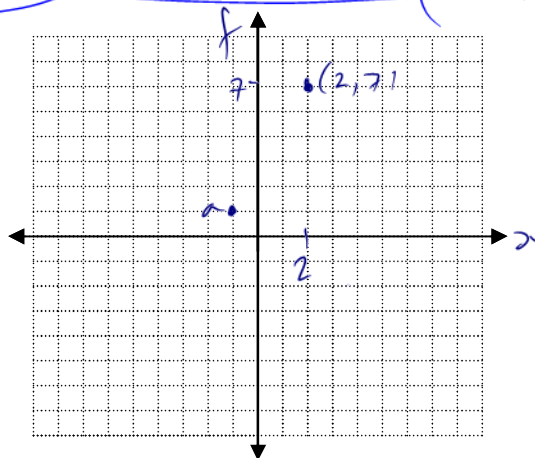
a. $f(-1) = 1 \Rightarrow (-1, 1)$

b. $f(2) = 7 \Rightarrow (2, 7)$

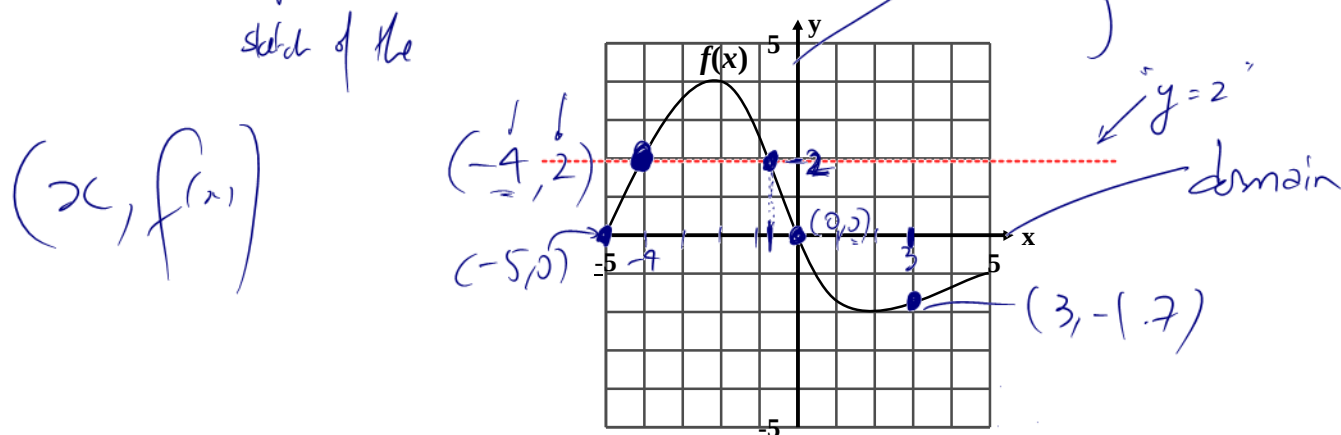
c. $f(1) = -1 \Rightarrow (1, -1)$

d. $f(3) = 0 \Rightarrow (3, 0)$

(domain, range)



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



Find:

a. $f(-4) = 2$

b. $f(0) = 2$

c. $f(3) = -1.7$

d. $f(-5) = 0$

e. x when $f(x) = 2$

$x = -4, x = -0.7$

f. x when $f(x) = 0$

$x = 0$
 $x = -5$

$x = 0, -5$

APPLICATION

6. Swine flu is attacking Porkopolis. The function below determines how many people have swine where t = time in days and S = the number of people in thousands. $S(t) = 9t - 4$

a. Find $S(4)$. $= 9(4) - 4$
 $= 36 - 4 = 32$

b. What does $S(4)$ mean?

32,000 are infected w/ swine flu

c. Find t when $S(t) = 23$.

$23 = 9t - 4$
 $27 = 9t \Rightarrow t = \frac{27}{9} = 3$

d. What does $S(t) = 23$ mean?

3 days, 23,000 people are infected

e. Graph the function.

