

NAME: Key DATE: 9/6

EVALUATING FUNCTIONS

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. $g(10) = -29$

b. $f(3) = 16$

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

d. $j(7) = 23$

e. $g(-5) = 16$

f. $f(-5) = 32$

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

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

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

$$x = -5$$

$$x = -6$$

$$x = \pm 4$$

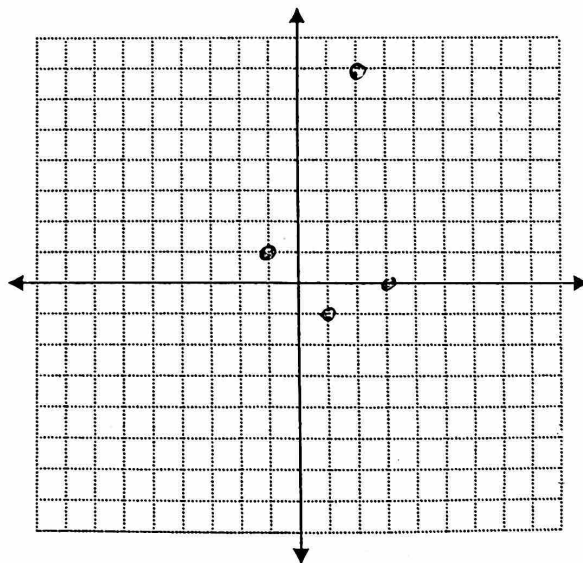
2. Change the following statements into coordinate points and then plot them!

a. $f(-1) = 1$

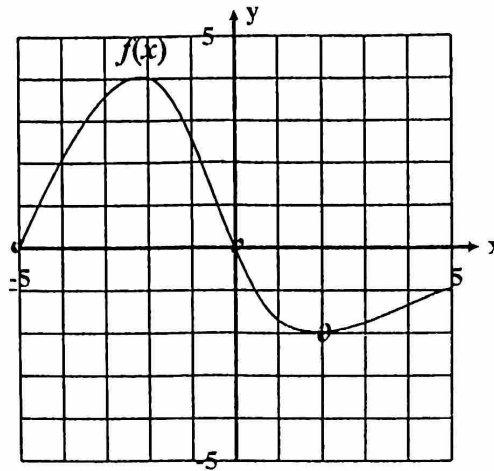
b. $f(2) = 7$

c. $f(1) = -1$

d. $f(3) = 0$



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 $f(x) = -2$
 $x = 2$

f. x when $f(x) = 0$
 $x = -5$
 $x = 0$

APPLICATION

4. Swine flu is attacking the North Pole. The function below determines how many elves have swine flu where t = time in days and S = the number of people in thousands.

$$S(t) = 9t - 4$$

a. Find $S(4)$. $= 32$

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

$32,000$ elves are sick

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

$$t = 3$$

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

when will $23,000$
elves be sick
(days)

