

Function Notation PRACTICE Quiz**DATE:** _____

1. Evaluate the following expressions given the functions below:

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

a. $g(10) =$

b. $f(3) =$

c. $h(-2) =$

d. $j(7) =$

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

f. Find x if $j(x) = -17$

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

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

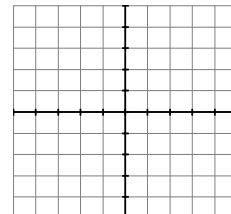
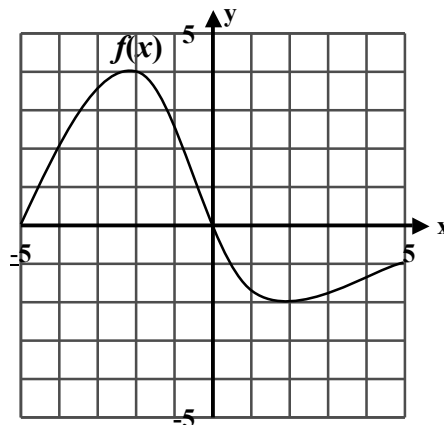
2. Change the following statements into coordinate points and then plot them!

a. $f(-1) = 1$

c. $f(1) = -1$

b. $f(2) = 3$

d. $f(3) = 0$

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

Find:

a. $f(-4) =$

b. $f(0) =$

c. $f(3) =$

d. $f(-5) =$

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

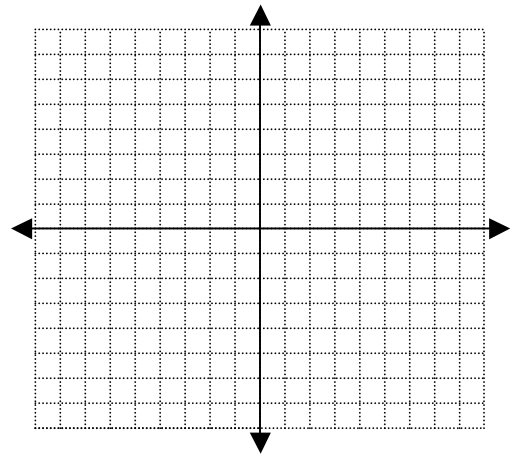
f. x when $f(x) = 0$

APPLICATION

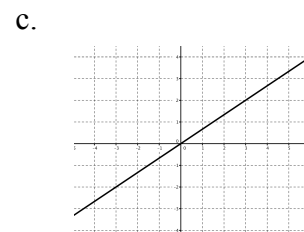
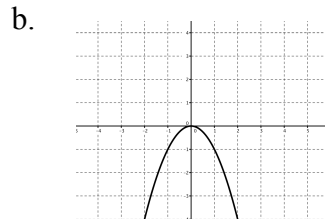
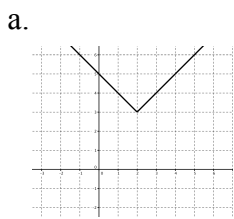
4. Swine flu is attacking the North Pole. The function below determines how many elves have swine flu where t = time in days and S = the number of people in thousands.

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

- a. Find $S(4)$.
- b. What does $S(4)$ mean?
- c. Find t when $S(t) = 23$.
- d. What does $S(t) = 23$ mean?
- e. Graph the function.



5. Are the following functions odd, even, or neither? Clearly justify your answer.



Continue to identify as odd, even, and neither and use appropriate calculations to justify.

d. $f(x) = 2x + 3$

e. $g(x) = 3x^2$

f. $h(x) = x^3$

6. Given: $f(x) = 6 - x$ $g(x) = 3x^2$ $h(x) = 666$ $j(x) = 4x$

Find the following. Show appropriate calculations.

a. $g(f(2))$

b. $h(j(-2))$

c. $j(g(-3))$

d. $f(g(m))$

e. $j(f(x))$

f. $h(j(g(f(x))))$ (think to save time)