

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Characteristics of Functions**

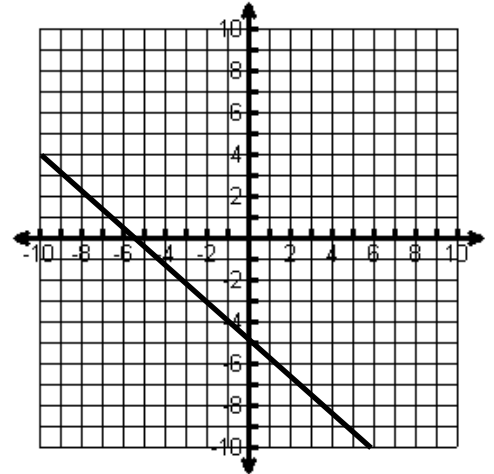
1.

- a. Domain: \_\_\_\_\_
- b. Range: \_\_\_\_\_
- c. Increasing: \_\_\_\_\_
- d. Decreasing: \_\_\_\_\_
- e. y – int: \_\_\_\_\_
- f. x – int: \_\_\_\_\_

$x \rightarrow \text{_____} \quad f(x) \rightarrow \text{_____}$

g. End Behavior:

$x \rightarrow \text{_____} \quad f(x) \rightarrow \text{_____}$



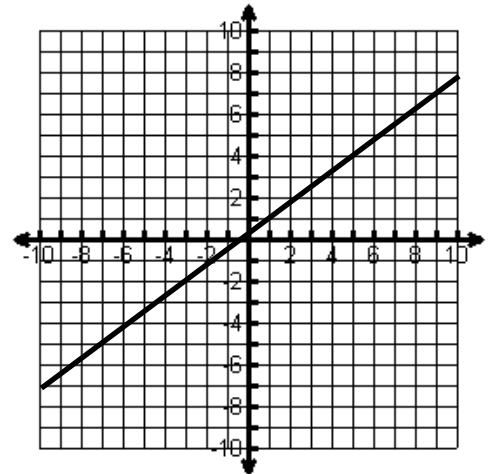
2.

- a. Range: \_\_\_\_\_
- b. Roots : \_\_\_\_\_
- c. Increasing: \_\_\_\_\_
- d. y - int: \_\_\_\_\_
- e. Rate of Change  $[-2, 1]$ : \_\_\_\_\_

$x \rightarrow \text{_____} \quad f(x) \rightarrow \text{_____}$

f. End Behavior:

$x \rightarrow \text{_____} \quad f(x) \rightarrow \text{_____}$



3.  $f(x) = 3x - 12$

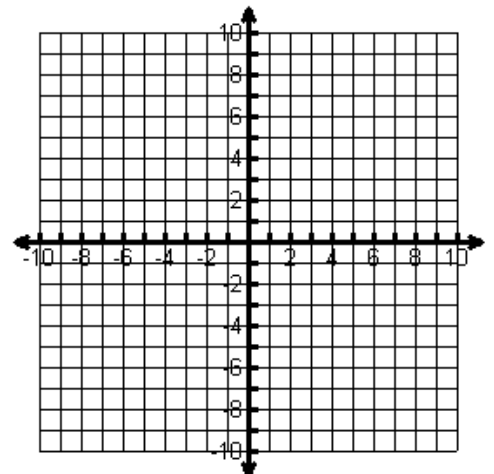
- a. Domain: \_\_\_\_\_
- b. y - int: \_\_\_\_\_
- c. Solutions: \_\_\_\_\_
- d. Decreasing: \_\_\_\_\_
- e. Is this a function? Why or why not?

\_\_\_\_\_

$x \rightarrow \text{_____} \quad f(x) \rightarrow \text{_____}$

f. End Behavior:

$x \rightarrow \text{_____} \quad f(x) \rightarrow \text{_____}$



4.  $8x + 2y = 6$

a. Increasing: \_\_\_\_\_ b. Decreasing: \_\_\_\_\_

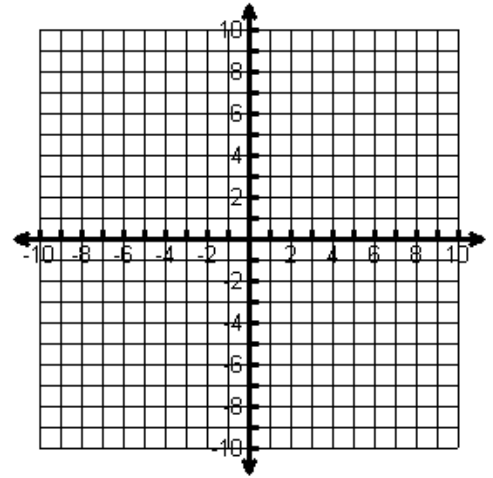
c. y - int: \_\_\_\_\_ d. zeros: \_\_\_\_\_

e. Rate of Change  $[-4, 6]$ : \_\_\_\_\_

$x \rightarrow$  \_\_\_\_\_  $f(x) \rightarrow$  \_\_\_\_\_

f. End Behavior:

$x \rightarrow$  \_\_\_\_\_  $f(x) \rightarrow$  \_\_\_\_\_



5.  $f(x) = 6$

a. Domain: \_\_\_\_\_ b. Increasing: \_\_\_\_\_

c. x - int: \_\_\_\_\_ d. Range: \_\_\_\_\_

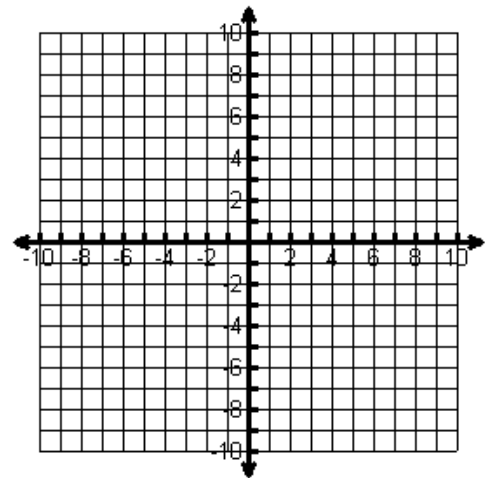
e. Is this a function? Why or why not?

\_\_\_\_\_

$x \rightarrow$  \_\_\_\_\_  $f(x) \rightarrow$  \_\_\_\_\_

f. End Behavior:

$x \rightarrow$  \_\_\_\_\_  $f(x) \rightarrow$  \_\_\_\_\_



**Review:** Given  $f(x) = -x^2 + 4x - 1$     $g(x) = 2x^2 - 5x$     $h(x) = -2x + 7$

6.  $f(-2) =$  \_\_\_\_\_

7.  $f(g(1)) =$  \_\_\_\_\_

8.  $h(2) + f(3) =$  \_\_\_\_\_

9.  $h(x+1) =$  \_\_\_\_\_

10.  $3g(2) + 1 =$  \_\_\_\_\_

11.  $h(\text{_____}) = 15$