## **SECTION 3.2: LINEAR FUNCTIONS**

Homework: \_\_\_\_\_

## Learning Targets:

- 3a. Understanding of determining if a relation is a function (linear or nonlinear).
- 3b. Understanding of when functions are discrete or continuous.

Linear Function: a non-\_\_\_\_\_ line. It has a \_\_\_\_\_ rate of change

and looks like a \_\_\_\_\_. Usually written in the form \_\_\_\_\_\_

| x | -2 | 1 | 4 | 7 | 10 | 13 |
|---|----|---|---|---|----|----|
| у | 8  | 6 | 4 | 2 | 0  | -2 |

Nonlinear Function: a function that does NOT have a \_\_\_\_\_ rate of change.

Nonlinear functions have many forms

| x | 0 | 1 | 2 | 3 | 4  | 5  |
|---|---|---|---|---|----|----|
| у | 1 | 2 | 4 | 8 | 16 | 32 |

| Discrete Domain:           | A set of input values with             | values. | A function is discrete if |  |
|----------------------------|--|---------|---------------------------|--|
|                            | it cannot have                         |         |                           |  |
| <u>Continuous Domain</u> : | A set of input values that consists of |         | values. A function is     |  |

continuous if it CAN have \_\_\_\_\_.