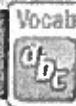**Vocabulary**

Vocabulary Start-Up

A **linear function** is a function whose graph is a line.
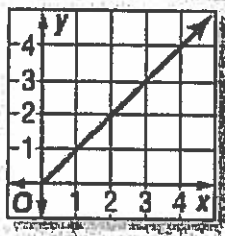
Linear
forms a straight line

Everyday Definition of Function
works properly

linear function

What do you notice about the graph?
forms a line

Math Definition of Function
a relation that gives exactly one output for one input

Linear Function – A function whose graph is a ___line___.

A relationship that assigns exactly ___one___ output value to ___one___ input value.

Guided Practice

1.) Write an _equation_ to represent the function shown in the table.

Input (x)	0	1	2	3	4
Output (y)	0	4	8	12	16

$x \cdot 4 = y$ OR $4x = y$

2.) Write an _equation_ to represent the function shown in the table.

Input (x)	1	2	4	8	16
Output (y)	5	10	20	40	80

$x \cdot 5 = y$ OR $5x = y$

3.) Graph the function y = x + 3

you choose!

↓
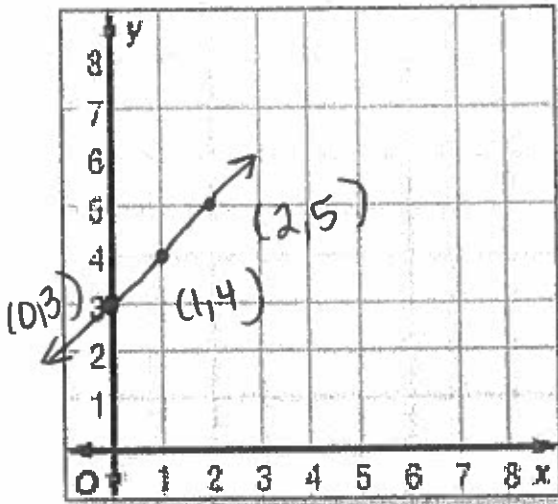
(0,3)
(2,5)
(0,3)
(1,4)
(1,4)
(2,5)

Input (x)	X + 3	Output (y)
0	0+3	3
1	1+3	4
2	2+3	5

4.) The graph below shows the number of inches of rainfall (x) equivalent to inches of snow (y). Make a function table for the input-output values. Write an equation from the graph that can be used to find the total inches of snow (y) equivalent to inches of rain (x).

Snowfall (in.)

Rainfall (in.)
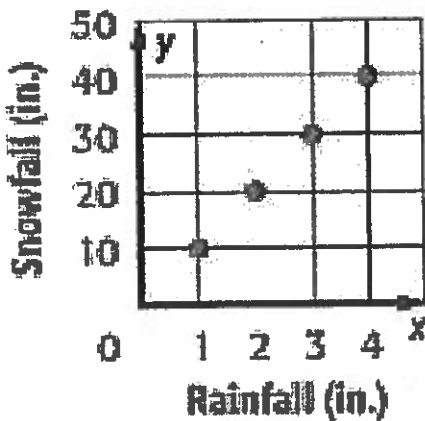
· 10

Rain (x)	Snow (y)
1	10
2	20
3	30
4	40

$$x \cdot 10 = y$$
$$10x = y$$

Partner Talk

Write an equation to represent the function.

.6

Input (x)	1	2	3	4	5
Output (y)	6	12	18	24	30

$$x \cdot 6 = y \qquad 6x = y$$

Building on the Essential Question – How are ordered pairs of a function used to create the graph of the function? Plot the ordered pairs on the graph and then draw a line.

Rate Yourself – Are you ready to move one? Shade the section that applies.

YES   ?   NO