6.1-6.2 & 4.1-4.3 Review

In your own words, describe what a function is? How is it different from other relationships?

1) a) What variable represents the input in a function?

b) What are two other names for the input?

2) a) What variable represents the output in a function?

b) What are two other names for the output?

Tell whether the pairing is a function.

3. $\{(1, 3), (2, 0), (4, 4)\}$

4. $\{(-1, 1), (7, 2), (8, 5)\}$

5. $\{(0, -5), (2, -1), (9, 7)\}$

Determine whether the relation is a function.

6.

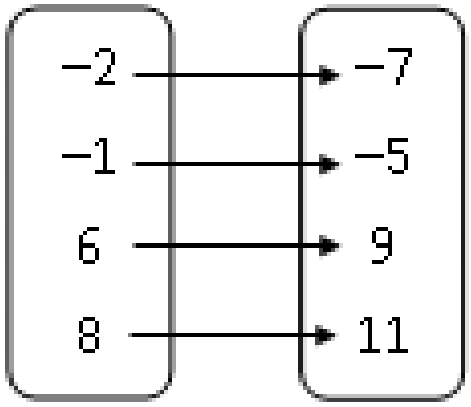
x	2	3	4	5
y	4	7	10	13

7.

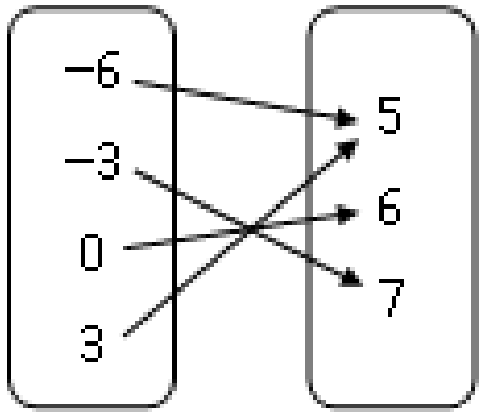
x	3	4	3	2
y	-2	3	2	4

List the ordered pairs shown in the mapping diagram.

8)



9)



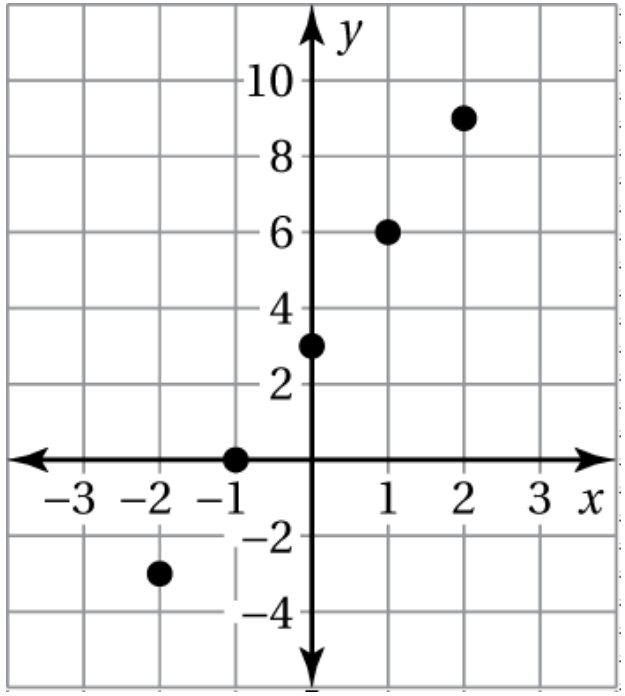
Draw a mapping diagram of the ordered pairs.

10) $(-15, -17), (-9, -11), (-6, 4), (-2, 8)$

11) $(-5, 3), (-3, 1), (2, 1), (6, 3)$

Draw a mapping diagram of the ordered pairs derived from the graph.

12)



Find the value of y for the given value of x.

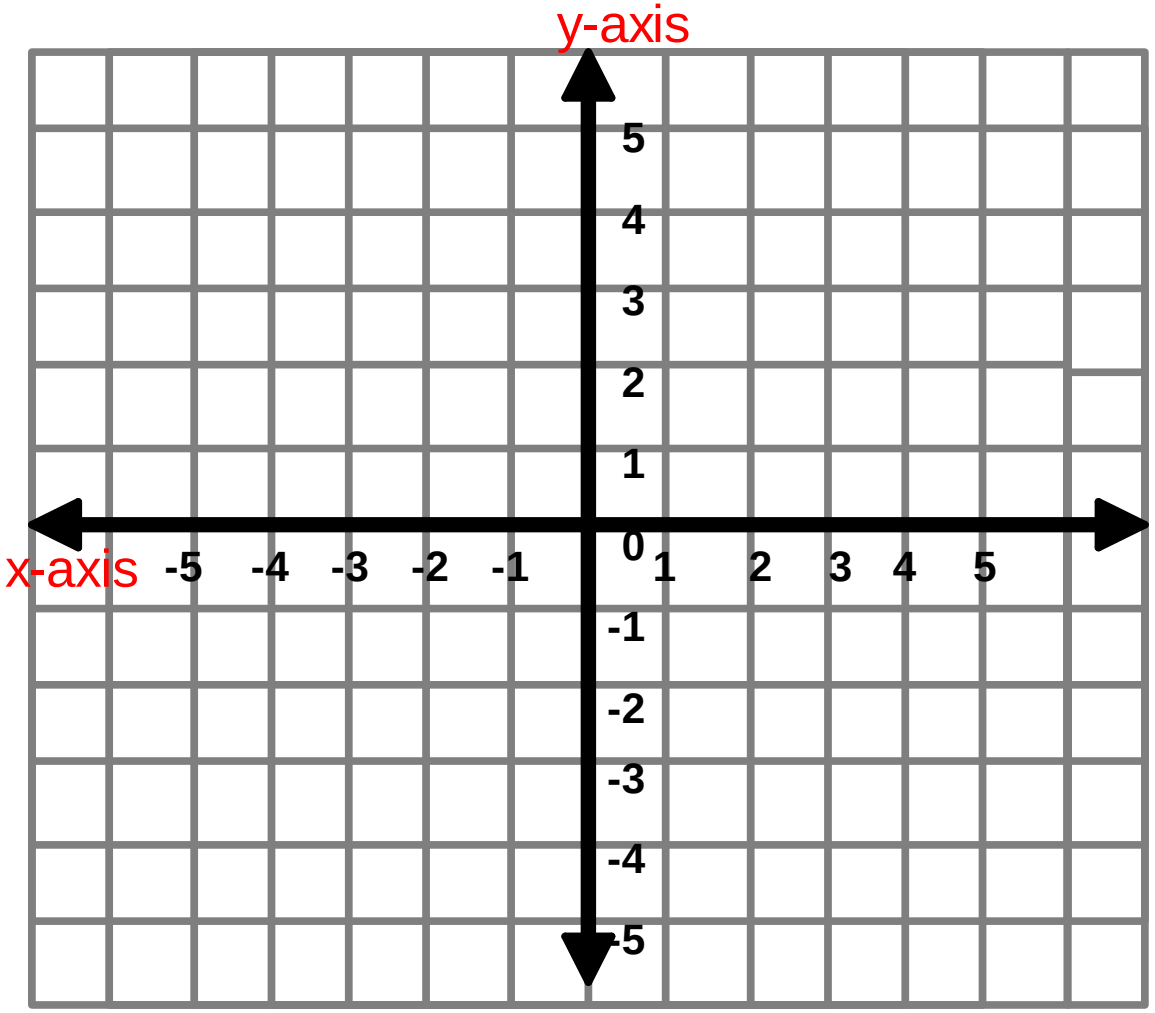
13) $y = 10x;\ x = -3$

14) $y = 6 - 2x;\ x = 11$

Graphing Using a Chart

1) Graph $y = 2x - 3$

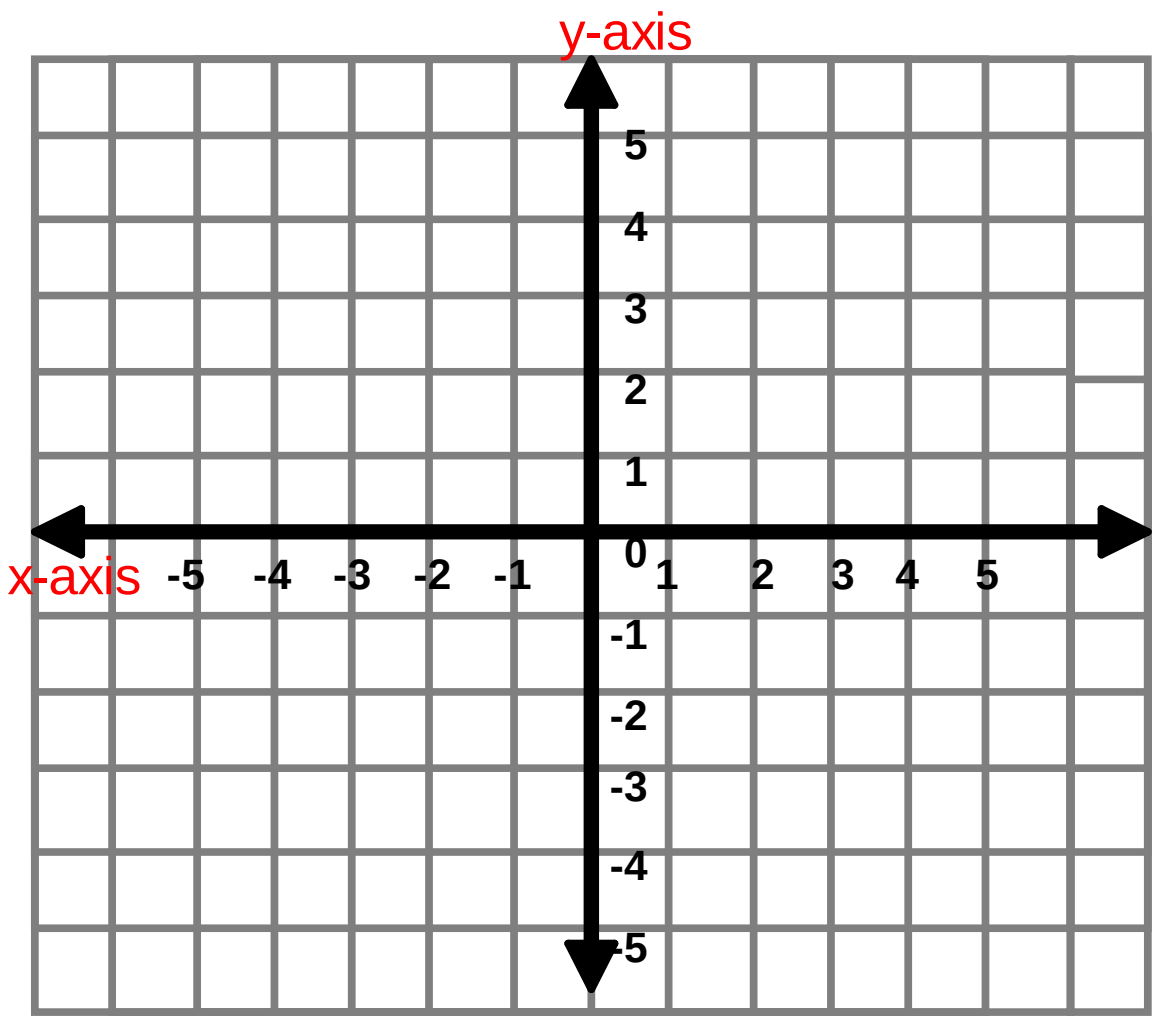
x	y



2) Graph the linear equation.

$$y = -x + 4$$

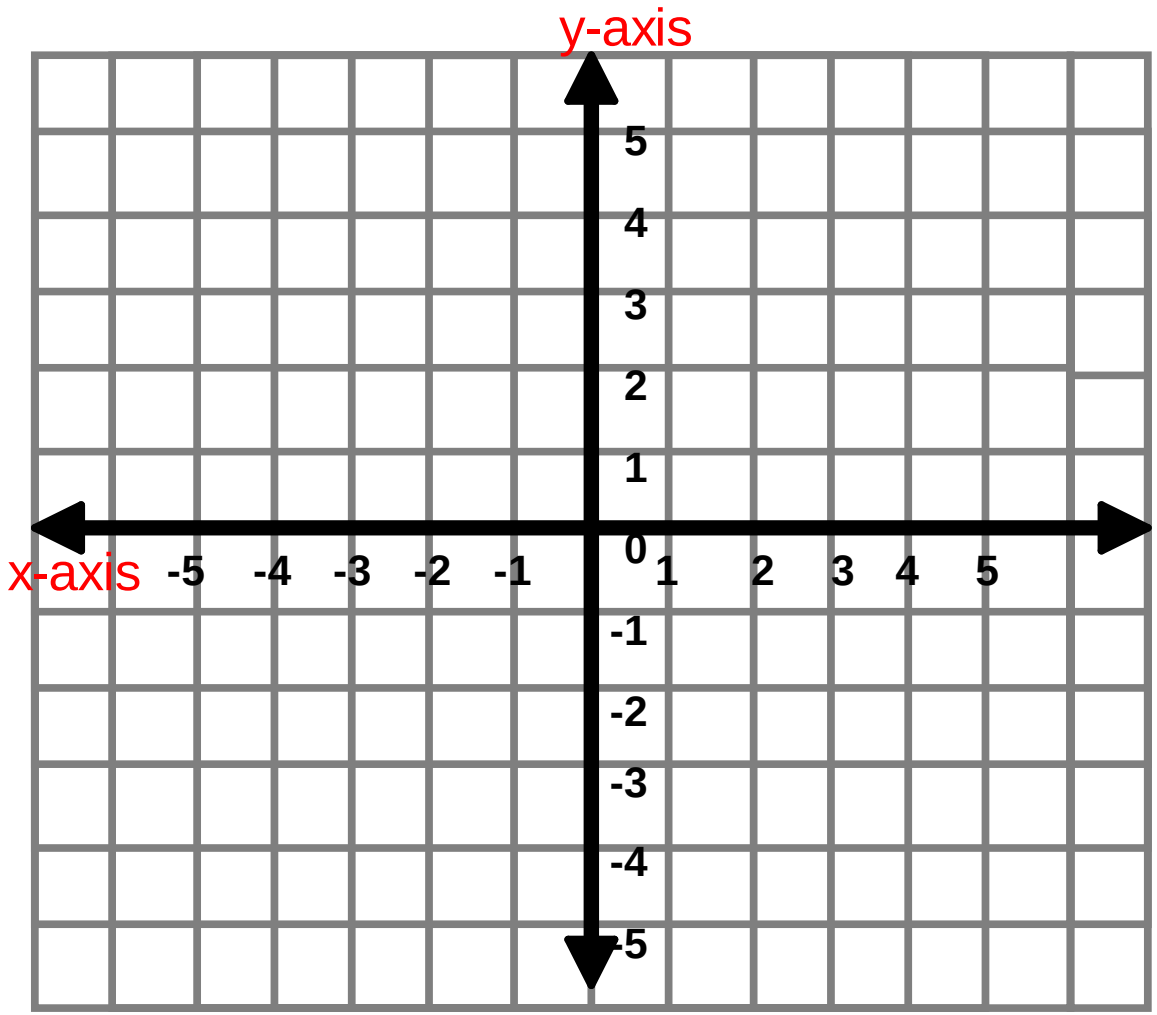
x	y



2) Graph the linear equation.

$$-3x + y = -1$$

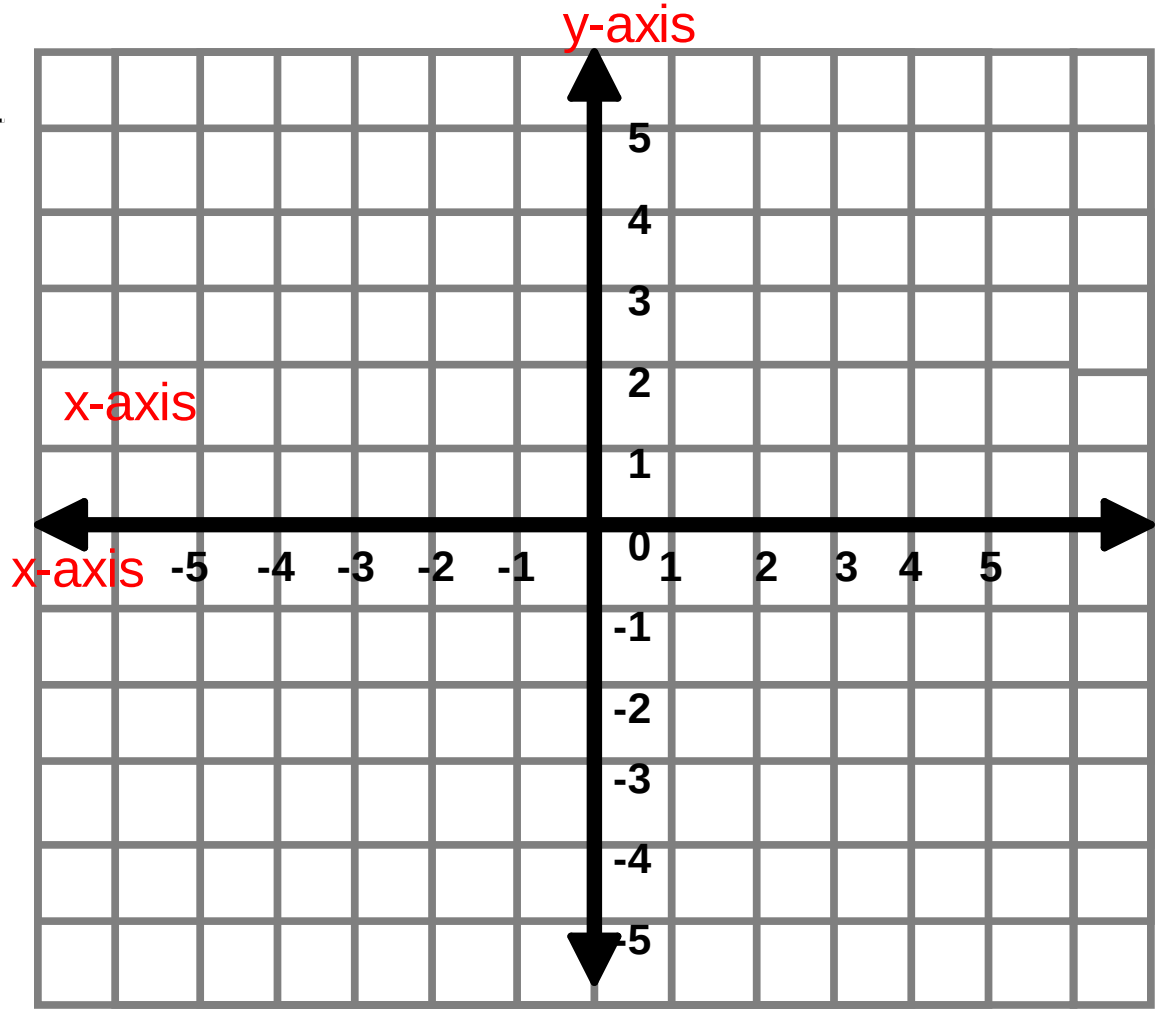
x	y



Using a T-Chart

4) Graph $y = \frac{1}{2}x + 1$ **using T-chart.**

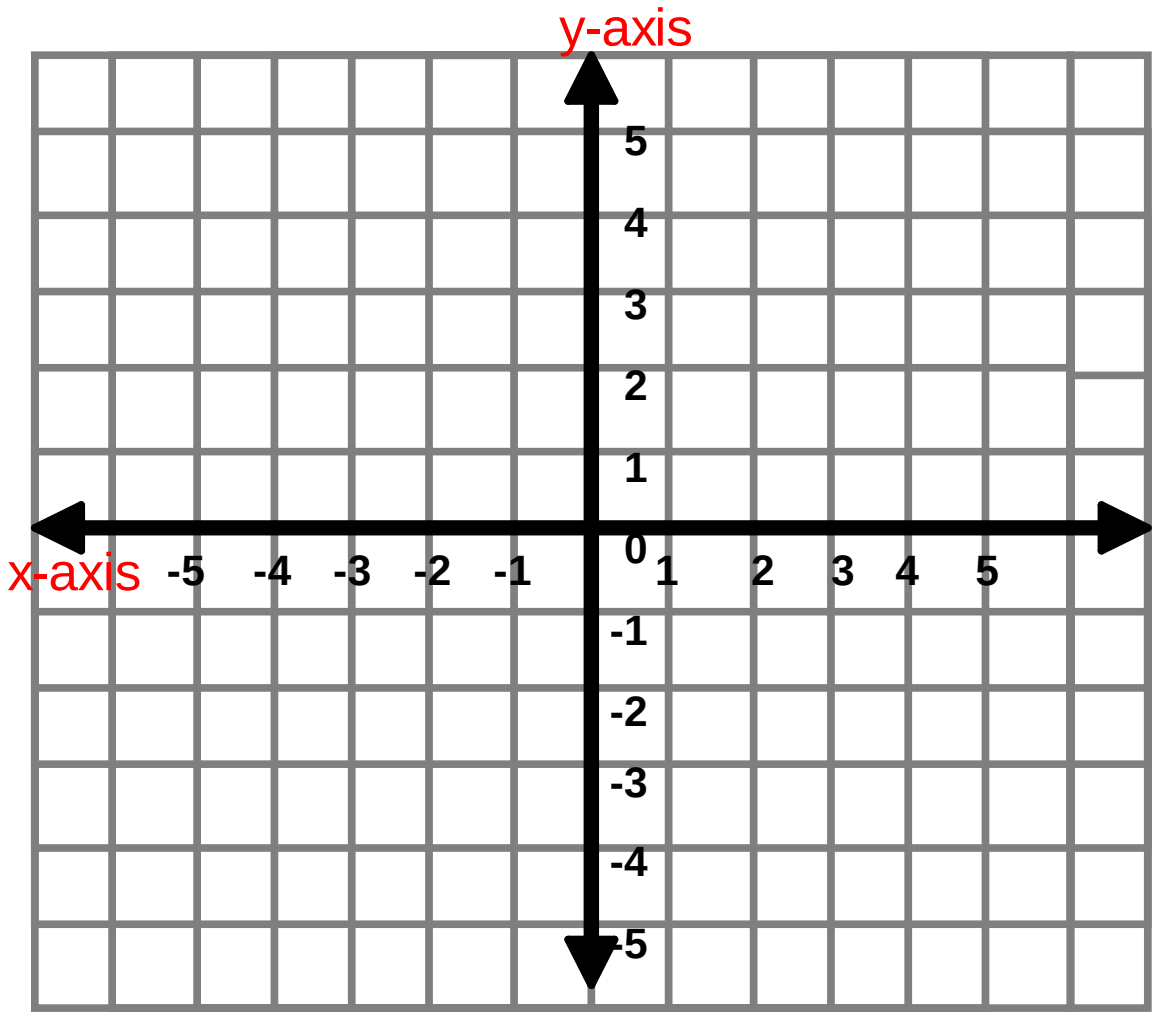
x	y



Graphing Horizontal and Vertical Lines

5) $y = 4$

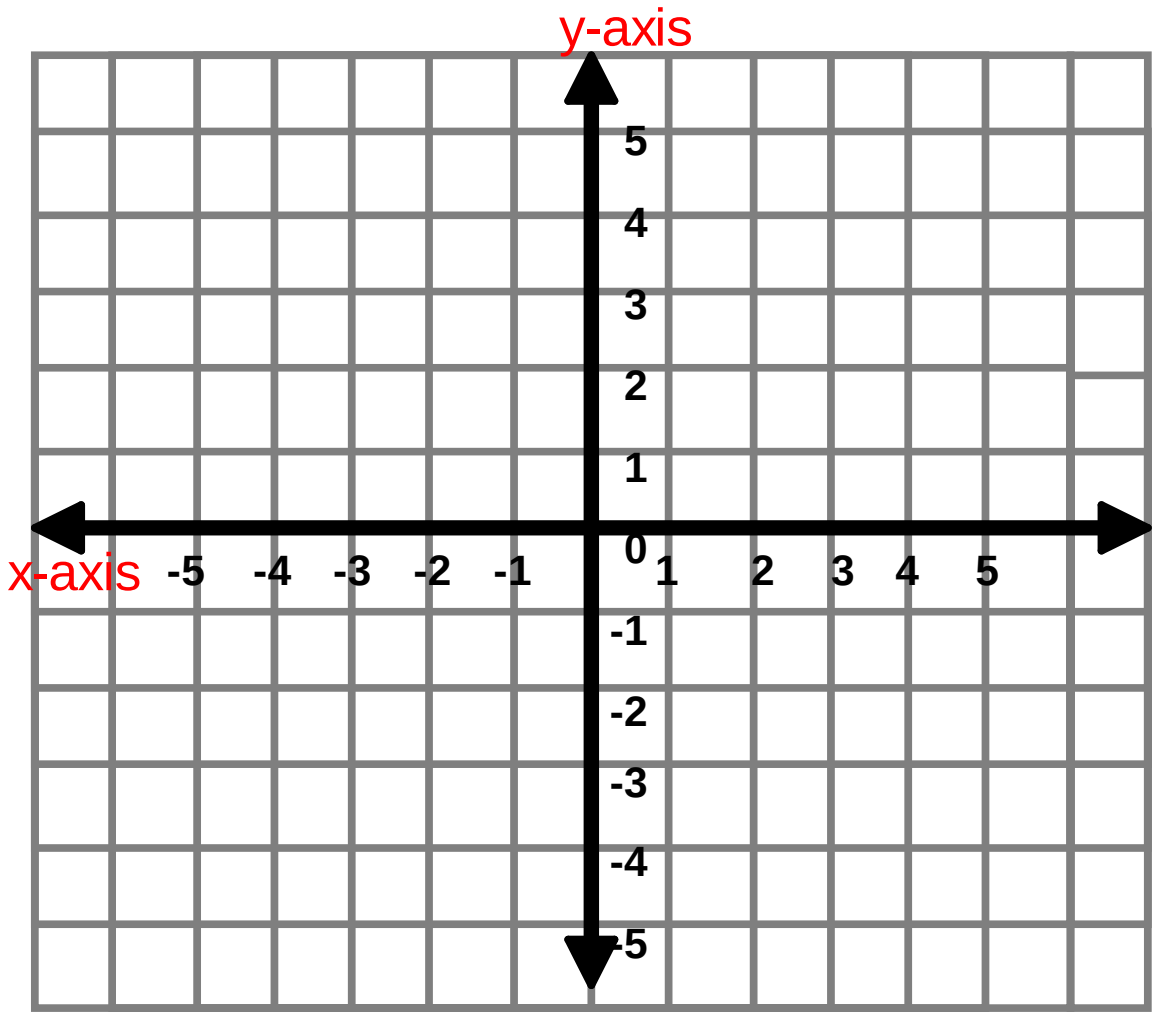
x	y



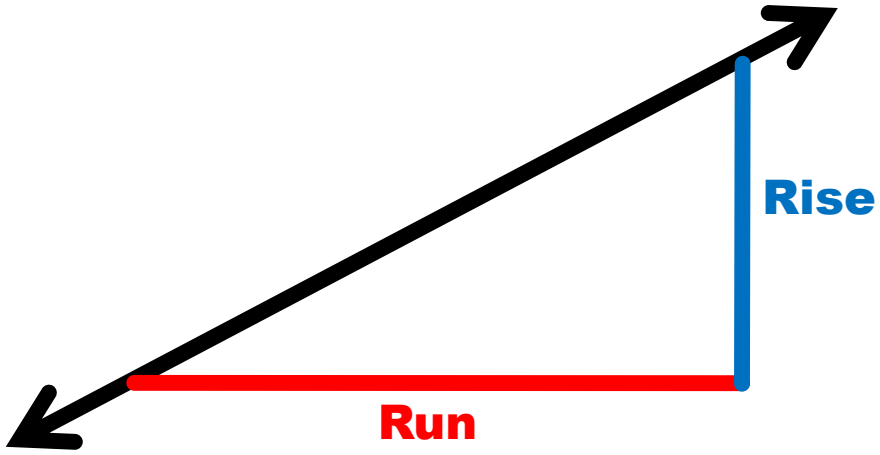
Graphing Horizontal and Vertical Lines

6) $x = 3$

x	y



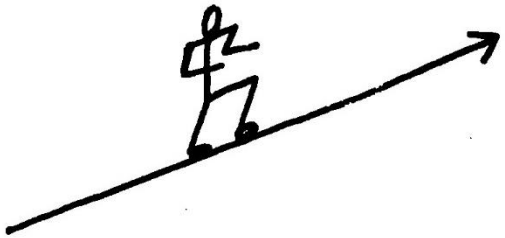
SLOPE OF A LINE



$$slope = \frac{rise}{run}$$

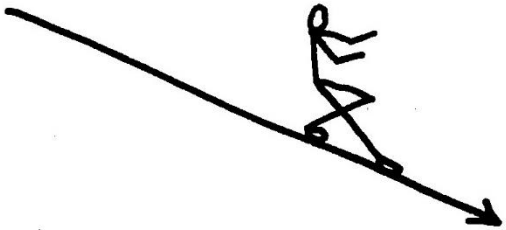
SLOPE OF A LINE

going up



positive slope

going down



negative slope

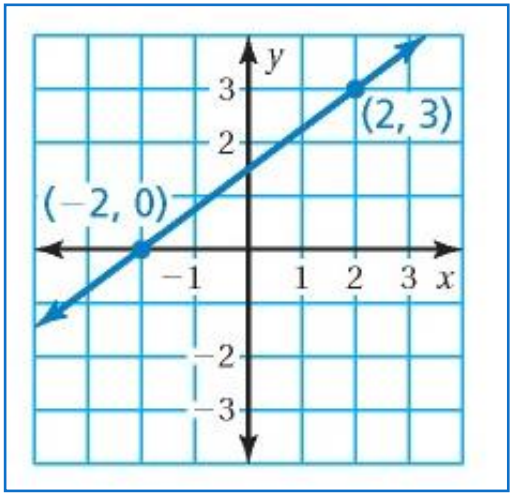
level

0 slope

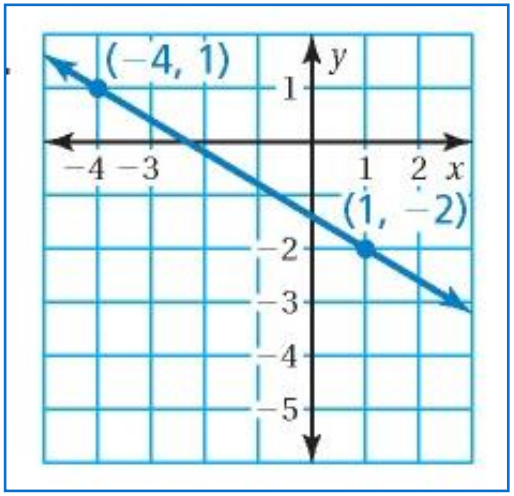
Find the slope of each line.

$$slope = \frac{rise}{run}$$

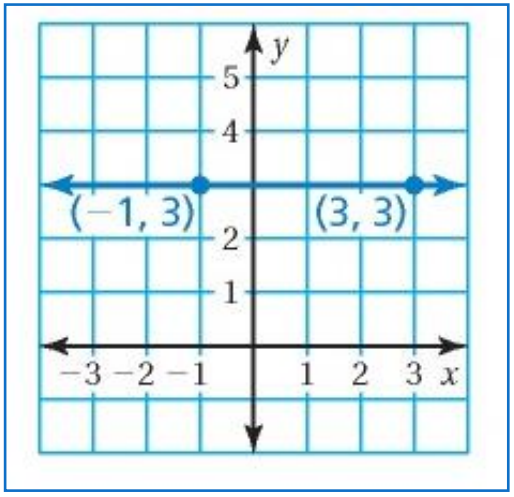
7)



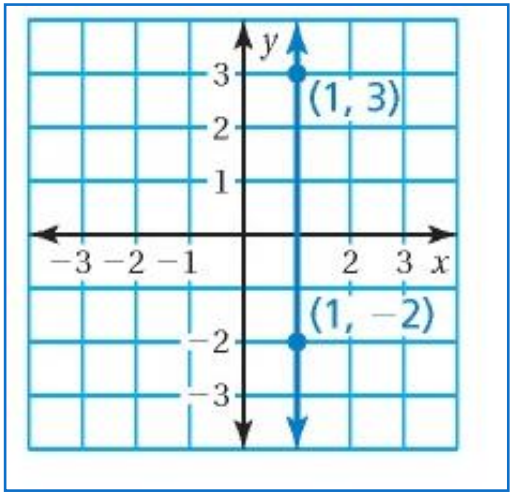
8)



9)



10)



SLOPE FORMULA

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Find the slope between the two points:

11) $(0, 7)$ ***and*** $(-4, -1)$

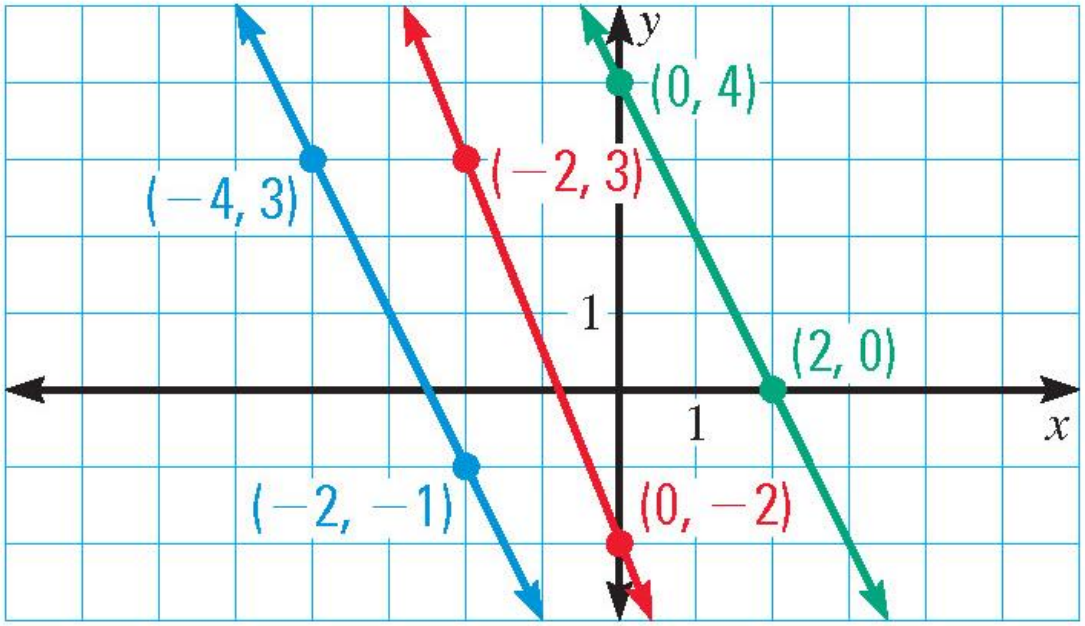
12) $(-2, 5)$ ***and*** $(9, 5)$

Practice

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Determine which lines are parallel.

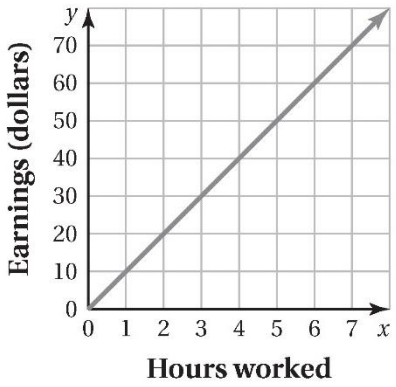
13)



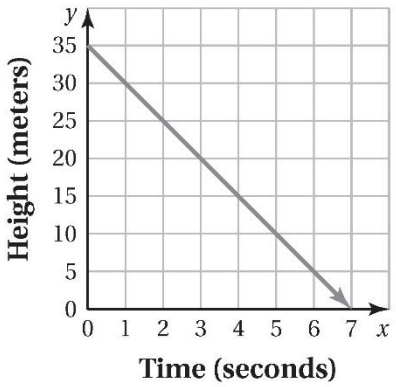
Identify if the following is a proportional relationship.

14)

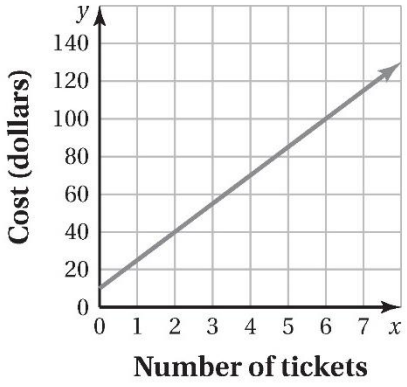
a.



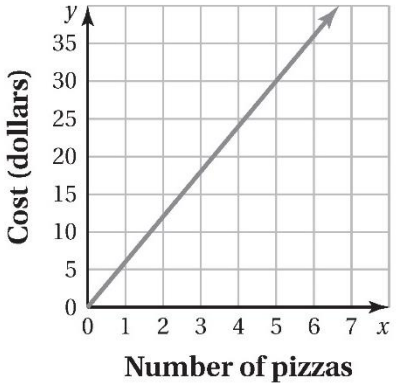
b.



c.



d.



e.

Laps, x	1	2	3	4
Time (seconds), y	90	200	325	480

f.

Cups of Sugar, x	$\frac{1}{2}$	1	$1\frac{1}{2}$	2
Cups of Flour, y	1	2	3	4

15) **The cost y (in dollars) for x gigabytes of data on an Internet plan is represented by $y = 10x$. Graph the equation and interpret the slope.**