

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

7/8A

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

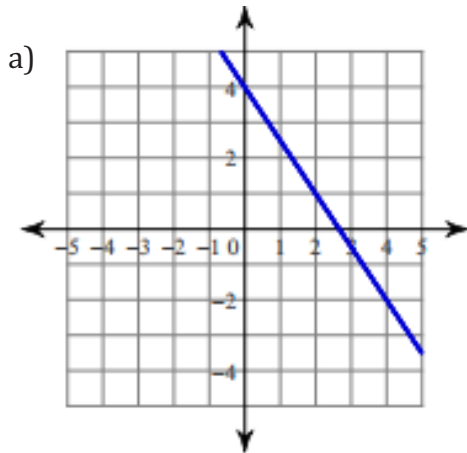
Classwork 9.5

## Writing Linear Equations

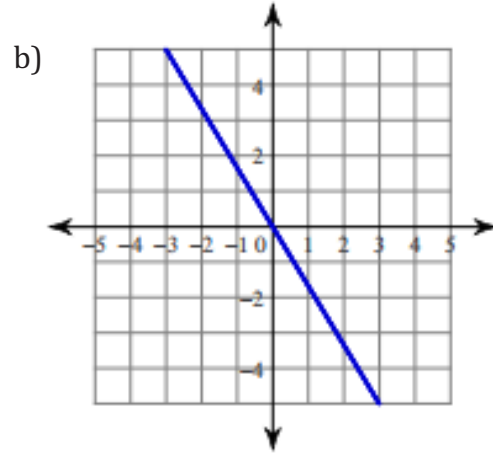
### FROM A GRAPH:

1. identify **2 points**
2. use these 2 points to count the **slope**
3. identify the **y-intercept**
4. **substitute** these two values into the equation  $y = mx + b$

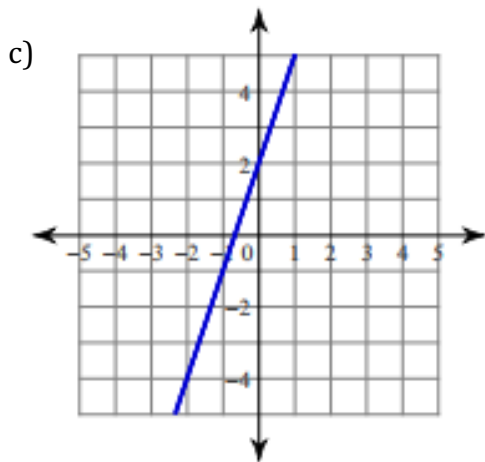
**Example 1:** Write the equation of the lines below in slope-intercept form.



\_\_\_\_\_

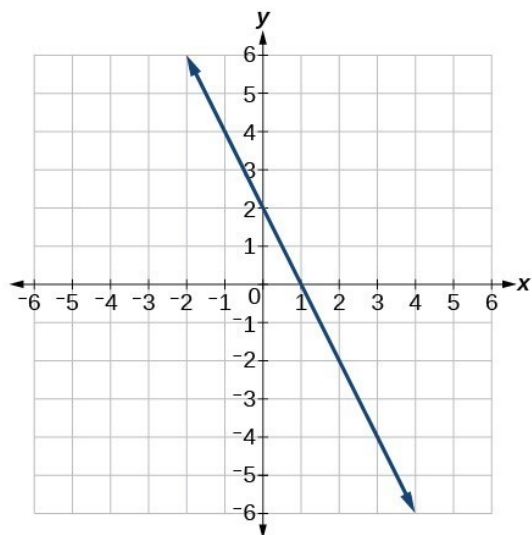


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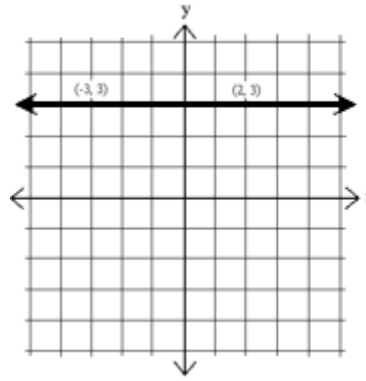
**Try It:** Write the linear equation of the following graph.



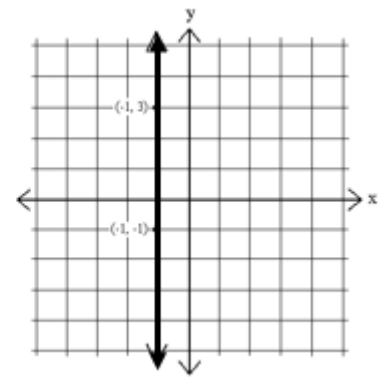
\_\_\_\_\_

**Horizontal lines:**

- are parallel to the x-axis
- Will always be "y = "



The equation is: \_\_\_\_\_



The equation is: \_\_\_\_\_

**Vertical lines:**

- are parallel to the y-axis
- Will always be "x = "

**FROM A TABLE:**

1. use the **slope formula** and any 2 coordinates to find the slope
2. identify the **y-intercept**
3. **substitute** these two values into the equation  $y = mx + b$

**Example 2:** Write the linear equation for each table below.

a)

|          |     |     |     |     |     |
|----------|-----|-----|-----|-----|-----|
| <b>x</b> | 0   | 1   | 2   | 3   | 4   |
| <b>y</b> | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 |

b)

|          |   |   |   |    |    |
|----------|---|---|---|----|----|
| <b>x</b> | 0 | 1 | 2 | 3  | 4  |
| <b>y</b> | 5 | 3 | 1 | -1 | -3 |

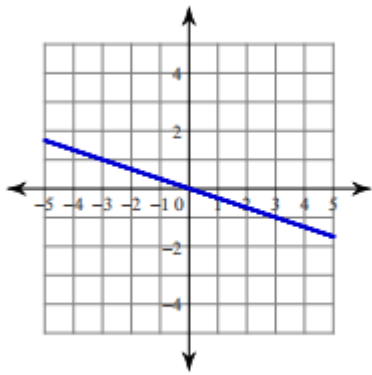
**Try It:** Write the linear equation from the table below.

|          |          |
|----------|----------|
| <b>x</b> | <b>y</b> |
| 0        | -3       |
| 2        | 2        |
| 4        | 7        |
| 6        | 12       |

**On your own!**

1. Write the equation of each linear function shown in the coordinate plane below.

a)

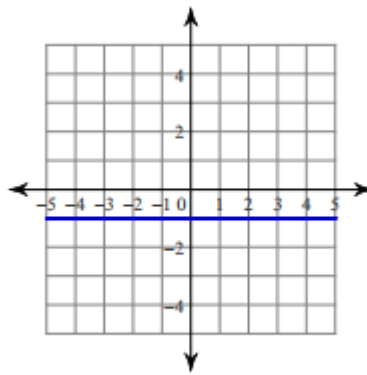


m =

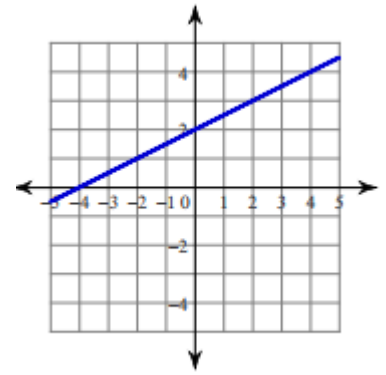
b =

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b)



c)



2. Write a linear equation from the following tables.

a)

|          |   |   |   |   |    |
|----------|---|---|---|---|----|
| <b>x</b> | 0 | 1 | 2 | 3 | 4  |
| <b>y</b> | 6 | 7 | 8 | 9 | 10 |

b)

|          |   |    |    |    |     |
|----------|---|----|----|----|-----|
| <b>x</b> | 0 | 1  | 2  | 3  | 4   |
| <b>y</b> | 3 | -1 | -5 | -9 | -13 |