

Name: _____

Period: _____

Warm-up 21

1. Solve the following equation for
- k

$$-3k + 6 = 21$$

$$-3k + 6 = 21$$

~~a. $k = 9$~~

~~b. $k = 5$~~

c. $k = -5$

d. $k = -9$

$$\underline{-6 \quad -6}$$

$$\underline{-3k = 15}$$

$$\underline{-3 \quad -3}$$

$$k = -5$$

2. Aly wants to save up for a new sweatshirt. She has \$5 and earns \$3 per week.

How much will she have at the end of

a. at the end of week 1? 8

b. at the end of week 2? 11

c. at the end of week 3? 14

- d. When will Aly have enough money to pay for a \$22 sweatshirt?

Week 4: 17

5: 20

6: 23

week 6

- e. Write an equation to represent how much money Aly has on any given week.

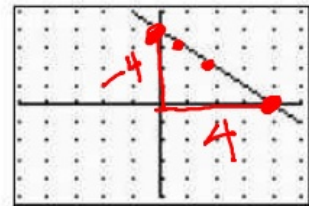
$$y = \frac{3}{1}x + 5$$

$$y = mx + b$$

$$y = 3x + 5$$

3. We have defined the slope of a line as the
- rise
- over the
- run
-
- and written the slope of the line as a fraction like
- $m = \frac{\text{rise}}{\text{run}}$

4. Use the graph below to answer the questions



- a. Is the slope of the line positive or
- negative
- ?

b. What is the numeric value of the slope? $m = \frac{-4}{4} = -\frac{1}{1}$

- c. Where does the line cross the
- y
- axis?
- 4

- d. Write the equation of the line in
- $y = mx + b$
- form.

$$y = \frac{-4}{4}x + 4$$

$$y = -\frac{1}{1}x + 4$$

$$y = -x + 4$$

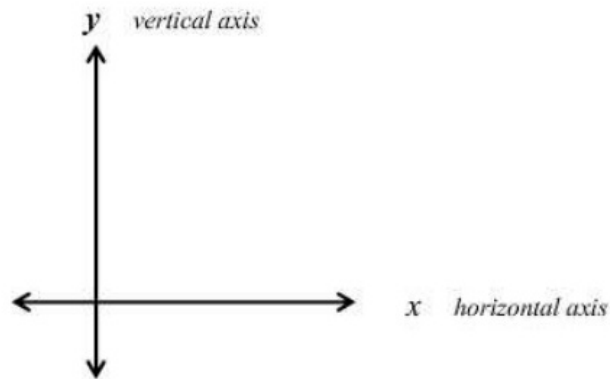
Notes: Linear Growth using Tables (part 2)

Review

$$y = (\text{change})x + \text{beginning}$$

Equation

in other words . . . slope – intercept form of a line : $y = mx + b$



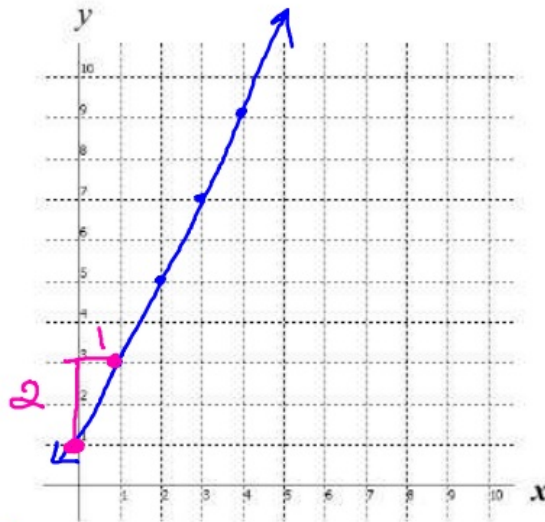
Find the equation from the Table. $y = \text{change} (x) + \text{beginning}.$

Example 1:

Graph the points in the table.

<i>horizontal</i> x	<i>vertical</i> y
0	1
1	3
2	5
3	7
4	9

Handwritten notes: A pink arrow labeled '+1' points from x=0 to x=1. A pink arrow labeled '+2' points from y=1 to y=3. Another pink arrow labeled '+2' points from y=3 to y=5. A third pink arrow labeled '+2' points from y=5 to y=7.



How is the pattern changing (m) ? $\frac{2}{1}$ $\frac{\text{vertical change}}{\text{horizontal change}}$

Where does the pattern touch the y - axis - step 0 (b) ? 1

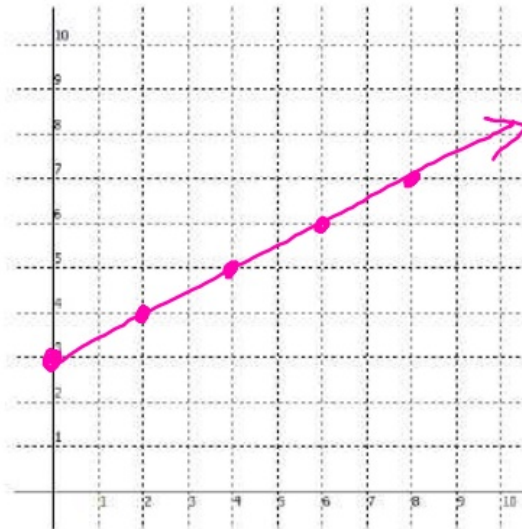
Write an equation $y = mx + b$ to represent the pattern $y = \frac{2}{1}x + 1$

$$y = 2x + 1$$

Example 2:

Graph the points in the table.

x	y
0	3
2	4
4	5
6	6
8	7



How is the pattern changing (m)? $\frac{1}{2}$ $\frac{\text{vertical change}}{\text{horizontal change}}$

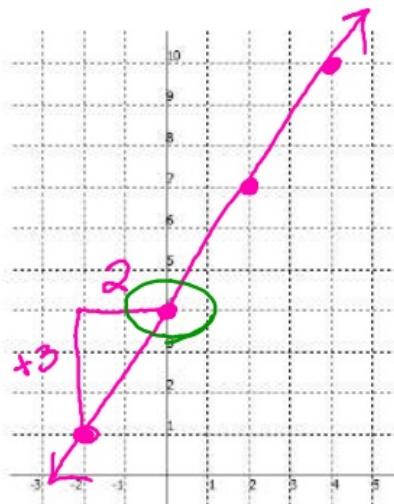
Where does the pattern touch the y -axis - step 0 (b)? 3

Write an equation $y = mx + b$ to represent the pattern $y = \frac{1}{2}x + 3$

Example 3:

Graph the points in the table.

x	y
-2	1
0	4
2	7
4	10



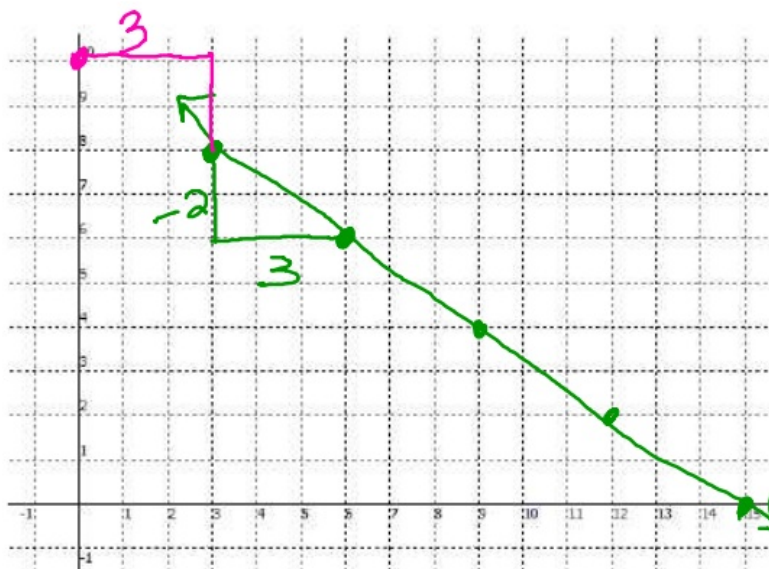
How is the pattern changing (m)? $\frac{3}{2}$ $\frac{\text{vertical change}}{\text{horizontal change}}$

Where does the pattern touch the y -axis - step 0 (b)? 4

Write an equation $y = mx + b$ to represent the pattern $y = \frac{3}{2}x + 4$

Example 4:

x	y
3	8
6	6
9	4
12	2
15	0



How is the pattern changing (**m**) ? $\frac{-2}{3}$ $\frac{\text{vertical change}}{\text{horizontal change}}$

Where does the pattern touch the y - axis - step 0 (**b**) ? 10

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern $y = -\frac{2}{3}x + 10$

Example 5:

x	y
-4	23
-2	20
0	17
2	14
4	11

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern $y = -\frac{3}{2}x + 17$

$$m = -\frac{3}{2}$$

$$b = 17$$

Example 6:

x	y
5	14
10	16
15	18
20	20
25	22

Write an equation $y = \mathbf{m}x + \mathbf{b}$ to represent the pattern $y = \frac{2}{5}x + 12$

$$m = \frac{2}{5}$$

$$b = 12$$

Assignment on the next pages

Assignment: Linear Growth using Tables (part 2)

Name: _____

Period: _____

Date: _____

Write the equation from the Table. $y = \text{change}(x) + \text{beginning}$.

X	Y
0	4
1	6
2	8
3	10

$y =$ _____

X	Y
-2	-5
0	0
2	5
4	10

$y =$ _____

X	Y
-4	12
0	9
4	6
8	3

$y =$ _____

X	Y
3	21
6	25
9	29
12	33

$y =$ _____

X	Y
5	-19
10	-13
15	-7
20	-1

$y =$ _____

X	Y
-1	-1
0	4
1	9
2	14

$y =$ _____

X	Y
-1	4
1	8
3	12
5	16

$y =$ _____

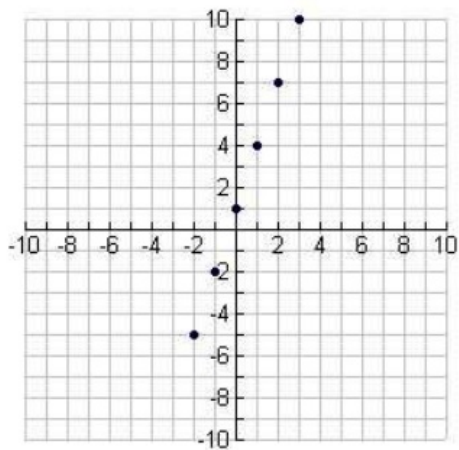
X	Y
2	10
4	5
6	0
8	-5

$y =$ _____

X	Y
-3	14
0	15
3	16
6	17

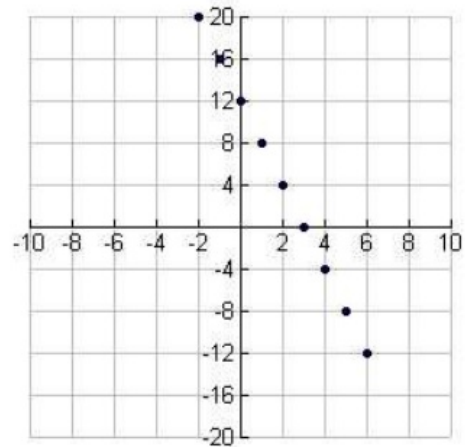
$y =$ _____

Fill out a table of values for the graph, then write the equation of the line that passes through the points.



X	Y
-2	-5
-1	

$y =$ _____



X	Y

$y =$ _____