Warm Up 2/13/19

2. Find the slope:

a) (-8, 4) & (-2, -6)

$m = \frac{-6-4}{-2+8} = \frac{-10}{6}$

$\frac{-5}{3}$

$\frac{4}{2} = 2$

$\frac{2}{1} = 2$

c)

x	y
-3	5
-2	7
0	11

+1, +2, +2, +4

$m = 2$

b) $2x - 3y = 12$

$-2x \quad -2x$

$-3y = -2x + 12$

$\frac{-3y}{-3} = \frac{-2x}{-3} + \frac{12}{-3}$

$y = \frac{2}{3}x - 4$

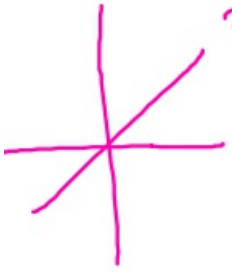
$m = \frac{2}{3}$

1. Create a table using $f(x) = 2x^2 - 3$ for the domain of {-5, -3, 0, 1, 4}

X		Y
-5	$2(-5)^2 - 3$	47
-3	$2(-3)^2 - 3$	15
0	$2(0)^2 - 3$	-3
1	$2(1)^2 - 3$	-1
4	$2(4)^2 - 3$	29

3. **Explain** how to find the slope of a line from a graph.

**Use full sentences



Find two points on the line. Start at the point on the left, rise to match the height of the second point. Run to the second point. Write the rise over the run and simplify if you can.

H

Horizontal Line

O

Slope = zero

Y

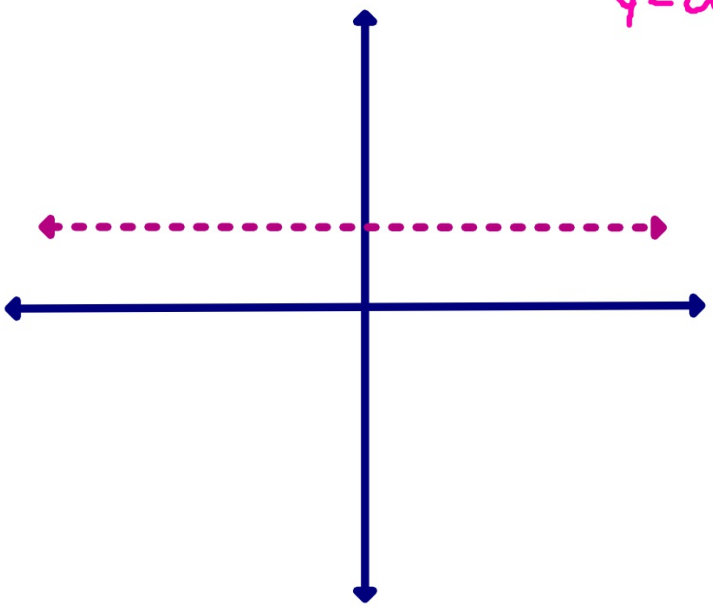
Equation: y = #

Crosses the y-axis

V

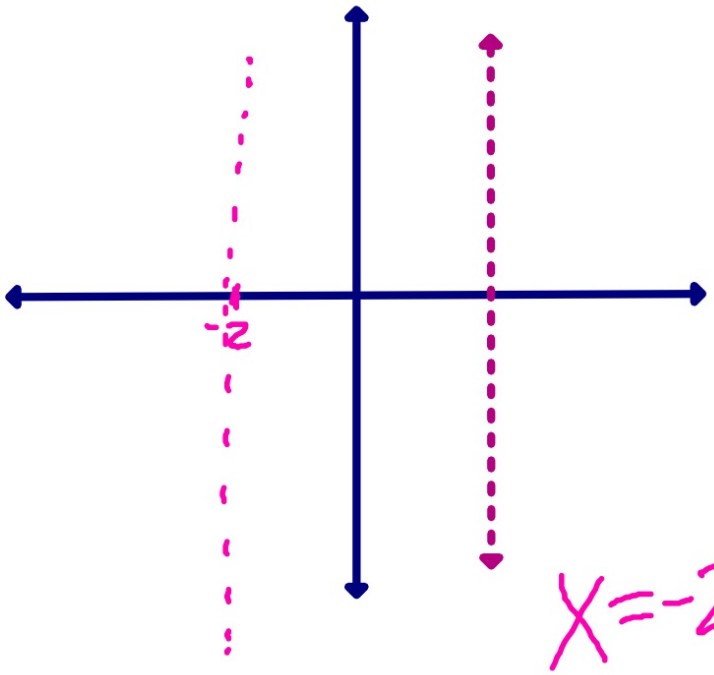
U

X



H O Y

V Vertical Line



U

Slope= Undefined

X

Equation: x= #

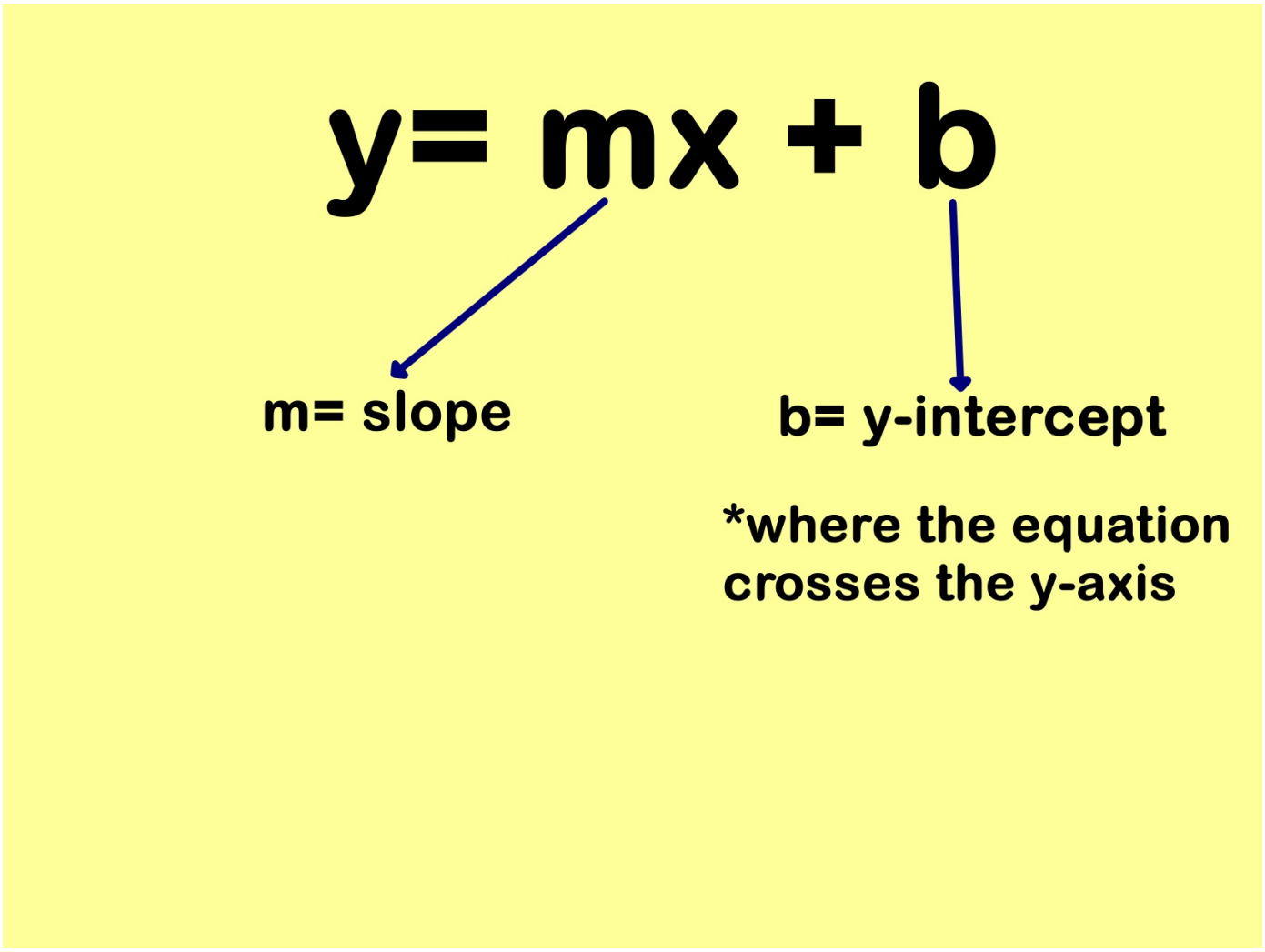
Crosses the X-axis

$X=-2$

$m=\emptyset$

$b=\emptyset$

Slope- Intercept Form


y= mx + b
m= slope
b= y-intercept
*where the equation crosses the y-axis

Given a value for m and for b....write an equation

Example 1:

$y=-4x+5$

m= -4

b= 5

Given a value for m and for b....write an equation

You Try:

m= 10

b= -3

$y = 10x - 3$

Given a value for m and for b....write an equation

Example 3:

m= 3/4
b= -9

$y = \frac{3}{4}x - 9$

Given a value for m and for b....write an equation

You Try:

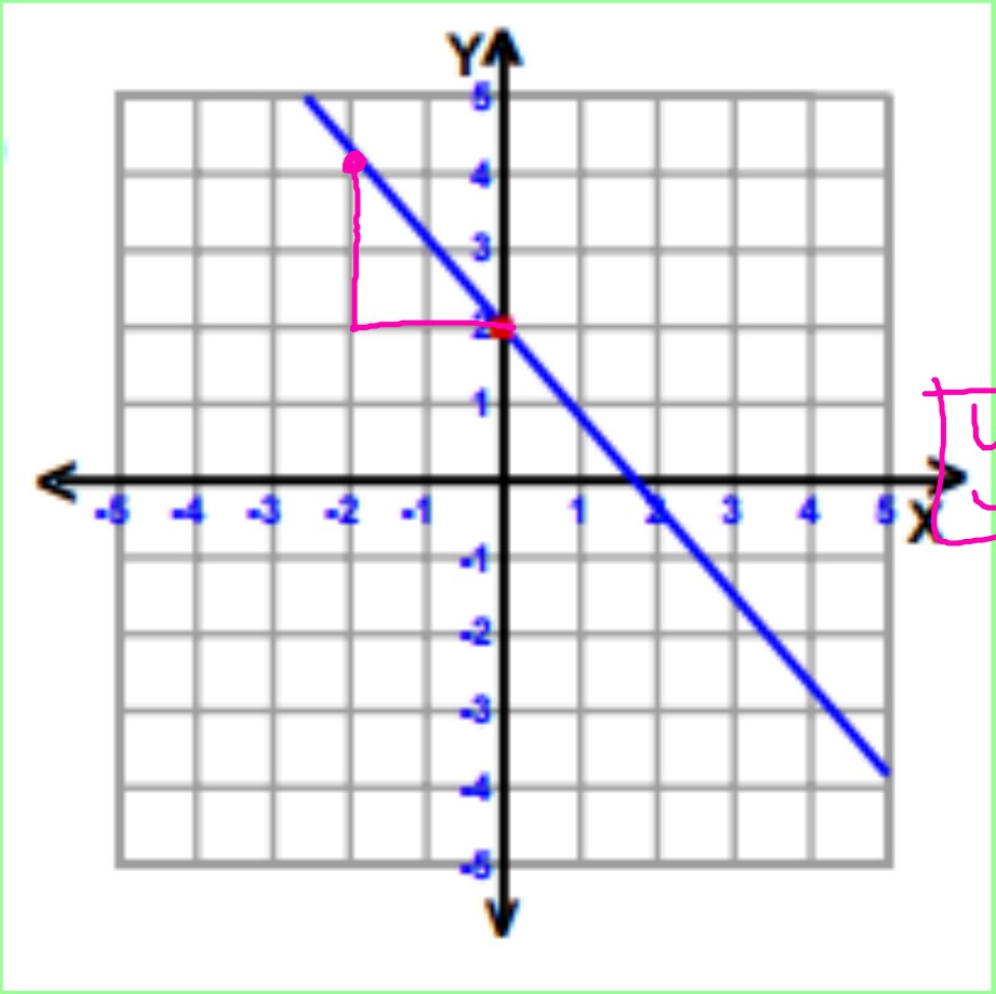
m= 5/4

b= 7

$y = \frac{5}{4}x + 7$

Given a graph, write an equation in slope-intercept form

Example 1:



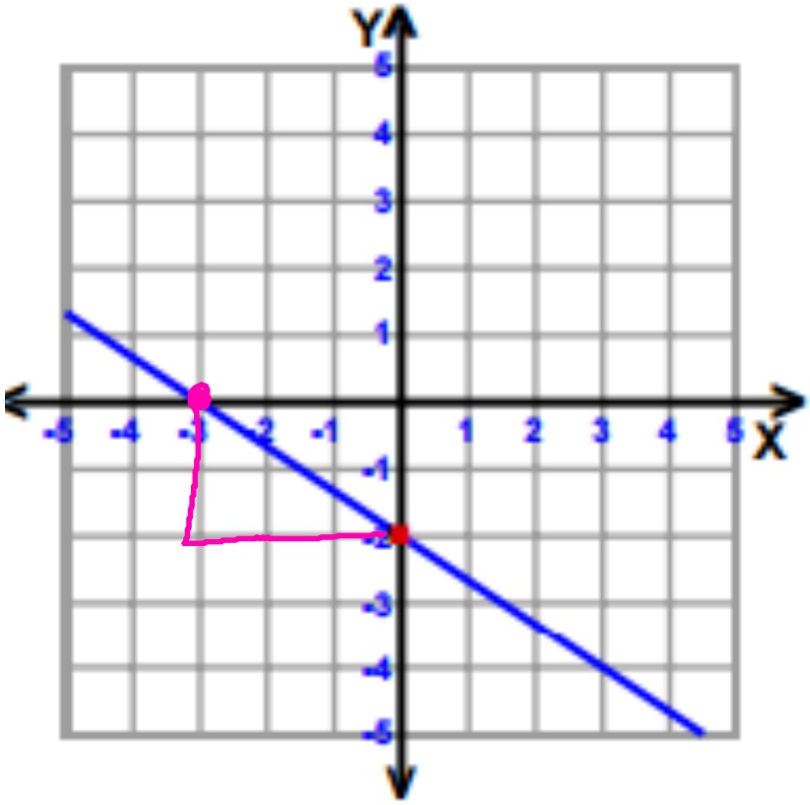
$\frac{-2}{2} = -1$

$m = -1$

$b = 2$

$y = -x + 2$

Given a graph, write an equation in slope-intercept form



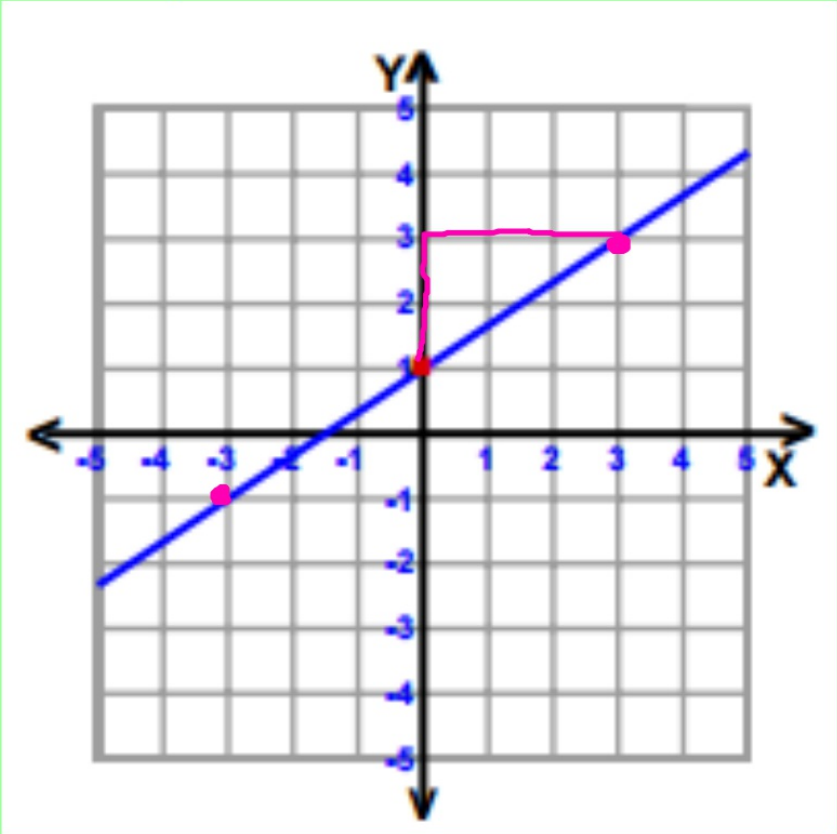
$m = \frac{-2}{3}$

$b = -2$

$y = \frac{-2}{3}x - 2$

Given a graph, write an equation in slope-intercept form

Example 3:

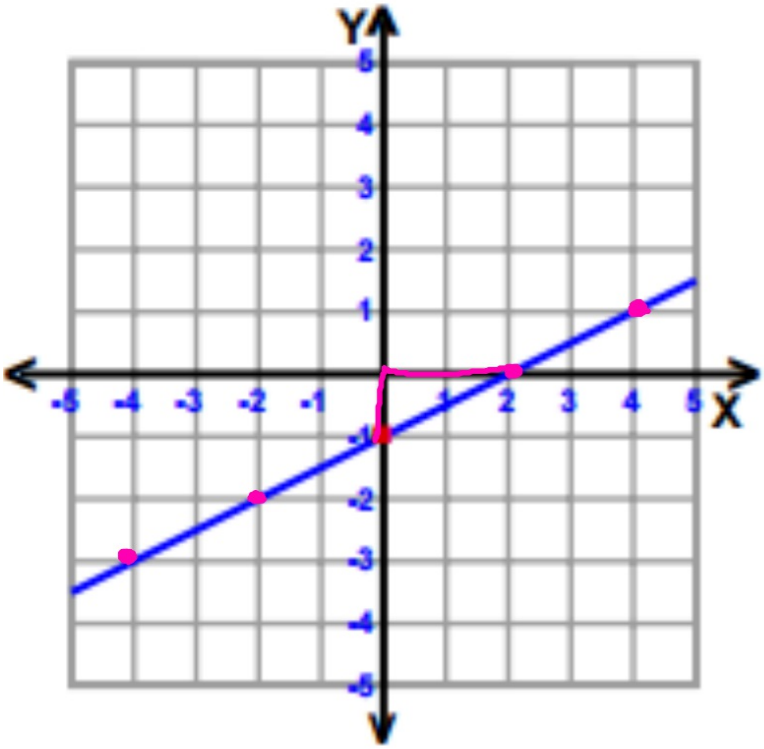


$m = \frac{2}{3}$

$b = 1$

$y = \frac{2}{3}x + 1$

Given a graph, write an equation in slope-intercept form



$m=\frac{1}{2}$ $b=-1$

$y=\frac{1}{2}x-1$

Given a table, write an equation in slope-intercept form

Example 1:

x	0	1	2	3	4
y	5	3	1	−1	−3

+1 +1 +1 +1

y-incpt

-2 -2 -2 -2

*when x=0 the y is the y-incpt

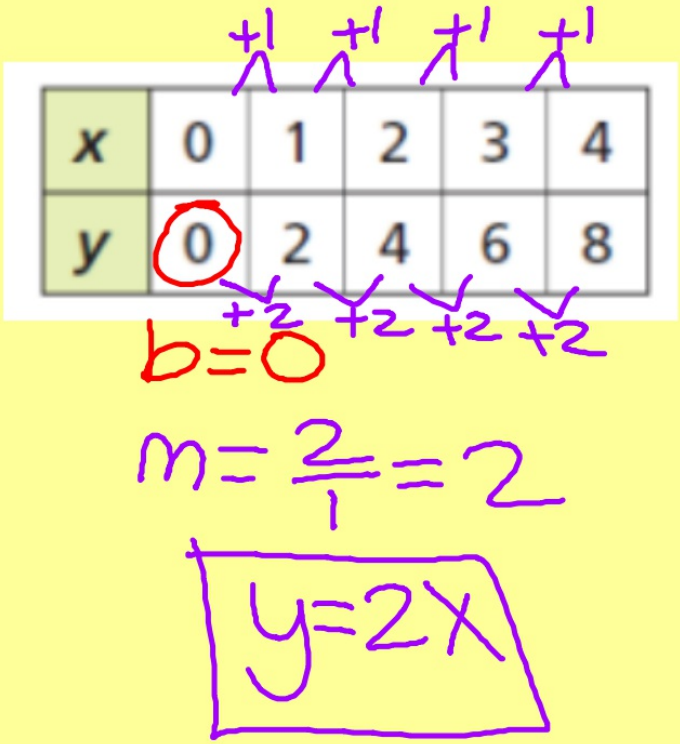
b=5

$m = \frac{-2}{1} = -2$

$y = -2x + 5$

Given a table, write an equation in slope-intercept form

You Try:



Given a table, write an equation in slope-intercept form

Example 3:

x	2	3	4	5	6
y	−11	−14	−17	−20	−23

0 | 1

−5 | −8

−3 −3 −3 −3 −3

b=−5

m=−3

$y=-3x-5$

Given a table, write an equation in slope-intercept form

You Try:

x	1	2	3	4	5
y	1	3	5	7	9

0

-1

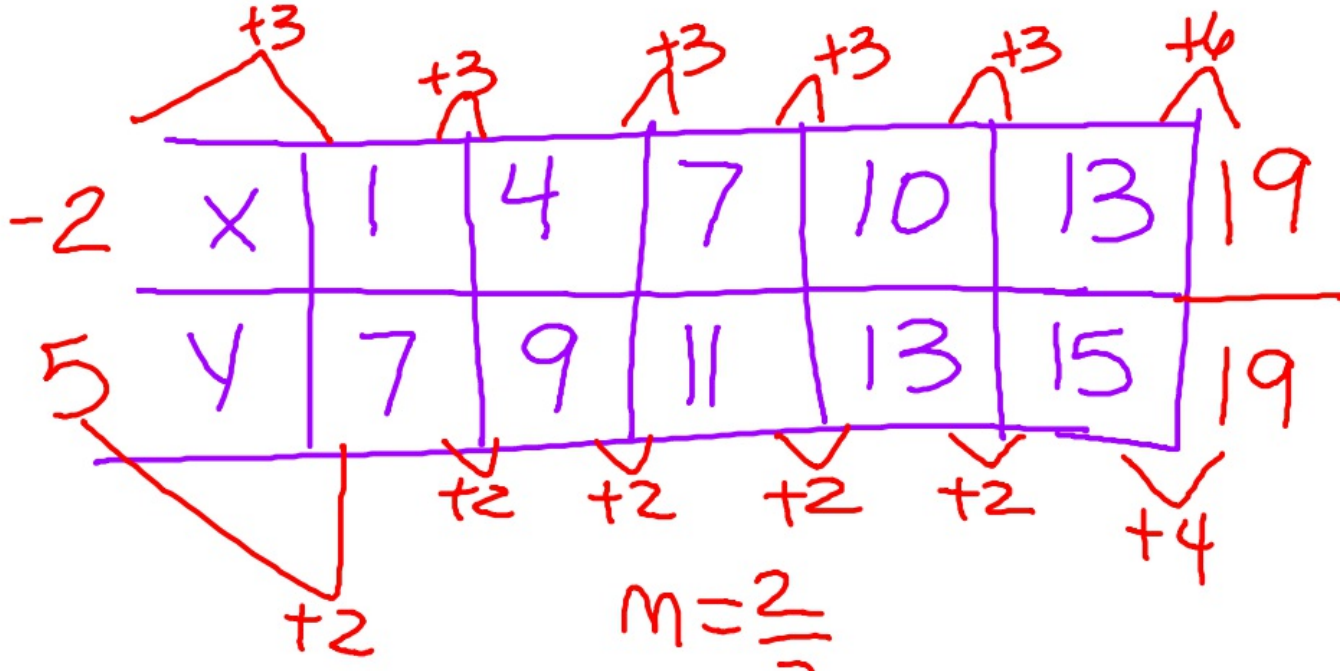
+2

+2 +2 +2 +2

$b = -1$

$m = \frac{2}{1} = 2$

$y = 2x - 1$



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

X	Y
-2	5
-1	
0	
1	7
4	9
7	11
10	13
B	15

$\frac{21}{3} - \frac{2}{3}$

$y = mx + b$

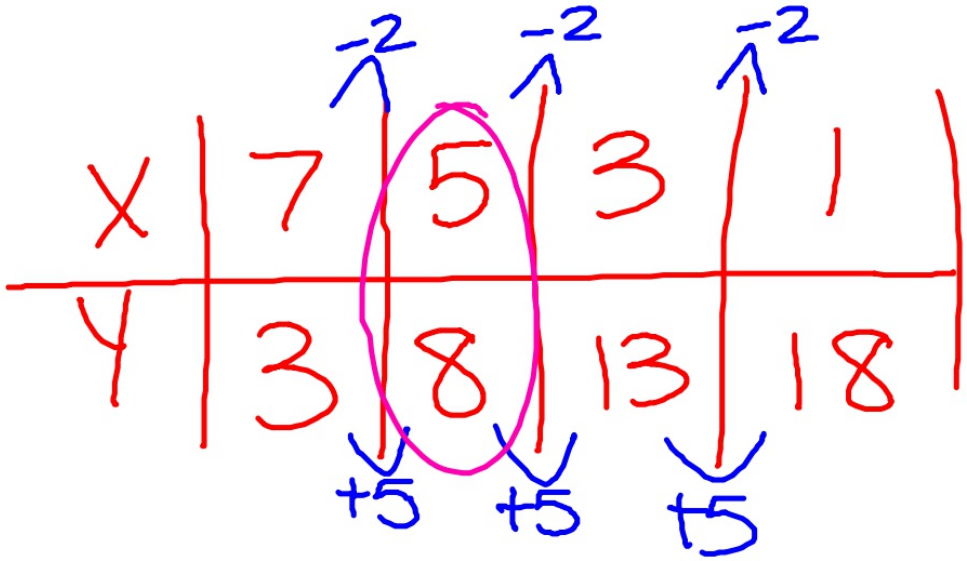
$7 = \frac{2}{3}(1) + b$

$7 = \frac{2}{3} + b$

$-\frac{2}{3} \quad -\frac{2}{3}$

$b = \frac{19}{3}$

$y = \frac{2}{3}x + \frac{19}{3}$



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

$y = mx + b$

$8 = -\frac{5}{2}(5) + b$

$8 = -\frac{25}{2} + b$

$+\frac{25}{2} \quad +\frac{25}{2}$

$b = \frac{41}{2}$

$y = -\frac{5}{2}x + \frac{41}{2}$