

Find the slope:

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

b) $2x - 3y = 12$

c) $\begin{array}{c|c} x & y \\ \hline -3 & 5 \\ -2 & 7 \\ 0 & 11 \end{array}$

① $m = \frac{-6-4}{-2-8} = \frac{-10}{-10} = 1$

② $2x - 3y = 12$
 $-3y = -2x + 12$
 $y = \frac{2}{3}x - 4$
 $m = \frac{2}{3}$

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

$f(-5) = 2(-5)^2 - 3 = 47$	x	y
$f(-3) = 2(-3)^2 - 3 = 15$	-5	47
$f(0) = 2(0)^2 - 3 = -3$	-3	15
$f(1) = 2(1)^2 - 3 = -1$	0	-3
$f(4) = 2(4)^2 - 3 = 29$	1	-1
	4	29

① ③ $\begin{array}{c|c} x & y \\ \hline -3 & 5 \\ -2 & 7 \\ 0 & 11 \end{array}$

+1 $\left\langle \begin{array}{c} -3 \\ -2 \end{array} \right\rangle +2$

+2 $\left\langle \begin{array}{c} -2 \\ 0 \end{array} \right\rangle +4$

$m = 2$

$\frac{2}{1}$ $\frac{4}{2}$

H

Horizontal Line

O

Slope = zero

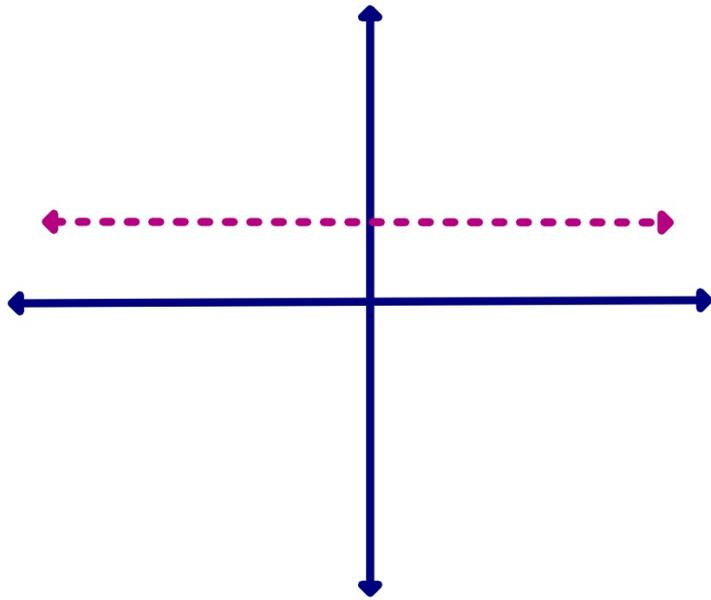
Y

Equation: $y = \#$

V

U

X



H

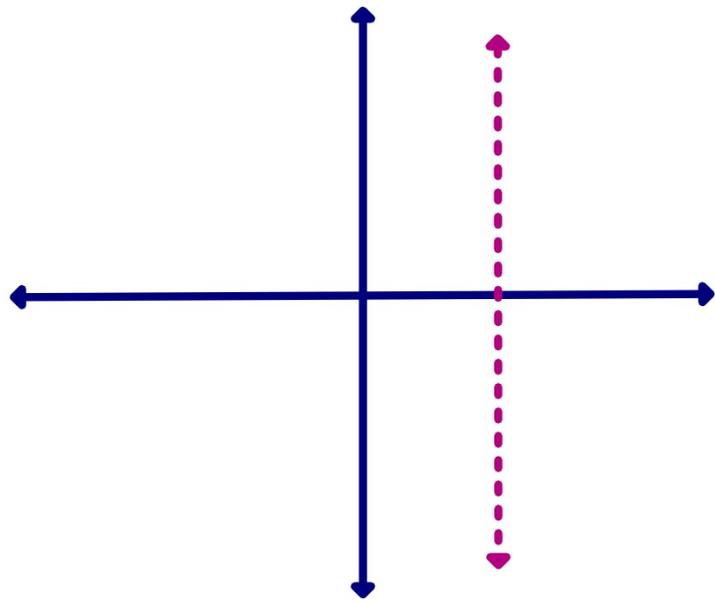
O

Y

V

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U

Slope= Undefined

X

Equation: $x = \#$

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: $y = mx + b$

$$m = -4$$

$$b = 5$$

$$y = -4x + 5$$

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:

$$m = \frac{3}{4}$$

$$b = -9$$

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

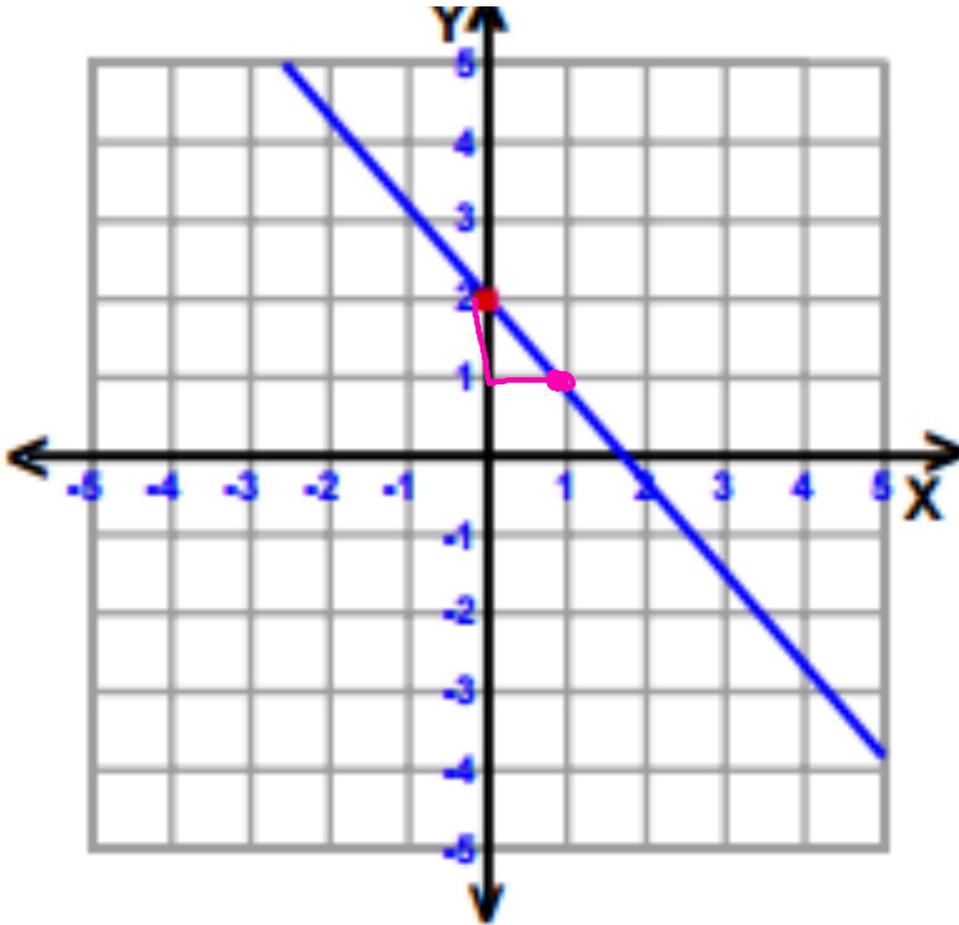
Given a value for m and for b...write an equation

You Try:

$$m = \frac{5}{4}$$

$$b = 7$$

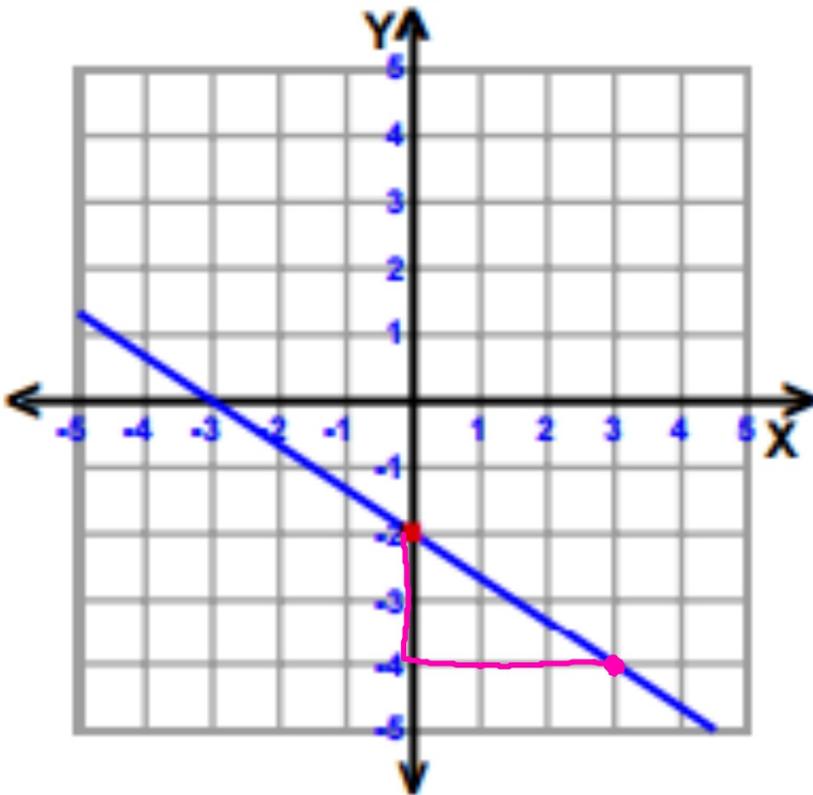
$$y = \frac{5}{4}x + 7$$



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

$$y = -x + 2$$

Given a graph write an equation in

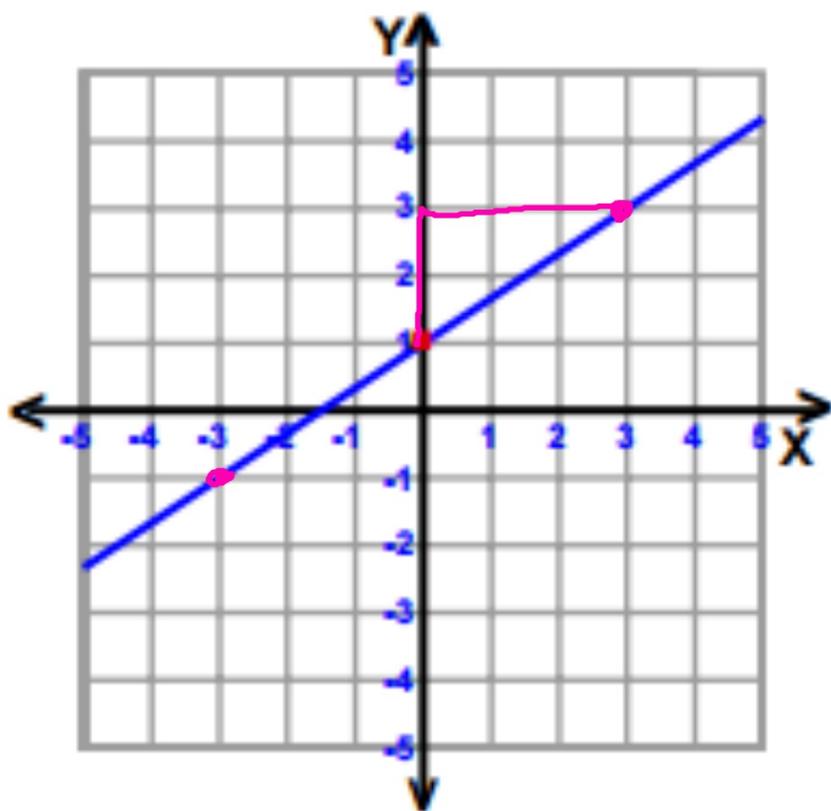


$$m = -\frac{2}{3}$$

$$b = -2$$

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

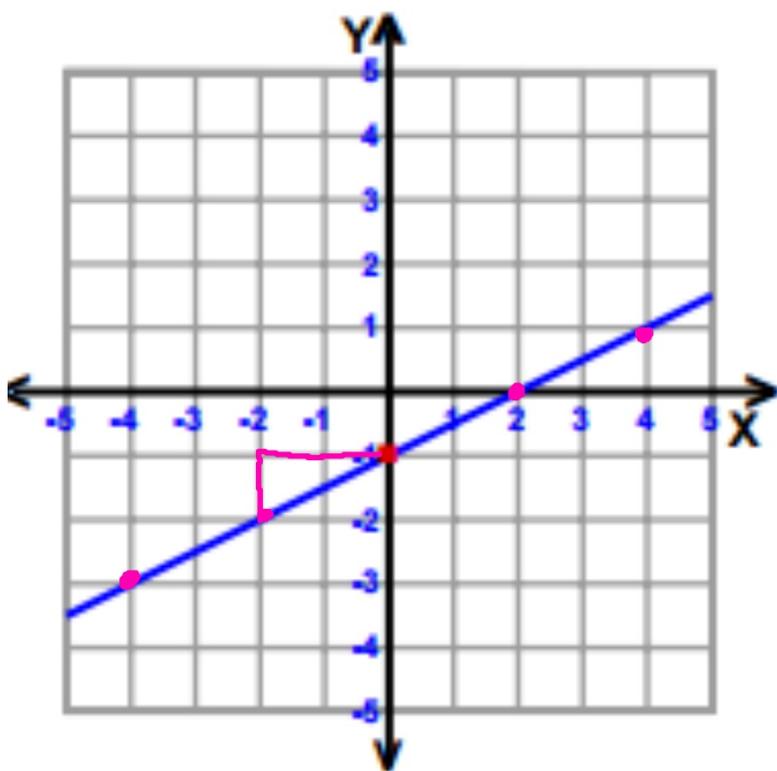
Given a graph write an equation in



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

$$b = 1$$

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



ation in y -intercept
ALWAYS has

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

$x=0$

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

$(0, y)$

form

x	0	1	2	3	4
y	5	3	1	-1	-3

+1 +1 +1 +1
-2 -2 -2 -2

$$m = -2$$
$$b = 5$$

$$y = -2x + 5$$

		+1	+1	+1	+1
x	0	1	2	3	4
y	0	2	4	6	8
		+2	+2	+2	+2

$$m=2$$
$$b=0$$

$$y=2x$$

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

Example 3:

		+1	+1	+1	+1	
x	1	2	3	4	5	6
y	-5	-11	-14	-17	-20	-23

Handwritten annotations: A vertical line is drawn at x=1, with a circled '0' above it and '-5' below it. Brackets below the table indicate the slope between consecutive x-values: from x=1 to 2, the slope is -3; from x=2 to 3, the slope is -3; from x=3 to 4, the slope is -3; from x=4 to 5, the slope is -3; and from x=5 to 6, the slope is -3.

$$m = -3 \quad b = -5$$

$$y = -3x - 5$$

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

You Try:

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

Handwritten annotations: A vertical line is drawn at $x = 0$ with a horizontal line at $y = -1$. The y-intercept is labeled -1 . Above the x-values, there are four upward-pointing arrows labeled $+1$. Below the y-values, there are four downward-pointing arrows labeled $+2$. A bracket connects the y-intercept -1 to the first y-value 1 , with a $+2$ written below it.

$$m=2 \quad b=-1$$

$$y=2x-1$$

NAME
10/30/18

Standard to
Slope-Intercept
Form

$$\textcircled{1} \quad \begin{array}{r} 3x + 4y = 8 \\ -3x \quad -3x \\ \hline \end{array}$$

$$\frac{4y}{4} = \frac{-3x}{4} + \frac{8}{4}$$

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

Scav. Hunt