

14. $Ax + By = C$

x's & y's
are on the
left
constant on
right
No fractions

A value is
positive

$$5 = y - x$$

$$5 = -x + y$$

$$\begin{array}{ccc} -x + y = 5 \\ \underline{-1} \quad \underline{-1} \quad \underline{-1} \end{array}$$

$$x + -y = -5$$

$$2x \overset{-4y}{=} 4y - 4y$$

$$2x - 4y = 0$$

8.5

y-intercept

$$y = 2x + 4$$

$$y = mx + b$$

X

-14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 10 11 12 13 14

10
9
8
7
6
5
4
3
2
1

(0, 4)

(-2, 0)

x-intercept

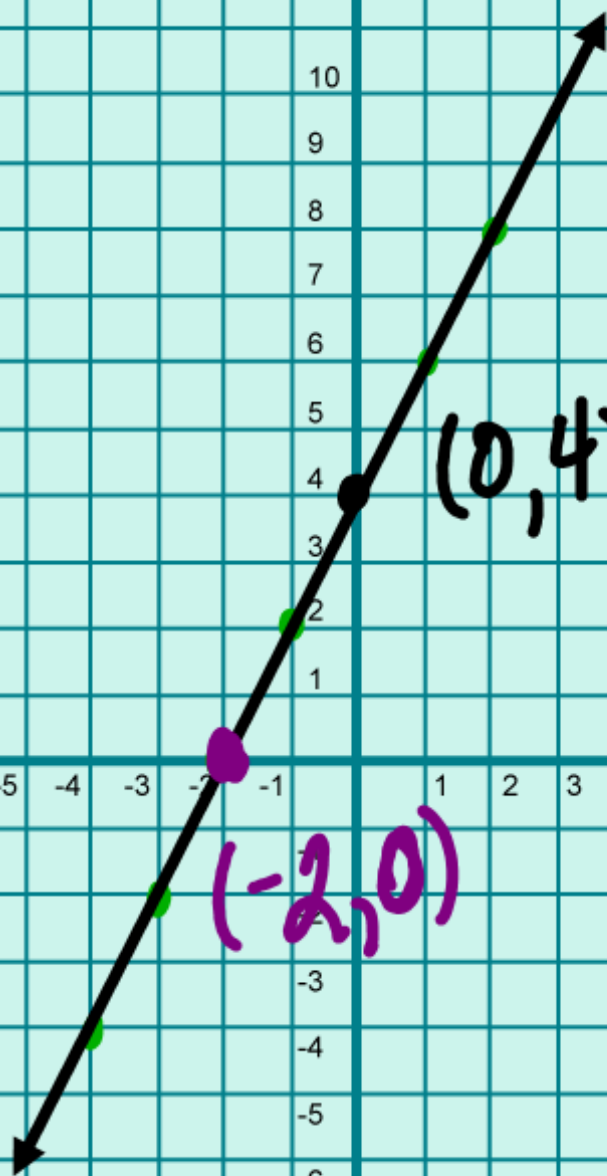
Cross x-axis

Slope $m = 2$

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

-3
-4
-5
-6
-7
-8
-9
-10

Y



y-intercept

$x = 0$

$y = 2x + 4$

Substitute

$y = 2(0) + 4$

$x = 0$

$y = 4$

$(0, 4)$

x-intercept

$y = 0$

$y = 2x + 4$

Substitute

$0 = 2x + 4$

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

$-2 = x$

$(-2, 0)$

$$4x + 3y = 12 \quad \text{Standard Form}$$

y-intercept

① Change into slope intercept form $y = mx + b$

$$4x + 3y = 12$$

$$3y = -4x + 12$$

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

y-intercept 4
(0, 4)

② y-intercept
 $x = 0$
Substitute

$$4x + 3y = 12$$

$$4(0) + 3y = 12$$

$$y = 4$$

(0, 4)

x-intercept

① $y = 0$
Substitute

$$4x + 3y = 12$$

$$4x + 3(0) = 12$$

$$4x = 12$$

$$x = 3$$

(3, 0)

② Graph

$$4x + 3y = 12$$

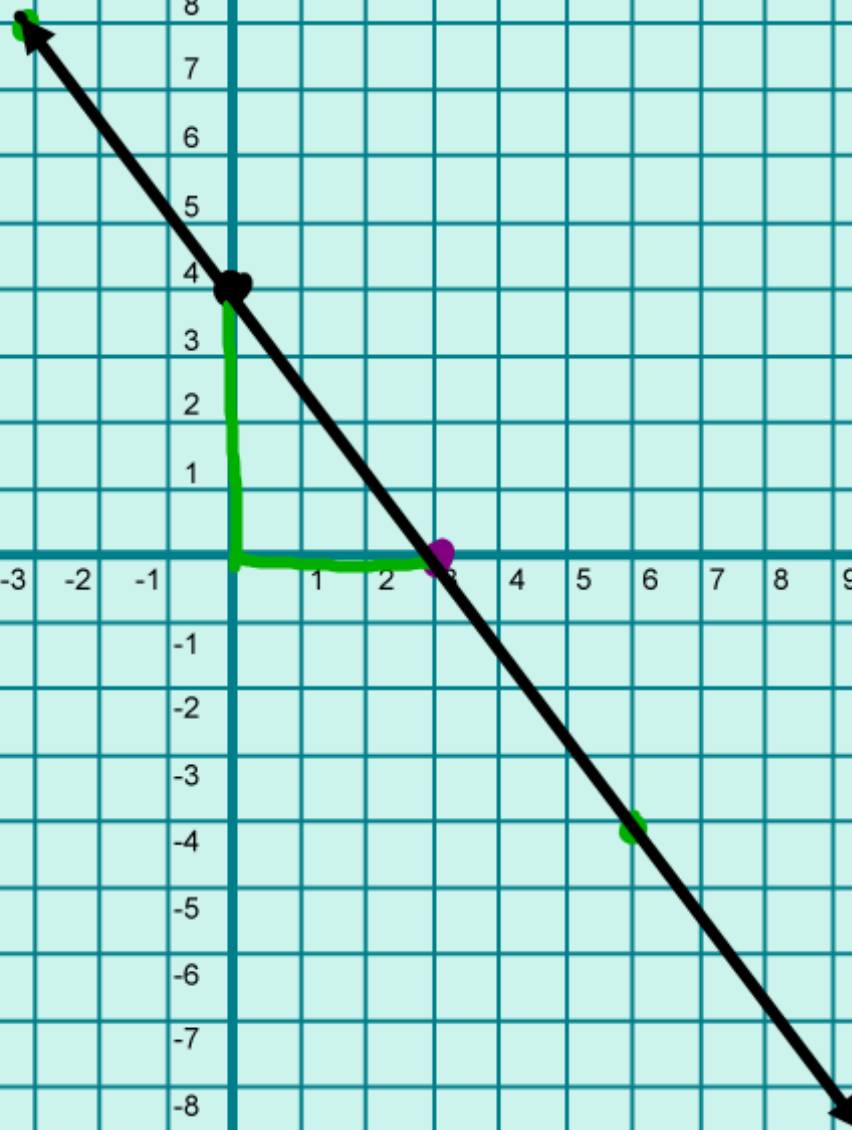
$$y = -\frac{4}{3}x + 4$$

X

-14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 10 11 12 13 14

10
9
8
7
6
5
4
3
2
1
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10

Y



Write the equation of a line
that goes through $(-1, 3)$ and has a
slope of $-\frac{3}{2}$

① $y = mx + b$

Substitute to find y-intercept

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

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

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

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

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

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

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

② Write equation

$$y = mx + b$$

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

p 464

15-21 All

24-27 All

