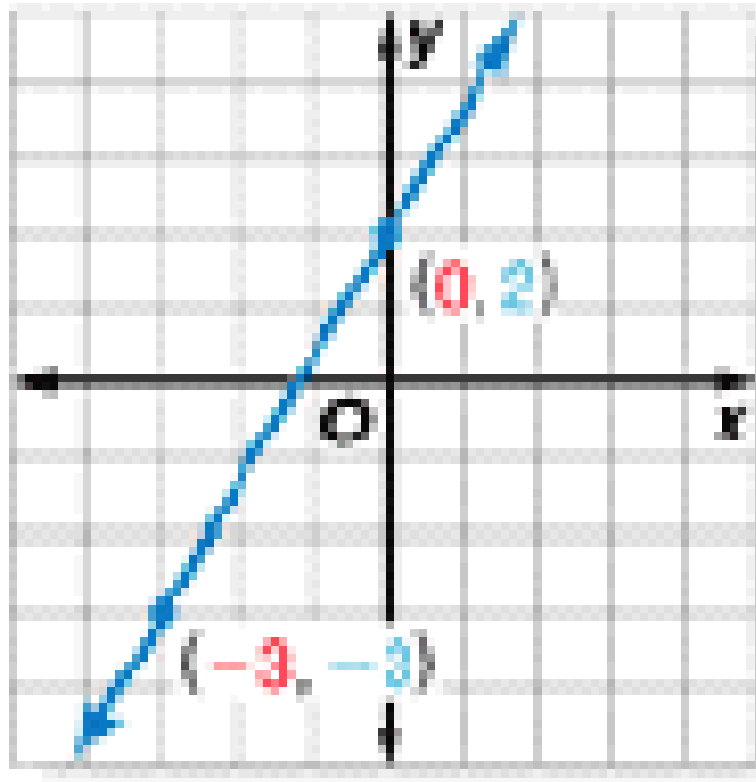


Slope-Intercept form

6.4

- The point at which a line intersects the x -axis is called the x -intercept.
- The point at which a line intersects the y -axis is called the y -intercept.



The y -intercept is 2.

The x -intercept is -1 .

Find the x and y intercepts
of the graph of $3x+4y=6$

Remember, the x -intercept is
the point at which $y=0$.

Let $y = 0$ and solve for x .

Do the same for $x=0$.

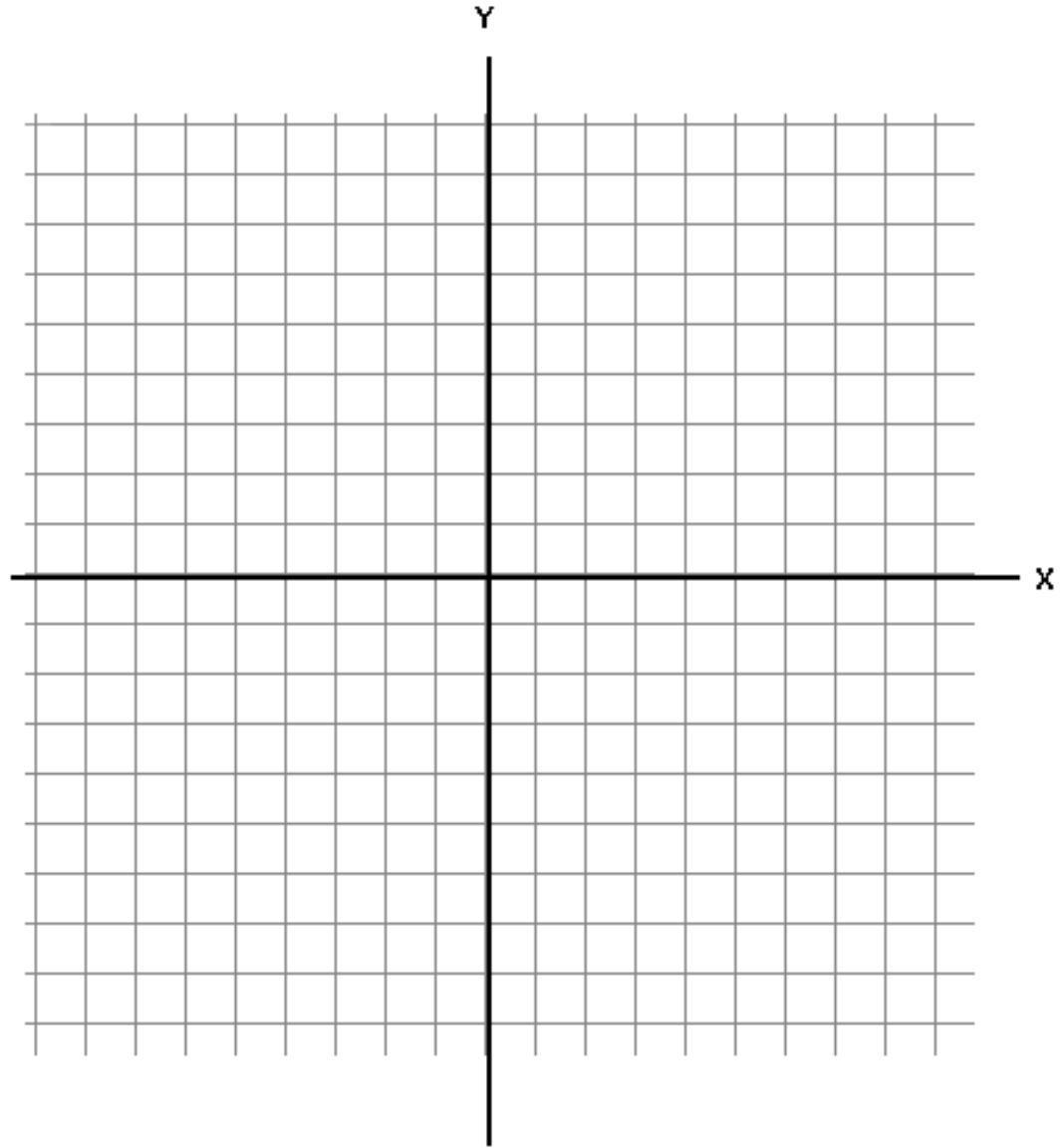
- $3x+4y=6$
- $3x+4(0)=6$
- $3x+0=6$
- $3x=6$
- $x=2$

$$3x+4y=6$$
$$3(0)+4y=6$$
$$0+4y=6$$
$$4y=6$$
$$y=3/2$$

X-intercept is 2

Y-intercept is $3/2$

Now,
you can
use
these
points
to
graph
this
line:



Slope intercept form

- $y = mx + b$
- m is the slope
- b is the y -intercept

Write an Equation Given Slope and y-intercept

Write an equation of the line whose slope is $-3/2$ and whose y-intercept is -2 .

$y = mx + b$ Slope-intercept form

$y = -3/2 x + -2$ Replace m with $-3/2$ and b with -2 .

$y = -3/2 x - 2$ Simplify.

**Write an equation of the line
whose slope is 5
and whose y -intercept is 4.**

**Write an equation of the line
whose slope is $-\frac{5}{6}$
and whose y -intercept is $-\frac{2}{7}$.**

What is the slope and the y-intercept of the following equations:

$$y=3x+8$$

$$y=5/7x+7/5$$

$$5x-3y=6$$