

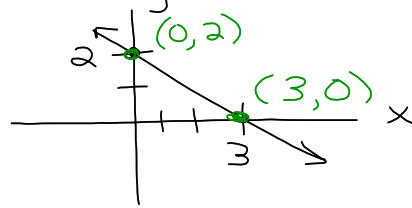
Finding x & y-intercepts of a line equation

x-int = the x-value of the point where the line crosses the x-axis

y-int = the y-value of the point where the line crosses the y-axis

Conclusion

The x-int occurs when $y = 0$
The y-int occurs when $x = 0$



Find the x-int and y-int for each equation and graph the equation.

ex) $2x + 3y = 6$

To find x-intercept:

Step 1: Plug in $y = 0$

$$2x + 3(0) = 6$$

Step 2: Solve for x

$$\begin{array}{r} 2x = 6 \\ \hline 2 \quad 2 \\ x = 3 \end{array}$$

Step 3: Write as a point (x, 0)

$$(3, 0)$$

To find y-intercept:

Step 1: Plug in $x = 0$

$$2(0) + 3y = 6$$

Step 2: Solve for y

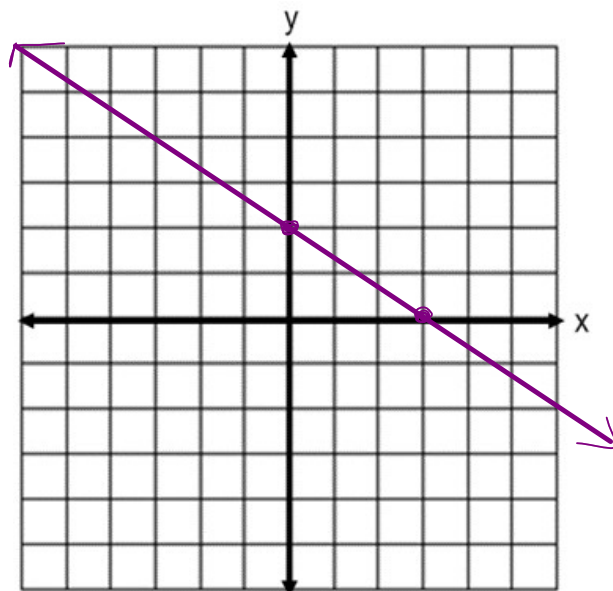
$$\begin{array}{r} 3y = 6 \\ \hline 3 \quad 3 \\ y = 2 \end{array}$$

Step 3: Write as a point (0, y)

$$(0, 2)$$

To graph:

Plot both points you found and connect with a straight line.



ex) $-4x + 2y = 8$

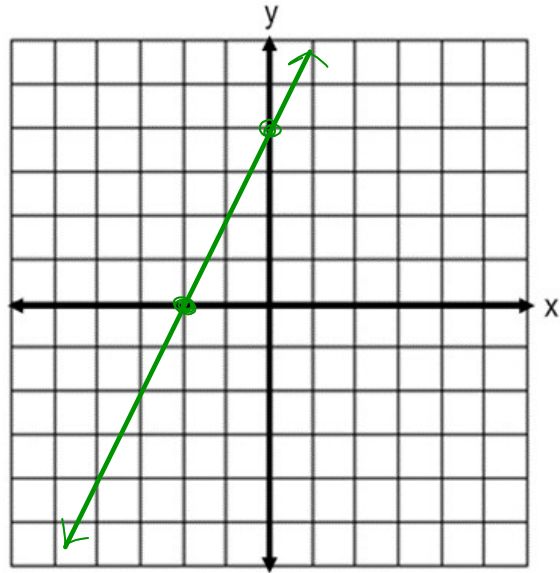
$$\frac{-4x = 8}{-4 \quad -4}$$

$$x = -2$$

$$(-2, 0)$$

$$\frac{-4(0) + 2y = 8}{2 \quad 2} \quad y = 4$$

$$(0, 4)$$



ex) $4y - 24x + 8 = 0$

$$4y - 24x = -8$$

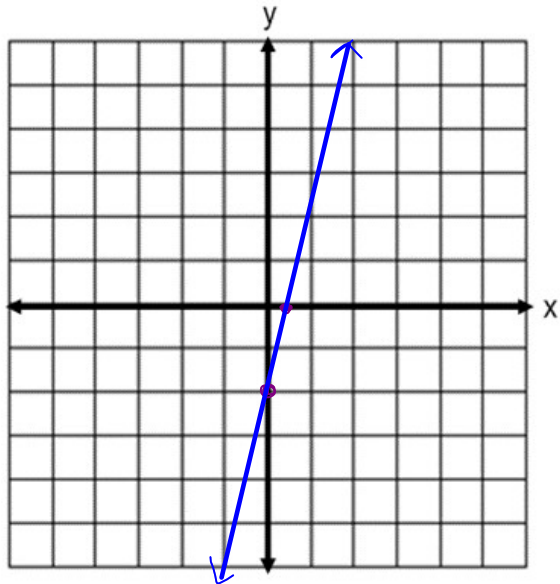
$$\frac{-24x = -8}{-24 \quad -24}$$

$$x = \frac{1}{3}$$

$$\left(\frac{1}{3}, 0\right)$$

$$\frac{4y = -8}{4} \quad y = -2$$

$$(0, -2)$$



ex) $-x + 2y = 5$

