Graphing $ax + by = c$

Class Goals – By the end of the period, you will understand and be able to…

- Graph a line using $ax + by = c$.
- Understand the differences between $ax + by = c$ & $y = mx + b$.

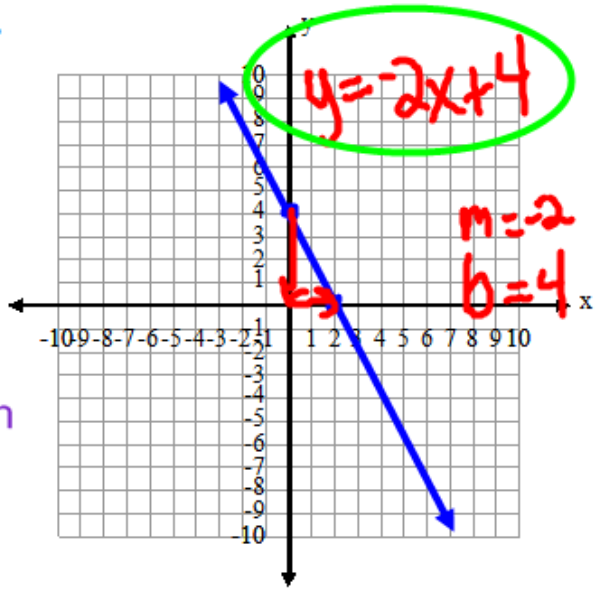
How to do it!

Example #1 Graph $2x + y = 4$.

Find x-int.
1. Plug 0 in for y, solve for x, plot that point (x,0).

Find y-int
2. Plug 0 in for x, solve for y, plot that point (0,y).

3. Draw the line that passes through the x- and y-intercepts.



You try One!

Graph $3x - 2y = -12$.

X-int

$3x - 2(0) = -12$

$\frac{3x}{3} = \frac{-12}{3}$

$x = -4$ $(-4, 0)$

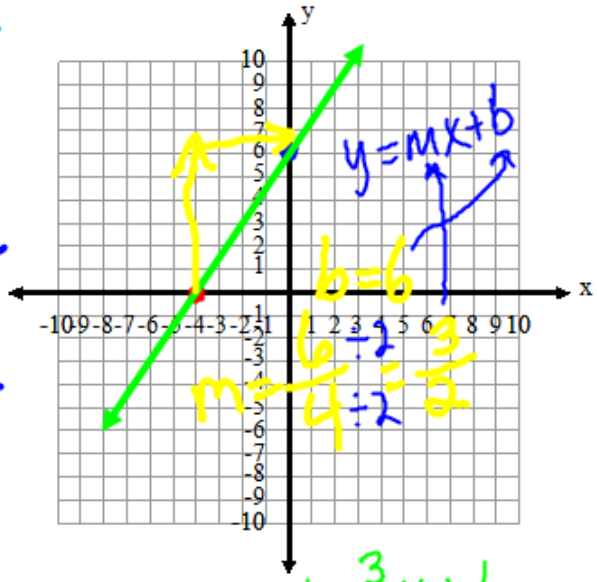
y-int

$3(0) - 2y = -12$

$\frac{-2y}{-2} = \frac{-12}{-2}$

$y = 6$

$(0, 6)$



$y = \frac{3}{2}x + 6$

What's the Difference?

$y = mx + b$

$ax + by = c$