

Slope-  
Intercept  
Form

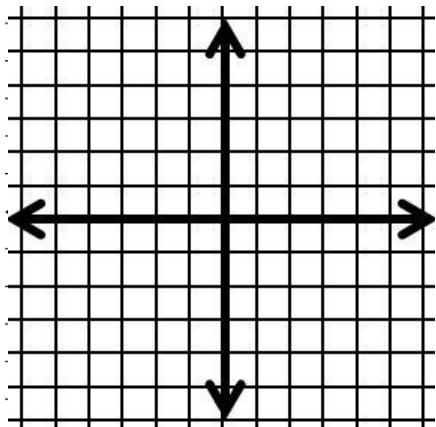
Point-  
Slope  
Form

Standard  
Form

What is **Slope- Intercept** Form?

Identify the slope and the y- intercept. Then, graph the line below.

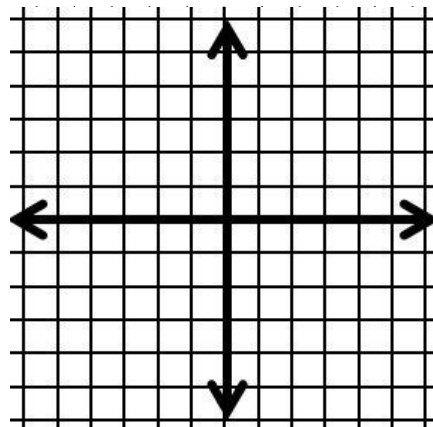
$$y = \frac{1}{4}x - 3$$



What is **Point- Slope** Form?

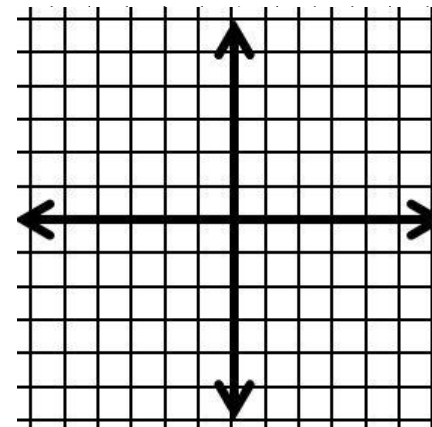
Identify the point and the Slope. Then graph the line below.

$$y - 3 = -2(x + 1)$$



What is **Standard** Form?

Graph the line below.  
 $3x - 2y = 8$



# Linear Equations

What is **Slope- Intercept** Form?

$$y = mx + b$$

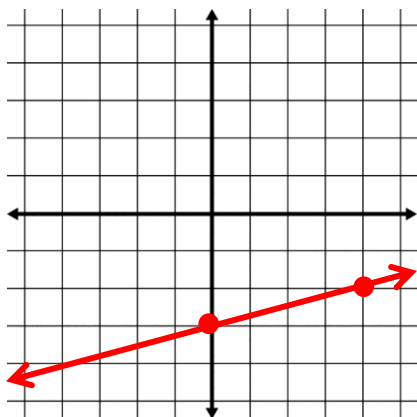
$\nearrow$                        $\uparrow$   
 slope                      y-intercept  
 (rise/ run)

Identify the slope and the y- intercept. Then, graph the line below.

$$y = \frac{1}{4}x - 3$$

$$m = \frac{1}{4} \quad b = -3$$

\*Start by plotting the y-intercept (-3), then use the slope (1/4) to plot additional points.



What is **Point- Slope** Form?

$$y - y_1 = m(x - x_1)$$

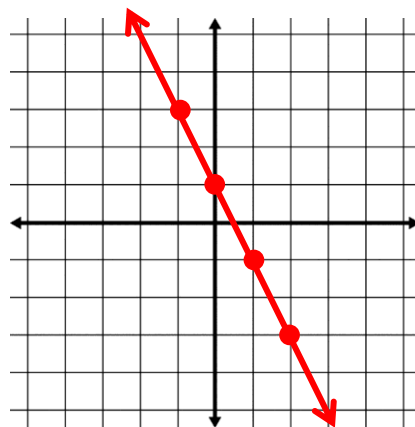
$\uparrow$                        $\nearrow$   
 point  $(x_1, y_1)$                       slope (rise/ run)

Identify the point and the slope. Then graph the line below.

$$y - 3 = -2(x + 1)$$

$$m = -2 \quad (x_1, y_1) = (-1, 3)$$

\*Start by plotting the point (-1,3), then use the slope (-2/1) to plot additional points.



What is **Standard** Form?

$$Ax + By = C$$

$\uparrow$                        $\uparrow$                        $\uparrow$

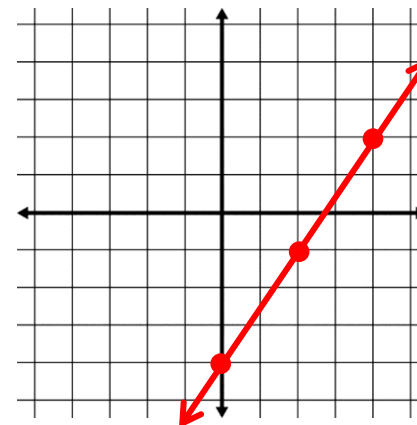
A, B & C must be integers, and A must be positive.

Graph the line below.

$$3x - 2y = 8$$

\*To graph an equation in Standard Form, you must first transform the equation into Slope-Intercept Form.

$$\begin{array}{rcl}
 3x - 2y & = & 8 \\
 -3x & & -3x \\
 \hline
 -2y & = & -3x + 8 \\
 -2 & & -2 \quad -2 \\
 \hline
 y & = & \frac{3}{2}x - 4
 \end{array}$$



# Linear Equations

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Print pages 1 & 2 front to back so that the writing is facing in opposite directions.

The final product should look like this:

