# Graphing with Slope-Intercept Form

4/29/15

**Step #1** - Identify the slope and y-intercept from the equation
- ↳ slope as a fraction
- ↳ y-intercept as an ordered pair

**Step #2** - Plot the y-intercept (y-axis)

**Step #3** - Use the slope to plot the next two points

$$\text{Slope} = \frac{\text{rise up}}{\text{run out}} = \frac{\text{y-axis}}{\text{x-axis}}$$

Example: $\frac{5}{1}$ ← rise up / ← run out

$-\frac{2}{3}$ ← fall down / ← run out

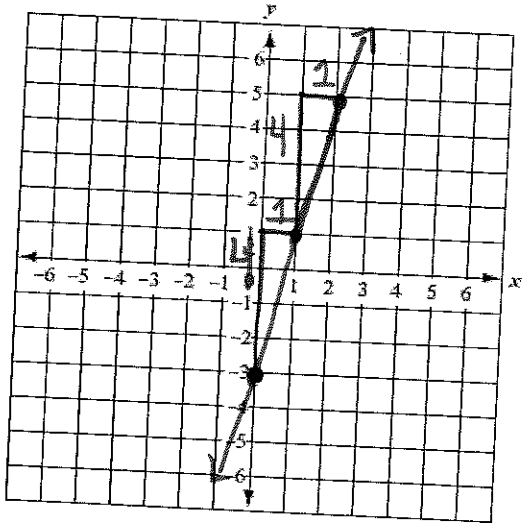
* Make numerator negative if slope is negative

**Step #4** - Connect points to create graph

$y = 4x - 3$

Slope = $\frac{4}{1}$

y-intercept = $(0, -3)$




Positive slope

**Don't forget!**
Proper notation
↳ arrows at end of line

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

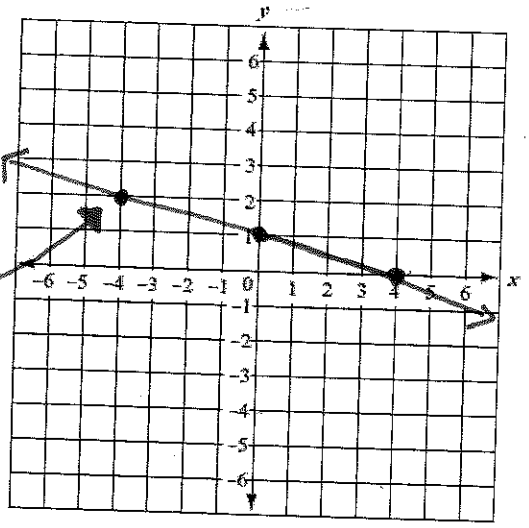
Slope = $\frac{-1}{4}$

y-intercept = (0, 1)

Put negative in numerator

*reverse slope to go the opposite direction to maintain same slope

$\frac{-1}{4}$ becomes $\frac{1}{-4}$



Negative slope

- Step #1 = identify slope & y-intercept
- Step #2 = plot y-intercept
- Step #3 = use slope to plot two points
- Step #4 = Connect points to create graph

$y = -2$

slope = $\frac{0}{1}$

y-intercept = (0, -2)