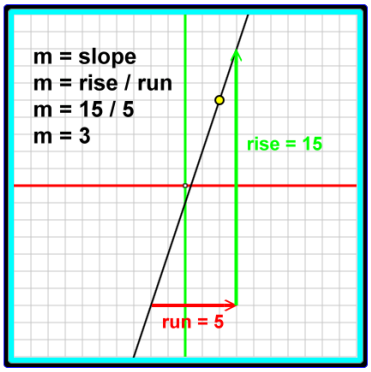
Graphing a line using Slope and the Y-Intercept

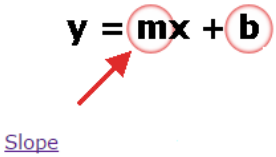
What is the slope of a line? The slope tells you



Slope:

Slope-Intercept Notation:

How to find the slope of a line given an equation:

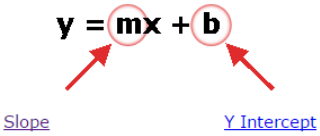


1.) Solve the equation for y
2.) Identify the slope (coefficient of the variable "x")

Examples- Find the slope of the following lines:

a.) $y = 3x + 1$ b.) $y = \frac{1}{5}x - 7$ c.) $2x + y = 4$

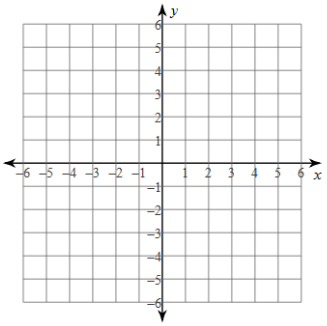
Graphing a line using the slope and the y-intercept:



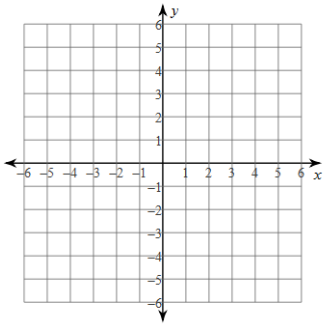
1.) Rewrite equation so that it is in slope-intercept form: $y = mx + b$
2.) The "b" value is the y-intercept – plot this point on the y-axis
3.) From the point plotted on the y-axis (b), use your slope to plot the next point (and from there, any additional points)
4.) Connect these points with a straight line

Examples – Identify the slope and the y-intercept (b). Then, graph each line using the slope and the y-intercept. Plot 3 points per line.

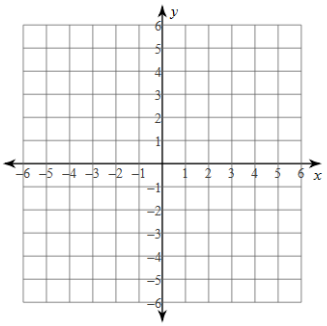
d.) $y = 3x - 2$



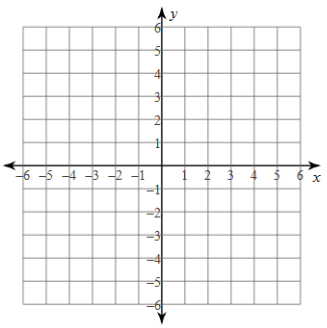
e.) $y = \frac{1}{2}x + 1$



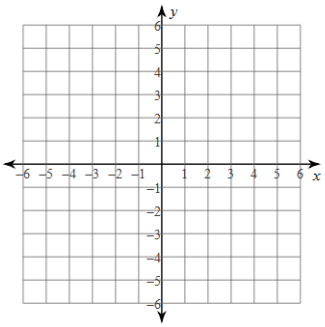
f.) $y + 2x = 4$



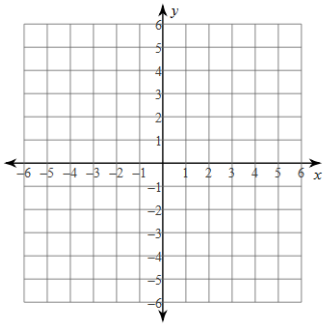
g.) $y = 5$



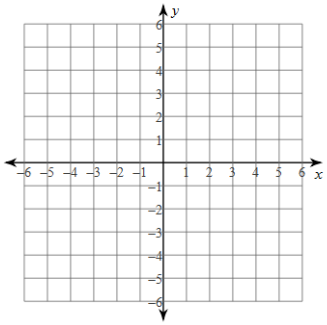
h.) $x = -2$



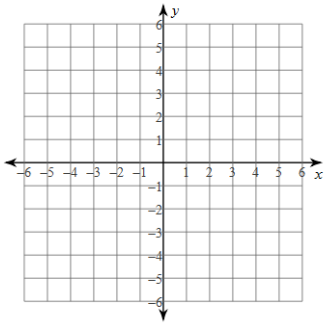
i.) $3x + 2y = -10$



j.) $x - y = -3$



k.) $2y = -6x + 1$



l.) $y = x$

m.) $y = -x$