Graphing Linear Equations

Level 1 - Graph a linear relationship from a table of values
Level 2 - Graph the linear relationship from slope-intercept and point-slope form
Level 3 - Rearrange the equation int slope-intercept form and graph

A linear equation represents a straight line on a graph. Every linear equation shows a constant rate of change. This rate is called the **slope (*m*)**, and the value where the line crosses the y-axis is the **y-intercept (*b*)**.

Slope-Intercept Form	Point-Slope Form
$y = mx + b$ ***m*** = slope (rise/run) ***b*** = y-intercept (where x = 0)	$y - y_1 = m(x - x_1)$ (x_1, y_1) is a point on the line ***m*** = slope (rise/run)

You can also graph from a table of values, which lists pairs of (x, y) points. Plot the points, connect them, and you have your line!

Example #1 Graph $y = \frac{1}{3}x - 1$	**Example #2** Graph $y - 4 = -3(x + 1)$