

Forms of Lines

1. Slope-intercept Form

$$y = mx + b$$

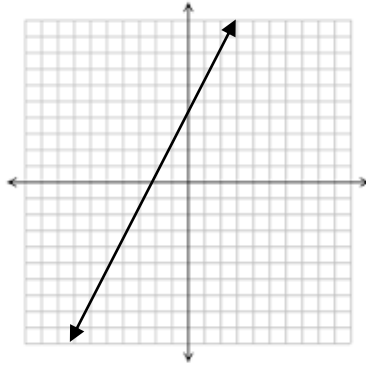
M is the slope, while y is the y-intercept

Step 1: Plot the y-intercept on the coordinate Plane.

Step 2: Count the slope from that point.

Step 3: Connect the dots.

Ex. $y = 2x + 4$



Special Case: Direct Variation (where $b=0$)

$$y = kx, k \text{ is the constant of variation (like } m)$$

This only occurs when the y-intercept is the origin (0,0).

2. Standard Form

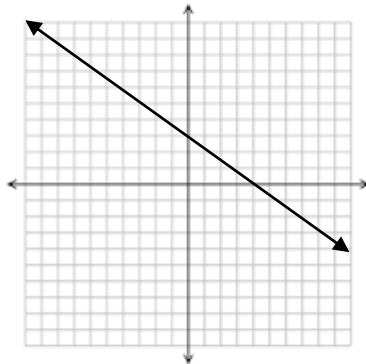
$$Ax + By = C$$

Step 1: Find the x- and y- intercepts

Step 2: Plot and Connect

Ex. $3x + 4y = 12$

X	Y
0	3
4	0



3. Point-Slope Form

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

M is the slope.

x_1 and y_1 are coordinates of a point given on the graph.

Step 1: Plot the point (x_1, y_1)

Step 2: Count the slope.

Step 3: Connect the dots.

Ex. $y - 2 = 2(x - 1)$

