

M10 - 7.2 - Slope Intercept Form ($y = mx + b$) Notes

Graphing Slope Intercept Form. Slope Intercept Method

$$y = 2x + 1 \leftarrow y - \text{intercept: } (0,1)$$

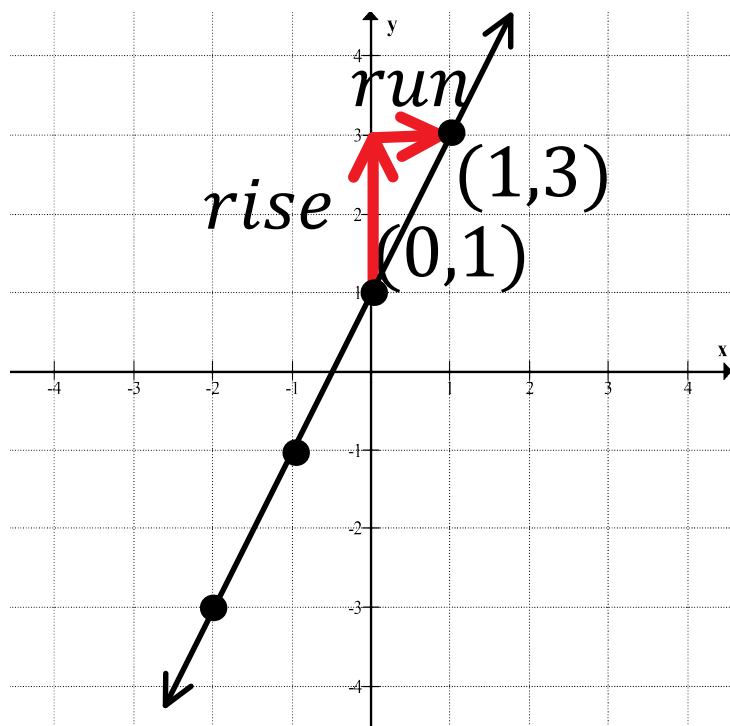
$$\uparrow$$

$$\text{Slope} = \frac{2}{1}$$

$$y = mx + b \leftarrow y - \text{intercept: } (0,b)$$

$$\uparrow$$

$$\text{Slope} = \frac{\text{rise}}{\text{run}}$$



Steps:

Plot $y - \text{intercept: } (0,1)$

Use slope: $\frac{2}{1}$ \leftarrow Rise
 \leftarrow Run

Plot new Point: $(1,3)$

Put Point in Other Direction

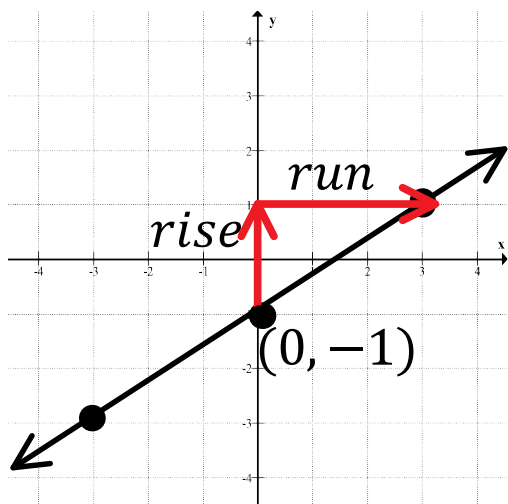
Draw New Points

Draw line

Arrow Tips

x	y
-1	-1
0	1
1	3
-2	-3

Find Equation in Slope Intercept Form



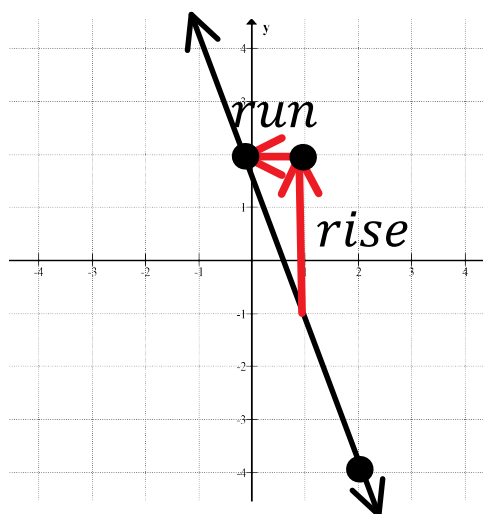
$$y - \text{int: } (0, -1) \quad \text{slope} = m = \frac{2}{3}$$

$$y = mx + b$$

Equation

$$y = \frac{2}{3}x - 1$$

Substitute b,m



$$y - \text{int: } (0,2) \quad \text{slope} = m = -\frac{3}{1}$$

$$y = mx + b$$

$$\frac{-3}{1} = \frac{3}{-1} = -\frac{3}{1}$$

$$y = -\frac{3}{1}x + 2$$