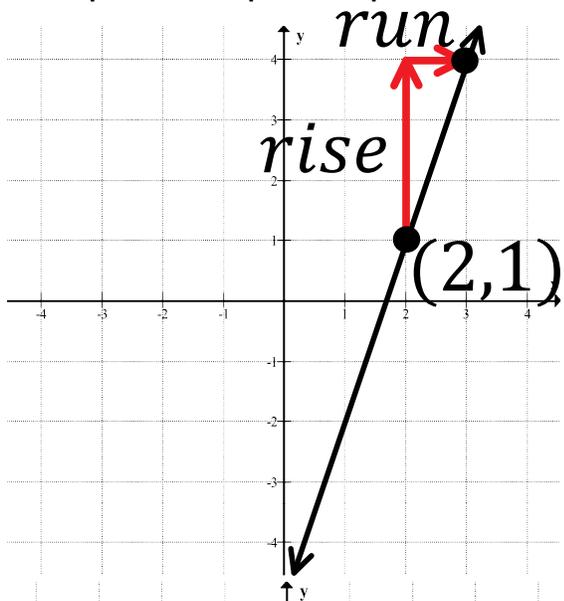


M10 - 7.3 - Slope Point Form $y - y_1 = m(x - x_1)$ Notes

Find Equation in Slope Intercept Form



Steps:

Find Point

Point
(2, 1)
(x_1, y_1)

Find Slope

$$\text{slope} = m = \frac{3}{1}$$

Equation

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

Substitute m

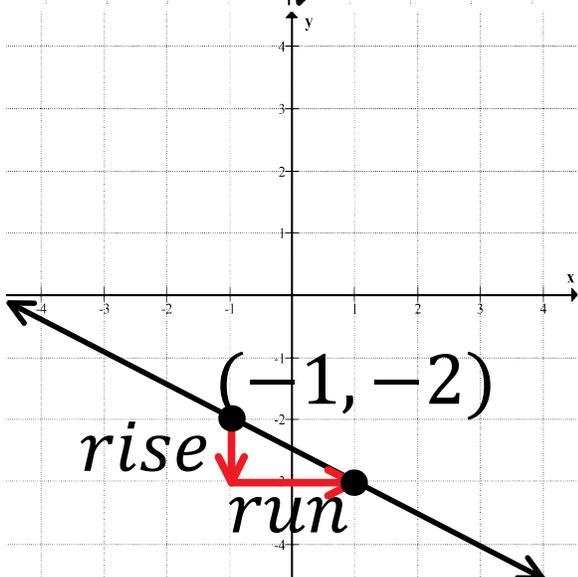
Point

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

Point (x_1, y_1)

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

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



Steps:

Find Point

Point
(-1, -2)
(x_1, y_1)

Find Slope

$$\text{slope} = m = -\frac{1}{2}$$

Equation

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

Substitute with Brackets

Substitute m

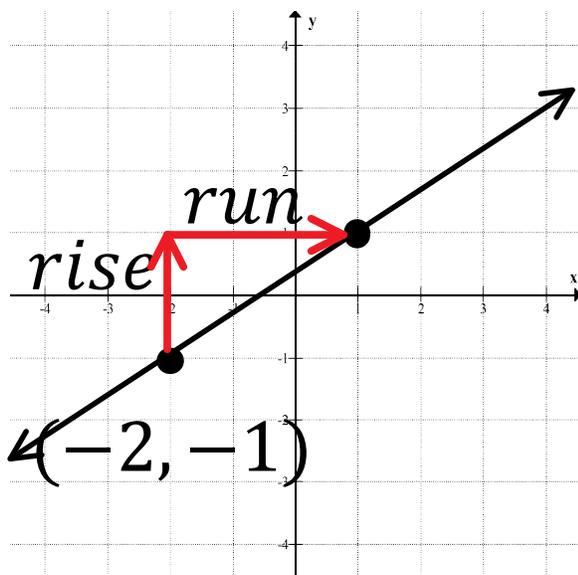
Point

$$y - (-2) = -\frac{1}{2}(x - (-1))$$

Simplify

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

Graph Slope Intercept Form



Steps:

Equation

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

Write Form

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

Find Point

Graph Point

Point
(-2, -1)
(x_1, y_1)

Notice it's the
Opposite of what's
Inside the Brackets

Find Slope

Graph Slope

$$\text{slope} = m = \frac{2}{3}$$