Writing Linear Equations From Two Points

Slope Intercept Form

$$y = mx + b$$

Slope Formula

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Steps

1. Use the _____ formula to find the slope of the line
2. Substitute the _____ and one of the _____ into the slope-intercept form equation
3. Solve for b
4. _____ the slope, m, and y-int, b, into the slope-intercept form equation

Examples

(3,2) and (6, − 1)

$x_1 = \_\_\_$ $y_1 = \_\_\_$

$x_2 = \_\_\_$ $y_2 = \_\_\_$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \_\_\_\_ = \_\_\_\_$$

$y = mx + b$

$\_\_ = \_\_\_ (\_\_) + b$

$\_\_ = \_\_ + b$

$\_\_ = b$

$m = \_\_\_\_$ $b = \_\_\_\_$

$y = mx + b$

$y = \_\_\_ x + \_\_\_$

(−4,6) and (8, − 3)

$x_1 = \_\_\_$ $y_1 = \_\_\_$

$x_2 = \_\_\_$ $y_2 = \_\_\_$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \_\_\_\_ = \_\_\_\_$$

$y = mx + b$

$\_\_ = \_\_\_ (\_\_) + b$

$\_\_ = \_\_ + b$

$\_\_ = b$

$m = \_\_\_\_$ $b = \_\_\_\_$

$y = mx + b$

$y = \_\_\_ x + \_\_\_$