

Name _____ Co. _____

To Find the Equation of a Line

$m = \frac{\quad}{\quad}$ (,)

(,) (,)

Given Only Two Points

Given the Slope and Only one point

Slope calculations

First find the Slope-Use the Slope Formula

Simplification and solution

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

Simplification and solution

Use the Slope Intercept Form of a Linear Equation to Derive the Equation of the line :

$$y_n = mx_n + b$$

Now use either (x_1, y_1) or (x_2, y_2) and substitute into the equation solving for b:
Example using (x_1, y_1)

$$y_1 = mx_1 + b$$

Now solve for the y-intercept "b"

$$b = y_1 - mx_1$$

The final result will be the Equation of the line in :
Slope Intercept Form

$$y = mx + b$$

Solution:

Solution:

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