Point-Slope Form of a Linear Equation

$\frac{y_2 - y_1}{x_2 - x_1} = m$ therefore, $y_2 - y_1 = m(x_2 - x_1)$

Remove one set of subscripts

This is "point-slope" form. → $y - y_1 = m(x - x_1)$

Put y here *Put m here* *Put x here*

Example:

Find equation of line through (3 , 4) with slope 5

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

$y - 4 = 5(x - 3)$

$y - 4 = 5x - 15$

$y = 5x - 11$

The rest of this page is a homework example. It does not need to go in your notebook.

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13.) $(8, 13)$ $m = -9$ x_1 y_1

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

$y - 13 = -9(x - 8)$

$y - 13 = -9x + 72$

$y = -9x + 85$