

Handout Lesson 3

Write equation of line passing
through 2 points

$(5, 12)$ and $(10, 15)$

1. Find slope:

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

Call $(5, 12)$ and $(10, 15)$
 (x_1, y_1) (x_2, y_2)

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{15 - 12}{10 - 5} = \frac{3}{5} = .6$$

2. ^{1st} Write the general equation of the
line as $y = mx + b$

(b) Substitute one point for y and x
and the slope you got for m .
and find b .

(c) Use the b and m you found to write eqn.

$$y = mx + b$$

$$12 = .6(5) + b$$

$$12 = 3.0 + b$$

$$12 - 3 = 3 + b - 3$$

$$b = 9$$

$$y = .6x + 9$$