

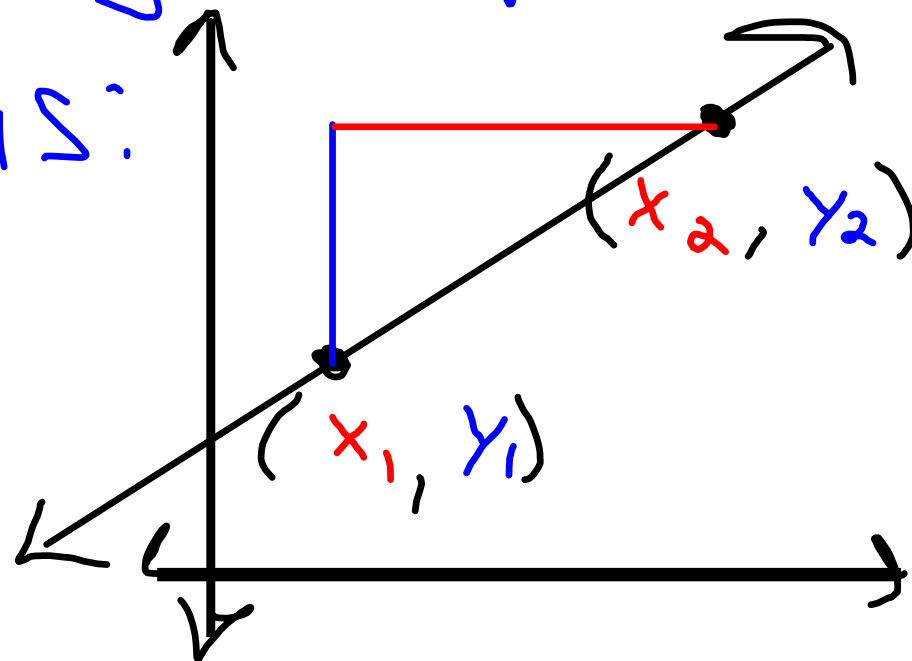
4.5 cont. Slope

Nov. 14, 2006

Slope: The slope m of a line that passes through the points (x_1, y_1) & (x_2, y_2) is:

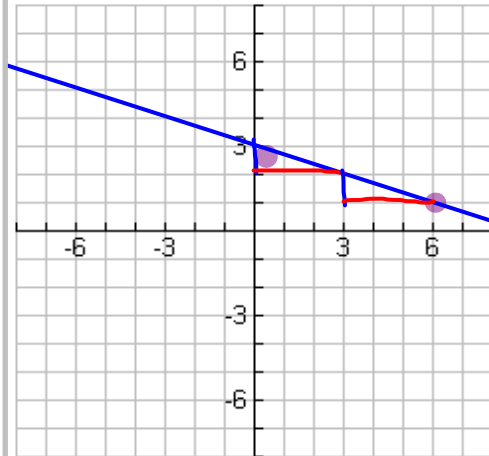
$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x}$$

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



Find the Slope of the line that
Passes through the Points: $(0, 3)$, $(6, 1)$

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$



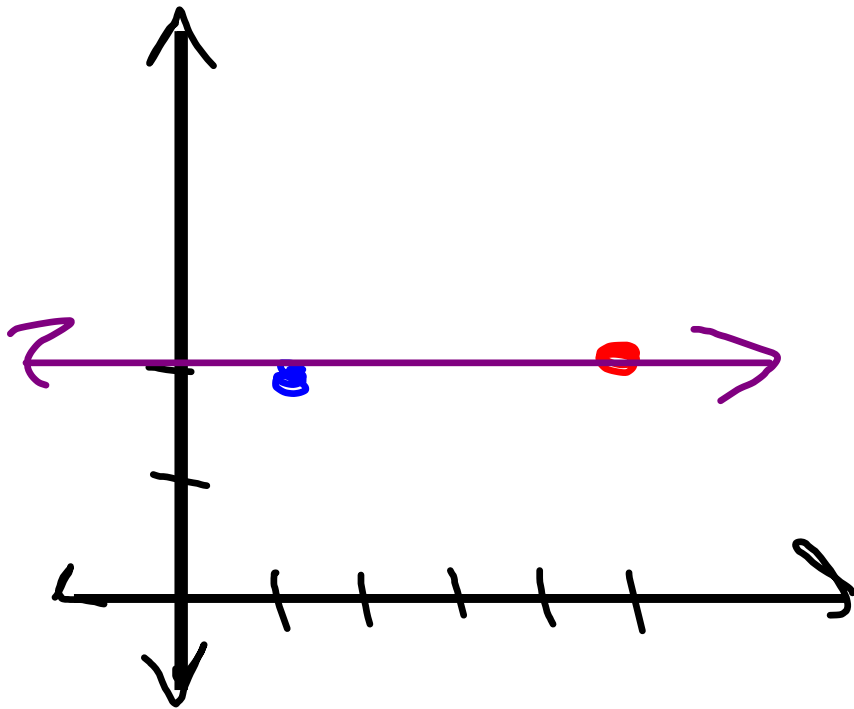
$$= \frac{1 - 3}{6 - 0} = \frac{-2}{6} = \underline{\underline{-\frac{1}{3}}}$$

Find the slope of the line that passes through the points:

$$(1, 2) + (5, 2)$$

(Note: In the original image, the first point (1, 2) has '1' labeled as x_1 and '2' as y_1 in blue. The second point (5, 2) has '5' labeled as x_2 and '2' as y_2 in red.)

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{Change in } y}{\text{Change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$
$$= \frac{2 - 2}{5 - 1} = \frac{0}{4} = \underline{\underline{0}}$$



0 Slope for horizontal lines

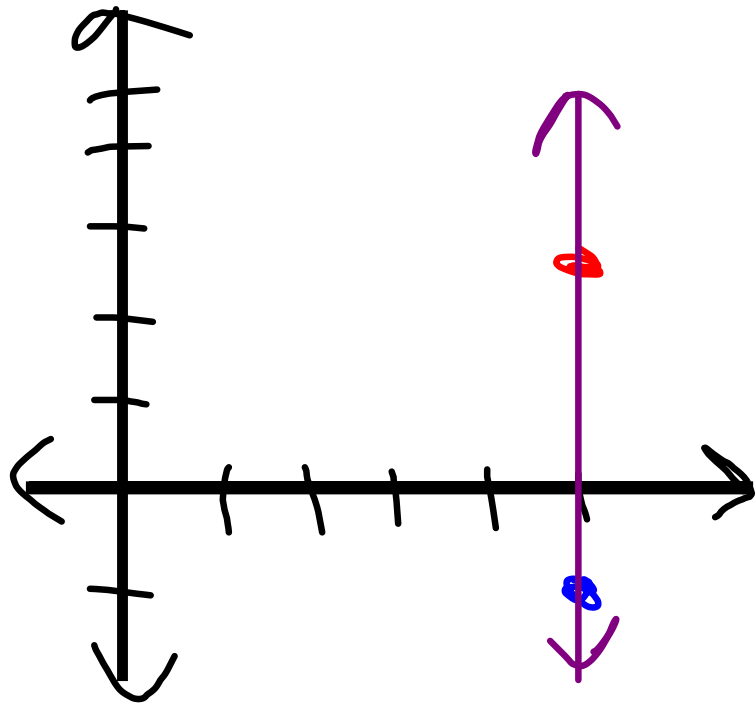
Find the Slope of the line that Passes Through the Points:

$$(5, -1) \text{ \& } (5, 3)$$

(x₁, y₁) \& (x₂, y₂)

$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{3 - (-1)}{5 - 5} = \frac{4}{0} = \text{undefined}$$



No Slope! for
a Vertical Line

O.T.L.

① pg 232: Put "Summary" Box at the Bottom of the Page into Notes. w/ Pictures!

② Correct previous day's O.T.L.

③ pg 233: 1-12(all) + 19-22(all) + 24-36(all)