

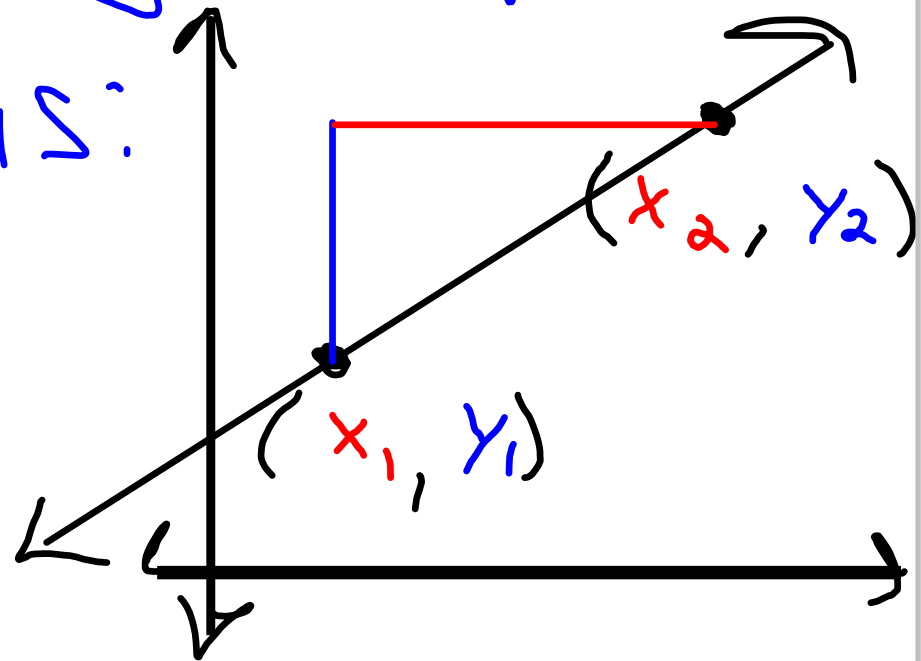
# 4.5 cont. Slope

Nov. 14, 2006

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

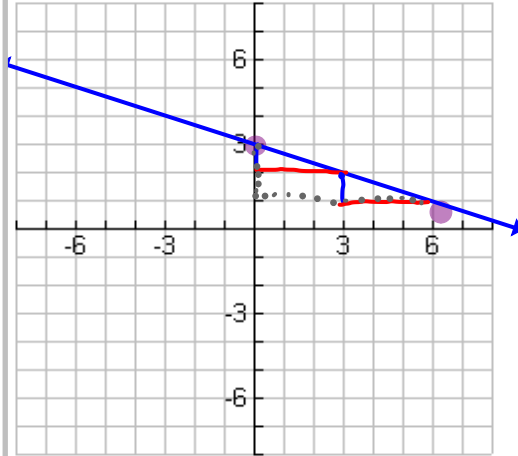
$$m = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\text{change in } y}{\text{change in } x}$$

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



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

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



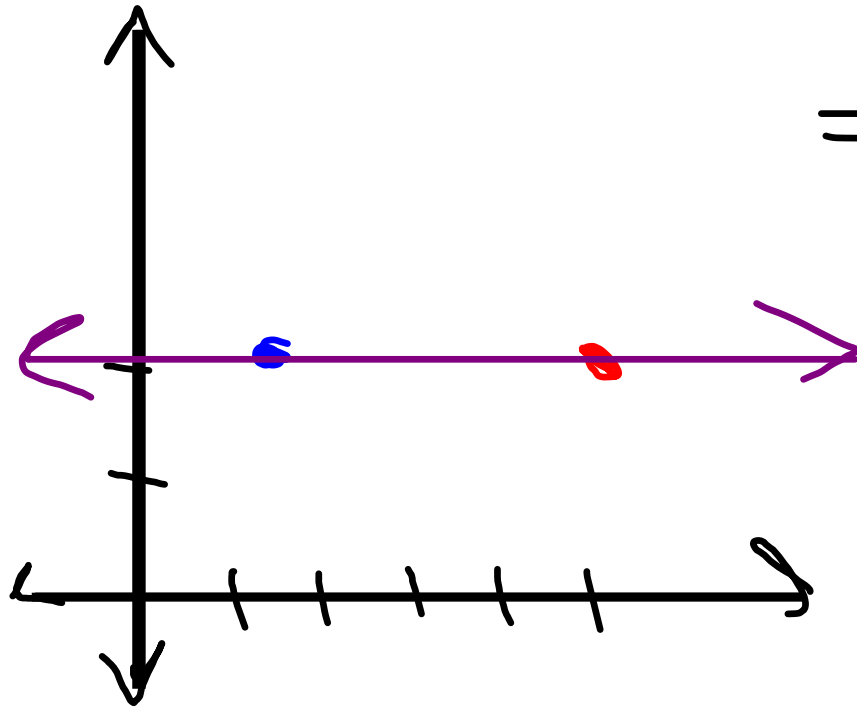
$$= \frac{1 - 3}{6 - 0} = \frac{-2}{6} = \underline{\underline{-\frac{1}{3}}}$$

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

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

$x_1, y_1$        $x_2, y_2$

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



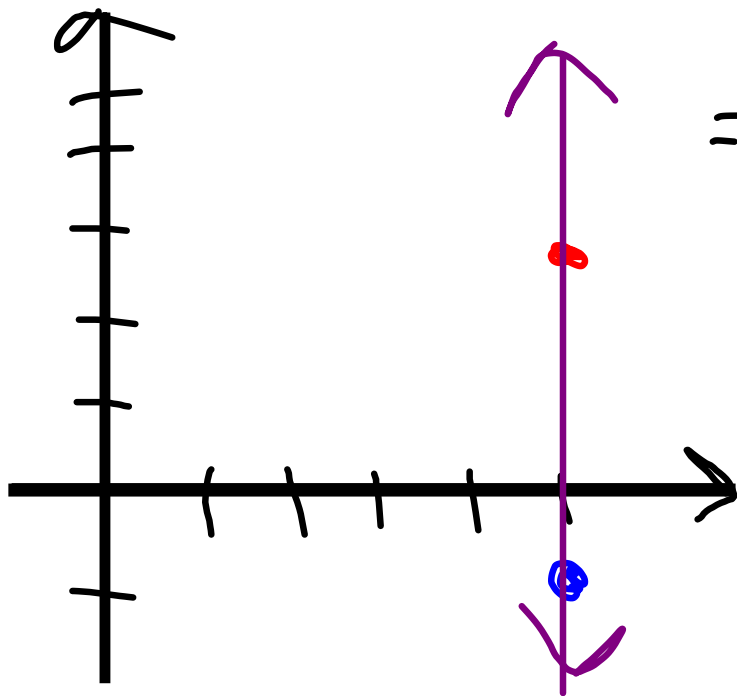
0 Slope for  
Horizontal Lines

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

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

$x_1, y_1$        $x_2, y_2$

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



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

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)