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

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

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

(x_2, y_2)

(x_1, y_1)
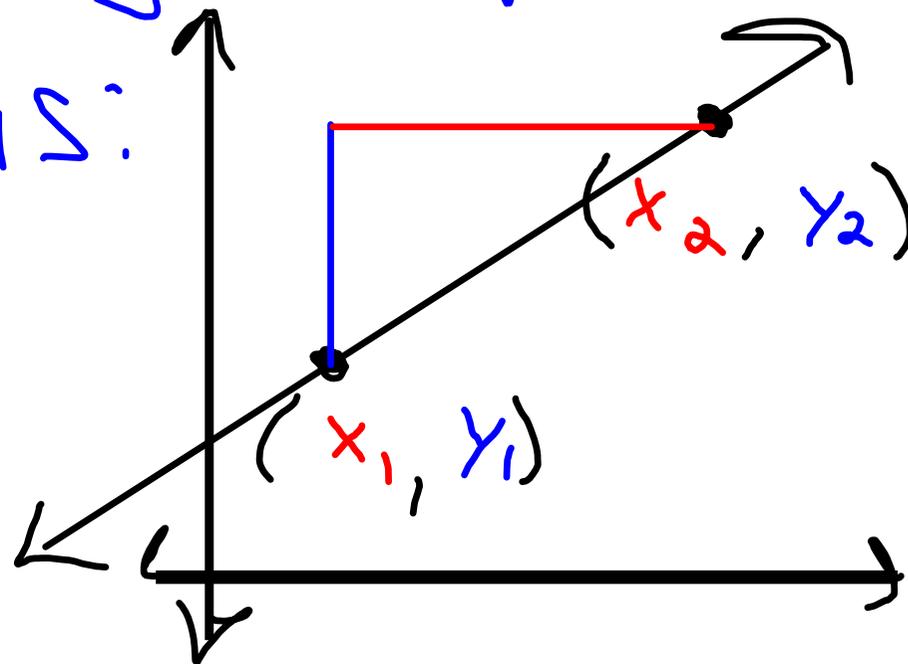
Find the Slope of the line that
Passes through the Points: $(0,3), (6,1)$

$$m = slope = \frac{rise}{run} = \frac{change\ in\ y}{change\ in\ x} = \frac{y_2 - y_1}{x_2 - x_1}$$
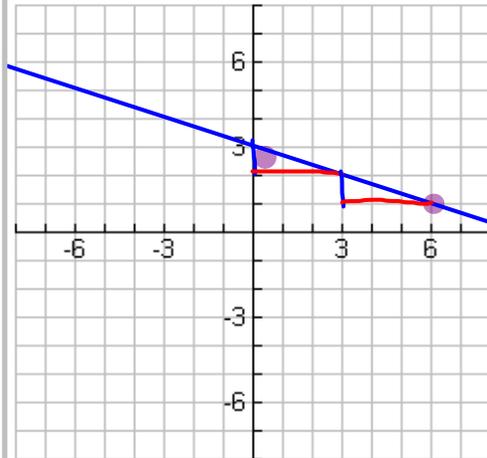
$$= \frac{1 - 3}{6 - 0} = \frac{-2}{6} = \frac{-1}{3}$$

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

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

$\underset{x_1, y_1}{} \quad \underset{x_2, y_2}{}$

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

$$= \frac{2 - 2}{5 - 1} = \frac{0}{4} = \underline{0}$$
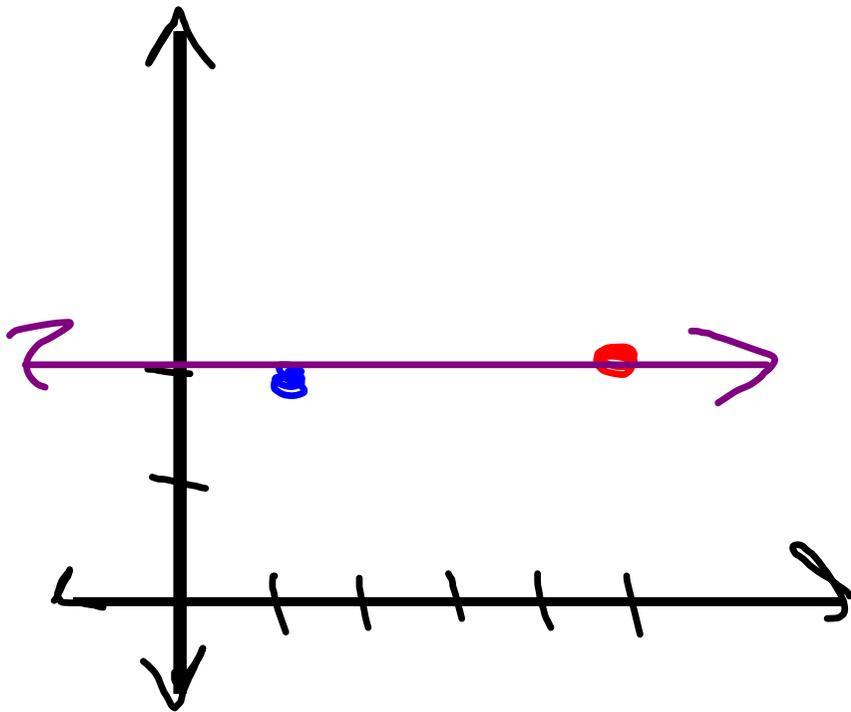
0 slope for horizontal lines

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

$(5, -1)$ & $(5, 3)$

x_1, y_1 x_2, y_2

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

$$= \frac{3 + {}^{+}1}{5 - 5} = \frac{4}{0} = \text{undefined}$$
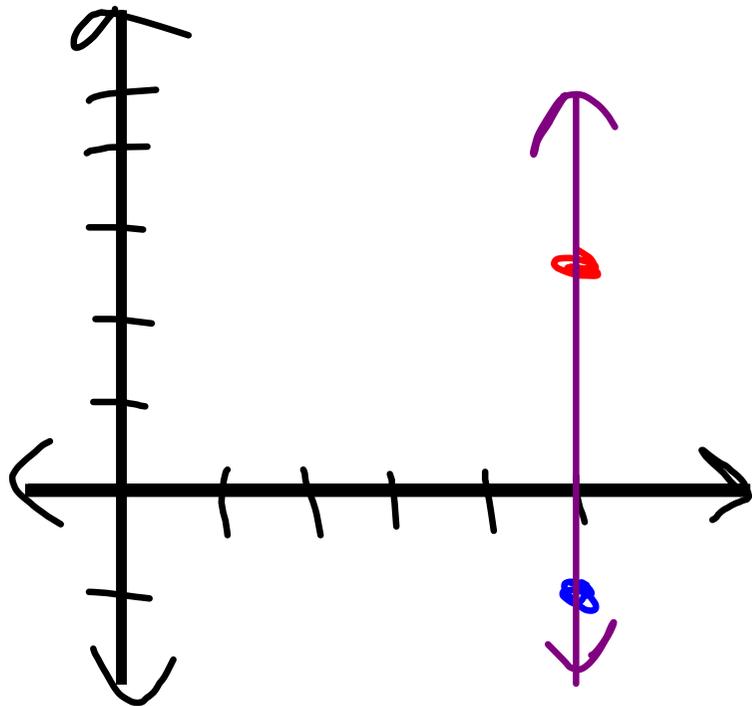
No Slope! for a Vertical Line

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)