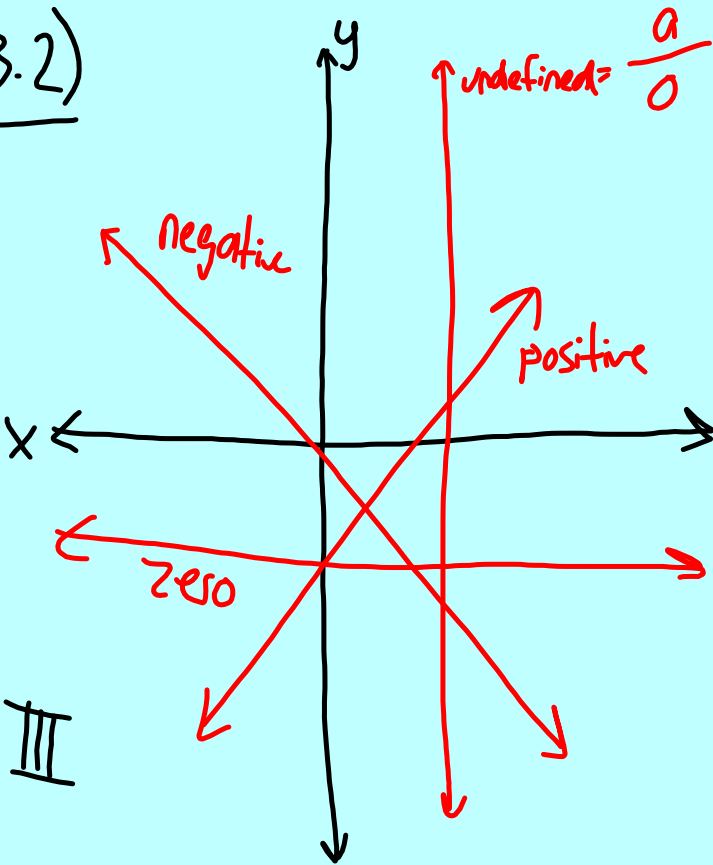


3.2)



$$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{\Delta y}{\Delta x}$$

geometric

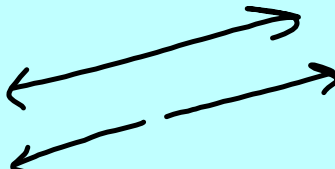
$$\frac{y_2 - y_1}{x_2 - x_1}$$


algebraic

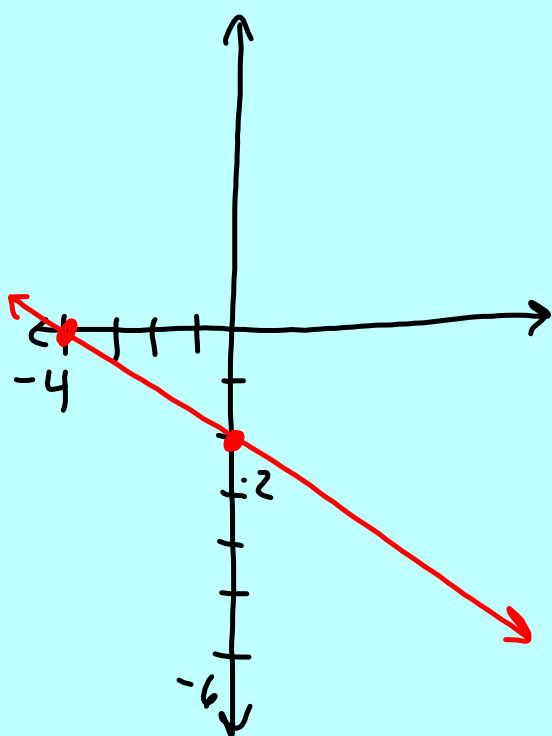
Slope-intercept form:

$$y = mx + b$$

↑
slope

Parallel:  $m_1 = m_2$

Perpendicular:  $m_1 = -\frac{1}{m_2}$ $5 = -\frac{1}{5}$



rise: -2

$$m = \frac{-2}{4} = -\frac{1}{2}$$

run: 4

Find slope of line

$$(-2, -3) \quad (-5, 1)$$

x_1, y_1

x_2, y_2

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - (-3)}{-5 - (-2)} = \frac{4}{-3}$$

Perp. $(2,3), (-8,1)$

$$m = \frac{1-3}{-8-2} = \frac{-2}{-10} = \frac{1}{5}$$

$$\frac{1}{5} \times m_2 = -\frac{1}{\frac{1}{5}}$$
$$m_2 = -5$$