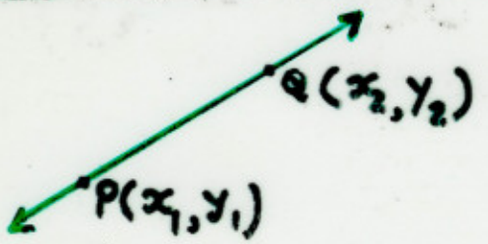
ALL YOU NEED TO KNOW ON LINEAR FUNCTIONS

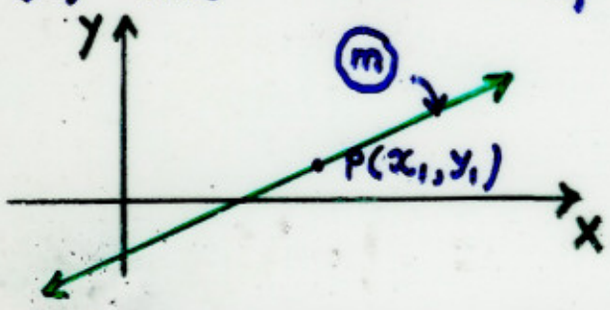
I SLOPE OF A LINE:



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

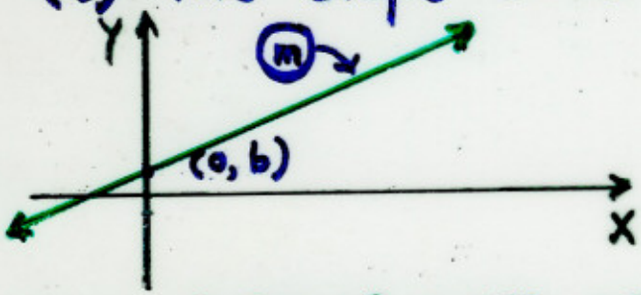
II EQUATION OF A LINE:

(a) The Point-Slope form:



EQN is: $y - y_1 = m(x - x_1)$

(b) The Slope-intercept form:

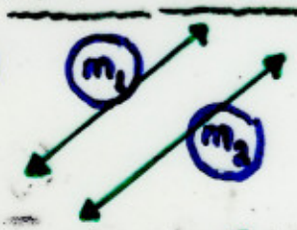


EQN is: $y = mx + b$

TWO POPULAR WAYS OF LEAVING THE FINAL ANSWER: $\underbrace{y = mx + b}_{\text{Slope-int form}}$ or $\underbrace{Ax + By = C}_{\text{Std form}}$

III PARALLEL and PERPENDICULAR LINES

(a)



Parallel lines have the same slope

i.e. $m_1 = m_2$

(b)

If two lines are $\perp^r$, then slope of one line is equal to the NEGATIVE RECIP. of the slope of the other.

i.e: $m_2 = -1/m_1$