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:

\[ \text{EQN is: } y - y_1 = m(x - x_1) \]

(b) The Slope-intercept form:

\[ \text{EQN is: } y = mx + b \]

TWO POPULAR WAYS OF LEAVING THE FINAL ANSWER

\[ \frac{y = mx + b}{\text{slope-int form}} \quad \frac{Ax + By = C}{\text{std form}} \]

III. **PARALLEL and PERPENDICULAR LINES**

(a) Parallel lines have the same slope

\[ m_1 = m_2 \]

(b) If two lines are **\( \perp \)**, then slope of one line is equal to the **NEGATIVE** RECIP. of the slope of the other.

\[ m_2 = -\frac{1}{m_1} \]