Steps for use of Point Slope Formula

\[ m = \text{slope} \rightarrow \frac{y_2 - y_1}{x_2 - x_1} \]

Slope Intercept (SI) = \[ y = mx + b \]

Point Slope (PS) = \[ y - y_1 = m(x - x_1) \]

Forms of Information

1. One ordered pair & m
   * PS is done
   ** SI is done \( y = mx + b \)"

Steps: 1.) Write out PS formula
        2.) Label ordered pair \( x_1, y_1 \) & slope \( m \)
        3.) Substitute \( x_1, y_1 \) & slope into PS formula
        4.) Distribute \( m \) to \( x \) \& \( x_1 \)
        5.) Get \( y \) by itself (zero out \( y_1 \))
        ** 6.) Combine like terms

2. Two Ordered Pairs
   * PS is done
   ** SI is done \( y = mx + b \)"

Steps: 1.) Use \( \frac{y_2 - y_1}{x_2 - x_1} \) to find \( m \) (slope)
        2.) Choose one ordered pair to work with
        3.) Label ordered pair \( x_1, y_1 \)
        4.) Substitute \( x_1, y_1 \) & slope \( m \) into PS formula
        5.) Distribute \( m \) to \( x \) \& \( x_1 \)
        6.) Get \( y \) by itself (zero out \( y_1 \))
        ** 7.) Combine like terms

3. X, Y Table
   * PS is done
   ** SI is done \( y = mx + b \)"

Steps: 1.) Choose 2 ordered pairs, any 2
        2.) Use \( \frac{y_2 - y_1}{x_2 - x_1} \) to find \( m \) (slope)
        3.) Choose one ordered pair to work with
        4.) Label ordered pair \( x_1, y_1 \)
        5.) Substitute \( x_1, y_1 \) & slope into PS formula
        6.) Distribute slope \( m \) to \( x \) \& \( x_1 \)
        7.) Get \( y \) by itself (zero out \( y_1 \))
        ** 8.) Combine like terms