

5.3 Write in Point-Slope Form

* Pt on line & Slope

For point (x_1, y_1) & Slope m , it is:

$$y - y_1 = m(x - x_1)$$

Example

① Given $P(4, -3)$ & slope = 2, write the eqn.

$$y - (-3) = 2(x - 4)$$

$$y + 3 = 2(x - 4)$$

$$\textcircled{2} A(-1, 3), B(1, 1)$$

$$\text{Slope} = \frac{y_1 - y_2}{x_1 - x_2} = \frac{3 - 1}{-1 - 1} = \frac{2}{-2} = -1$$

Pick a point

$$\textcircled{A} \quad y - 3 = -1(x + 1)$$

$$y - 3 = -1x - 1$$

$$y = -1x + 2$$

\textcircled{B}

$$y - 1 = -1(x - 1)$$

$$y - 1 = -1x + 1$$

$$y = -1x + 2$$