

Writing Equations in Slope Intercept Form

Slope Intercept Form

$$y = mx + b$$

slope

y-intercept

slope

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

y-intercept

The point where the line _____
the _____-axis
(0, b)

Example 1:

Find the slope and y-intercept from the given equations

$$y = \frac{5}{7}x - 1$$

$$m = \underline{\hspace{2cm}} \quad b = \underline{\hspace{2cm}}$$

$$y = 3x$$

$$m = \underline{\hspace{2cm}} \quad b = \underline{\hspace{2cm}}$$

Example 2:

Use the given slope and y-intercept to write the equation

$$m = \frac{2}{3}$$

$$y = \underline{\hspace{2cm}}$$

$$b = 4$$

$$m = 1$$

$$y = \underline{\hspace{2cm}}$$

$$b = -3$$

Special Cases:

$$y = x + 2$$

$$m = 1 \quad b = 2$$

$$y = 4x$$

$$m = 4 \quad b = 0$$

$$y = 8$$

$$m = 0 \quad b = 8$$