

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

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

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

$$y = 3x$$

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

Example 2:

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

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

$$b = 4$$

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

$$m = 1$$

$$b = -3$$

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

Special Cases:

$$y = x + 2$$

$m = 1$ $b = 2$

$$y = 4x$$

$m = 4$ $b = 0$

$$y = 8$$

$m = 0$ $b = 8$