Jan 21st

6-2 Slope Intercept Form

$y = mx + b$

- dependent variable
- output
- range

slope (rate of change)

y-intercept

- independent variable
- input
- domain

(x, y) ordered pairs

write an equation - evaluate

$m = -2 \quad b = 8 \quad y = -2x + 8$

$m = -\frac{1}{2} \quad b = 0 \quad y = -\frac{1}{2}x$

$m = 0 \quad b = 4 \quad y = mx + b$

$y = 0x + 4$

Horizontal Line

$y = 0 + 4$

$y = 4$

Identify the slope & y-intercept

$y = -3x + 1$ $\quad m = -3 \quad b = 1$

$y = \frac{7}{6}x - \frac{3}{4}$ $\quad m = 7/6 \quad b = -3/4$

$y = -\frac{4}{5}x$ $\quad m = -\frac{4}{5} \quad b = 0$

$y = -6 - \frac{1}{2}x$ $\quad m = -\frac{1}{2} \quad b = -6$

$y = -\frac{1}{2}x - 6$

★ Slope (m) should NEVER be a mixed number or a decimal ★

Solve for y to identify the slope & y-intercept.

$y - 9x = \frac{1}{2}$

$+9x \quad +9x$

$y = 9x + \frac{1}{2}$

$m = 9$

$b = \frac{1}{2}$

$2y - 6 = 3x$
$+6 \quad +6$

$\frac{2y}{2} = \frac{3x+6}{2}$

$y = 3x + 3$

OR

$y = \frac{3}{2}x + 6$

$\frac{2y}{2} = \frac{3x}{2} + \frac{6}{2}$

$y = \frac{3}{2}x + 3$

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

$b = 3$

$\frac{-2(3+y)}{-2} = \frac{4x}{-2}$

$3 + y = -2x$
$-3 \quad -3$

$y = -2x - 3$

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

$-6 - 2y = 4x$
$+6 \quad +6$

$\frac{-2y}{-2} = \frac{4x+6}{-2}$

$y = -2x - 3$

Pg. 294 #2-20 Evens
#41-47 All