

6.2 Slope Intercept Form.notebook

January 02, 2018

Warm-Up

Evaluate each expression.

$$1. 6a + 3 \text{ for } a = 2 \quad \boxed{15}$$

$$2. -2x - 5 \text{ for } x = 3 \quad \boxed{-11}$$

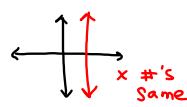
$$3. \frac{1}{4}x + 2 \text{ for } x = 16 \quad \boxed{V4}(16)+2$$

$$4. 0.2x + 2 \text{ for } x = 15 \quad \boxed{0.2(15)+2}$$

$$5) \text{ Find Slope: } (-2, 3), (-6, 5)$$

$$\frac{5-3}{-6+2} = \frac{2}{-4} = \frac{1}{-2} \quad \text{1 up, 2 left}$$

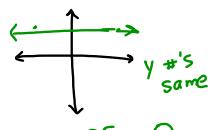
Vertical AND Horizontal LINES



$$\frac{5}{0} = \text{ERROR}$$

SLOPE = UNDEFINED

$$\begin{aligned} X &= \# \\ X &= 2 \end{aligned}$$



SLOPE = 0

$$\begin{aligned} Y &= \# \\ Y &= 3 \end{aligned}$$

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6.2 Slope Intercept Form

Definition

Slope-Intercept Form of a Linear Equation

The **slope-intercept form** of a linear equation is $y = mx + b$.

\uparrow slope \uparrow y-intercept

Ex 1: Identify the Slope and Y-Intercept

$$y = mx + b$$

$$y = 3x - 5$$

slope: 3

y-int: -5

$$y = -\frac{3}{4} + \frac{7}{6}x$$

slope: $\frac{7}{6}$

y-int: $-\frac{3}{4}$

* Slope is the #

w/ the x

* y-int is the other #
(not w/ the x)

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Ex 2: Writing an Equation

Write an equation of the line with slope $\frac{3}{8}$ and y-intercept 6.

slope: $\frac{3}{8}$

y-int: 6

$$y = mx + b$$

$$y = \frac{3}{8}x + 6$$



Ex 3: Graphing an Equation

a) $y = 3x - 1$

Slope: $\frac{3}{1}$

y-int: -1

Start here

b) $y = \frac{3}{2}x - 2$

Slope: $\frac{3}{2}$

y-int: -2

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