Do Now

1) Write an equation whose slope is 3 and y-intecept is 15. $y = mx + b$

$y = 3x + 15$

2) What is the equation of a line whose slope is 5 and passes through the point (-6,-26).

$y = mx + b$

$-26 = 5(-6) + b$

$-26 = -30 + b$

$+30 \quad +30$

$4 = b$

$y = 5x + 4$

3) Write a linear equation that passes through the points (3, 0) & (6, -2)

$x_1, y_1 \quad x_2, y_2$

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

$m = \frac{-2 - 0}{6 - 3}$

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

$y = mx + b \quad (3,0)$

$0 = \frac{-2}{3}(3) + b$

$0 = -2 + b$

$+2 \quad +2$

$2 = b$

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

Dec 13-6:55 AM

Writing Equations for Real Life Situations

Translating Information into an Equation

- Write a let statement for your variables (x and y)
- Identify the starting amount (b)
- Is it positive or negative??
- Identify the change (m)
- Is it positive or negative?? (increasing/decreasing) rate
- Write the equation!

Nov 16-5:08 PM

Javier is filling up an above-ground swimming pool. The pool already had 10 gallons of water, and it is filling at a rate of 5 gallons per minute.

"b" Initial amount: 10

Increasing / Decreasing

"m" Rate: 5

Equation: $y = 5x + 10$

$y = mx + b$

Elena received $200 for a birthday present, which she deposited in a bank account. Every month she withdraws $25.

"b" Initial amount: 200

Increasing / Decreasing

"m" Rate: -25

Equation: $y = -25x + 200$

Nov 15-6:46 AM

Victor works at a shoe store. His salary is $300 a week plus 10% commission on any shoes he helps sell.

Initial amount: 300

Increasing / Decreasing

Rate: .10

Equation: $y = .10x + 300$

$10\% \rightarrow .10$

$\frac{10}{100}$

Danielle is expecting a cold front. She records the drop in temperature (°F) every hour.

Hour	0	1	2	3
Temp.	82	78	74	70

-4 -4 -4

Initial amount: 82

Increasing / Decreasing

Rate: -4

Equation: $y = -4x + 82$

"m" Use the formula $m = \frac{y_2 - y_1}{x_2 - x_1}$

Nov 15-6:49 AM

1) Mr. Ring had 95 updates on Facebook. Every day he gets 43 more.

A) Initial Amount 95

B) Increasing/Decreasing

C) Rate 43

D) Write a linear equation that represents the situation.

$y = 43x + 95$

E) How many updates will Mr. Ring have after 23 days? x-value

$y = 43(23) + 95$

$y = 989 + 95$

$y = 1084$ updates

Nov 28-7:01 PM