Alg 2 Bellwork Monday, December 9, 2013

1. Given the line $4x + 8y = 12$ write the equation of the line that is perpendicular to the this line and passes through the point (10,1)

$m = 2$

Slope – intercept

$y = 2x - 19$

Point-slope

$y - y_1 = m(x - x_1)$

$y - 1 = 2(x - 10)$

$4x + 8y = 12 - 4x$

$-4x$

$\frac{8y}{8} = \frac{12 - 4x}{8}$

$y = \frac{12}{8} - \frac{1}{2}x$

2. Does each table show direct variation? If yes,
   a. Write a direct variation equation
   b. Find x when y=50.

I

x	y	$\frac{y}{x}$
-6	7.5	-1.25
-4	5	-1.25
8	-10	-1.25
12	-15	-1.25

Yes

II

x	y
-4	1
-3	2
-2	3
-1	4

NO

III

x	y
6	26.4
8	44
10	52
12	60

NO

a) $y = -1.25x$ or $-1.25 = \frac{y}{x}$

b)

3. Ohm's law states that the Voltage (V) in volts varies directly with the current (I) in amps.

Y varies w/ X

An electronic device passed a current of 1.6 amps at a voltage of 9.2 volts.

a. Write a direct variation equation. → $y = 5.75x$

b. What was the current when the voltage was increased to 12 volts.

$12 = 5.75x$

$\frac{V}{I} = k$ $\frac{12V}{xA}$ $\frac{9.2V}{1.6A} = 5.75$ volts/Amps

12 volts = 2.08 Amps