Algebra 1 Bellwork Wednesday, January 20, 2016

6TH

For 1 to 4 write the equation of each line in SLOPE-INTERCEPT FORM

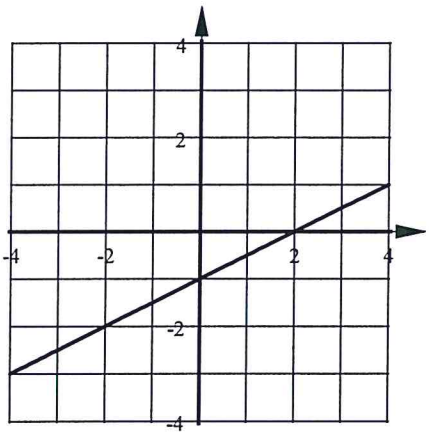
1. The line has a slope of $-\frac{4}{3}$ and passes through the point $(-6, 14)$

EQ:

2. The line passes through the points $(15, -3) \& (25, 1)$

EQ:

3. Use the line in the graph. EQ:



4. $12x - 8y = 48$

EQ:

5. A pool has 400 gallons of water in it and the owner puts the hose in the pool. Water comes out of the hose at a rate of 3.5 gallons per minute.

a) Write an equation to model this situation.

b) Use this equation to predict the amount of time it will take until the pool has 1000 gallons of water.

Algebra 1 Bellwork Wednesday, January 20, 2016 ANSWERS

For 1 to 4 write the equation of each line in SLOPE-INTERCEPT FORM

1. The line has a slope of $-\frac{4}{3}$ and passes through the point $(-6, 14)$

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

$y - 14 = -4/3(x+6)$

$y - 14 = -4/3x - 8$

$+14 \quad +14$

$\rightarrow y = -4/3x + 6$

2. The line passes through the points $(15, -3)$ & $(25, 1)$

EQ: $y = \frac{2}{5}x - 9$

$m = \frac{1-(-3)}{25-15} = \frac{4}{10} = \frac{2}{5}$

using $(25, 1)$

$y - 1 = \frac{2}{5}(x-25)$

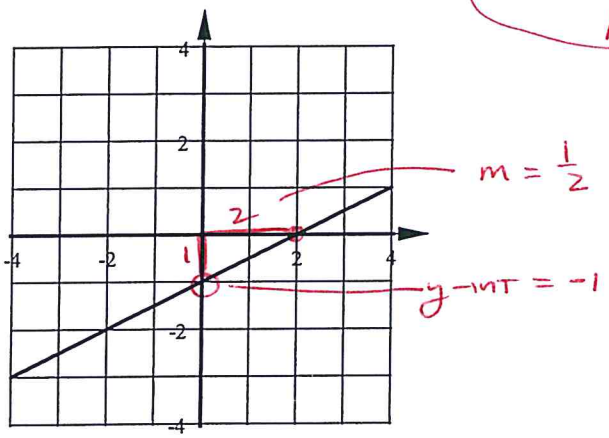
$y - 1 = \frac{2}{5}x - 10$

$+1 \quad +1$

$y = \frac{2}{5}x - 9$

3. Use the line in the graph.

EQ: $y = \frac{1}{2}x - 1$



4. $12x - 8y = 48$

$12x - 8y = 48$

$-12x \quad -12x$

$\frac{-8y}{-8} = \frac{48 - 12x}{-8}$

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

EQ: $y = \frac{3}{2}x - 6$

5. A pool has 400 gallons of water in it and the owner puts the hose in the pool. Water comes out of the hose at a rate of 3.5 gallons per minute.

a) Write an equation to model this situation.

G = # gallons of water

m = # minutes.

$G = 400 + 3.5m$

b) Use this equation to predict the amount of time it will take until the pool has 1000 gallons of water.

$1000 = 400 + 3.5m$

$-400 \quad -400$

$\frac{600}{3.5} = \frac{3.5m}{3.5}$

$m = 171.43$ min

$= 2$ hrs 51.43 min