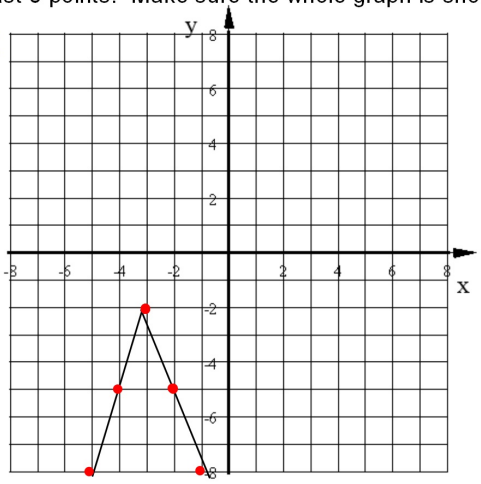
Algebra 1 Bellwork Monday, February 10, 2014

1. Graph using at least 5 points. Make sure the whole graph is shown.

$y = -3|x + 3| - 2$

V-shape open down

x	y
-2	-5
-1	-8
0	-11
1	-14
2	-17
-3	-2
-4	-5
-5	-8



2. a) Write a direct variation equation that contains the following point: (4, -10)

$k = y/x = -10/4 = -2.25 \rightarrow y = -2.25x$

3. Is each equation a direct variation?

a) $8 + 7x - 5 = -4y + 3$

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

Yes, it can be written as $y = kx$

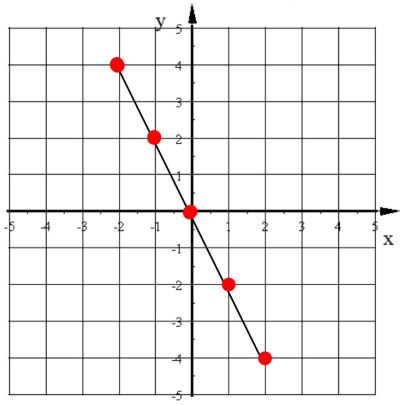
b) $3y + 4 = 2x - 4$

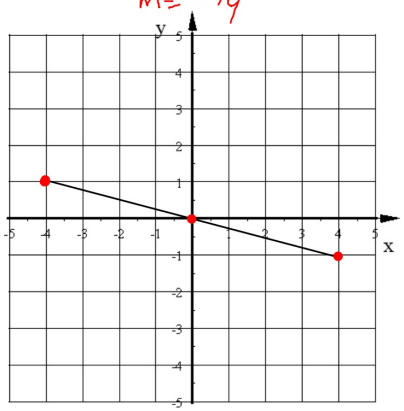
$\frac{3y}{3} = \frac{2x}{3} - \frac{8}{3} \rightarrow y = \frac{2}{3}x - \frac{8}{3}$ NO, it can't be written as $y = kx$

4. Graph each direct variation. → must pass through the origin

a) $y = -2x$ $\quad m = -2/1$

b) $y = -\frac{1}{4}x$ $\quad m = -1/4$





5. The distance you can travel varies directly with the amount of gas in your tank. You can travel 252 miles if you have 8 gallons of gas.

$k = y/x = \frac{252\ mi}{8\ gal} = 31.5\ mpg$

a) Model this situation with a direct variation equation.

$y = 31.5x$

b) How many miles can you travel if you have 11 gallons of gas?

$y = 31.5(11) = 346.5$ mi or use a proportion

c) How many gallons are required to travel 600 miles?

$600 = 31.5x$

$19.05 = x$ or use a proportion