

# Bellwork Alg 2A Thursday, October 20, 2016

1. Given this line:  $8x + 6y = 27$

a) Write the equation of the line that is Perpendicular to the given line but passes through the point  $(5, -3)$

b) Write the equation of the line that is Parallel to the given line but passes through the point  $(-2, 7)$

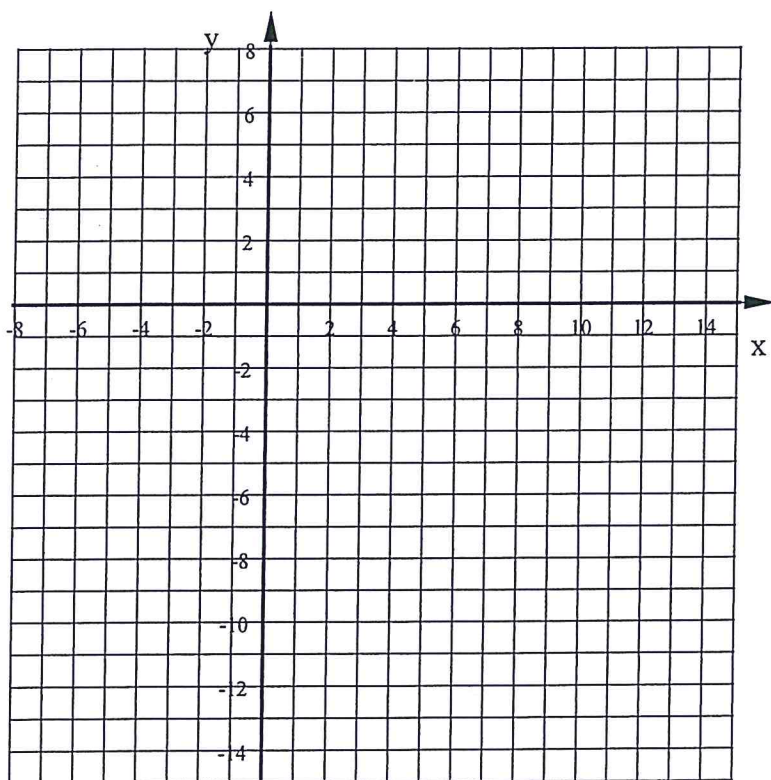
2. A line passes through these two points:  $(0, 0)$  &  $(-2, 7)$ . The point  $(x, 12)$  is also on this line. Find the missing x-coordinate.

3. Use the table of values below.

X	Y
-6	7.5
-4	5
2	-2.5
8	-10
12	-15

a) Add a third column to this table. In this column find the value of this ratio:  $\frac{Y}{X}$ . Round to the nearest hundredth if needed. What do you notice?

b) Use the graph below to plot these five points. What do you notice?



1. Given this line:  $8x + 6y = 27 \rightarrow y = \frac{27-8x}{6} = -\frac{4}{3}x + 4.5$

a) Write the equation of the line that is Perpendicular to the given line but passes through the point (5, -3)

$m = 3/4$

$y + 3 = 3/4(x - 5) \text{ or } y = 3/4x - 27/4$

b) Write the equation of the line that is Parallel to the given line but passes through the point (-2, 7)

$m = -4/3$

$y - 7 = -4/3(x + 2) \text{ or } y = -4/3x + 13/3$

2. A line passes through these two points: (0, 0) & (-2, 7). The point (x, 12) is also on this line. Find the missing x-coordinate.

$m = \frac{7-0}{-2-0} = -7/2$

Eq of Line:  $y = -7/2x$

$-2/7 \cdot 12 = -7/2x \cdot -2/7$

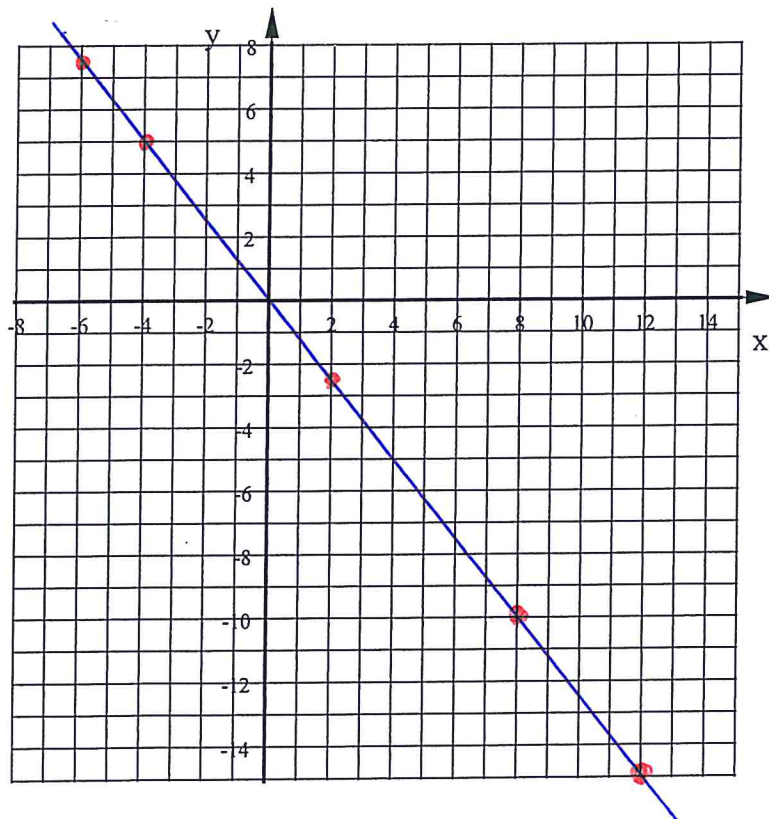
$x = \frac{-24}{7}$

3. Use the table of values below.

X	Y	$Y/X$
-6	7.5	$-1.25$
-4	5	$-1.25$
2	-2.5	$-1.25$
8	-10	$-1.25$
12	-15	$-1.25$

a) Add a third column to this table. In this column find the value of this ratio:  $\frac{Y}{X}$ . Round to the nearest hundredth if needed. What do you notice? They all have the same ratio

b) Use the graph below to plot these five points. What do you notice?



They form a line that passes through the origin.