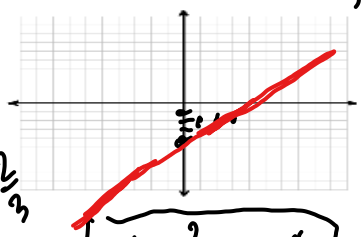
Math 1215 Hw 3 **Name** ..... Solutions

Find equation in slope intercept form and graph:

1) (3,-2)(-6,-8)



$y = \frac{2}{3}x - 4$

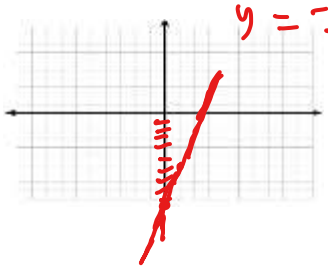
2) (-6,10) (9,-10)

$y = -\frac{4}{3}x + 2$

3) m= 4 (-2,-5)

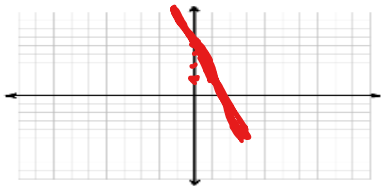
$y = 4x + 3$

4) 16x -4y =36



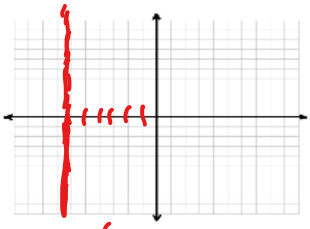
$y = 4x - 9$

5) 8x+24y = 96



$y = -\frac{1}{3}x + 4$

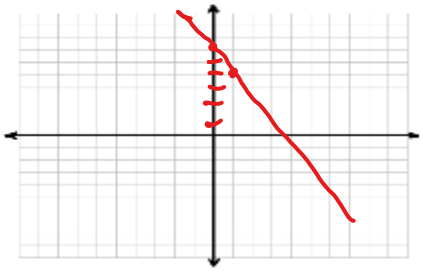
6) m = undefined (-6, 5)



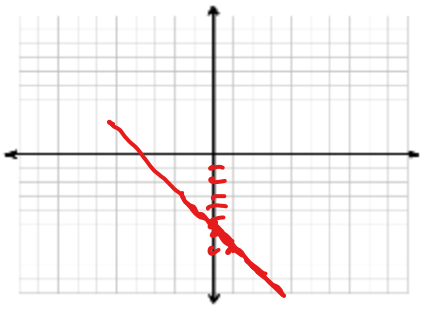
$x = -6$

Graph both of the lines on the same set of axis:

7) y = -2x + 6



8) y = -2x – 5



9)Use the two points to find the equation of the line. (-5, 13) (3, -3) in slope intercept form.

$\text{slope} = \frac{-3-13}{3-(-5)} = \frac{-16}{8} = -2$

$y = -2x + b \Rightarrow -3 = (-2)(3) + b \Rightarrow -3 = -6 + b$

use $(3, -3)$

$b = 3$

$y = -2x + 3$

10) Find the equation of the line parallel to y = 3x – 2, passing through (-2, 1).

slope $= 3 \Rightarrow y = 3x + b$ use $(-2, 1)$

$1 = 3(-2) + b \Rightarrow 1 = -6 + b \Rightarrow b = 7$

$y = 3x + 7$

11) Find the equation of the line perpendicular to y = 2x – 1, passing through (4, 5).

slope $= -\frac{1}{2}$

$y = -\frac{1}{2}x + b \Rightarrow$ use $(4, 5)$

$\Rightarrow 5 = -\frac{1}{2}(4) + b$

$5 = -2 + b \Rightarrow b = 7$

$y = -\frac{1}{2}x + 7$

12) Julio plans a diet to gain 0.2 kg a day. After 14 days he weighs 40 kg. The number of days he diets and his weight are related.

Identify the variables in this situation: x= # days

y= weight

What is the given information in this problem (find all that apply)?

y-intercept 37.2 slope 0.2 one point (14 , 40)

$y = 0.2x + b$

use $(14, 40)$

$40 = 0.2(14) + b$

$40 = 2.8 + b$

$b = 37.2$

a. Write an equation relating Julio's weight , *w*, to the number of days, *d*, on his diet.

$w = 0.2d + 37.2$

b. How long will it take Julio to reach his goal weight of 50 kg?

$50 = 0.2d + 37.2$

$50 - 37.2 = 0.2d \Rightarrow 12.8 = 0.2d$

$d = \frac{12.8}{0.2} = 64$ days