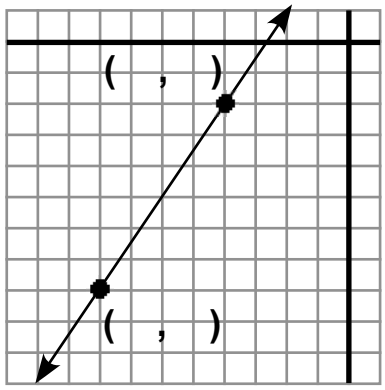
Advanced Algebra
Review #1
August 21, 2013

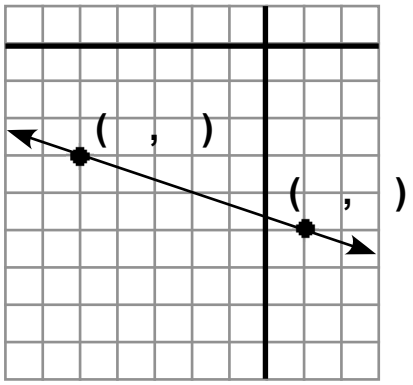
Name:_____ Per:_____ HW#_____

I. Find the slope of the line through the given pair of points by first drawing a slope triangle and finding its dimensions. Next find the coordinates for the two given points. Then use the slope formula to find the slope.

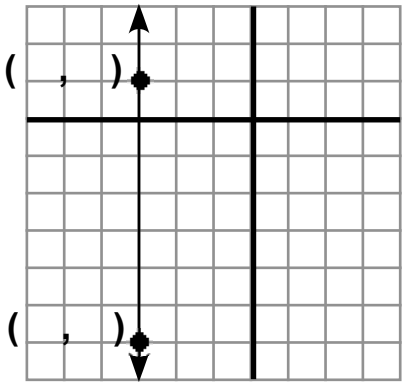


(a) slope formula equation

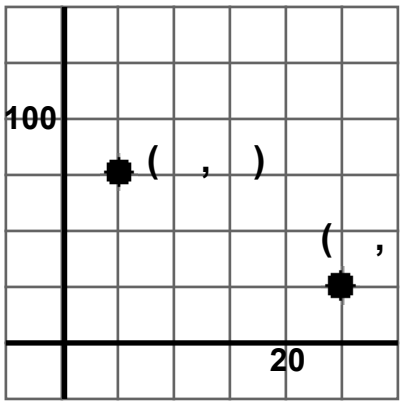
m = ——— =



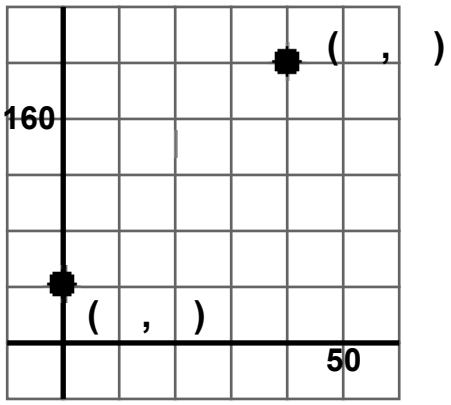
(b)



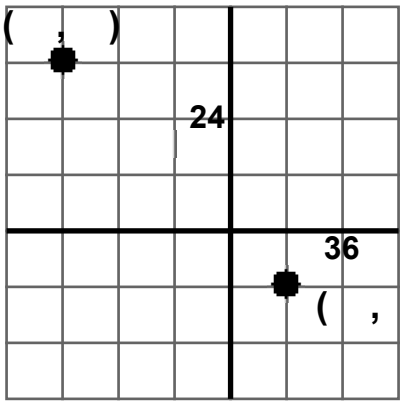
(c)



(d)



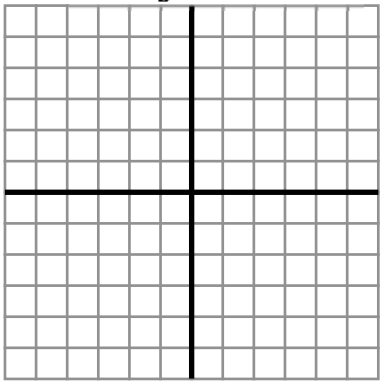
(e)



(f)

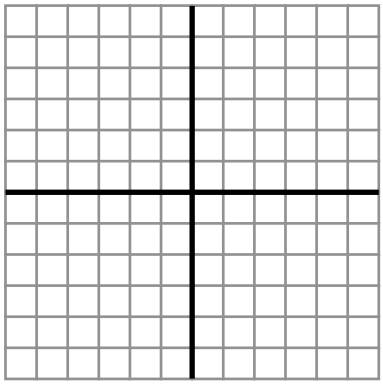
II. Graph the lines satisfying the given conditions. Then find the equation for the line.

(a) $m = -\frac{4}{3}$; y-int. $(0,2)$

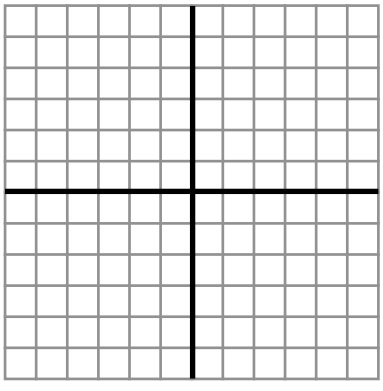


y =

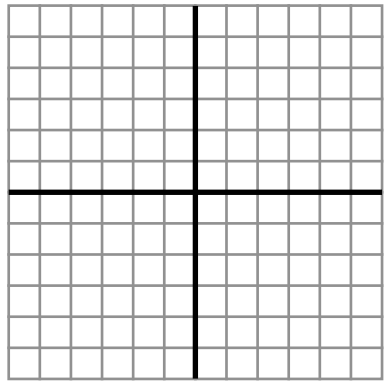
(b) $m = 2$; through $(2,4)$



(c) through $(-3, 1)$ & $(3, -3)$



(d) through $(-3, -2)$ & $(4, -2)$



III. Symbolically find the x & y-intercepts by using substitution. Show all work.

(a) **5x - 3y = 30**

x-int. y = ___

x-int.: (,)

y-int. x = ___

y-int.: (,)

(b) $\frac{2}{3}y = -\frac{1}{2}x + 4$

x-int. y = ___

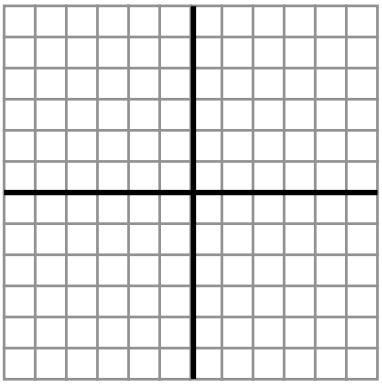
x-int.: (,)

y-int. x = ___

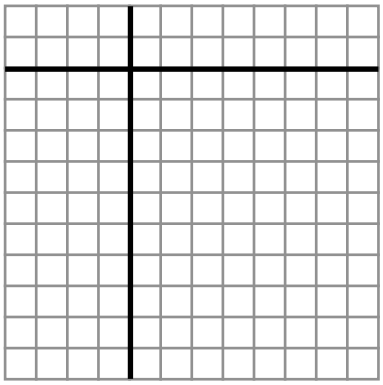
y-int.: (,)

IV. Change each of the following functions into slope-intercept form (y = mx + b). Then graph each line.

(a) **-5x - 3y = 3**



(b) $\frac{1}{2}x - \frac{1}{4}y = 1$



V. Solve the following systems using **substitution**. Check first answer in **both** equations. Show all steps.

(a) $y = \frac{2}{3}x - 1$ and $y = \frac{3}{4}x - 2$

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(b) **3x - 2y = 6** **2y - 14 = 8x**

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VI. Solve the following systems using **elimination**. Check first answer in **both** equations. Show all steps.

(a) **5x + 6y = -3**
-2x + 3y = 39

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(b) **7x + 2y = 22**
3x - 5y = 27

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