QUIZ 4 take home solutions

QUIZ 4 TAKE HOME DUE MON 7-7. DOWNLOAD GRAPH PAPER FROM THE WEB SITE AT THIS LINK.

SEC. 3.1. A B C D E F

1. PLOT EACH POINT: (2,-4), (1, -2), (-1, 5), (-3, -5), (0, 4), (-5, 0)

SEC. 3.2.

2. DETERMINE IF (0, 8) is a solution to y = 5x + 8; SAY YES OR NO.

3. DETERMINE IF (1, -2) is a solution to 3y – 2x = -8; SAY YES OR NO.

4. DETERMINE IF EACH PAIR IS A SOLUTION OF THE EQUATION. Then *graph* the two pairs to determine another solution. y = x – 2 ; (3, 1), (-2, -4) . HINT: Draw a line through the two points AFTER YOU VERIFY they are solutions to the equation BY SUBSTITUTING AND CHECKING. THEN LOOK AT THE LINE YOU DREW FROM THESE FIRST TWO POINTS AND FIND A *THIRD* POINT ON THE LINE. WHAT ARE COORDINATES X AND Y OF THIS THIRD POINT? YOU MAY ALSO USE A TABLE LIKE YOU DO IN PROBLEMS BELOW.

5. GRAPH: y = x – 1. USE A TABLE.

6. GRAPH: y = 2x – 3. USE A TABLE.

7. GRAPH: x + 2y = 8 Hint: TO GET ONE POINT: Set y = 0 and find x. TO GET ANOTHER POINT: Set x = 0 and find y. THEN DRAW A LINE THOUGH THESE TWO POINTS, THE INTERCEPTS.

8. GRAPH: 2x = 5y by first solving for y. USE A TABLE.

9. GRAPH: 8x – 4y = 12 by first solving for y. USE A TABLE.

10. GRAPH: 4x – 2y = 8 by first solving for y. USE A TABLE.

11. GRAPH: x + 5y = 10 by first solving for y. (See example 7.) USE A TABLE.

SEC. 3.3

12. FIND THE X AND Y INTERCEPTS AND GRAPH. 5x + 2y = 10

13. GRAPH: x = 5 . SHOW AND LABEL ANY INTERCEPTS. WHAT IS THE SLOPE OF THIS LINE? IF THE SLOPE IS UNDEFINED THEN SAY SO.

14. SEC. 3.4 . JASMINE BEGAN PROOF READING AT 9:00 AM. SHE STARTED AT THE TOP OF PAGE 93. SHE WORKED UNTIL 2:00 PM THAT DAY AND FINISHED PAGE 195. SHE BILLED THE PUBLISHER $220 FOR THE DAY'S WORK.

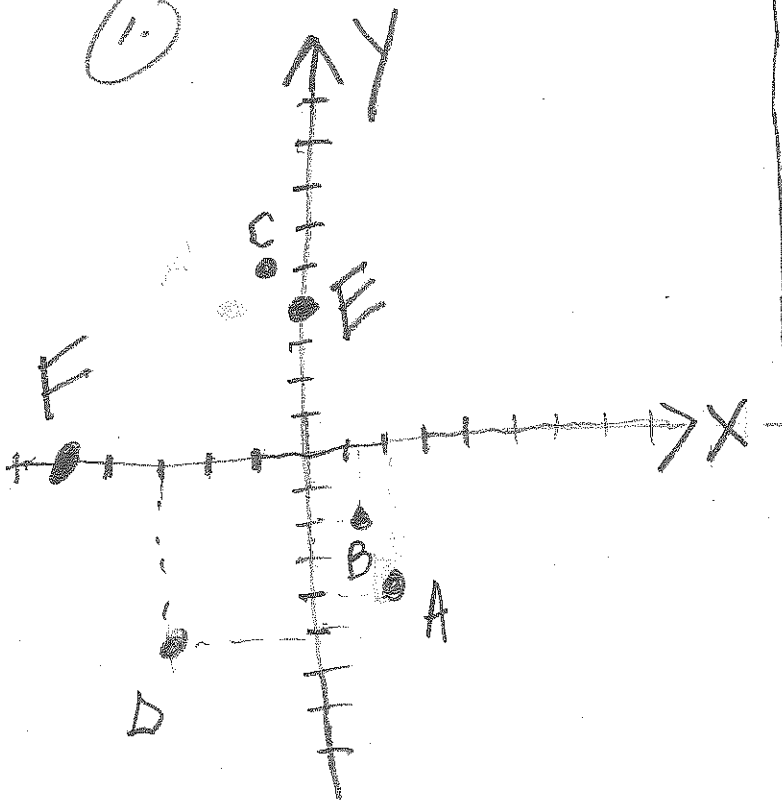
(a) Find the rate of pay in dollars per hour.

(b) Find the rate of pay in dollars per page.

(c) Find her rate of work *in pages per hour.*

Quiz 4 solutions

(1.)



(2.) $y = 5x + 8$

$8 = 5(0) + 8 = 8$ (yes)

(3.) $3y - 2x = -8$

$3(-2) - 2(1) = -8$

$-6 - 2 = -8$ (yes)

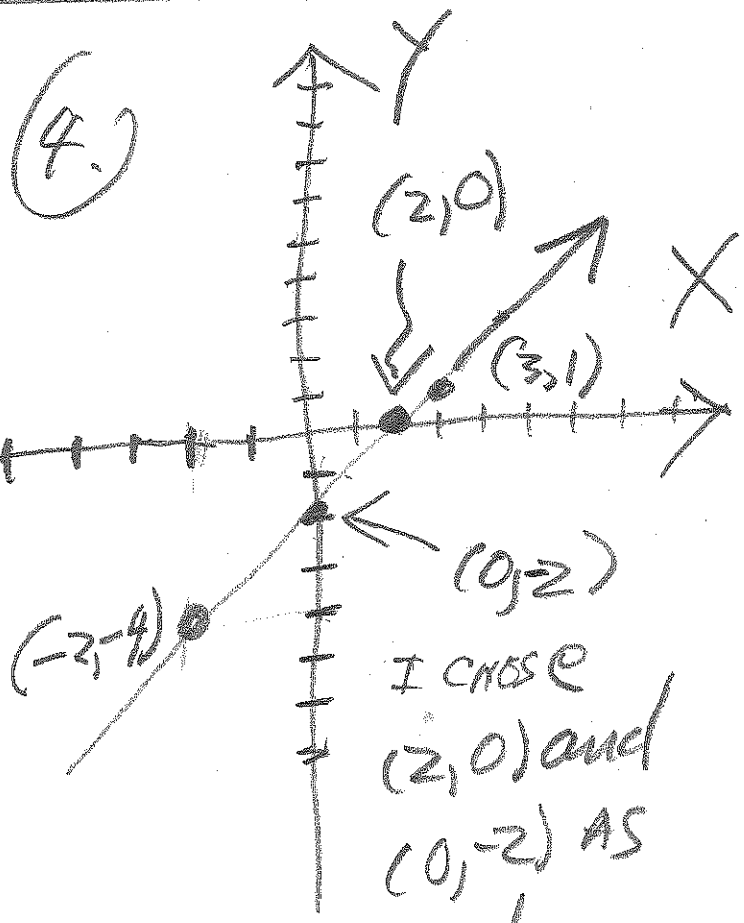
(4.) $y = x - 2$ $(3,1)$

$1 = 3 - 1$ (yes)

$y = x - 2$ $(-2,-4)$

$-4 = -2 - 2$ (yes)

(4.)

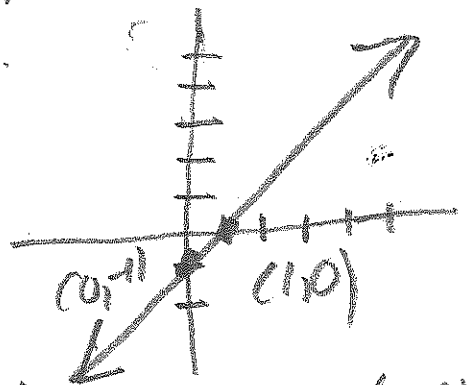


I chose $(2,0)$ and $(0,-2)$ as new points!

(5)

x	y
0	-1
1	0

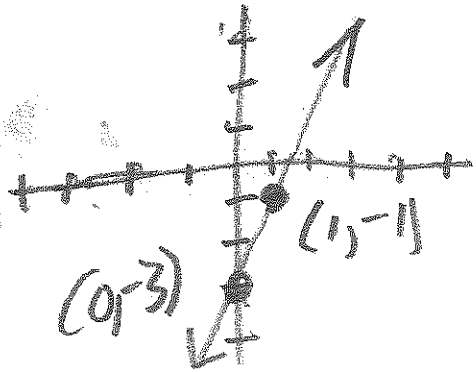
$y = x - 1$



(6)

x	y
0	-3
1	-1

$y = 2x - 3$ (work)



(7.) $x + 2y = 8$

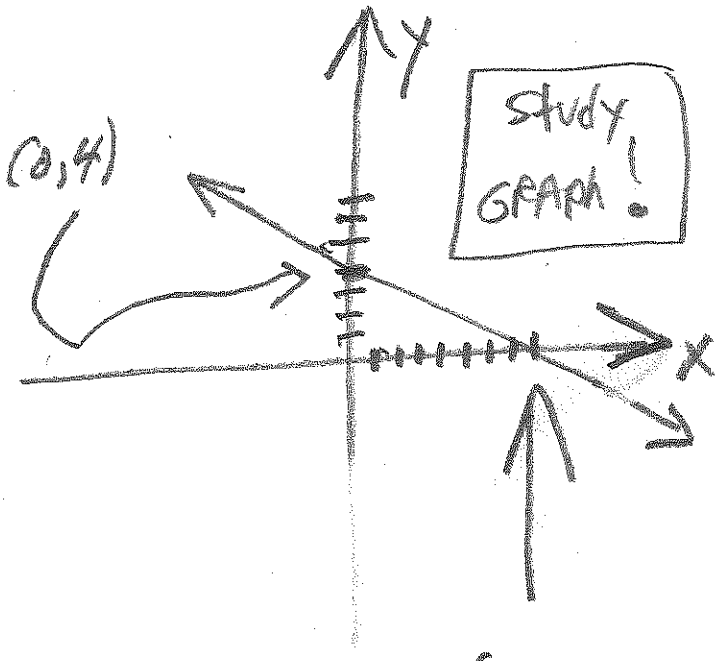
set $x = 0$:

$2y = 8$

$y = 4 \Rightarrow (0, 4)$

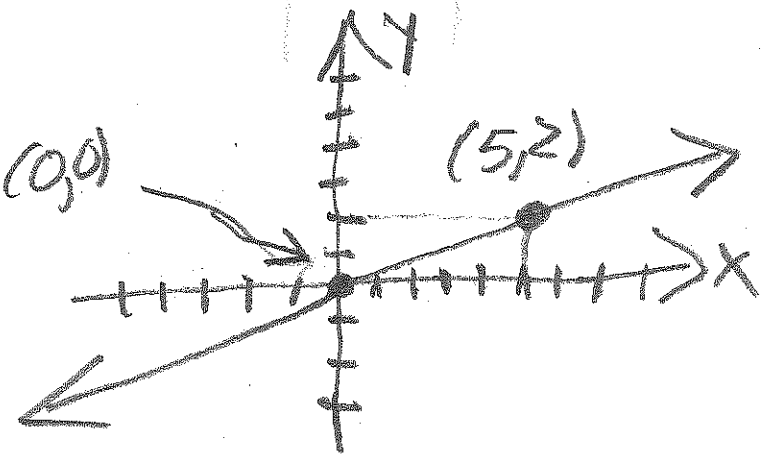
set $y = 0$:

$x = 8 \Rightarrow (8, 0)$



(8.) CHOOSE MULTIPLES OF 5 FOR X

x	y	WORK
0	0	$y = \frac{2}{5} \cdot 0 = 0$
5	2	$y = \frac{2}{5} \cdot 5 = 2$



(6.) $2x = 5y \Rightarrow \frac{2}{5}x = y$

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

(9.) $8x - 4y = 12$

$-8x \quad -8x$

$-4y = -8x + 12$

$\frac{-4y}{-4} = \frac{-8x + 12}{-4}$

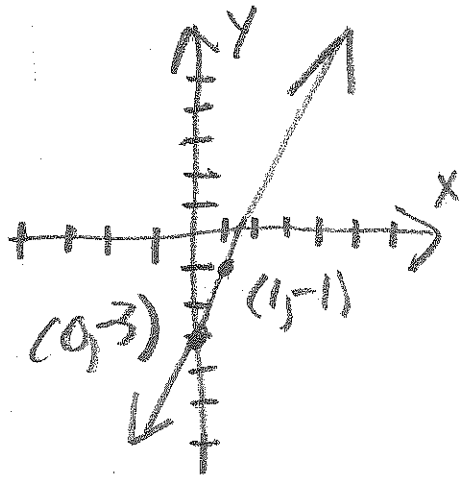
$y = \frac{-8x}{-4} + \frac{12}{-4}$

$y = 2x - 3$

Quiz 4 solutions

(9) $y = 2x - 3$

x	y
0	-3
1	-1



(10) $4x - 2y = 8$

$-4x \quad -4x$

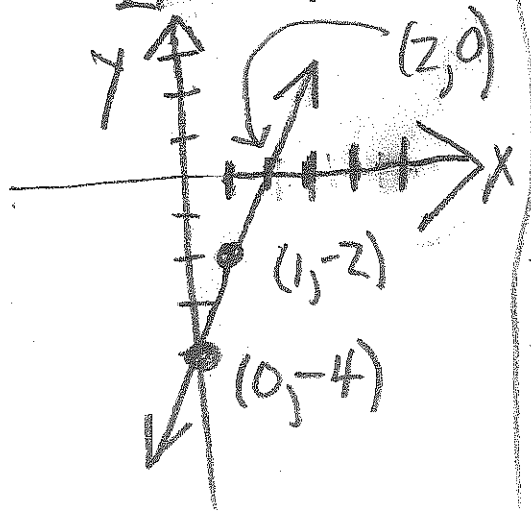
$-2y = -4x + 8$

$\frac{-2y}{-2} = \frac{-4x+8}{-2}$

$y = \frac{-4x}{-2} + \frac{8}{-2}$

$y = 2x - 4$

x	y
0	-4
1	-2
2	0



(11) $x + 5y = 10$

$-x \quad -x$

$5y = -x + 10$

$\frac{5y}{5} = \frac{-x+10}{5}$

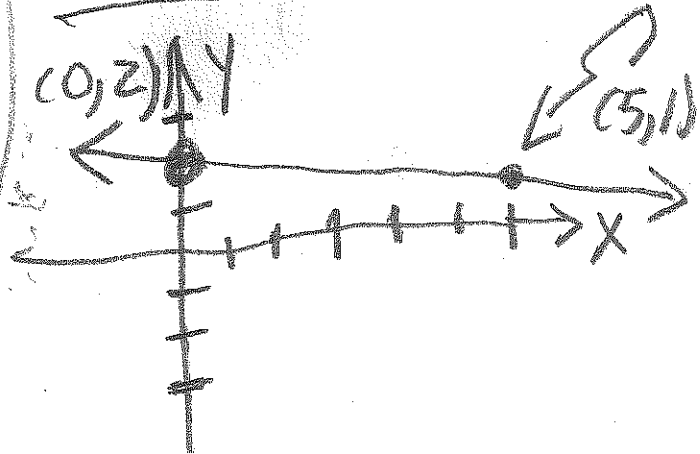
$y = \frac{-x}{5} + \frac{10}{5}$

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

TABLE

x	y	
0	2	$0 + 2 = 0$
5	1	$-\frac{1}{5} \cdot 5 + 2 = -1 + 2 = 1$

graph



Quiz 4

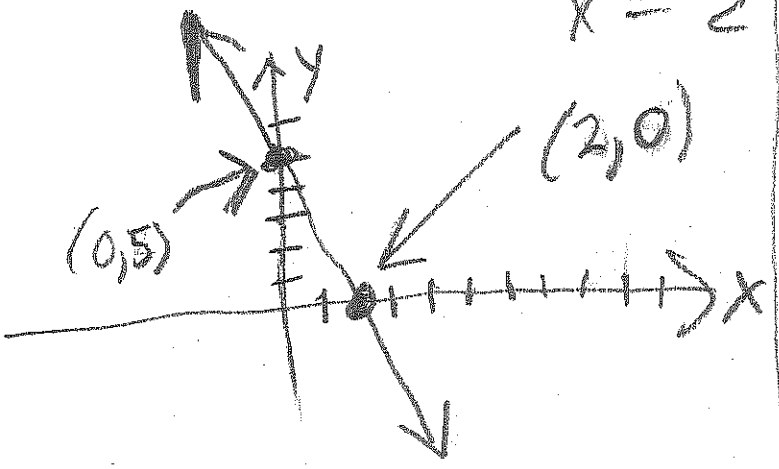
(12.) $5x + 2y = 10$

$x = 0 \Rightarrow 2y = 10$

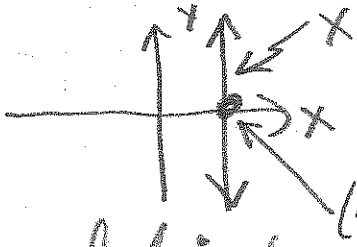
$y = 5$

$y = 0 \Rightarrow 5x = 10$

$x = 2$



(13.) $x = 5$ (y is anything)



slope undefined; slope = ∞.

(14) TIME = 5 hours = 5h

PAGES = 195 − 93 = 102p

MONEY = PAY = $220.00

(14.) (a) $\frac{\$220}{5h} = \frac{\$44}{h}$

(b.) $\frac{\$220}{102p} = \frac{\$2.17}{p}$

$$\begin{array}{r} 2.156 \\ 102\overline{)220.000} \\ 204\downarrow \\ \hline 160\downarrow \\ -\ 102 \\ \hline 580\downarrow \\ -\ 510\downarrow \\ \hline 700 \end{array}$$

ABOUT 2 dollars per page!

(c.) $\frac{102p}{5h} = 20.4\frac{p}{h}$

$$\begin{array}{r} 20.4 \\ 5\overline{)102.0} \\ 10\downarrow\downarrow \\ \hline 20 \\ 20 \end{array}$$

Sorry no solutions: Quiz 5

Quiz 5 Math 65 083; CRN= 10113

1. SEC. 3.5. FIND THE SLOPE OF THE LINE CONTAINING THE PAIR OF POINTS. (1, 4) AND (3, 6) . IF THE SLOPE IS UNDEFINED, SAY SO.

2. SEC. 3.5. FIND THE SLOPE OF THE LINE CONTAINING THE PAIR OF POINTS. (1, 4) AND (3, 4). IF THE SLOPE IS UNDEFINED, SAY SO.

3. SEC. 3.5. FIND THE SLOPE OF THE LINE CONTAINING THE PAIR OF POINTS. (1, 4) AND (1, 6). IF THE SLOPE IS UNDEFINED, SAY SO.

4. SEC. 3.5. FIND THE SLOPE OF THE LINE CONTAINING THE PAIR OF POINTS. (0, 4) AND (3, 2). IF THE SLOPE IS UNDEFINED, SAY SO.

5. SEC. 3.5. CAPITAL RAPIDS DROPS 28 FT (RISE IS NEGATIVE) OVER A HORIZONTAL DISTANCE (RUN) OF 1080 FT. WHAT IS THE SLOPE OF THE LAND?

6. Find the slope of each line whose equation is given. If the slope is undefined, say so. In each case *sketch the line*, labeling any x or y intercepts. (a) $y = 2$ (b) $x = -3$

SEC. 3.6: SLOPE-INTERCEPT EQUATION $y = mx + b$, WHERE m IS THE SLOPE AND b IS THE Y-COORDINATE OF Y-INTERCEPT (0, b).

7. DRAW THE LINE THAT HAS THE GIVEN SLOPE m AND Y-INTERCEPT (0,b).

Slope $-\frac{2}{3}$; y-intercept (0, -1)

8. DRAW THE LINE THAT HAS THE GIVEN SLOPE m AND Y-INTERCEPT (0,b).

Slope $\frac{4}{3}$; y-intercept (0, 2)

9. (a) FIND THE SLOPE-INTERCEPT EQUATION ($y = mx + b$) FOR THE LINE WITH THE INDICATED SLOPE AND Y-INTERCEPT; slope $-\frac{5}{7}$; y-intercept (0, 3) .

(b) GRAPH THE LINE USING TECHNIQUES OF PREVIOUS PROBLEMS OR LECTURE NOTES.

10. (a) FIND THE SLOPE- INTERCEPT EQUATION ($y = mx + b$) for the line with this equation: $4x + 3y = 12$. HINT: SOLVE FOR y. IDENTIFY m and b; REMEMBER THE Y-INTERCEPT IS (0, b).
(b) GRAPH THE LINE USING TECHNIQUES OF PREVIOUS PROBLEMS OR LECTURE NOTES.

SEC. 3.7: *POINT-SLOPE EQUATION*: $y - y_1 = m(x - x_1)$, where the point is (x_1, y_1) and slope is m.

11. WRITE THE *POINT-SLOPE EQUATION* FOR A LINE THAT HAS SLOPE $m = 5$ AND PASSES THROUGH THE POINT (2, 4).

12. (a) WRITE THE *POINT-SLOPE EQUATION* FOR A LINE THAT HAS SLOPE $m = 2$ AND PASSES THROUGH THE POINT (-1, -4).
(b) WRITE THE *SLOPE-INTERCEPT EQUATION* $y = mx + b$ FOR THE

LINE DESCRIBED IN PART (a).

13. Extra Credit: GRAPH: $y - 3 = \frac{3}{2}(x - 1)$. **HINT: START THE GRAPH AT THE POINT GIVEN BY** (x_1, y_1) **IN THE *POINT-SLOPE EQUATION. THEN MOVE ALONG THE LINE USING THE RISE/RUN FROM THE IDENTIFIED SLOPE.***

Quiz 5 Solutions

1.

(3,6)
− (1,4)

2, 2 → $m = \frac{2}{2} = 1$

2.

(1,4)
− (3,4)

−2, 0 → $m = \frac{0}{-2} = 0$

3.

(1,6)
− (1,4)

0, 2 → $m = \frac{2}{0}$

UNDEFINED!

4.

(0,4)
− (3,2)

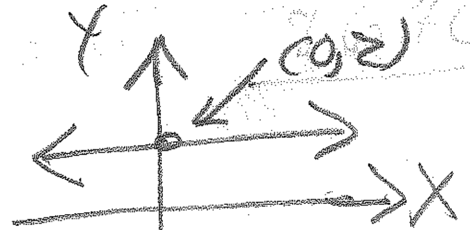
−3, 2 → $m = -\frac{2}{3}$

5. slope = grade

$= \frac{28\text{ ft}}{1080\text{ ft}} = 0.026$

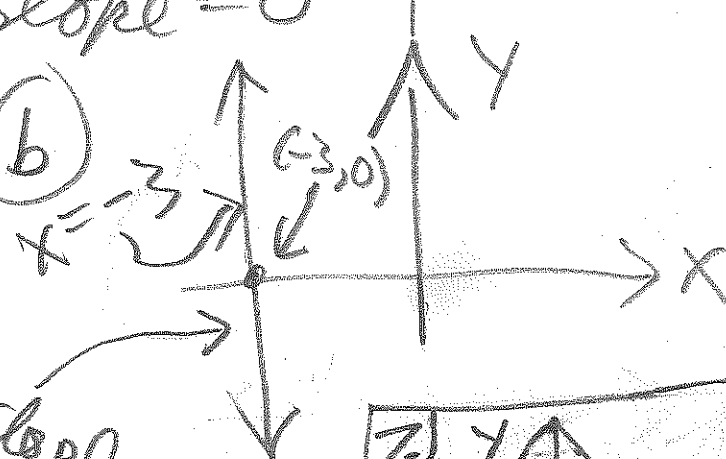
$$\begin{array}{r} 0.0259 \\ 1080\overline{)28.0000} \\ 2160 \\ \hline 6400 \\ 5400 \\ \hline 10000 \end{array}$$

6. (a)



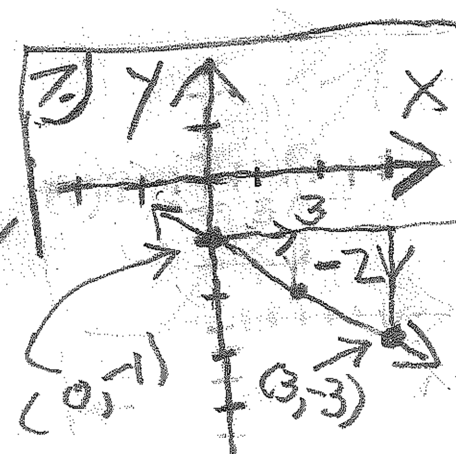
slope = 0

(b)

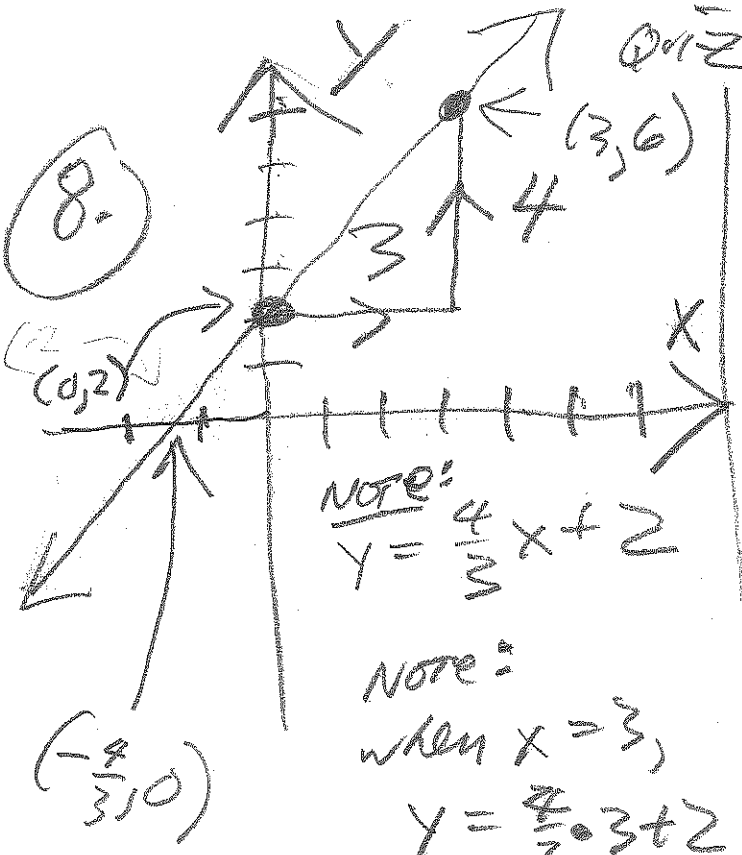


slope NOT defined

7.



8.



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

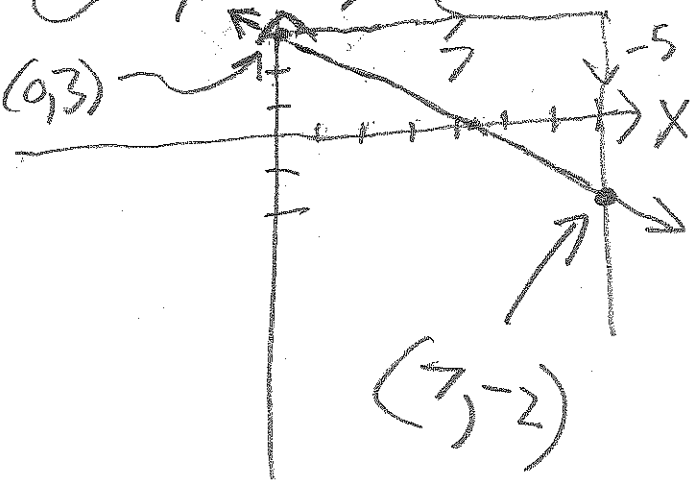
NOTE:
when $x = 3$,

$y = \frac{4}{3} \cdot 3 + 2$

$y = 4 + 2$

$y = 6$

9.



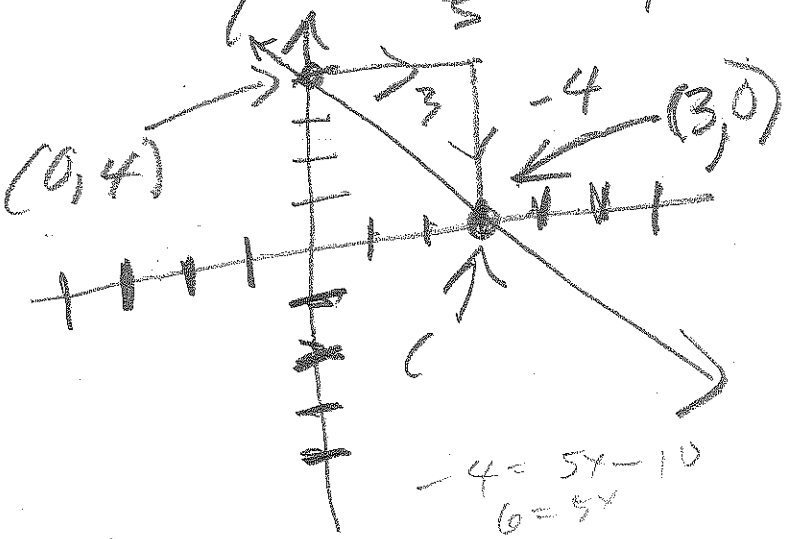
10.

$4x + 3y = 12$

$-4x \quad -4x$

$3y = -4x + 12$

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



$-4 = 5x - 10$

$6 = 5x$

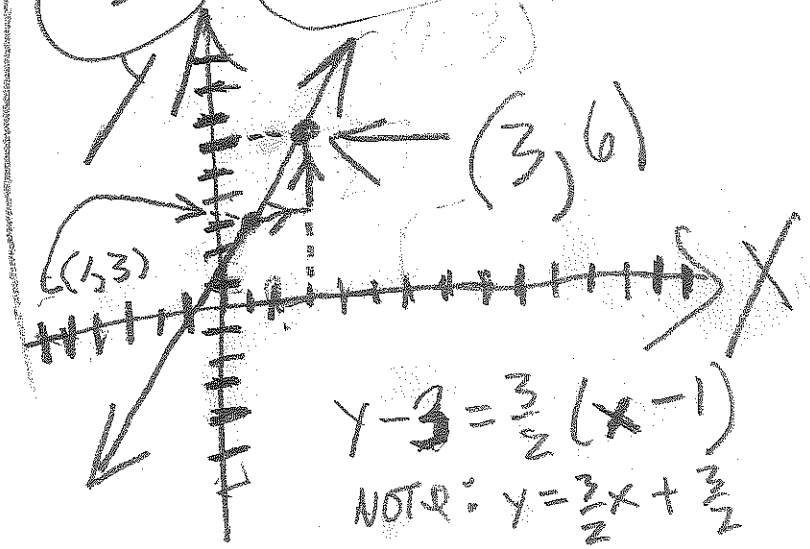
11. $y - 4 = 5(x - 2)$

12. a) $y + 4 = 2(x + 1)$

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

$y = 2x - 2$

13.



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

NOTE: $y = \frac{3}{2}x + \frac{3}{2}$

QUIZ 6

7/8/2014

Scroll down for answers

Quiz 6 Math 65 083; CRN= 10113

SEC. 3.7: ***POINT-SLOPE EQUATION***: $y - y_1 = m(x - x_1)$, where the point is (x_1, y_1) and slope is m. Reference #13, 15, 21, 27, 39, 43, 49

1. WRITE THE ***POINT-SLOPE EQUATION*** FOR A LINE THAT HAS SLOPE $m = 4$ AND PASSES THROUGH THE POINT (2, 3).

2. (a) WRITE THE ***POINT-SLOPE EQUATION*** FOR A LINE THAT HAS SLOPE $m = 2$ AND PASSES THROUGH THE POINT (-3, -1).
(b) WRITE THE ***SLOPE-INTERCEPT EQUATION*** $y = mx + b$ FOR THE LINE DESCRIBED IN PART (a). *HINT:* SOLVE FOR Y IN PART (a).

3. ***GRAPH:*** $y - 2 = \frac{3}{4}(x - 1)$. HINT: START THE GRAPH AT THE POINT GIVEN BY (x_1, y_1) IN THE ***POINT-SLOPE EQUATION. THEN MOVE ALONG THE LINE USING THE RISE/RUN FROM THE IDENTIFIED SLOPE.***

Solutions:

(1.) $y - 3 = 4(x - 2)$

(2.) (a.) $y - (-1) = 2(x - (-3)) \Rightarrow y + 1 = 2(x + 3)$

(b.) $y + 1 = 2(x + 3)$

$y + 1 = 2x + 6$

$y = 2x + 5$, AFTER subtracting 1.

(3.) $y - 2 = \frac{3}{4}(x - 1) \Rightarrow (x_1, y_1) = (1, 2)$

$\frac{\text{Rise}}{\text{Run}} = \frac{3}{4}$