Name: KEY Period: _____

4.1- 4.3 Review

Graph both linear equations on the coordinate plane on the right. Make sure you use an input/output table with at least 3 ordered pairs for each. ***Label the line with the problem number.***

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

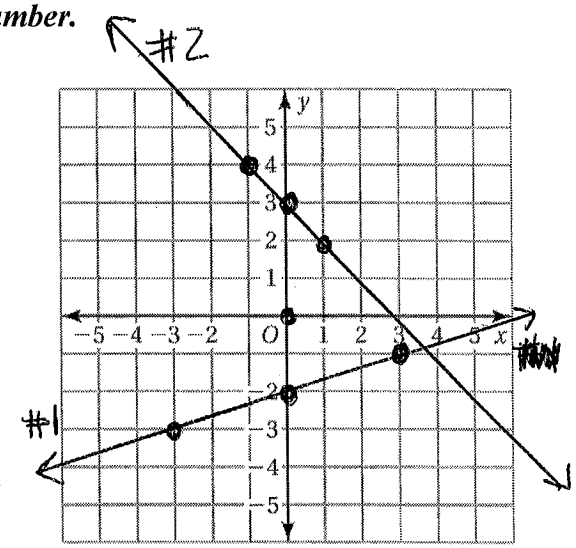
	x		y
(-3,-3)	-3	-1-2	-3
(0,-2)	0		-2
(3,-1)	3	1-2	-1

2) $y + x = 3$ *(hint: solve for y first)*

$-x \quad -x$

$y = -x + 3$

	x		y
(-1,4)	-1	1+3	4
(0,3)	0		3
(1,2)	1	-1+3	2



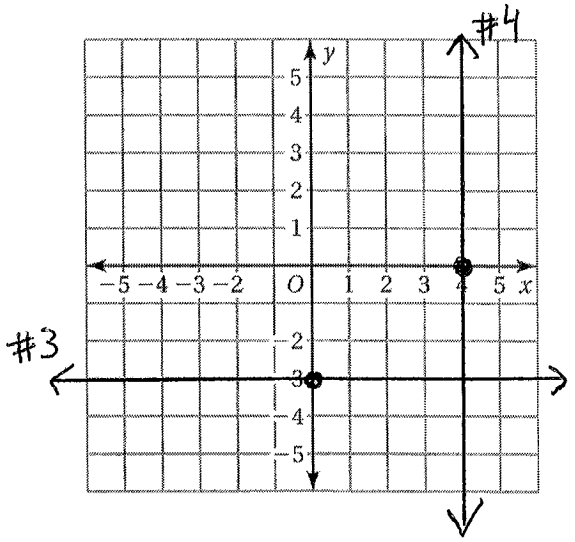
Graph both of the equations on the coordinate plane on the right. You may you a input/output table if you wish.

3) $y = -3$

x	y
-1	-3
0	-3
1	-3

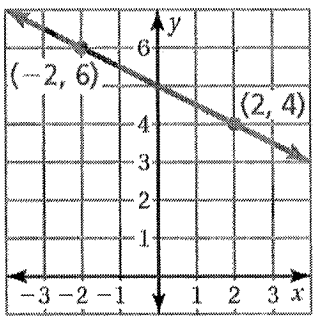
4) $x = 4$

x	y
4	-1
4	0
4	1



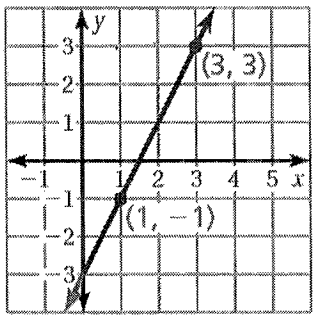
Find the slope of the line in ***simplest form.***

5)

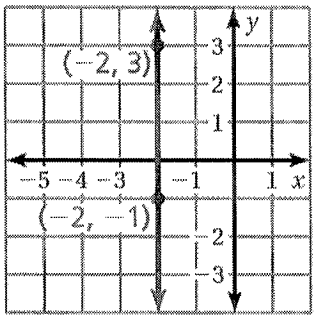


$m = \frac{-2}{4} = \frac{-1}{2}$

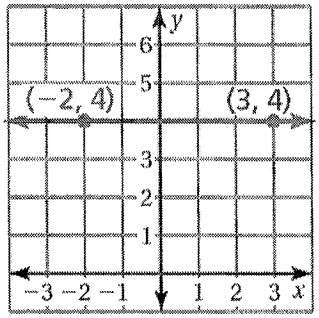
6)



$m = \frac{4}{2} = \frac{2}{1}$ or 2

7) 

$m =$ no slope or undefined

8) 

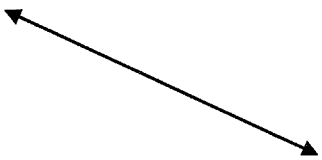
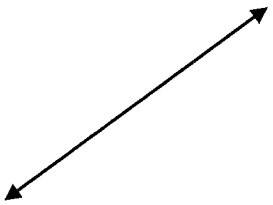
$m =$ zero (0)

9) What is the slope of the line that is parallel to the line in problem #5. What do we know about the slope of parallel lines? $m = -\frac{1}{2}$ because parallel lines always have the same slope.

10) The slope of any line can be written as a ratio that represents its rise over its run.

11) Match the slope with the line best represented by the slope.

Zero Slope b Positive Slope c Negative Slope a Undefined Slope d

a)	b)	c)	d)
			

12) Find the slope of the line that passes through the points. Write your answer in simplest form.

a) (4, 8) and (6, 12) $m = \frac{2}{1}$ or 2

$x_1\ y_1 \quad x_2\ y_2$

$m = \frac{12-8}{6-4} = \frac{4}{2} = \frac{2}{1}$

b) (-4, 9) and (-4, -1) $m =$ no slope / undefined

$x_1\ y_1 \quad x_2\ y_2$

$\frac{-1-9}{-4+4} = \frac{-10}{0}$

c) (2, 6) and (-8, 4) $m = \frac{1}{5}$

$x_1\ y_1 \quad x_2\ y_2$

$\frac{4-6}{-8-2} = \frac{-2}{-10} =$

d) (-5, -7) and (1, -7) $m = 0$

$x_1\ y_1 \quad x_2\ y_2$

$\frac{-7+7}{1+5} = \frac{0}{6} =$

13) Find the missing coordinate if a line passes through $(-6,-3)$, $(-10, y)$ and has a slope of -2.

$x_1\ y_1 \quad x_2\ y_2$

$\frac{y+3}{-10+6} = \frac{-2}{1} \rightarrow \frac{y+3}{-4} = \frac{-2}{1} \rightarrow \frac{y+3=8}{-3\ \ -3}$

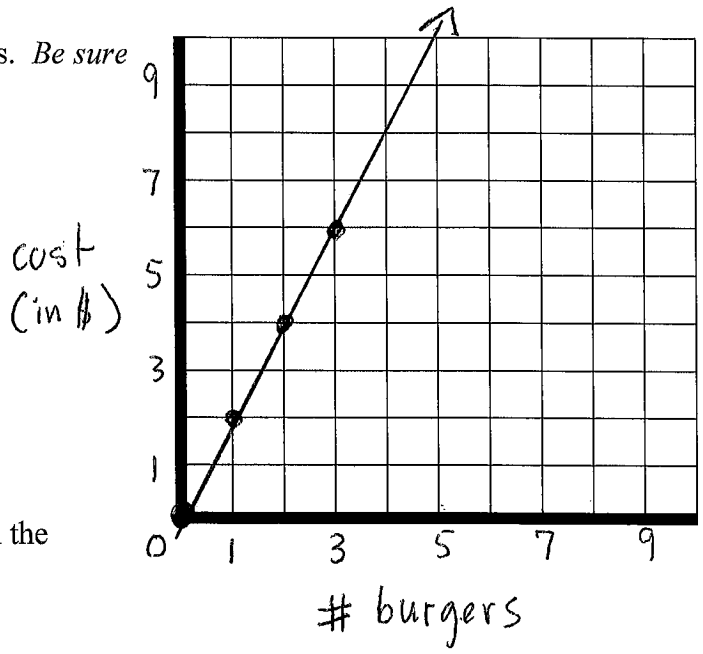
$y = 5$

$y = 5$

14) There is a holiday special at In-N-Out today!! The cost y *(in dollars)* for x number of Double-Double burgers you get is represented by the equation $y = 2x$.

a) Graph the equation using at least 4 ordered pairs. *Be sure to label both axis!*

x	y
0	0
1	2
2	4
3	6



b) What is the slope of the line? Interpret (explain the meaning of) the slope.

$m =$ 2/1 or 2 Interpret: $2 per every Double-double burger

15) To make a special Halloween green hair dye, you mix 3 drops of yellow dye (y) for every 6 drops of blue dye (x).

a) Write an equation that represents the situation in simplest form.

$\frac{3}{6} = \frac{m \cdot 6}{6}$ $m = \frac{3}{6} = \frac{1}{2}$ $y = \frac{1}{2}x$ or $y = \frac{x}{2}$

b) What is the slope of the line? Interpret the slope. *(what does the slope mean in this situation?)*

$m =$ 1/2 Interpret: 1 yellow drop per every 2 blue drops

c) How many drops of yellow dye would you need if there were 36 drops of blue dye? *(use your equation from part a)*

$y = \frac{x}{2} \rightarrow y = \frac{36}{2} \rightarrow y = 18$ 18 drops of yellow dye