

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Day 8: Review

7/8A

### Functions Review

1. The table represents the number of computer tablets sold. Determine the average rate of change over the interval  $1 \leq x \leq 4$ .

<b>Week</b>	1	3	4	8
<b>Number Sold</b>	32	96	128	224

2. Determine whether each relationship is a function? Justify.

a:

<b>Input</b>	<b>Output</b>
2	10
4	12
6	24
4	8

b:

<b>Input</b>	<b>Output</b>
2	10
4	10
6	6
8	8

3. Given the following points, first find the slope of the line passing through the pairs of points and then write the equation of the lines in slope-intercept form.

a: M (2, 1); A (4, 5)

b: T (-1, 0); H (3, -5)

m = \_\_\_\_\_

m = \_\_\_\_\_

y = \_\_\_\_\_

y = \_\_\_\_\_

4. Is the ordered pair  $(3, -1)$  a solution to the linear equation  $y = 2x - 7$ ? Justify.

**(#5-8) State the slope and y-intercept of the graph of the following linear equations.**

5.  $y = x + 1$

6.  $y = 7x - 5$

7.  $y = -4x + 2$

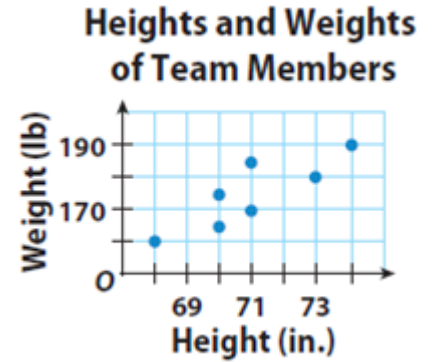
8.  $y = \frac{3}{2}x - 3$

9. Write an equation of a line that passes through the point  $(5, 11)$  and has a slope of  $-4$ .

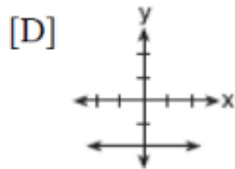
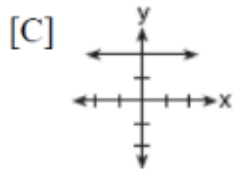
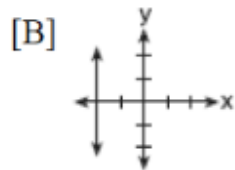
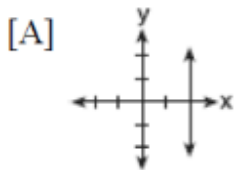
10. Find an equation of the line passing through the points  $(3, 5)$  and  $(5, 15)$ .

11. Does the point  $(1, -1)$  lie on the line  $3x + 7y = 9$ ? Justify.

12. The graph shows the relationship between the heights and weights of the members of a basketball team. Is the relationship represented by the graph a function? Explain.



13. Which graph represents the equation  $x = 2$ ?



14.

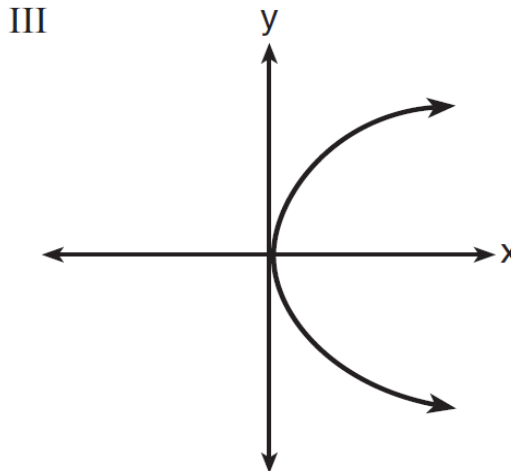
If a line is horizontal, its slope is

- [A] negative                      [B] 1  
 [C] undefined                    [D] 0

15. Given the following information on four different relations, which representations are **functions**? **Circle all that apply.**

I

x	y
2	6
3	-12
4	7
5	5
2	-6



II  $\{(1,1), (2,1), (3,2), (4,3), (5,5), (6,8), (7,13)\}$

IV  $y = 2x + 1$

(#16-19) Write the following equations in slope-intercept form. Then, identify the slope and y-intercept of each equation.

16.  $2x + 5y = 10$

17.  $-6x + 3y = 54$

m = \_\_\_\_\_ b = \_\_\_\_\_

m = \_\_\_\_\_ b = \_\_\_\_\_

18.  $4 - y = 3x$

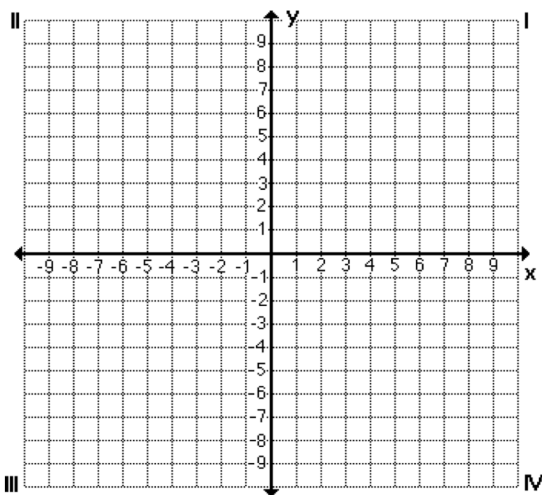
19.  $15x - 12y = 24$

m = \_\_\_\_\_ b = \_\_\_\_\_

m = \_\_\_\_\_ b = \_\_\_\_\_

20. Given the linear equation:  $y = \frac{1}{3}x - 3$

**Part A:** Graph the following linear equations using either the table method or the slope-intercept form.



**Part B:** What are the slope and y-intercept?

**Part C:** In which quadrant will the graph of the line never pass through?