

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

Directions: Write the correct letter in the space provided.

\_\_\_\_\_ 1. This table shows a relation between  $x$  and  $y$ . Which equation shows the same relation?

|   |    |   |   |   |    |
|---|----|---|---|---|----|
| X | -1 | 0 | 1 | 2 | 3  |
| Y | -2 | 1 | 4 | 7 | 10 |

$$y = 3x + 1$$

A.  $y = -3x$

B.  $y = -3x + 1$

C.  $y = 3x + 1$

D.  $y = x + 3$

\_\_\_\_\_ 2. For which equation is  $(1, 5)$  a solution?

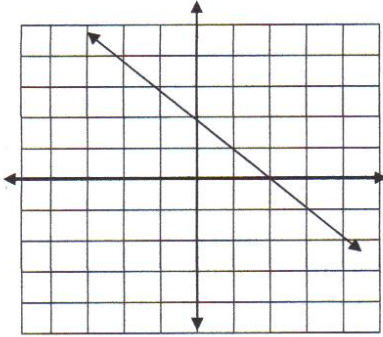
A.  $y = 3x + 1$

B.  $y = -x + 6$

C.  $y = 2x + 2$

D.  $y = 2x - 3$

\_\_\_\_\_ 3. Which is the linear equation for this graph?



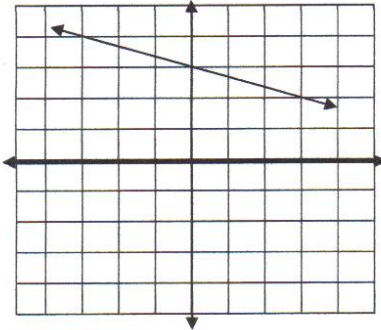
A.  $y = -2x + 1$

B.  $y = 2x - 1$

C.  $y = x + 2$

D.  $y = -x + 2$

Look carefully at the following graphed line and then answer the following three questions.

4. What is the slope of the line?  $-\frac{1}{3}$ 

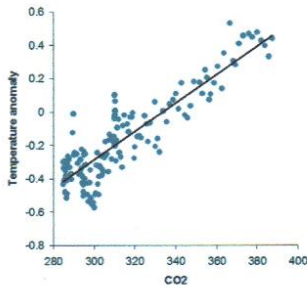
5. What is the y-intercept of the line? 3

6. What is the equation of the line?

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

7. True or False? The slope of the line in the graph below has a positive slope. Circle your answer.

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True

8. The slope between the points (1, 5) and (3, 5) is

A. 0

B.  $\frac{1}{2}$

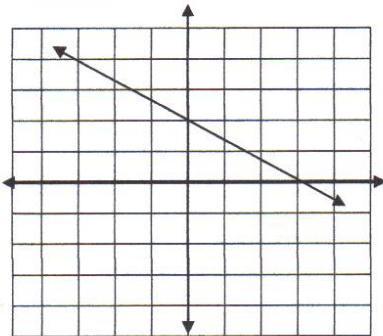
C. 2

D. undefined

9. Find the slope of the line through (-6, -2) and (2, 3).

$$\frac{3 - (-2)}{2 - (-6)} = \frac{3 + 2}{2 + 6} = \frac{5}{8}$$

10. Which set of ordered pairs all lie on this line?



A. (0, 2), (3, 0), (-3, 4)

B. (2, 0), (0, 3), (4, -3)

C. (0, -2), (-3, 0), (3, -4)

D. (-2, 0), (0, -3), (-4, 3)

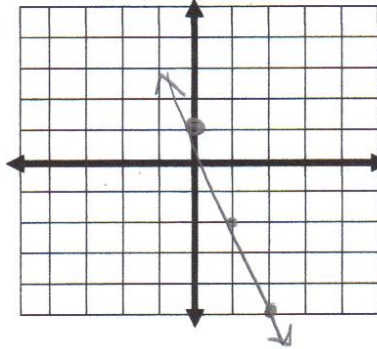
11. Complete the following table. Then write an equation to show the relationship in the table.

| x  | Y  |
|----|----|
| -3 | 11 |
| -2 | 8  |
| -1 | 5  |
| 0  | 2  |
| 1  | -1 |
| 2  | -4 |
| 3  | -7 |

Equation:  $y = -3x + 2$

12. Graph  $y = -3x + 1$  using a table of values. Show all work.

| x | $y = -3x + 1$ | y  |
|---|---------------|----|
| 0 |               | 1  |
| 1 |               | -2 |
| 2 |               | -5 |



\_\_\_\_\_ 13. Given the function  $y = 2x + 4$ , which set of numbers completes the table?

| x | Y  |
|---|----|
| 2 | 8  |
| 3 | 10 |
| 4 | 12 |

A. [4, 6, 8]

B. [8, 10, 12]

C. [12, 18, 24]

Find the *slope* and the *y-intercept* of the line with the given equation.

14.  $y = \frac{1}{2}x + 4$

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

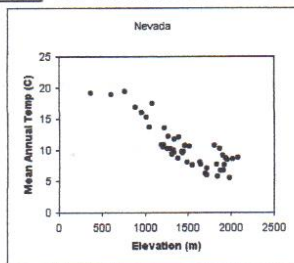
y-intercept = 4

15.  $y = -3x$

slope = -3

y-intercept = 0

\_\_\_\_\_ 16. Which term best describes the relationship between the variables in the scatter plot?



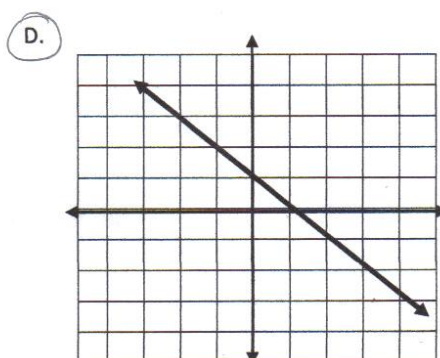
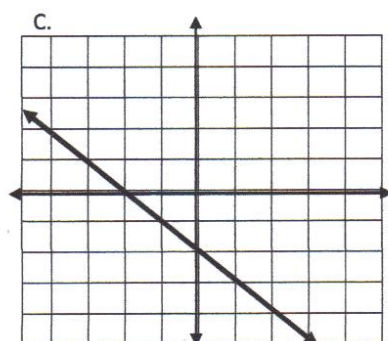
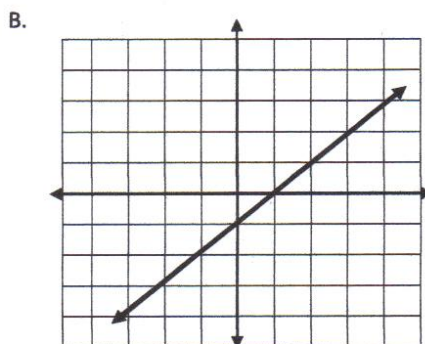
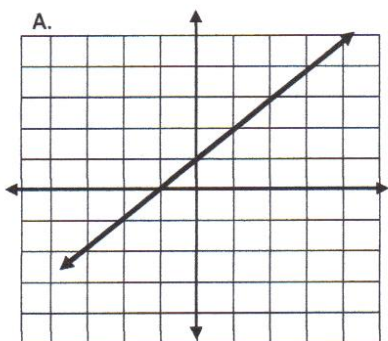
A. negative

B. positive

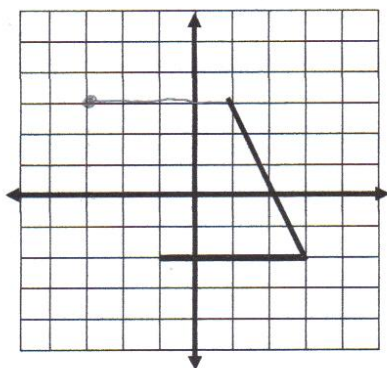
C. zero

D. undefined

\_\_\_\_\_ 17. Which graph shows the relationship  $y = -x + 1$ ?



\_\_\_\_\_ 18. Complete the drawing of the parallelogram. Which of the following is the location of the missing vertex of a parallelogram?



A. (3, -3)

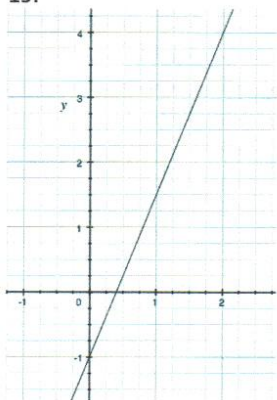
B. (-3, 3)

C. (-4, 3)

D. (3, -4)

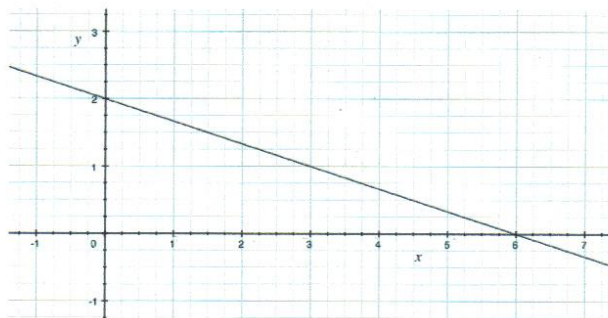
Write the equation of the following lines in  $y = mx + b$  form.

19.



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

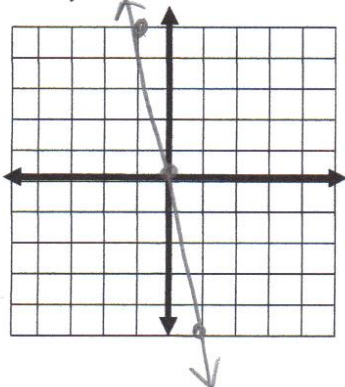
20.



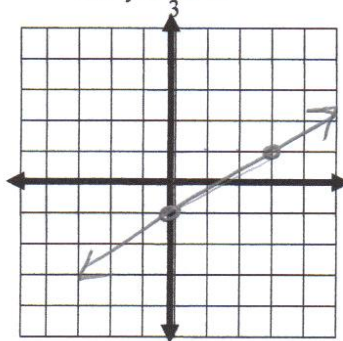
Equation:  $y = -\frac{1}{3}x + 2$

Graph each (you can make a table of values or use  $y = mx + b$ ).

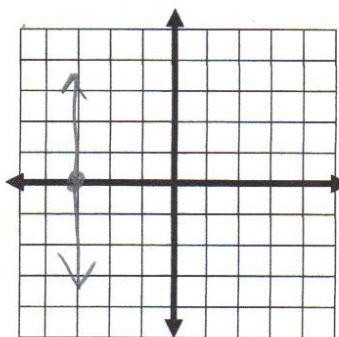
21.  $y = -5x$



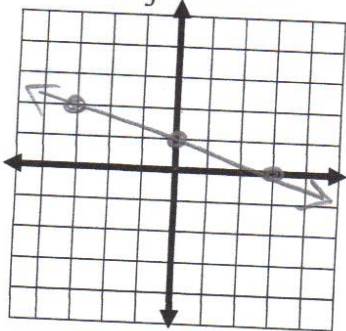
22.  $y = \frac{2}{3}x - 1$



23.  $x = 3$



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



26.  $y = 2x + 1$

