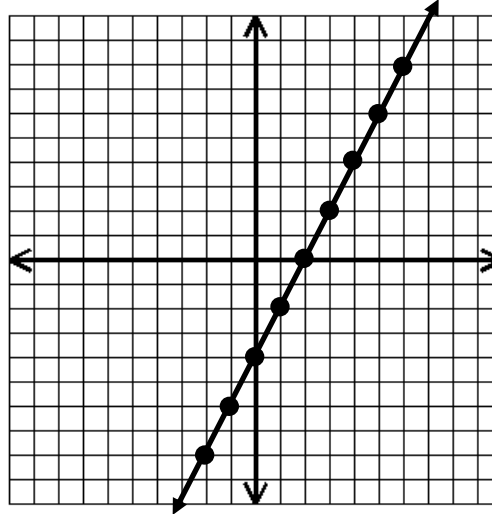NAME_____DATE_____PER._____

Interpreting Changes in Slope and Intercepts – Day 2

Use the graph of the linear function shown to answer questions 1 – 6.

Original Equation:

$y = \_\_x + \_\_$

1. If the y-intercept is changed to (0, 3) and the slope is doubled, what would be the equation of the new line?

2. If the slope and y-intercept are divided by $\dfrac{-1}{4}$, what would be the equation of the new line?

3. If the line is translated down 5 units, what would be the equation of the new line?

_____4. If the y-intercept is changed to (0, -5) and the slope becomes $-\dfrac{1}{2}$, which statement best

describes the relationship between the two lines when they are graphed on the same coordinate grid?

    A. The y-intercepts are 1 unit apart, and the lines are parallel.
    B. The y-intercepts are 1 unit apart, and the lines are perpendicular.
    C. The y-intercepts are 1 unit apart, and the lines intersect at (-1, 6).
    D. The y-intercepts are 1 unit apart, and the lines intersect at (0, 4).

_____5. What will happen to the slope if the line is shifted so that the x-intercept is negative and the y-intercept remains the same?

    A. The slope will change from negative to positive.
    B. The slope will remain constant.
    C. The slope will be negative.
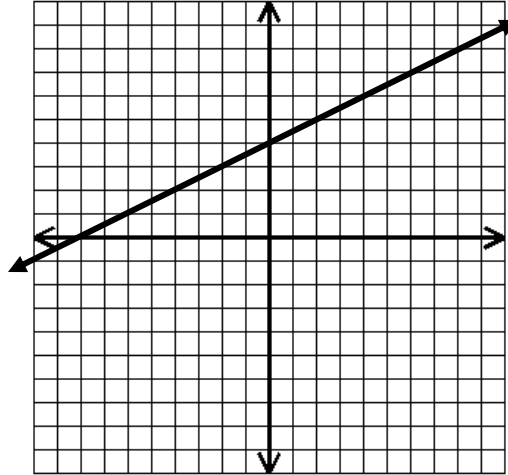   D. The slope will be positive.

_____6. Which of the following best describes the effect on the graph when the slope is doubled?

    A. The y-intercept increases.   C. The x-intercept increases.
    B. The y-intercept decreases.   D. The x-intercept decreases.

The graph shown contains the points (-4, 2) and (4, 6). Use this graph for problems 7 – 9.

Original Equation:

$$y = \underline{\quad} x + \underline{\quad}$$

7. If the slope of the line is multiplied by -4 and the y-intercept decreases by 6 units, what would be the linear equation that represents these changes?

_____8. Which best describes the effect on the x-intercept of the graph of function if the y-intercept changes to -3?

   A. The x-intercept remains the same, and the new line is translated upward.
   B. The x-intercept becomes positive, and the new line is parallel to the original line.
   C. The x-intercept remains the same, and the new line is translated downward.
   D. The x-intercept becomes negative, and the new line intersects the original line.

_____9. Which graph best represents this line if the slope is doubled and the y-intercept is halved?

A.

C.

B.

D.