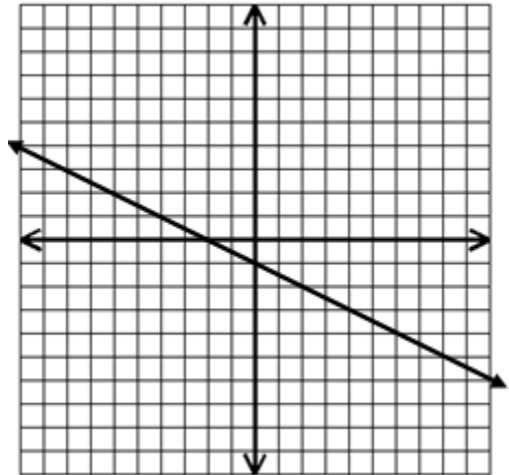


## INTERPRETING CHANGES IN SLOPE AND INTERCEPTS – DAY 3

The graph shown contains the points (8, -5) and (-6, 2):

**Original Equation:**

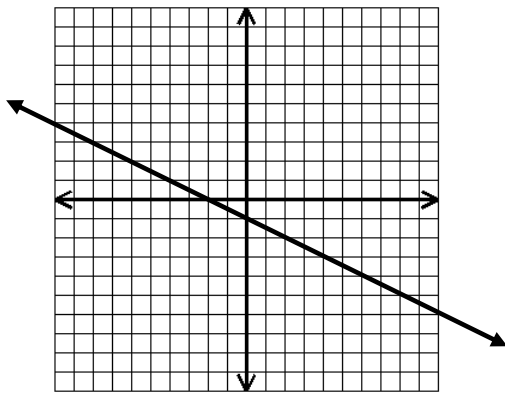
**y = \_\_\_\_\_**



1. If the slope of the line is multiplied by -1 and the y-intercept decreases by 2 units, what would be the linear equation that represents these changes?

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

New:  $y = \underline{\hspace{2cm}}$



The slope changes from \_\_\_\_\_ to \_\_\_\_\_.

Do the lines intersect? yes / no

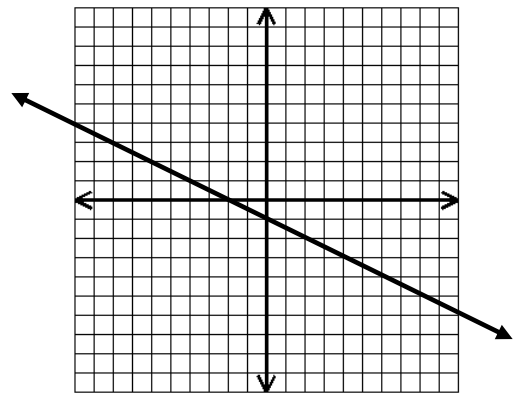
If so, where do they intersect? \_\_\_\_\_

The x-intercept increases / decreases.

The new line is \_\_\_\_\_ units above / below the original.

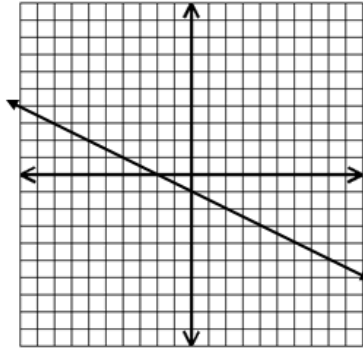
The new is less steep than the original. T / F

2. Which best describes the effect on the x-intercept of the graph of  $y = -\frac{1}{2}x - 1$  if the slope changes to  $\frac{1}{2}$ ?

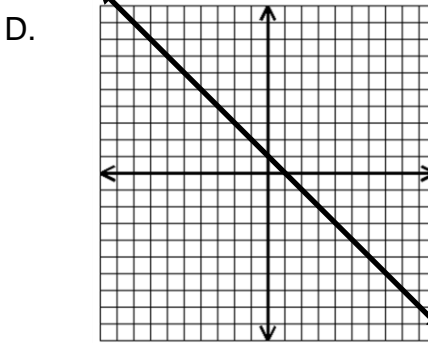
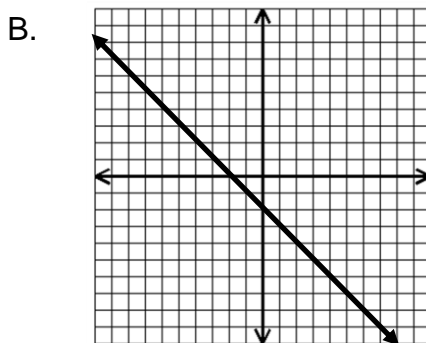
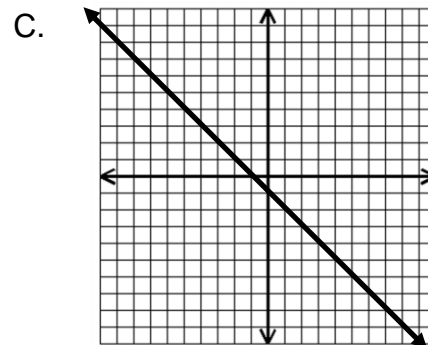
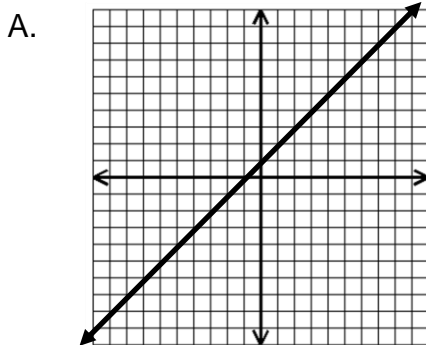


- A. The x-intercept remains the same, and the new line is translated upward.
- B. The x-intercept becomes negative, and the new line is parallel to the original line.
- C. The x-intercept remains the same, and the new line is translated downward.
- D. The x-intercept becomes positive, and the new line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

3. The graph shown contains the points (8, -5) and (-6, 2).



Which graph best represents this line if the slope is doubled and the y-intercept remains constant?



4. Write the equation of each line shown, and answer the following true (T) or false (F).

Line 1:  $y = \underline{\hspace{2cm}}$ , Line 2:  $y = \underline{\hspace{2cm}}$

- Line 1 is steeper than Line 2.
- Lines 1 and 2 intersect in Quadrant 4.
- Line 1 and 2 are perpendicular.
- Line 1's y-intercept > Line 2's y-intercept.
- The point (14, 9) is on Line 1.

