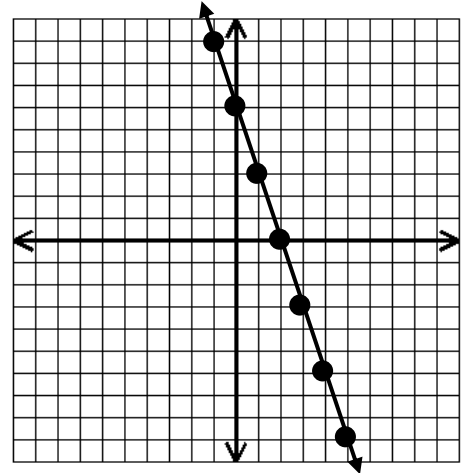


INTERPRETING CHANGES IN SLOPE AND INTERCEPTS – DAY 2

The graph of a linear function is shown on the coordinate grid:



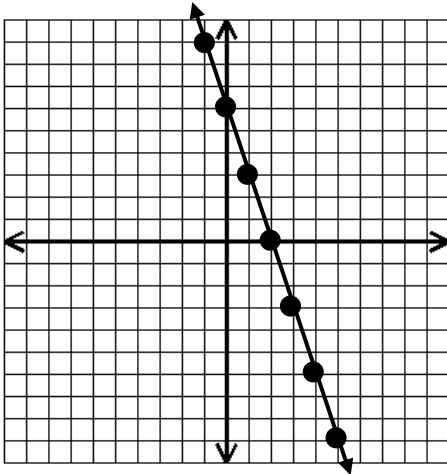
Original Equation:

$y = \underline{\hspace{1cm}}x + \underline{\hspace{1cm}}$

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

Original: $y = -3x + 6$

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



Are the lines parallel? yes / no

The line shifts up / down $\underline{\hspace{1cm}}$ units.

The x-intercept increases / decreases.

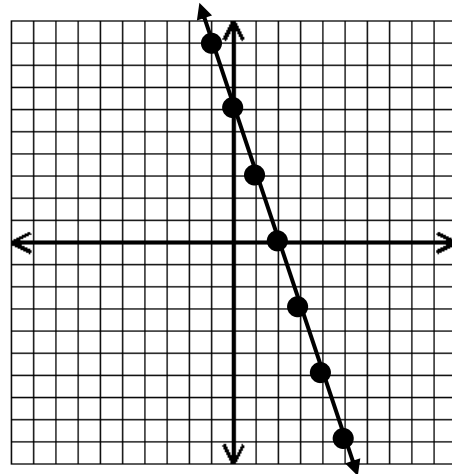
The new line is above / below the original.

The new / original line is steeper.

2. If the slope is changed to $-\frac{1}{4}$, what would be the equation of the new line?

Original: $y = -3x + 6$

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



Are the lines parallel? yes / no

Are they perpendicular? yes / no

The lines intersect at $\underline{\hspace{1cm}}$.

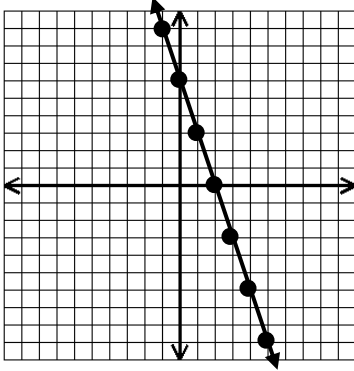
The x-intercept increases / decreases.

The new / original line is less steep.

3. If the slope is doubled, and the y-intercept is decreased by 4, what would be the equation of the new line?

Original: $y = -3x + 6$

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



Are the lines parallel? yes / no

Do the lines intersect? yes / no

The x-intercept increases / decreases.

The new line is _____ units above / below the original.

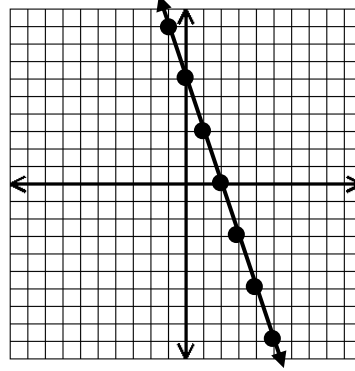
The new / original line is steeper.

The original line is steeper / less steep than the new.

4. If the line is translated down 7 units, what would be the equation of the new line?

Original: $y = -3x + 6$

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



Are the lines parallel? yes / no

The new is above / below the original.

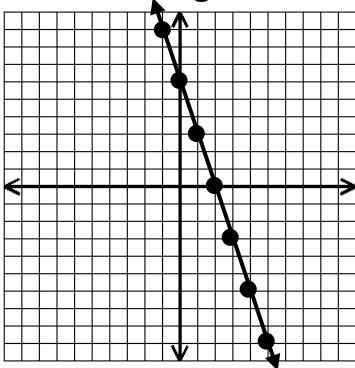
The x-intercept increases / decreases.

The new line is _____ units above / below the original.

The new / original line is steeper.

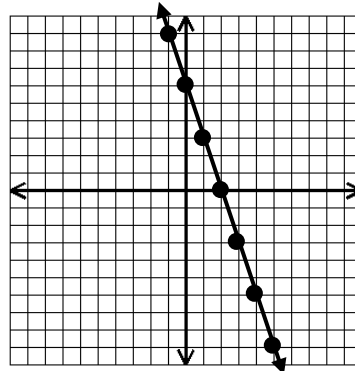
The new / original line begins below the origin.

5. If the y-intercept of $y = -3x + 6$ is changed to (0, 5) and the slope becomes -2, which statement best describes the relationship between the two lines when they are graphed on the same coordinate grid?



- A. The lines are parallel.
- B. The lines are perpendicular.
- C. The lines intersect at (1, -1).
- D. The lines intersect at (1, 3).

6. Which statement describes the slope if the line $y = -3x + 6$ is shifted so that the y-intercept changes to (0, 1) and the x-intercept remains the same?

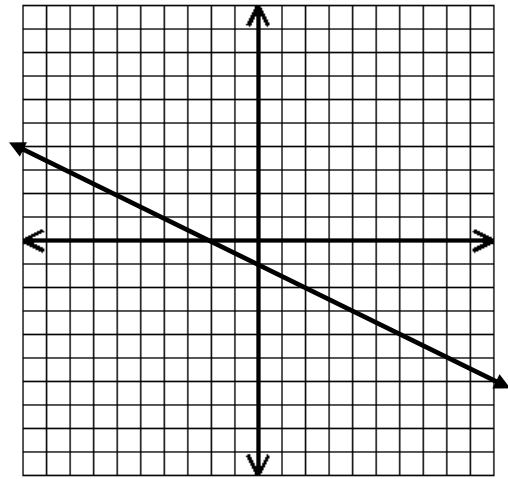


- A. The slope changes from positive to negative.
- B. The slope remains constant.
- C. The slope becomes steeper.
- D. The slope becomes less steep.

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

Original Equation:

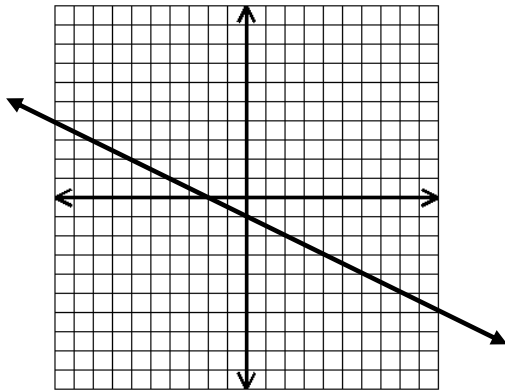
$y = \underline{\hspace{1cm}}x + \underline{\hspace{1cm}}$



7. 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? _____

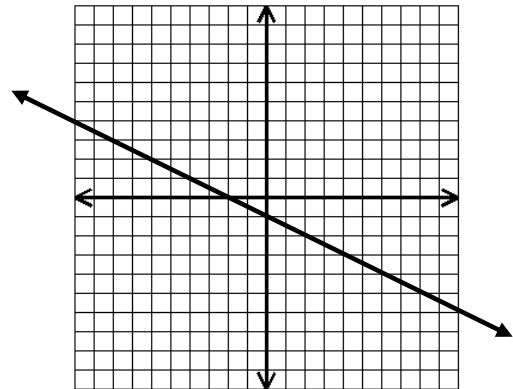
The x-intercept increases / decreases.

The new line is _____ units above / below the original.

The new / original line is steeper.

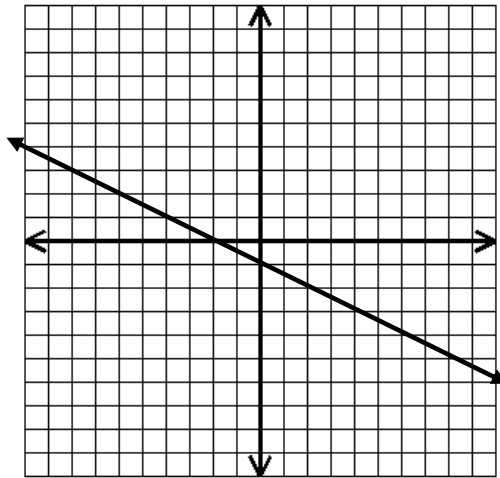
The new is less steep than the original. T / F

8. 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.

9. 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?

