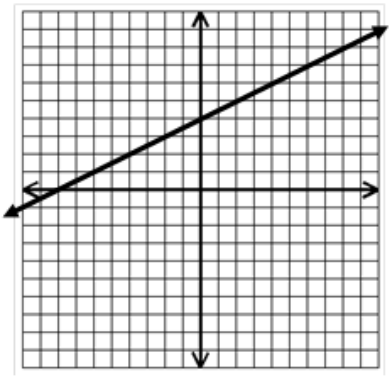
NAME_____DATE_____PER._____

Interpreting Changes in Slope and Intercepts – Day 3

The graph shown contains the points (-4, 2) and (4, 6). Use this graph for problems 1 – 5.



Original Equation:

y = _____

1. 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?

_____2. 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.

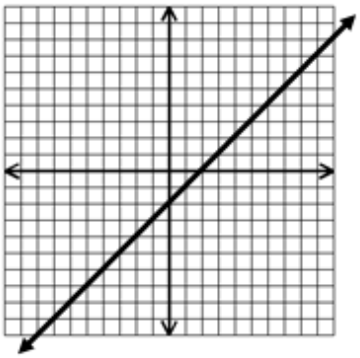
B. The x-intercept becomes positive, and the new line is parallel to the original line.

C. The x-intercept remains the same, and the new line is translated downward.

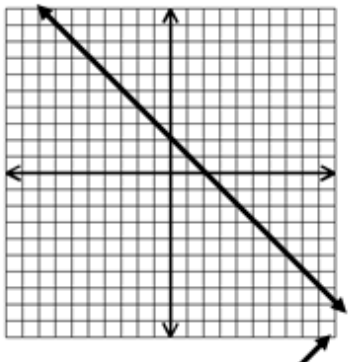
D. The x-intercept becomes negative, and the new line intersects the original line.

_____3. Which graph best represents this line if the slope is doubled and the y-intercept is halved?

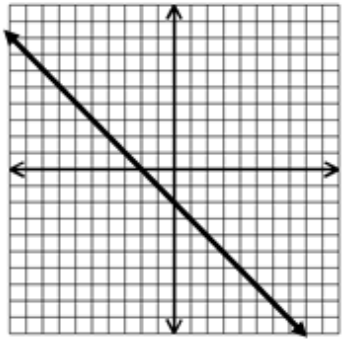
A.



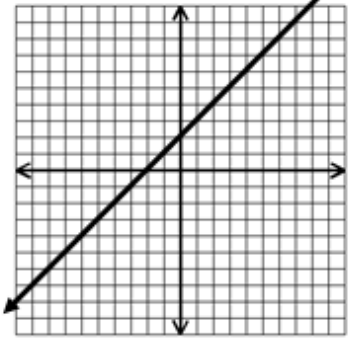
C.



B.



D.



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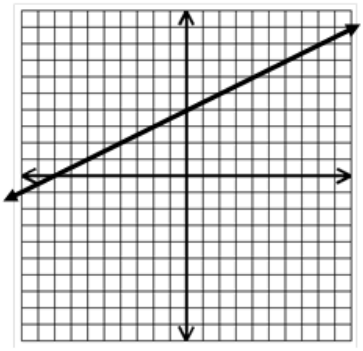


Original Equation:

y = _____

4. If the slope is divided by $-3/4$ and the y-intercept decreases by 8, answer the following:

The equation of the new line is _____.

True or False? _____ The new line is translated downward.

_____ The new line is perpendicular to the original line.

_____ The original line is steeper.

_____ The x-intercept increases.

_____5. If the slope of the original graph becomes steeper and the y-intercept decreases, which of the following could be the equation of the new line?

A. $y = x + 7$

B. $-4x + 8y = 32$

C. $y = -\frac{1}{2}x - 7$

D. $3x + 2y = -8$

Mini Murder Mystery

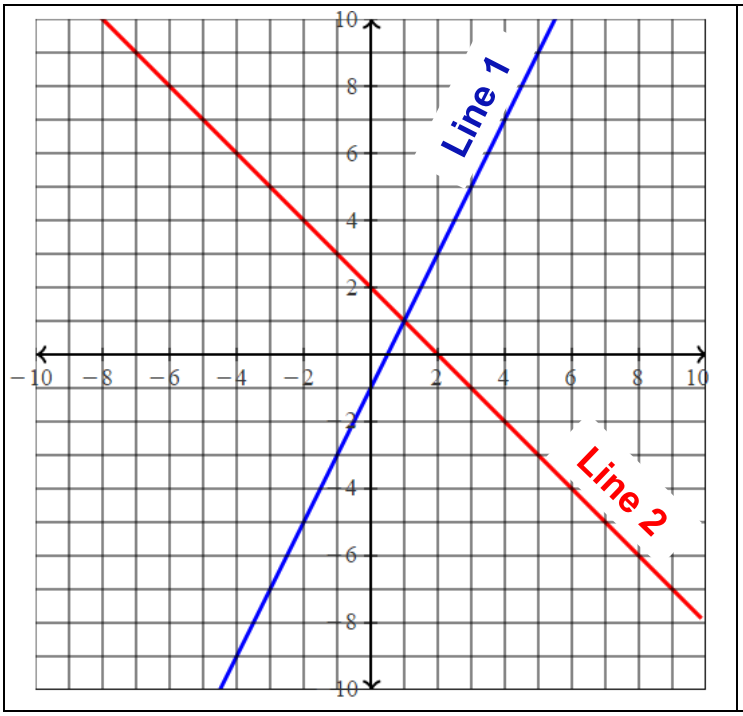
One of the following 6 people has murdered one of the others.
Each has made 4 statements about the graphs below.
The murderer made 3 false statements; the victim made 0 false statements.
The other suspects made 1 or 2 errors.

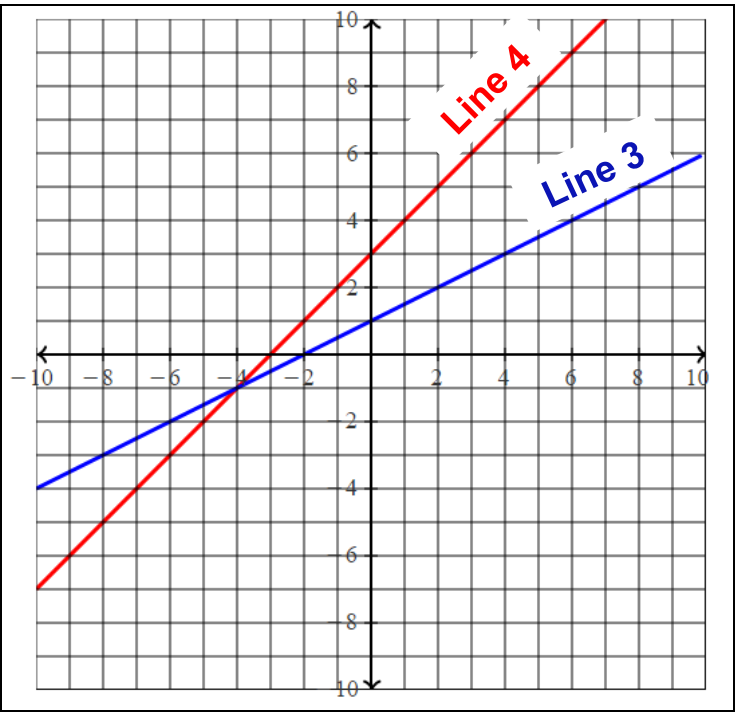
Ham Burglar says • _____ Line 1 is steeper than line 3 • _____ The rate of change of y with respect to x for line 1 is 2. • _____ Line 2's y-intercept > line 4's y-intercept • _____ (2, 3) is on line 1	Isabell Ringing says • _____ The slope of line 3 is 2 • _____ Line 4 is less steep than line 1 • _____ Line 3's y-intercept < line 2's y-intercept • _____ Line 4 is parallel to the linear parent function
Annie Mossity says • _____ Lines 1 & 2 are perpendicular • _____ Line 4 is less steep than line 3 • _____ (0, -1) is on line 1 • _____ The x-intercept of line 3 is (0, 1)	Paige Turner says • _____ Line 1 is steeper than line 2 • _____ Line 3 passes through the origin • _____ Lines 1 & 2 intersect in Quadrant I • _____ (0, 2) and (2, 0) are both on line 2
Gill T. Ascharged says • _____ (-4, -1) is on lines 3 and 4 • _____ Lines 2 & 4 are perpendicular • _____ (0, -3) is on line 4 • _____ The y-intercept of line 2 is (-2, 0)	Hurlock Shomes says • _____ The y-intercept of line 3 is 1 • _____ The slope of line 3 is 0.5 • _____ Line 2 is the only line that is decreasing • _____ (20, 11) would be on line 3

Write the equation of each line:

Line 1: y = _____ Line 3: y = _____

Line 2: y = _____ Line 4: y = _____





The evidence proves that _____ murdered _____.