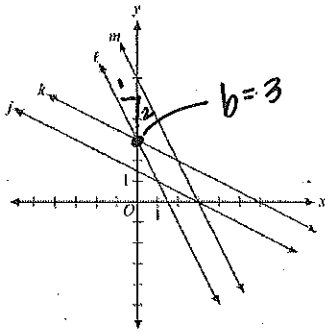


8.EE.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y=mx+b$ for a line through the origin and the equation $y=mx+b$ for a line intercepting the vertical axis at b .

Which line in the figure below has a slope of -2 and a y intercept of 3?



- A) j
- B) k
- C) l
- D) m

If a line contains the points in the table below, what is its equation?

x	y
-8	-42
-3	-17
0	-2
6	28

$\frac{25}{5} = 5$

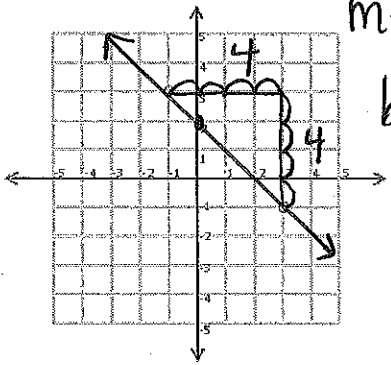
A $y = -2x + 5$

B $y = 2x - 5$

C $y = 5x - 2$

D $y = -5x - 2$

If a line passes through the two points below, what is its equation?

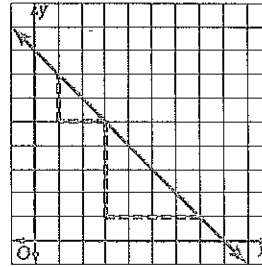


$m = \frac{-4}{4} = -1$

$b = 4$

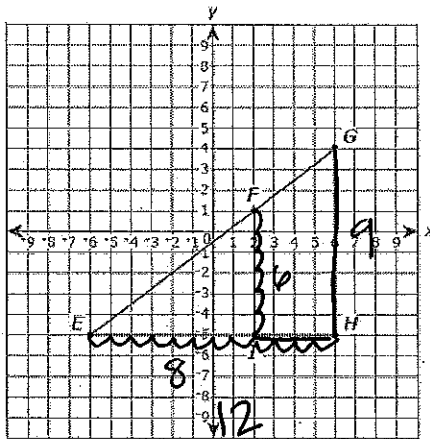
- A) $y = x + 2$
- B) $y = -x + 4$
- C) $y = 2x - 1$
- D) $y = 2x + 1$

Which of the following statements is NOT true concerning the graph below?



- A) The simplified ratio of the vertical side length to the horizontal side length of each triangle is 1. (True)
- B) The slope of the line is 1. False (neg.)
- C) The slope of the line is -1. True
- D) The smaller triangle and the larger triangle are similar. True

Triangle EGH is graphed on a coordinate grid.



Part A: Use the Pythagorean Theorem to find the length of side \overline{EG} . Show your work.

$a^2 + b^2 = c^2$

$6^2 + 8^2 = c^2$

$36 + 64 = c^2$

$100 = c^2$

$\sqrt{100} = \sqrt{c^2}$

$10 = c$

Part B: What is the slope of the line containing \overline{EF} ? What is the slope of the line containing \overline{EG} ? Explain the relationship between the slopes of \overline{EF} and \overline{EG} .

$m_{(EF)} = \frac{\text{rise}}{\text{run}} = \frac{6}{8} = \frac{3}{4}$

$m_{(EG)} = \frac{9}{12} = \frac{3}{4}$

Part C: Write an equation to represent the line that passes through points E and G. If $x=12$, in the equation you wrote, what is the value of y ? Show your work.

$y = \frac{3}{4}x - .5$

* I can use slope & one point (x,y) to solve for y_{int} .

$y = mx + b$

$4 = \frac{3}{4}(6) + b$

$(6, 4)$

$y = \frac{3}{4}x - .5$

$y = (\frac{3}{4})12 - .5$

$y = \frac{36}{4} - .5$

$y = 9 - .5$

$y = 8.5$

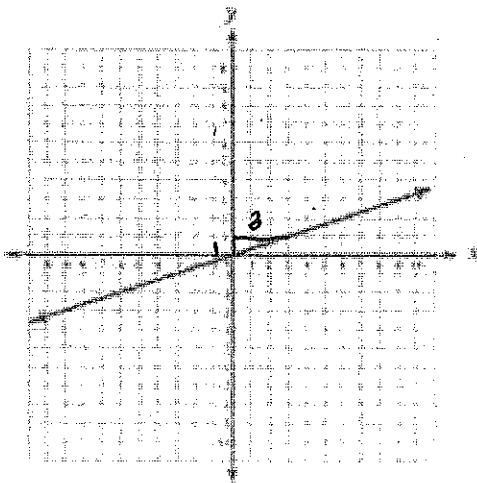
$4 = \frac{18}{4} + b$

$-\frac{18}{4} - \frac{18}{4}$

$b = -\frac{2}{4} = -.5$

8.EE.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y=mx$ for a line through the origin and the equation $y=mx+b$ for a line intercepting the vertical axis at b .

Tariq graphed a proportion on the plane below.

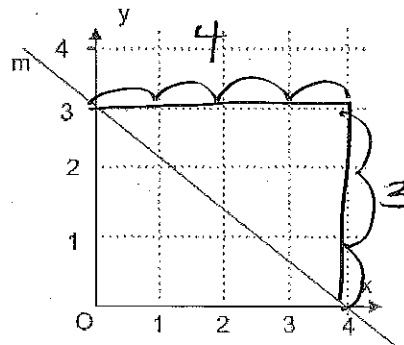


What are the equation and the y-intercept of the proportion?

- A. $y = x$; (0,3)
- B. $y = x+3$; (0,3)
- C. $y = 1/3x$; (0,0)
- D. $y = 1/3x$; (0,1)

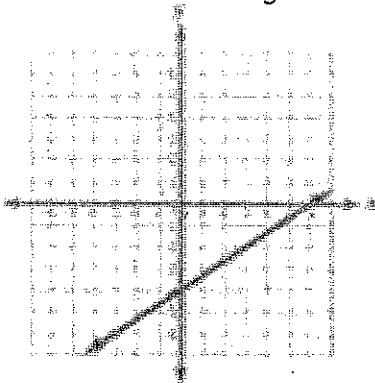
$m = \frac{1}{3}$ ↓ 0

What is the equation of the line m shown in the coordinate plane below?



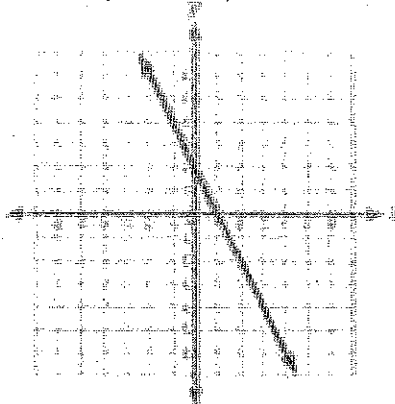
- a. $y = 3/4x - 3$
- b. $y = -3/4x - 3$
- c. $y = 3/4x + 3$
- d. $y = -3/4x + 3$

Which of the following is true of the graph?



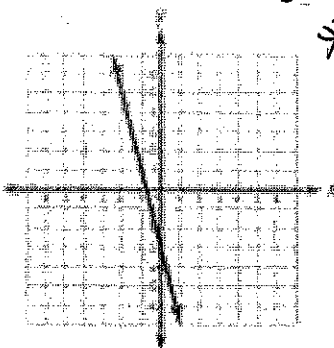
- A. The slope of the graph is $3/2$
- B. The y-intercept of the graph is (0,6)
- C. The equation of the graph is $y = 2/3x - 4$
- D. The graph has a negative slope

Which equation represents the graph?



- A. $y = 2x + 2$
- B. $y = -2x$
- C. $y = -2x + 2$
- D. $y = -1/2x + 2$

Which of the following is true of the graph?



*hard to read graph i

- A. The slope of the graph is -4
- B. The y-intercept of the graph is (0, -4)
- C. The equation of the graph is $y = -1/4x + 3$
- D. The graph has a positive slope

if the pic was clear, you could see the yint is not at -4.