

F.IF.B.4: Graphing Linear Functions

1 What is the y -intercept of the graph of the line whose equation is $y = -\frac{2}{5}x + 4$?

- 1) $-\frac{5}{2}$
- 2) $-\frac{2}{5}$
- 3) 0
- 4) 4

2 The graph of the equation $x + 3y = 6$ intersects the y -axis at the point whose coordinates are

- 1) (0,2)
- 2) (0,6)
- 3) (0,18)
- 4) (6,0)

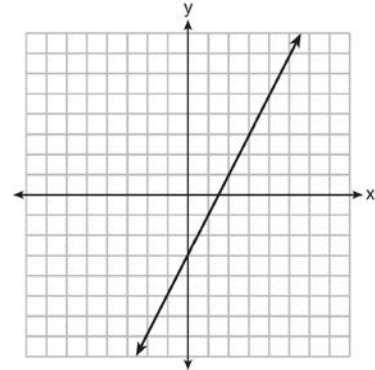
3 The value of the x -intercept for the graph of $4x - 5y = 40$ is

- 1) 10
- 2) $\frac{4}{5}$
- 3) $-\frac{4}{5}$
- 4) -8

4 What is the y -intercept of the line that passes through the points $(-1,5)$ and $(2,-1)$?

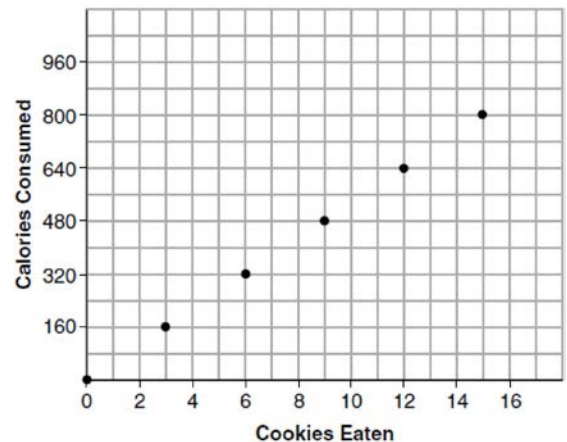
- 1) -1
- 2) -2
- 3) 3
- 4) 5

5 Which function has the same y -intercept as the graph below?



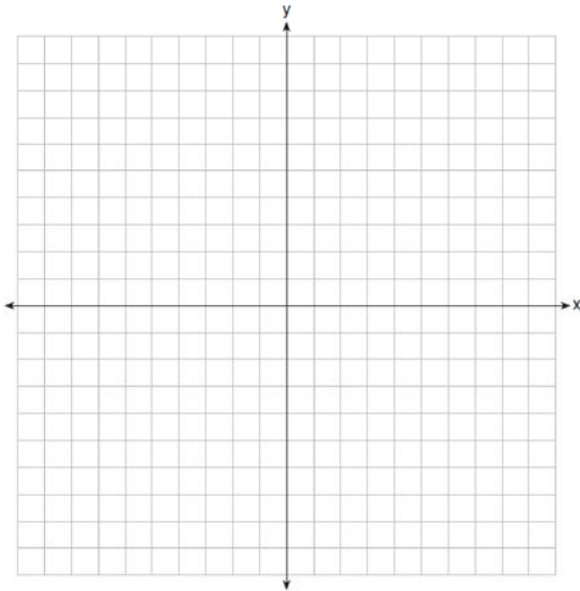
- 1) $y = \frac{12 - 6x}{4}$
- 2) $27 + 3y = 6x$
- 3) $6y + x = 18$
- 4) $y + 3 = 6x$

6 Samantha purchases a package of sugar cookies. The nutrition label states that each serving size of 3 cookies contains 160 Calories. Samantha creates the graph below showing the number of cookies eaten and the number of Calories consumed.



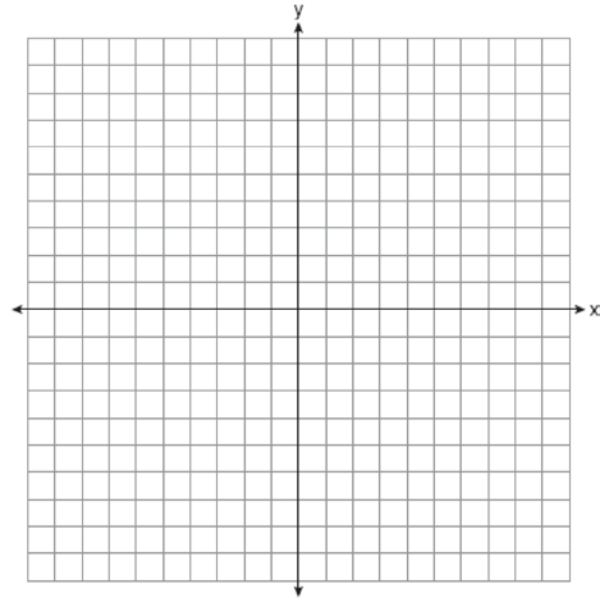
Explain why it is appropriate for Samantha to draw a line through the points on the graph.

- 7 On the set of axes below, draw the graph of the equation $y = -\frac{3}{4}x + 3$.



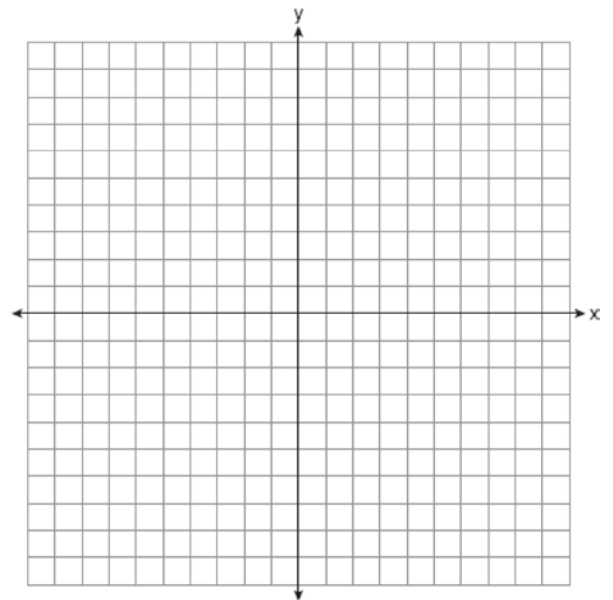
Is the point $(3, 2)$ a solution to the equation?
Explain your answer based on the graph drawn.

- 8 On the set of axes below, graph the line whose equation is $2y = -3x - 2$.



This linear equation contains the point $(2, k)$. State the value of k .

- 9 On the set of axes below, graph the equation $3y + 2x = 15$.



Explain why $(-6, 9)$ is a solution to the equation.

F.IF.B.4: Graphing Linear Functions**Answer Section**

1 ANS: 4 REF: 010605a

2 ANS: 1

$$y\text{-intercept} = \frac{C}{B} = \frac{6}{3} = 2$$

REF: 080619a

3 ANS: 1

$$4x - 5(0) = 40$$

$$4x = 40$$

$$x = 10$$

REF: 081408ai

4 ANS: 3

$$\frac{5 - (-1)}{-1 - 2} = \frac{6}{-3} = -2 \quad 5 = -2(-1) + b$$

$$3 = b$$

REF: 062410ai

5 ANS: 4

$$y + 3 = 6(0)$$

$$y = -3$$

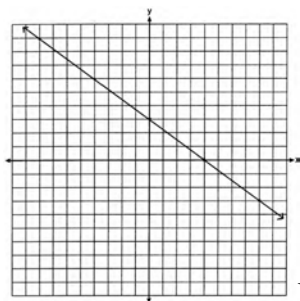
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6 ANS:

The data is continuous, i.e. a fraction of a cookie may be eaten.

REF: 081729ai

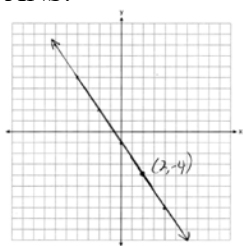
7 ANS:



No, because (3,2) is not on the graph.

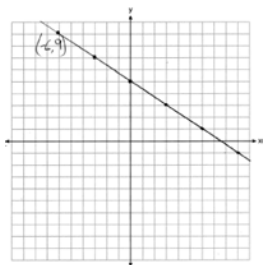
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8 ANS:



REF: 081927ai

9 ANS:



$(-6, 9)$ is a solution to the equation because it falls on the line.

REF: 012428ai