

**A.REI.D.10: Identifying Solutions**

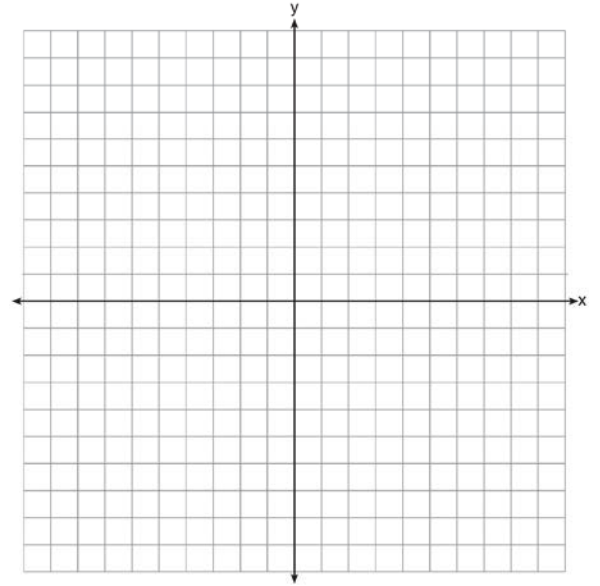
- 1 The solution of an equation with two variables,  $x$  and  $y$ , is
  - 1) the set of all  $x$  values that make  $y = 0$
  - 2) the set of all  $y$  values that make  $x = 0$
  - 3) the set of all ordered pairs,  $(x,y)$ , that make the equation true
  - 4) the set of all ordered pairs,  $(x,y)$ , where the graph of the equation crosses the  $y$ -axis
  
- 2 Which linear equation represents a line containing the point  $(1,3)$ ?
  - 1)  $x + 2y = 5$
  - 2)  $x - 2y = 5$
  - 3)  $2x + y = 5$
  - 4)  $2x - y = 5$
  
- 3 Which point lies on the line whose equation is  $2x - 3y = 9$ ?
  - 1)  $(-1,-3)$
  - 2)  $(-1,3)$
  - 3)  $(0,3)$
  - 4)  $(0,-3)$
  
- 4 Which point is on the line  $4y - 2x = 0$ ?
  - 1)  $(-2,-1)$
  - 2)  $(-2,1)$
  - 3)  $(-1,-2)$
  - 4)  $(1,2)$
  
- 5 Which point lies on the graph represented by the equation  $3y + 2x = 8$ ?
  - 1)  $(-2,7)$
  - 2)  $(0,4)$
  - 3)  $(2,4)$
  - 4)  $(7,-2)$
  
- 6 Which set of coordinates is a solution of the equation  $2x - y = 11$ ?
  - 1)  $(-6,1)$
  - 2)  $(-1,9)$
  - 3)  $(0,11)$
  - 4)  $(2,-7)$
  
- 7 Which point is *not* on the graph represented by  $y = x^2 + 3x - 6$ ?
  - 1)  $(-6,12)$
  - 2)  $(-4,-2)$
  - 3)  $(2,4)$
  - 4)  $(3,-6)$
  
- 8 Which ordered pair would *not* be a solution to  $y = x^3 - x$ ?
  - 1)  $(-4,-60)$
  - 2)  $(-3,-24)$
  - 3)  $(-2,-6)$
  - 4)  $(-1,-2)$

- 9 Point  $(k, -3)$  lies on the line whose equation is  $x - 2y = -2$ . What is the value of  $k$ ?
- 1)  $-8$
  - 2)  $-6$
  - 3)  $6$
  - 4)  $8$

- 10 The graph of the equation  $2x + 6y = 4$  passes through point  $(x, -2)$ . What is the value of  $x$ ?
- 1)  $-4$
  - 2)  $8$
  - 3)  $16$
  - 4)  $4$

- 11 If the point  $(5, k)$  lies on the line represented by the equation  $2x + y = 9$ , the value of  $k$  is
- 1)  $1$
  - 2)  $2$
  - 3)  $-1$
  - 4)  $-2$

- 12 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.

**A.REI.D.10: Identifying Solutions**  
**Answer Section**

1 ANS: 3 REF: 081602ai

2 ANS: 3  
 $2(1)+3=5$ 

REF: 061007ia

3 ANS: 4  
 $2x - 3y = 9$ 

$$2(0) - 3(-3) = 9$$

$$0 + 9 = 9$$

REF: 081016ia

4 ANS: 1  
 $4y - 2x = 0$ 

$$4(-1) - 2(-2) = 0$$

$$-4 + 4 = 0$$

REF: 011021ia

5 ANS: 4  
 $3y + 2x = 8$ 

$$3(-2) + 2(7) = 8$$

$$-6 + 14 = 8$$

REF: 011218ia

6 ANS: 4  
 $2(2) - (-7) = 11$ 

REF: 081217ia

7 ANS: 4 REF: 081405ai

8 ANS: 4  
 $-2 \neq (-1)^3 - (-1)$   
 $-2 \neq 0$ 

REF: 011806ai

9 ANS: 1  
 $x - 2y = -2$ 

$$x - 2(-3) = -2$$

$$x = -8$$

REF: 080628a

10 ANS: 2

$$2x + 6y = 4$$

$$2x + 6(-2) = 4$$

$$2x = 16$$

$$x = 8$$

REF: 060721a

11 ANS: 3

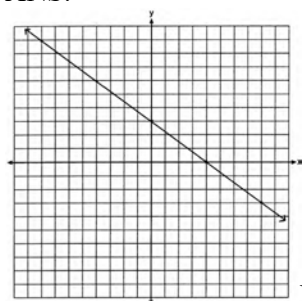
$$2(5) + k = 9$$

$$10 + k = 9$$

$$k = -1$$

REF: 061304ia

12 ANS:



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

REF: 061429ai