



2 Variable System of Equations quiz  
17 Questions

NAME : \_\_\_\_\_

CLASS : \_\_\_\_\_

DATE : \_\_\_\_\_

1. John went to the grocery store. On Monday, he purchased 4 apples and 6 bananas for a total of \$13. On Wednesday he purchased 3 apples and 7 bananas for a total of \$13.50. What are the prices for apples and bananas? Which system of equations represents the situation?

A  $4x + 6y = 13$   
 $3x - 7y = 13.5$

B  $4x + 6y = 13$   
 $3x + 7y = 13.5$

C  $4x - 6y = 13$   
 $3x - 7y = 13.5$

D  $x + y = 4$   
 $x - y = 6$

2. Meghan is in charge of the talent show committee who sold a total of 530 tickets in advance. Student tickets cost \$3 each and the adult tickets cost \$4 each. If the total receipts were \$1740, which system could Meghan use to find how many of each type of ticket were sold?

A  $S + A = 1740$   
 $3S + 4A = 530$

B  $S + A = 530$   
 $3S + 4A = 1740$

C  $S + A = 1740$   
 $4S + 3A = 530$

D  $S + A = 530$   
 $4S + 3A = 1740$

3. Molly won a bag full of money! She has 49 bills in all. She counts \$1430. There are twenty dollar bills and fifty dollar bills. How many of each bill does Molly have? Which system best represents the situation?

A  $x + y = 1430$   
 $20x + 50y = 49$

B  $x + y = 49$   
 $10x + 5y = 1430$

C  $x + y = 49$   
 $x + y = 1430$

D  $x + y = 49$   
 $20x + 50y = 1430$

4. Omar had brochures printed for a new business venture. Omar originally ordered 4 boxes of black-and-white brochures and 3 boxes of color brochures, which cost a total of \$134. After those ran out, Omar spent \$120 on 3 boxes of black-and-white brochures and 3 boxes of color brochures. Which system represents this situation, if you are looking for the prices for boxes of black and white and color brochures?

A  $x + y = 134$   
 $x + y = 120$

B  $3x + 3y = 134$   
 $4x + 3y = 120$

C  $4x + 3y = 134$   
 $3x + 3y = 120$

D  $7xy = 134$   
 $6xy = 120$

5. A \_\_\_\_\_ is a set of two or more equations that have the same variables.

A elimination method

B solution of a system

C table

D system of equations

6. If a system of equations has no solution, what does the **graph** look like?

A intersecting lines

B skew lines

C intersecting lines

D parallel lines

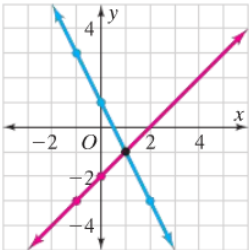
7.  This system has \_\_\_\_ solutions

A Infinitely many

B 1

C 0

D 2

8.  What type of system is being illustrated by the graph?

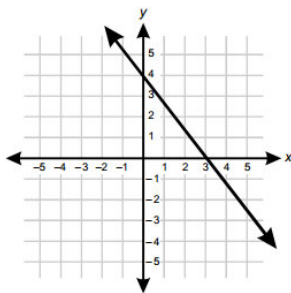
A infinitely many solutions

B two solutions

C one solution

D no solutions

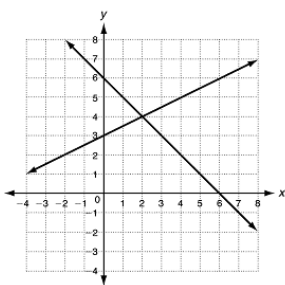
9.



When you graph the exact same equation twice,

- A you will have one solution.       B you will graph a giraffe.  
 C you will have no solution.       D you will have infinite solutions.

10.



What is the solution of the graph?

- A (2, 4)       B (0, 6)  
 C (4, 2)       D (0, 3)

11. What is the first step to solve this system using elimination?

$$S + A = 530$$

$$3S + 4A = 1740$$

- A Solve for s in the first equation       B Multiply the first equation by 4  
 C Substitute A for S in the second equation       D Multiply the first equation by -3

12. Solve this system by eliminating S. After you do step 3 and eliminate s, what new equation do you get before you continue step 4 to solve this system?

$$S + A = 530$$

$$3S + 4A = 1740$$

- A  $A = 160$        B  $S = 380$   
 C  $160 + A = 530$        D  $-3S - 3A = 1590$

13. Solve this system where you eliminate S. What equation do you create in step 5, where you are trying to solve for the second variable in this system?

$$S + A = 530$$

$$3S + 4A = 1740$$

A  $S + 160 = 530$

B  $160 + A = 530$

C  $S = 380$

D  $A = 160$

14. After solving this system using elimination, what does S and A equal?

$$S + A = 530$$

$$3S + 4A = 1740$$

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15. What is the first step to solve this system using substitution?

$$x + y = 49$$

$$20x + 50y = 1430$$

A Substitute 49y for x in the second equation

B Multiply the first equation by -20

C Solve for x in the first equation

D Multiply the first equation by 20

16. Solve this system by substitution to solve for y. After you do Step 2, the substitution step, you distribute and simplify. What equation do you get?

$$x + y = 49$$

$$20x + 50y = 1430$$

A  $980 - 10y + 50y = 1430$

B  $980 + 70y = 1430$

C  $980 + 30y = 1430$

D  $30x + 2450 = 1430$

17. After solving using substitution, what is the solution?

$$x + y = 49$$

$$20x + 50y = 1430$$

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**Answer Key**

1.b

2.b

3.d

4.c

5.d

6.d

7.c

8.c

9.d

10.a

11.d

12.

13.

14.(150,380)

15.c

16.c

17.(34,15)