

Systems Test Review

Date _____ Period _____

Choose the correct answer to each question.

- 1) An ice skating arena charges an admission fee for each child plus a rental fee for each pair of ice skates. John paid the admission fees for his six nephews and rented five pairs of ice skates. He was charged \$32. Juanita paid the admission fees for her seven grandchildren and rented five pairs of ice skates. She was charged \$35.25. If a represents the amount of the admission fee and r represents the skate rental fee, which of the following systems of equations can be used to represent this situation?

A) $6a + 5r = 35.25$ B) $32a + 5r = 5$ C) $6a + 5r = 32$ D) $5a + 6r = 32$
 $7a + 5r = 32$ $35.25a + 5r = 7$ $7a + 5r = 35.25$ $5a + 7r = 35.25$

- 2) A jar containing only nickels and dimes contains a total of 60 coins. The value of all the coins in the jar is \$4.45. If n represents the number of nickels and d represents the number of dimes, which one of the following systems of equations can be used to represent this situation?

A) $n + d = 4.45$ B) $n + d = 60$
 $0.05n + 0.10d = 60.$ $0.05n + 0.10d = 4.45$
C) $0.05n + 0.10d = 60$ D) $n + d = 60$
 $0.05n + 0.10d = 4.45$ $5n + 10d = 4.45$

- 3) Solve the following systems of equations.

$$\begin{aligned} -4x + 2y &= -2 \\ 4x + 6y &= 10 \end{aligned}$$

A) $(-2, 3)$ B) $(2, -3)$
C) $(-1, -1)$ D) $(1, 1)$

- 4) What is the solution of the following linear system?

$$\begin{aligned} y &= -x + 1 \\ 5x - 3y &= 5 \end{aligned}$$

A) no solution B) $(0, 1)$
C) infinite solutions D) $(1, 0)$
E) $(-8, 1)$

- 5) Hannah is solving a system of equation using the graphing method. What is her first step?

A) Graph the equation B) Isolate a variable C) Solve each equation for y
D) Eliminate y variable E) Eliminate x variable

6) What is the solution of the system of equations?

$$y = 3x + 7$$

$$y = x - 9$$

- A) $(-17, -8)$ B) $(-1, -10)$
C) $(4, 19)$ D) $(-8, -17)$
E) $(-10, -1)$

7) $3y = -\frac{1}{2}x + 2$

$$y = -x + 9$$

- A) $(10, -1)$ B) $(-1, 8)$
C) $(20, -4)$ D) $(3, 6)$

8) Solve the system of equations.

$$y = 4x + 6$$

$$y = 2x$$

- A) $(-3, -6)$ B) $(1, 2)$
C) no solution D) $(3, 6)$
E) $(6, 3)$

9) Solve the system of equations using elimination.

$$-10x - 3y = -18$$

$$-7x - 8y = 11$$

- A) $(3, -4)$ B) $(-4, 3)$
C) $(2, -1)$ D) $(-7, -10)$

10) Solve the system using any method.

$$3x + 3y = -9$$

$$3x - 3y = 21$$

- A) Infinite number of solutions
B) $(-5, 2)$
C) $(3, 3)$
D) $(3, -6)$
E) $(2, -5)$

11) Solve the system using any method.

$$x + 2y = -6$$

$$3x + 8y = -20$$

- A) $(3, 1)$ B) $(-1, -4)$
C) $(-4, -1)$ D) $(-4, 4)$
E) no solution

12) Solve the system using any method.

$$5x = -25 + 5y$$

$$10y = 42 + 2x$$

- A) $(4, -1)$ B) $(-1, 4)$
C) no solution D) $(-1, 2)$
E) $(5, 10)$

Solve each system by substitution.

13) A quiz has fourteen questions worth 100 points. The quiz consists of free response questions worth 5 points each and multiple choice questions worth 11 points each. How many free response questions are on the test?

- A) 8 B) 7 C) 5 D) 9

14) A movie theater sells tickets for \$9.00 each. However, student tickets can be bought at \$6.00 each. One evening the theater sold tickets for a total of \$4,974. How many tickets were sold to students if 636 tickets were sold?

- A) There were 425 student tickets sold B) There were 250 student tickets sold
C) There were 318 student tickets sold D) There were 386 student tickets sold

15) Gabby and Shanice each improved their yards by planting rose bushes and ivy. They bought their supplies from the same store. Gabby spent \$81 on 6 rose bushes and 3 pots of ivy. Shanice spent \$92 on 6 rose bushes and 4 pots of ivy. Find the cost of one rose bush.

- A) A rose bush costs \$7 B) A rose bush costs \$11
C) A rose bush costs \$6 D) A rose bush costs \$8

16) Ursula is in charge of selling tickets to the school musical. They sold a total of 154 tickets. Student tickets were \$3 and adult tickets were \$5. They raised a total of \$588. How many students went to see the musical?

- A) 63 students went to see the musical B) 91 students went to see the musical
C) 97 students went to see the musical D) 38 students went to see the musical

17) Mr. Harlin is planning a field trip for the band and chorus students to go to Florida. They are taking a combination busses and vans to get there. Each bus can hold 48 people and each van holds 8 people. There are a total of 544 people going on the trip and a total of 18 total vehicles. How many vans will be going?

- A) There will be 9 vans B) There will be 8 vans
C) There will be 7 vans D) There will be 10 vans

18) Which point is the solution to the system of equations?

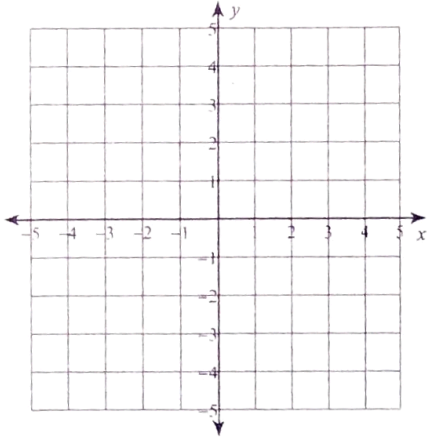
$$x + 2y = 10$$

$$3x + 4y = 8$$

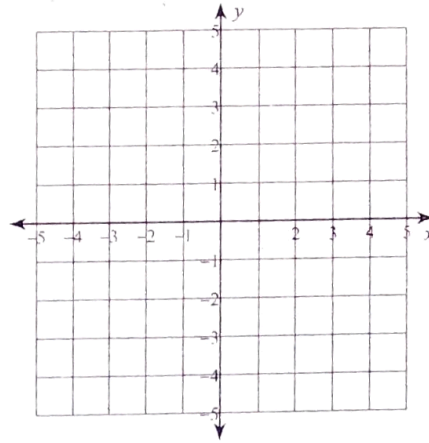
- A) (11, -12) B) (7, 1.5) C) (-12, 11)
D) (-11, -12) E) (-12, -11)

Solve each system by graphing.

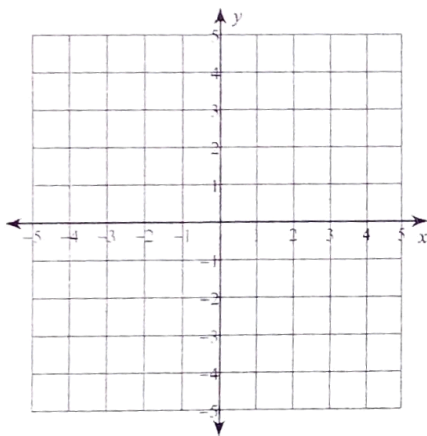
19) $y = -x + 2$
 $y = -x + 4$



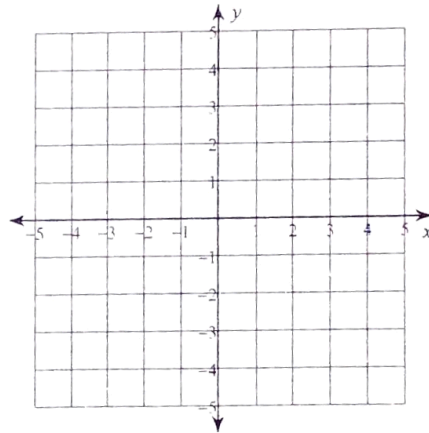
20) $x + y = -2$
 $x = -4$



21) $y = \frac{1}{3}x + 3$
 $y = \frac{8}{3}x - 4$



22) $y = 2x + 2$
 $y = \frac{2}{3}x - 2$



- A) (3, 4)
- B) (-3, 5)
- C) (-5, -3)
- D) (5, 3)
- E) (3, 5)

- A) (-3, -4)
- B) (-4, 4)
- C) (3, 4)
- D) (1, 4)
- E) (-3, 4)

23) Sumalee bought 9 shirts for a total of \$81. Tee shirts cost \$4 and long sleeve shirts cost \$13. How many of each type of shirt did she buy?

- A) 4 tee shirts and 5 long sleeve shirts
- B) 6 tee shirts and 3 long sleeve shirts
- C) 7 tee shirts and 3 long sleeve shirts
- D) 7 tee shirts and 2 long sleeve shirts
- E) 6 tee shirts and 4 long sleeve shirts

24) Huong bought 4 eating utensils for a total of \$18. Spoons cost \$6 and forks cost \$3. How many of each eating utensil did she buy?

- A) 2 spoons and 4 forks
- B) 3 spoons and 5 forks
- C) 2 spoons and 2 forks
- D) 3 spoons and 4 forks
- E) 5 spoons and 2 forks