Secondary Math III
Unit 12 Systems of Equations
Review Assignment 12.6

Name_____
Period_____

___1. Abby and Addy each improved their yards by planting daylilies and shrubs. They bought their supplies from the same store. Abby spent $52 on 2 daylilies and 4 shrubs. Addy spent $79 on 2 daylilies and 7 shrubs. What is the cost of one daylily?

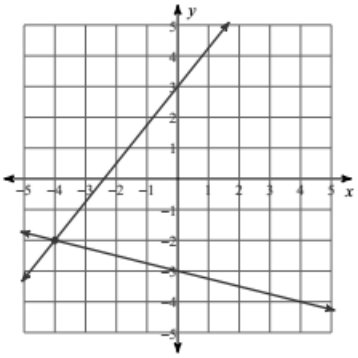
A. $6 B. $8 C.$7 D. $12

___2. The sum of two numbers is 16. The sum of their squares is 160. Find the two numbers.

A. 9 and 3 B. 12 and 4 C. 4 and 7 D. 5 and 6

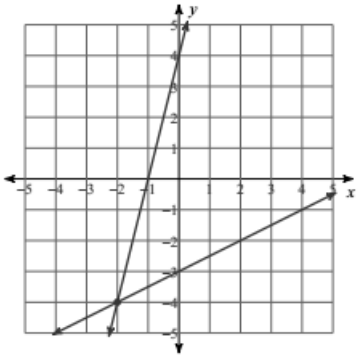
___3. Choose the graph that solves the following system: $\begin{cases} -5x = 12 - 4y \\ 4y = -12 - x \end{cases}$

A.



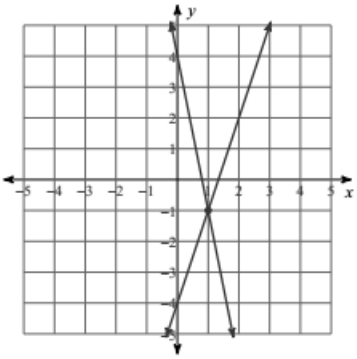
(–4, –2)

B.



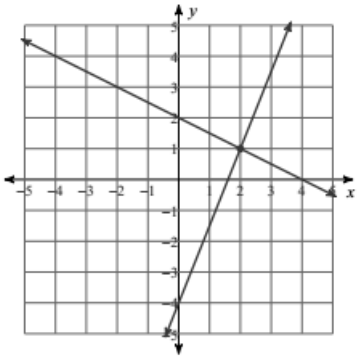
(–2, –4)

C.



(1, –1)

D.



(2, 1)

___4. Solve the following system by substitution or elimination: $\begin{cases} 10x - 9y = 27 \\ -20x - 5y = 15 \end{cases}$

A. (10, 5)
B. (10, -9)
C. (0, -3)
D. (10, 9)

___5. Solve the following system by substitution or elimination: $\begin{cases} x - 7y = 13 \\ 3x + 7y = 11 \end{cases}$

A. (6, -1)
B. (-7, -6)
C. (-7, -7)
D. (-1, -6)

___6. Solve the system of equations: $\begin{cases} -5x - 5y - 5z = 30 \\ 2x + 6y - z = 4 \\ 3x + 4y + 5z = -25 \end{cases}$

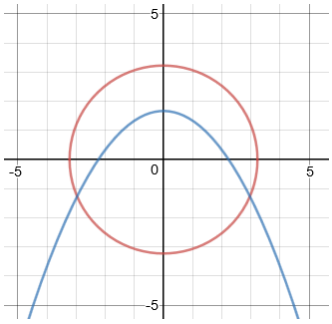
A. (-5, -6, 2)
B. Infinitely many solutions
C. (-3, 1, -4)
D. (0, -2, -1)

___7. Solve the system of equations: $\begin{cases} y = x^2 \\ x^2 + y = 8 \end{cases}$

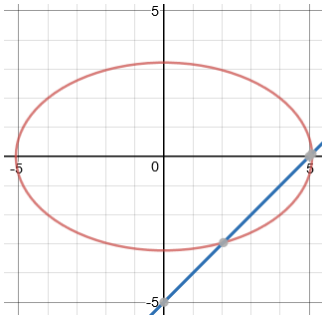
A. (-2, 4)
B. (-2, -4), (-2, 4)
C. (-2, 4), (2, 4)
D. (4, -2)

___8. Choose the graph that solves the following system: $\begin{cases} 5x^2 + 5y^2 = 52 \\ x^2 + 3y = 5 \end{cases}$

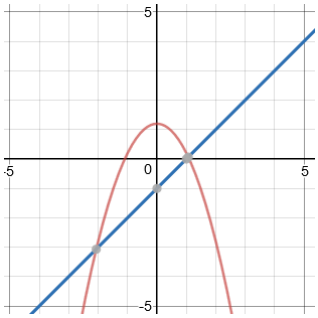
A.



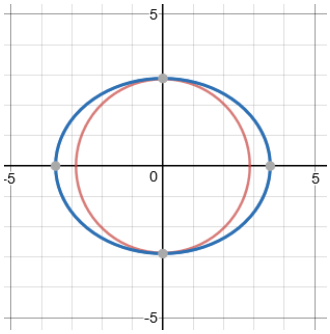
B.



C.



D.



___9. Classify the following system of equations: $\begin{cases} -42y = 28x \\ 0 = y + \frac{2}{3}x \end{cases}$

A. Consistent/Dependent
B. No Solution
C. Consistent/Independent
D. Inconsistent

___10. Sammy's Seafood Buffet orders 120 pounds of salmon, halibut, and trout every week. Salmon is $3.50 per pound, halibut is $2.75 per pound and trout is $1.50 per pound. The order costs a total of $322.50 and they always order 20 fewer pounds of trout than halibut. How many pounds of each type of fish is ordered?

A. Salmon: 40 lbs. Halibut: 50 lbs. Trout: 30 lbs.
B. Salmon: 30 lbs. Halibut: 40 lbs. Trout: 50 lbs.
C. Salmon: 50 lbs. Halibut: 40 lbs. Trout: 30 lbs.
D. Salmon: 50 lbs. Halibut: 30 lbs. Trout: 40 lbs.

11. You are going to help your grandmother create a garden of tulips and daffodils. She has space for approximately 80 bulbs. The florist tells you that tulips cost $0.50 per bulb and daffodils cost $0.75 per bulb. How many of each can you purchase if her budget is $52? (BTW – Remember you grandmothers on Mother's Day and Grandparent's Day)

12. The cost of two meals at a fancy restaurant is shown in the table below.

Group	Total Cost
4 steak, 2 chicken	$160
4 steak, 3 chicken	$172

a. Define variables to represent the cost of a steak meal and the cost of a chicken meal.

b. Write a system of equations to find the cost of a steak meal and a chicken meal.

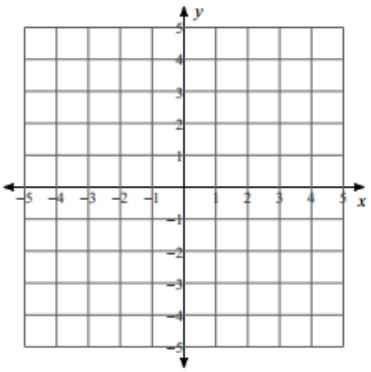
c. Solve the system of equations, and explain what the solution means.

d. How much would a customer pay for 3 steak meals and 5 chicken meals?

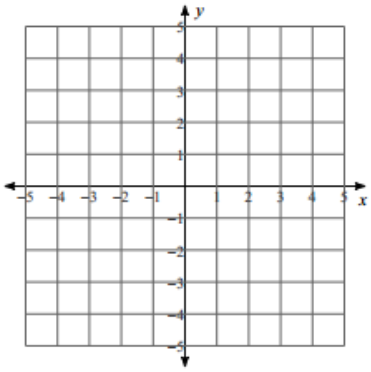
13. Gem's Jewelry sells 3 different sets of jewelry. Each set comes with at least one necklace, one pair of earrings and one ring. The first set is $50.00 and you get 3 necklaces, 2 pairs of earrings, and 1 ring. The second set is $38.50 and you get 2 necklaces, 1 pair of earrings and 3 rings. The third set is $21.25 and you get 1 necklace, 1 pair of earrings and 1 ring. What is the cost of necklace, the pair of earrings and the ring?

Solve each system of equations (must know how to solve by graphing, elimination and substitution):

14. $\begin{cases} 5x - 3y = -12 \\ 2x + 3y = -9 \end{cases}$



15. $\begin{cases} 4x + y = 4 \\ 4x + y = 2 \end{cases}$



16. $\begin{cases} -3x + 3y = 0 \\ x - y = 7 \end{cases}$

17. $\begin{cases} x - 7y = 16 \\ 5x - 2y = 14 \end{cases}$

18. $\begin{cases} y = x + 3 \\ x^2 + y^2 = 17 \end{cases}$

19. $\begin{cases} x + 3y + 2z = 1 \\ 2x + y - z = 2 \\ x + y + z = 2 \end{cases}$

20. The sum of two numbers is12, and the sum of their squares is 74. What are the numbers?