# Instructions

- Complete the problems as if this were an actual test.
  - 50-60 minutes of <u>uninterrupted</u> time. (this means no phones, Netflix, snapchat, etc….I promise you will survive 😊)
  - No help from notes, friends, google, etc.

- After you have completed the problems, grade your test using the key provided.

- Try extra problems similar to the ones you missed until you feel like you understand those concepts.

Multiple Choice

___1. Choose the graph that solves the following system: $\begin{cases} -4 = x + 2y \\ 8 = 2y + 7x \end{cases}$

A.

No solution

B.

$(2, 3)$

C.

$(2, -3)$

D.
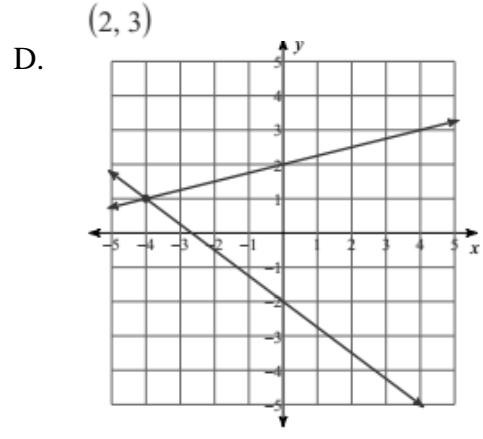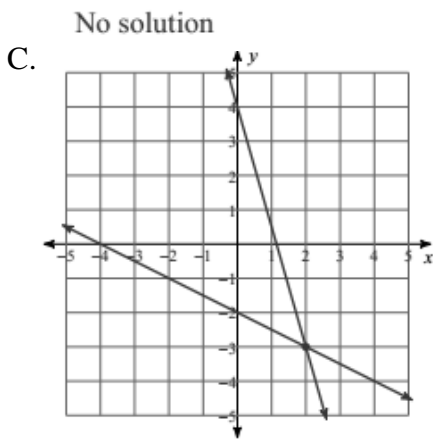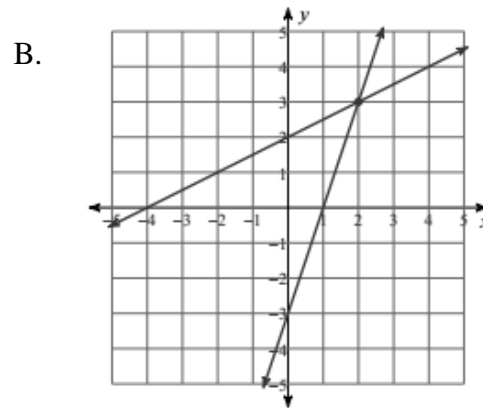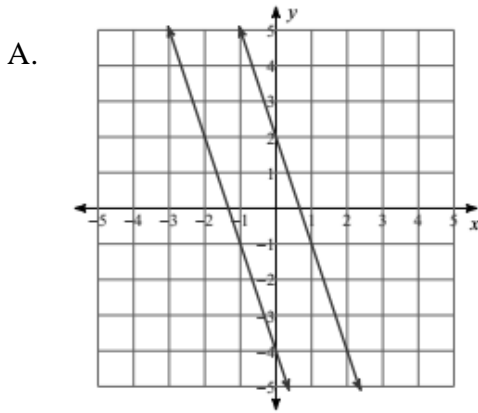
$(-4, 1)$

___2. Solve the following system by elimination or substitution: $\begin{cases} -2x + y = -17 \\ 2x + 5y = -13 \end{cases}$

A. (-4, 5)   C. (6, -5)
B. (4, 5)   D. Infinite number of solutions

___3. Classify the following system: $\begin{cases} 3x = -4 + 4y \\ -4 = 3x - 4y \end{cases}$

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

___4. Harry's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 6 adult tickets and 4 child tickets for a total of $80. The school took in $76 on the second day by selling 5 adult tickets and 4 child tickets. Find the price of a child ticket.

  A. $11   B. $14   C. $7   D. $4

___5. Determine which system of equations the ordered triple is a solution to. (1, -1, -3)

A. $\begin{cases} -2x - 4y + 3z = -7 \\ -x + 4y - 6z = 13 \\ 3x - y - 3z = -3 \end{cases}$ C. $\begin{cases} 2x - 3y + z = 0 \\ -x + 4y - 6z = 13 \\ -x + 2y + 3z = -12 \end{cases}$

B. $\begin{cases} -2x - 4y + 3z = -7 \\ -x + 4y - 6z = 13 \\ -x + 2y + 3z = -12 \end{cases}$ D. $\begin{cases} -2x - 4y + 3z = -7 \\ 2x - y + 2z = 3 \\ -x + 2y + 3z = -12 \end{cases}$

___6. Solve the following system of equations: $\begin{cases} x^2 + 6x = y \\ 6y = 24x \end{cases}$

  A. (2, 4)   C. No solution
  B. (0, 4), (3, -4)   D. (0, 0), (-2, -8)

___7. Beka's flower shop ordered 200 flowers for Mother's Day. They ordered carnations at $1.50 each, roses at $5.75 each, and daisies at $2.60 each. They ordered mostly carnations, and 20 fewer roses than daisies. The total order came to $589.50. Pick the system of equations to best represent the problem.
$x = Carnations, y = Roses, z = Daisies$

A. $\begin{cases} x + y + z = 589.50 \\ 1.50x + 5.75y + 2.60z = 200 \\ z - 20 = y \end{cases}$ C. $\begin{cases} x + y + z = 200 \\ 1.50x + 5.75y + 2.60z = 200 \\ y - 20 = z \end{cases}$

B. $\begin{cases} x + y + z = 589.50 \\ 1.50x + 5.75y + 2.60z = 200 \\ x - 20 = z \end{cases}$ D. $\begin{cases} x + y + z = 200 \\ 1.50x + 5.75y + 2.60z = 589.50 \\ z - 20 = y \end{cases}$

___8. The sum of two numbers is 11. The sum of their squares is 61. Find the two numbers
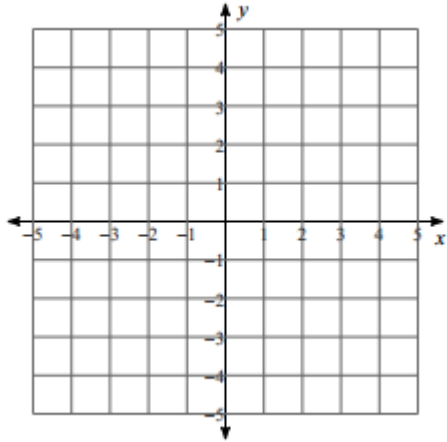 A. 9 and 3   C. 4 and 7
  B. 8 and 1   D. 5 and 6
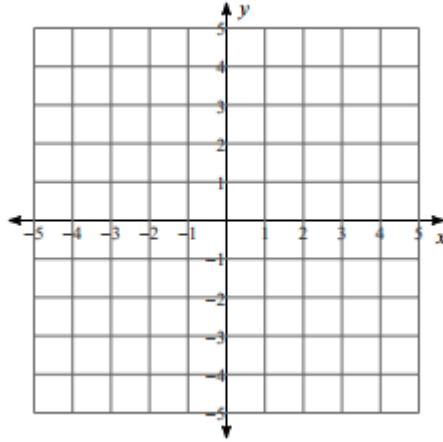
Free Response. Show All Work.

Solve each system by graphing.

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

10. $\begin{cases} 3x + y = 2 \\ 4 + 3x = -y \end{cases}$

Solution: _____

Solution: _____

Solve each system of equations by substitution or elimination. Write your answer as an ordered pair or triple. You must show all work!

11. $\begin{cases} 4x - 3y = 10 \\ 5x + 6y = -7 \end{cases}$

12. $\begin{cases} 3x + 4y = 5 \\ 9x + 12y = 15 \end{cases}$

13. $\begin{cases} 2x + y + 3z = -11 \\ -5x - y - z = 23 \\ 6x - 12z = -24 \end{cases}$

14. $\begin{cases} 8x^2 - 2x = 2y \\ y = x \end{cases}$

For the following problems, define the variables, write a system of equations and solve. Show all work!

15. Jenny and Trevon are selling pies for a school fundraiser. Customers can buy blueberry pies and lemon meringue pies. Jenny sold 9 blueberry pies and 5 lemon meringue pies for a total of $211. Trevon sold 9 blueberry pies and 4 lemon meringue pies for a total of $194. Find the cost of one blueberry pie.

16. Last Tuesday, Regal Cinemas sold a total of 8500 movie tickets. Proceeds totaled $64,600. Tickets can be bought in one of 3 ways: a matinee admission costs $5, student admission is $6 all day, and regular admissions are $8.50. How many of each type of ticket was sold if twice as many student tickets were sold as matinee tickets?

17. The cost of two meals at a local restaurant is shown in the table below.

Group	Total Cost
4 tacos, 2 enchiladas	$47
4 tacos, 3 enchiladas	$54.50

    a. Define variables to represent the cost of a taco and the cost of an enchilada.

    b. Write a system of equations to find the cost of a taco and the cost of an enchilada.

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

    d. How much would a customer pay for 3 tacos and 5 enchiladas?