December 7, 2015
Day 1- Review for Nine Weeks Test
Test Date: December 10th

B 1. What is the first step to solving this system by elimination?

$$2x - y = -7$$
$$-4x + y = 4$$

a. Multiply the first equation by -2.
b. The equations are ready to be added.
c. Multiply the second equation by any number.
d. This system cannot be solved using elimination.

C 2. What is the first step to solving this system by elimination?

$$5x - 2y = 3$$
$$2x + y = 3$$

a. The equations are ready to be added.
b. Multiply the first equation by -2.
c. Multiply the second equation by 2.
d. This system cannot be solved using elimination.

Solve each system using the elimination method. Then state the solution.

(-6, -9) 3.

$$3x - 5y = 27$$
$$-3x + 2y = 0$$

NO Solution 4.

$$10x - 9y = 17$$
$$-20x + 18y = 14$$

(-2, 1) 5.

$$5(3x - 4y = -10)$$
$$4(10x + 5y = -15)$$

A 6. How many solutions does the system $\begin{matrix} 4x+4y=24 \\ x+4y=24 \end{matrix}$ have?

(A.) one solution B. two solutions C. infinitely many solutions D. no solution

C 7. Sherri has some one-dollar bills and some five-dollar bills. She has 14 bills worth $30. How many one-dollar bills does Sherri have?

A. 15 B. 9 (C.) 10 D. 5

B 8. Which is the correct system of equations to find the cost of a single hot dog and a single soft drink?

One group of people purchased 10 hot dogs and 5 drinks at a cost of $35.00. A second group bought 7 hot dogs and 4 drinks at a cost of $25.25. Let x = the cost of a single hot dog and y = the cost of a single soft drink.

a. $\begin{matrix} x+y=15 \\ x+y=11 \end{matrix}$ (b.) $\begin{matrix} 10x+5y=35.00 \\ 7x+4y=25.25 \end{matrix}$ c. $\begin{matrix} 10x+5y=25.25 \\ 7x+4y=35.00 \end{matrix}$ d. $\begin{matrix} x+y=35.00 \\ x+y=25.25 \end{matrix}$

Create a system of equations to solve the following and then solve.

9. The sum of two numbers is 122 and the difference is 52. Setup a system of equations and solve the system to find the two numbers. Show all work to receive credit!

$x + y = 122$
$x - y = 52$
$2x = 174 \quad x = 87$

9. (87, 35)

10. Given the scenario, define each variable and write a system of linear inequalities that could be used to solve the problem. DO NOT SOLVE.

A cafeteria sells two kinds of wraps: vegetarian and chicken. The vegetarian wrap cost $1.00 and the chicken wrap cost $1.80. Find the number of each type of wrap needed to be sold each day to sell at least 70 wraps and make at least $98.

x = vegetarian wraps

y = chicken wraps

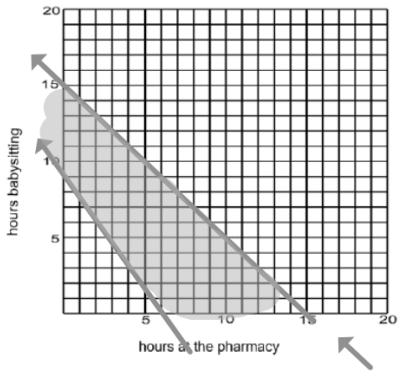
Inequalities: number of wraps: $x + y \geq 70$

money made: $x + 1.80y \geq 98$

Graph the system of linear inequalities given with the scenario below.

11. Linda works at a pharmacy for $15 an hour. She also babysits for $10 an hour. Linda needs to earn at least $90 per week, but she does not want to work more than 15 hours per week. Let x = the number of hours she works at the pharmacy and y = the number of hours she babysits. The inequalities for this scenario are given below.

$x + y \leq 15$
$15x + 10y \geq 90$



Use #11 to answer the following questions.

12. Why does the graph fall in the first quadrant?
The graph falls in quadrant I, because the measure of time(hour) is positive.

13. Use your graph to determine a possible solution to the problem and explain why it works.
(10, 3) would be a solutions as it falls in the shaded region.

14. Determine if the given ordered pair is a solution to the system. Show why or why not.

$2x+y=12$
$3x-y=21$; (9, -6)

$3(9)-(-6)=21$
$27+6=21$
$33 \neq 21$

$2(9)+(-6)=12$
$18-6=12$
$12=12$

14. Circle one: yes or (no)

15. Solve the system by graphing.

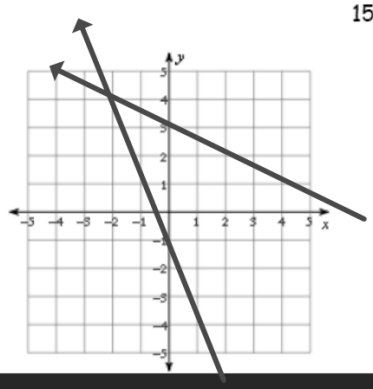
$3x+y=-2$
$x+2y=6$

$-x \quad -x$

$\frac{2y}{2} = \frac{-x}{2} + \frac{6}{2}$

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

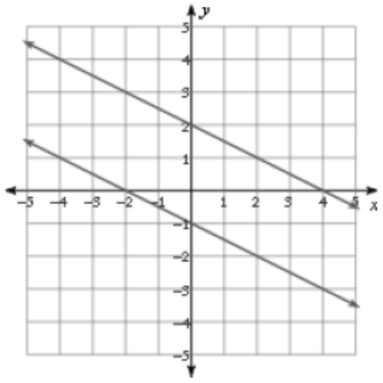
$y=-3x-2$



15. Solution: $(-2, 4)$

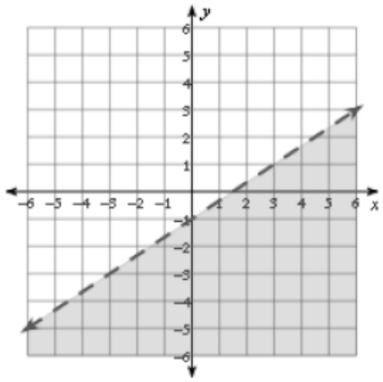
16. Name the solution of the system that is graphed.

Solution: no solution



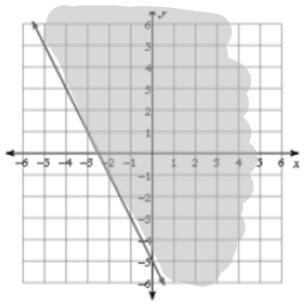
17. Is (3,-2) a solution to the linear inequality?

Circle yes or no

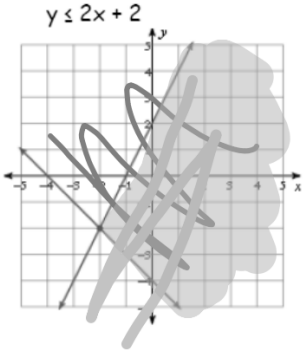


For #18 & 19, complete the graph by shading appropriately.

18. $y \geq -2x - 5$

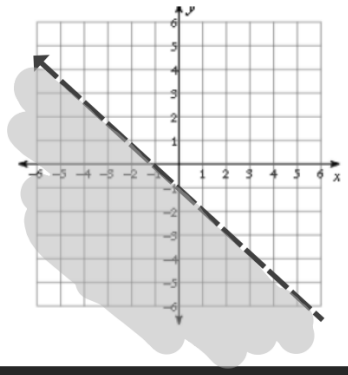


19. $y \geq -x - 4$
$y \leq 2x + 2$



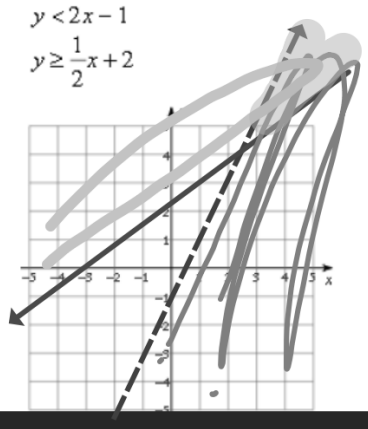
20. Graph the inequality to find the solution.

$y < -x - 1$



21. Graph the system of inequalities to find the solution.

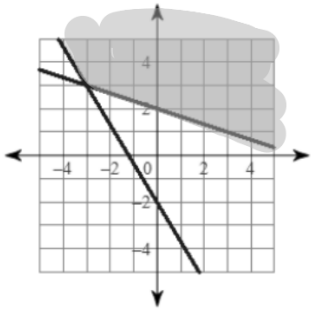
$y < 2x - 1$
$y \geq \frac{1}{2}x + 2$



_____22. Choose the system of linear inequalities shown in the graph.

A. $y > -\frac{1}{3}x + 2$
$y > -\frac{5}{3}x - 2$

B. $y \geq -\frac{1}{3}x + 2$
$y \geq -\frac{5}{3}x - 2$

C. $y \leq -\frac{1}{3}x + 2$
$y \geq -\frac{5}{3}x - 2$

D. $y \geq -3x + 2$
$y \geq -2x - 3$