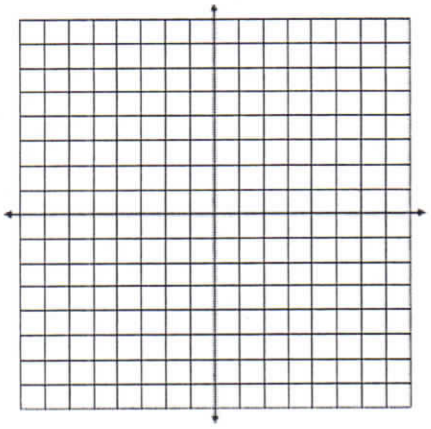
Name: _____

Date: 10/19/17 Block: ____

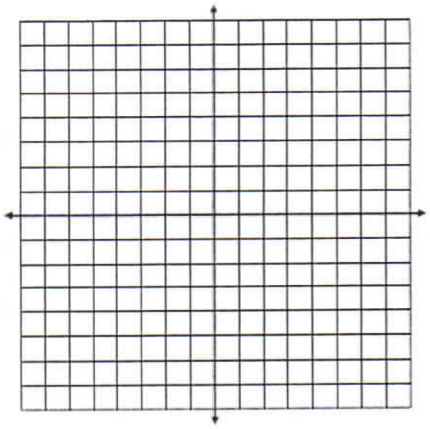
Chapter 3 Test Review

For questions 1-2, solve the system by graphing.

1. $2x + 3y = 9$
$x - 2y = 8$



2. $6x = 10y - 10$
$x + y + 7 = 0$



For questions 3-4, solve the system using the substitution method.

3. $9x - y = 17$
$5x + 4y = -27$

4. $2x - 4y = 8$
$7x - 3y = 61$

For questions 5-8, solve the system using the elimination method.

5. $8x + y = -39$
$2x - 5y = 27$

6. $3x - 7y = -18$
$4x - 2y = -24$

7. $12y = 17 - 9x$
$-4y - 3x = 31$

8. $11y + 1 = -6x$
$0 = 43 - 7x - 4y$

For questions 9 and 10, outline your variables, set up a system of equations and solve using graphing/substitution or elimination. Clearly label your answer.

9. A storeowner mixed 8 pounds of peanuts and 5 pounds of M&M's. This 13 pound mixture sold for $55.27. A second mixture included 6 pounds of peanuts and 4 pounds of M&M's. This 10 pound mixture sold for $42.70. Find the cost per pound of the peanuts and M&M's.

10. Katy's favorite rides at the amusement park are the rollercoaster and water slide. The wait time for the rollercoaster is 25 minutes and the wait time for the water slide is 10 minutes. If she went on 12 rides total and waited three hours in line, how many times did she go on each ride?

Solve the system of three variables below. Clearly label your answer.

12. $x - 7y + 3z = 17$

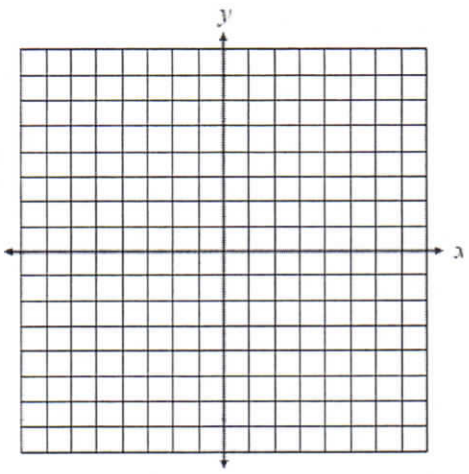
$5x + 2y - 2z = -57$

$3x - 10y - z = -11$

13. Graph the systems and clearly outline the solution set

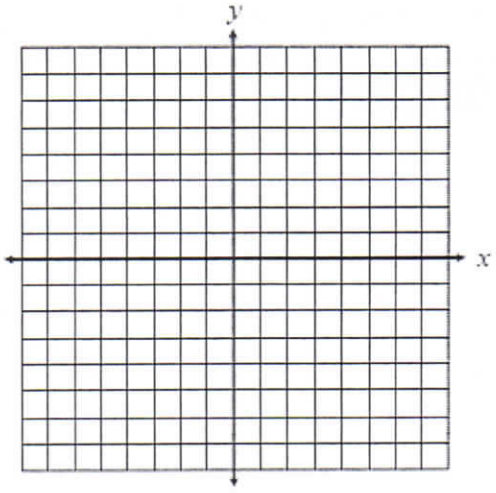
$x - y \geq 4$

$x + 5y \leq 0$



$2x - 5y < -20$

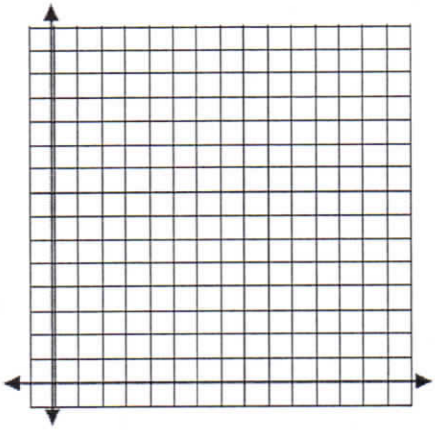
$x > -3$



14.

. Brandon is shopping at Old Navy during a sale. All shorts are $16 each and all t-shirts are $10 each. He has $100 to spend and would like to purchase at least 2 pairs of shorts.

a) Write a system of linear inequalities to represent this situation, then graph.

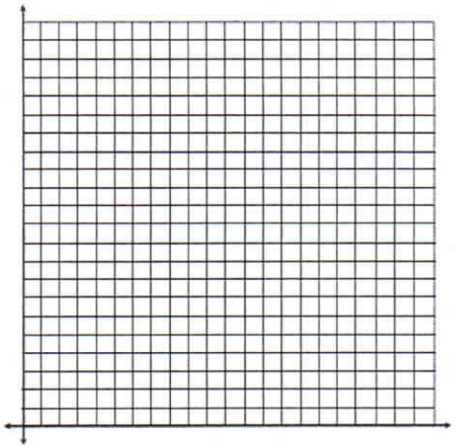


b) Using your graph, give two possible combinations of shorts and Brandon can buy.

15. The area of a parking lot is 600 square meters. A car requires 6 square meters. A bus requires 30 square meters. The attendant can handle only 60 vehicles. If a car is charged $2.50 and a bus $7.50, how many of each should be accepted to maximize income?

CONSTRAINTS:

GRAPH:



OBJECTIVE FUNCTION:

TEST VERTICES:

SOLUTION: