CCGPS Coordinate Algebra Day 24 Unit 2 Solving Equations and Inequalities
Name: _____ Date: _____

Unit 2 Test Review

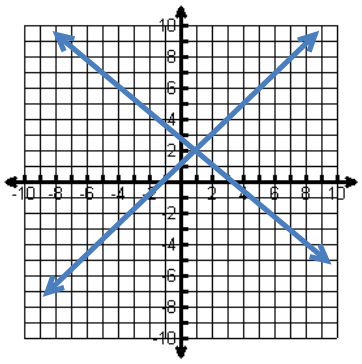
Study your properties! Give an example of each of the following:

Commutative: x + y = y + x Associative: (2+4)+6 = 2+(4+6) Distributive: 2(x+4)=2x+8

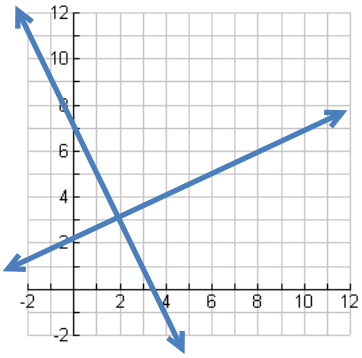
Additive or Multiplicative Inverse: a + -a = 0 Additive or Multiplicative Identity: 22b x 1 = 22b

Find the solution of the linear system graphically. Write your solution in the blank provided.

_(1, 2)___1. $y = -x + 3$, $y = x + 1$



_(2,3)___2. $y = -2x + 7$, $-3x + 6y = 12$



Use substitution to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

_(2,2)___3. $y = 2x - 2$, $6x + 2y = 16$

_(-2,-2)__4. $4x - y = -6$, $y = 2x + 2$

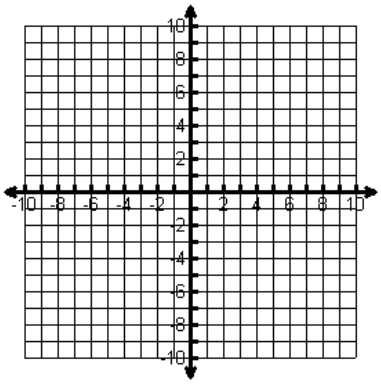
Use elimination to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

_(2,1)__5. $5x - 3y = 7$, $x + 3y = 5$

_(1, -2)_6. $-3x + 3y = -9$, $6x + 2y = 2$

Use any method to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

__No Solution__7. $6x - 9y = 18$, $2x - 3y = 10$



Systems of Linear Equations Word Problems:

8. Bill wants to buy some CDs at the music store. Used ones sell for $4.99, and new ones sell for $13.99. He has $75 to spend that he got for his birthday.

a) Write a linear inequality to represent the situation. Can Bill by 4 used and 4 new CDs?

4.99u + 13.99n ≤ 75; No, not enough money by $0.92

9. A store sold 32 pairs of jeans for a total of $1050. Brand A sold for $30 per pair and Brand B sold for $35 per pair. How many of Brand A were sold?

A + B = 32

30A + 35B = 1050

Answer: 14 of Brand A and 18 of Brand B

10. You are selling tickets for a basketball game. Student tickets cost $3 and general admission tickets cost $5. You sell 350 tickets and collect $1450. How many of each type of ticket did you sell?

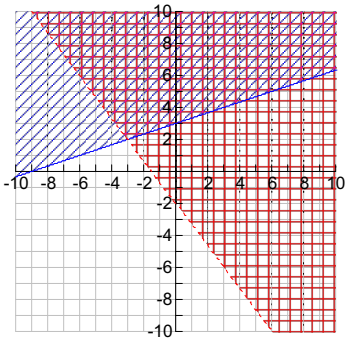
S + G = 350

3S + 5G = 1450

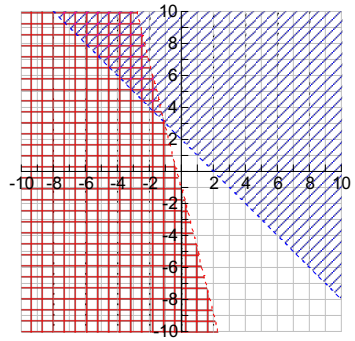
Answer: 150 Student Tickets and 200 General Admission Tickets

Graph the systems of inequalities, and name a solution.

_____11. $x - 3y \le -9$
$4x + 3y > -6$



_____12. $y > -x + 2$
$4x + y < -1$



Systems of Linear Inequalities Word Problems:

13. Julia and Jackson are raising money for a Mother's Day gift. They have a lemonade stand and are selling cups of lemonade for $2 each and cookies for $1.50 each. They must raise at least $150.

a. Write an inequality to express the income from the lemonade stand.

2x + 1.5y ≥ 150

b. They expect to sell at least 3 dozen cookies. Write an inequality to represent this situation.

y ≥ 30

14. You are looking to buy a bouquet of flowers for your favorite math teacher. Lilies cost $3.00 each and roses cost $4.00 each. You have budgeted no more than $28 to spend on flowers. Graph a system of inequalities to illustrate how many of each type of flower you can purchase if you want to buy at least half a dozen flowers. Explain how to use the graph to determine possible solutions.

3x+4y ≤ 28

X + y ≥ 6