Systems of Linear Equations and Inequalities Test Study Guide
(Test on Tuesday, March 20)

Tell whether the ordered pair is a solution of the system of equations (*show all work*)

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

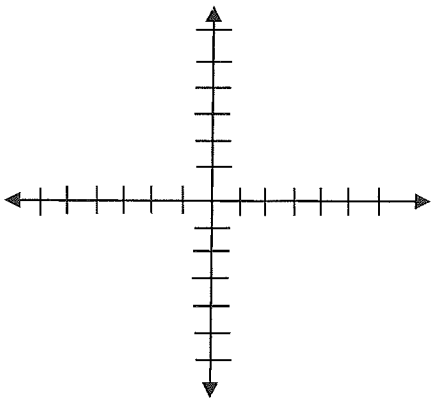
Circle: YES or NO

2. $y = -6x + 5$ (0, 5)
   $x + y = 5$

Circle: YES or NO

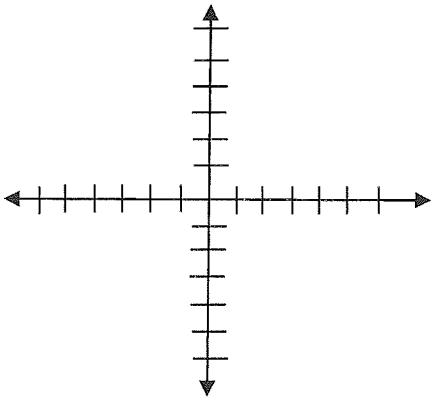
Solve the system of equations by graphing

3. $y = 2x - 2$
   $y = \frac{1}{2}x + 4$



(,)

4. $y = 3x - 2$
   $2x + y = 3$



(,)

Solveby substitution

5. $y = x + 3$
   $y = 2x + 12$

(,)

Solve by elimination

6. $4x + y = -1$
   $2x - y = -5$

(,)

7. Sam brought 12 balloons to a party. Some were red and some were blue. Blue balloons cost $2 and red balloons cost $3. They spent a total of $33 on balloons. How many of each did they bring? Complete the system here:

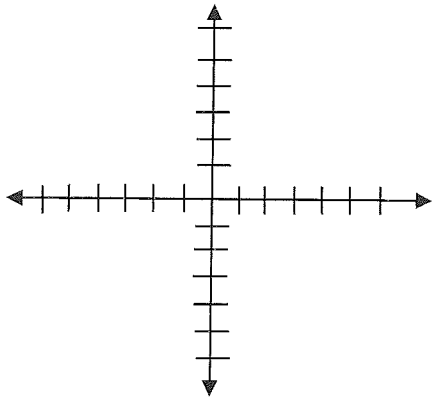
$$\begin{cases} b + r = \_\_\_\_ \\ 2b + \_\_\_\_ = 33 \end{cases}$$

8. Use the equations from #7 to find out how many of each balloon they brought. Use any method. *(show all work)*

Blue Balloons: _____ Red balloons:_____

9. Solve using any method

$y = 2x + 4$
$y + 2x = 8$



_____(,)_____

Solve the system of equations (tell whether it has infinitely many or no solutions) (use graphing, substitution or elimination method)

9. $y = -3x - 4$
$y = -3x + 8$

10. $y = 4x - 3$
$-4x + y = -3$

Linear Inequalities Study Guide

Indicate which ordered pair is a solution of the inequality or the system of inequalities. (L2)

1. $3y + 5 \leq 7x$

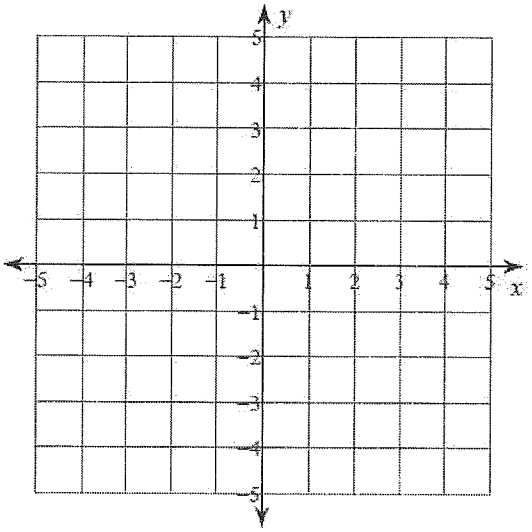
Ordered Pair	Solution	Not a Solution
(0 0)		
(2,-1)		
(-5,-3)		

2. $\begin{cases} y \geq -2x - 4 \\ y < x + 1 \end{cases}$

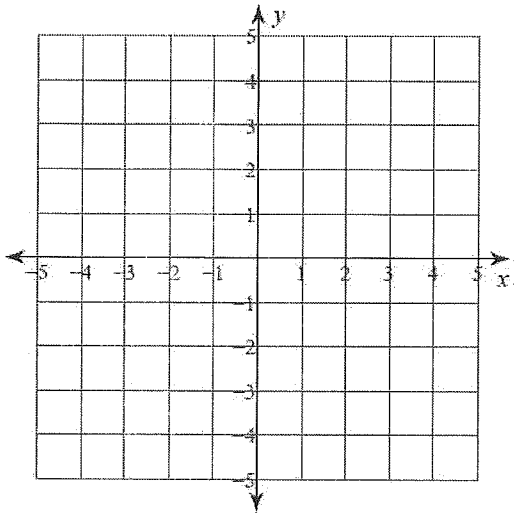
Ordered Pair	Solution	Not a Solution
(-1, 3)		

3. Graph each inequality

a. $y < -3x + 5$



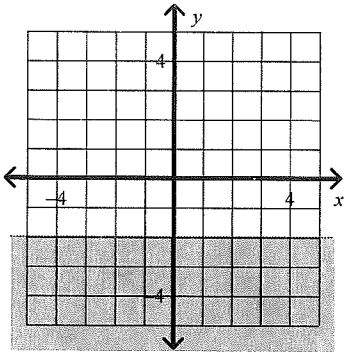
b. $-3x + 2y \geq 2$



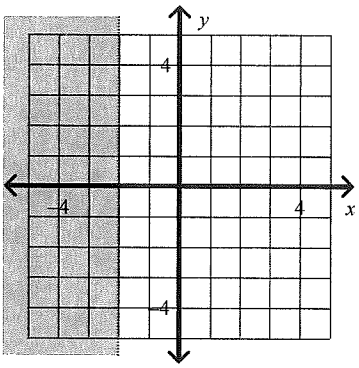
What is the graph of the inequality in the coordinate plane?

4. $y < -2$

a.



b.



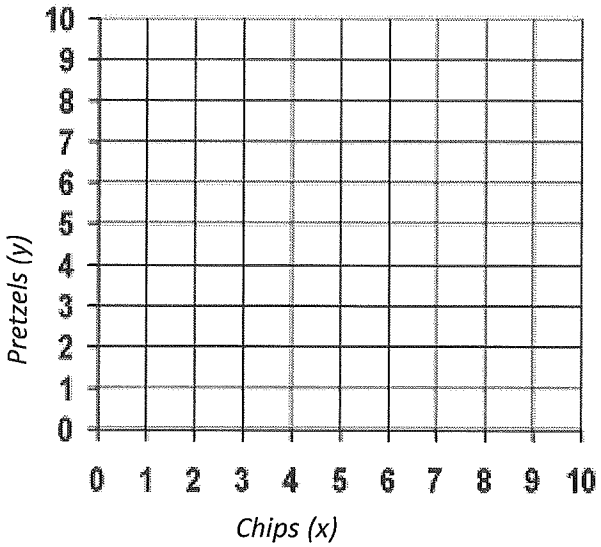
5. Clark is having a party at his house. His father has allowed him to spend <u>at most</u> $20 on snack food. He wants to buy chips that costs $4 per bag and pretzels that costs $2 per bag.

a. Write a linear inequality _____

b. Graph the Inequality (use intercepts or Slope intercept)

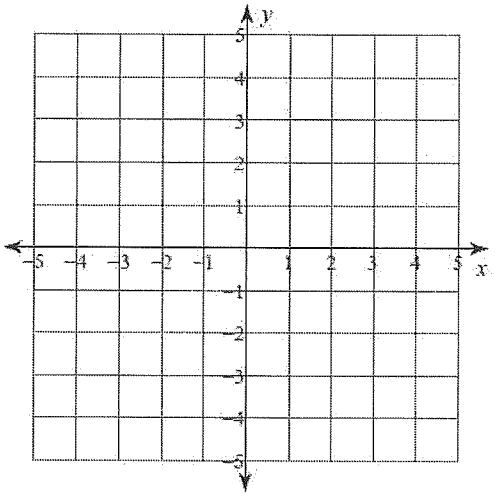
c. Give **two** combinations of the number of bags of chips and pretzels that Clark could purchase.

_____

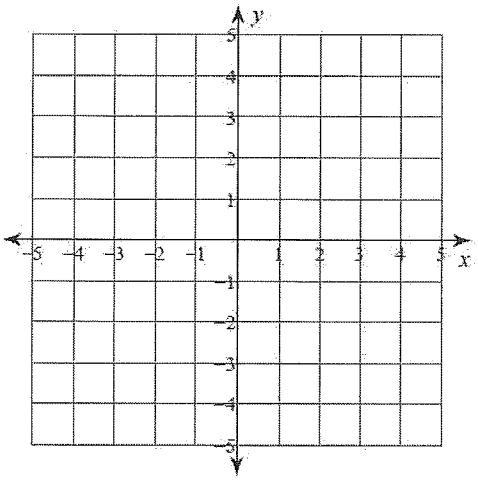


6. Graph each system of Linear Inequalities *(L3: One correct, L4:Two correct)*

a. $y < -x + 3$
$y \geq -x + 1$



Math Scholar: $y < -x$
$y > -2$
$x \leq -3$



Math Scholar: Charlene makes $10 per hour babysitting and $16 per hour gardening. She wants to make at least $80 a week but can work no more than 10 hours per week.

System: {

Give one combination of the amount of hours Charlene can work babysitting and gardening _____