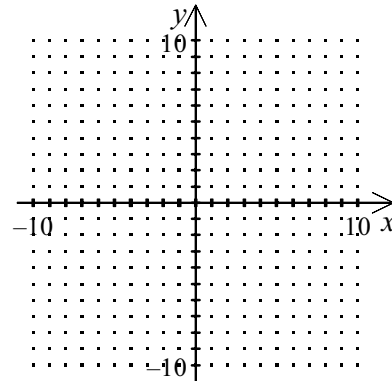

Algebra 2 - Linear Systems REVIEW

1. Find the solution to the system by graphing (label the solution).

$$y = -x + 7$$

$$y = 3x - 5$$



[1] _____

2. Is $(5, -2)$ a solution of the system?

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

$$x + 2y = 1$$

[2] _____

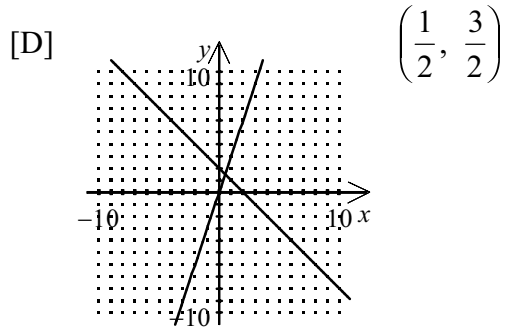
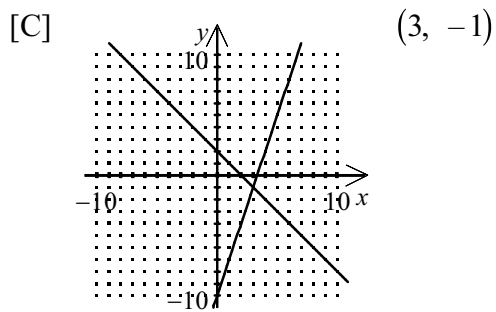
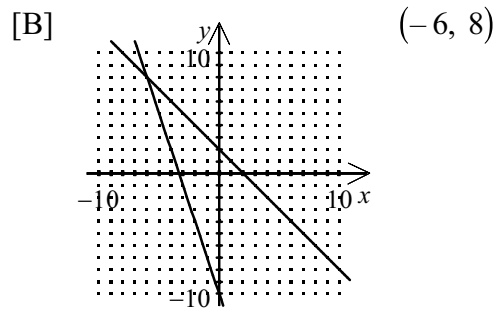
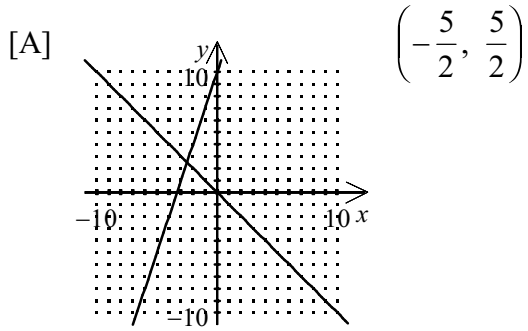
3. Tell how many solutions the linear system has: infinitely many solutions, one solution, or no solution.

$$x - 4y = 2$$

$$x + 4y = 2$$

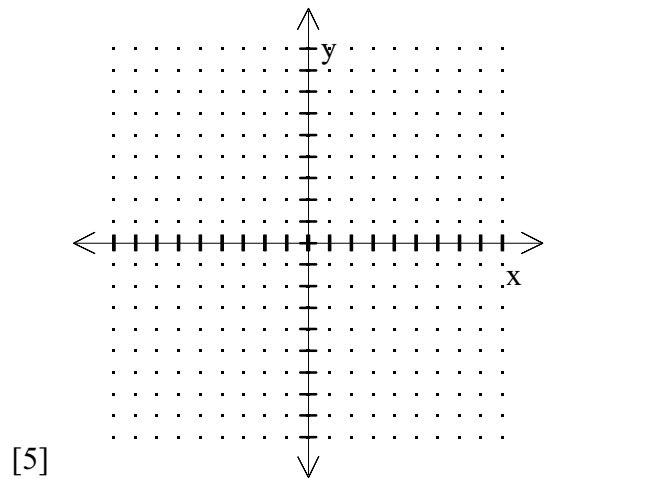
[3] _____

4. Graph the linear system and estimate the solution: $y = -x + 2$
 $y = 3x - 10$



[4] _____

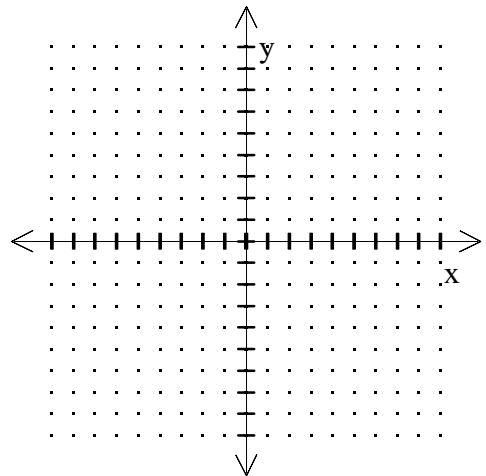
5. Graph the system of inequalities: $y \geq -2x + 4$
 $y \leq x + 3$



6. Graph the system of linear inequalities:

$$y \leq x - 6$$

$$y \leq -3x + 6$$

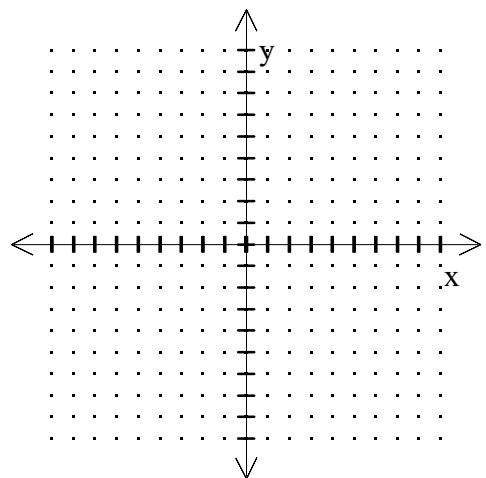


7. Graph the system of linear inequalities.

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

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

$$y \leq 4$$



8. Find the maximum and minimum values of

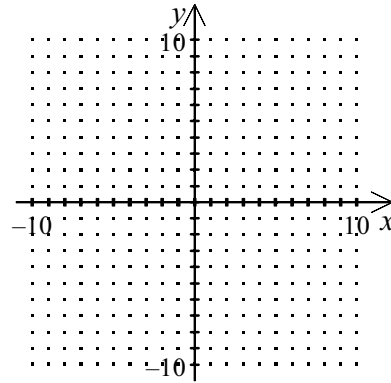
$$C = 2x + 6y$$

Subject to the following constraints.

$$y \geq -x + 1$$

$$y \geq 3x - 3$$

$$y \leq \frac{5}{3}x + 1$$



Maximum: _____
[8] Minimum: _____

9. Solve the linear system: $x - 2y = 9$

$$-3x + y = -7$$

[9] _____

10. Tickets to a local movie were sold at \$4.00 for adults and \$2.50 for students. If 59 tickets were sold for a total of \$222.50, how many student tickets were sold?

[10] _____

Solve the linear system:

11. $3x + 2y = -25$

$$-x + y = 0$$

[11] _____

12. $x + 4y = 7$

$$-3x + y = -8$$

[12] _____

Solve the linear system:

13. $4x - 2y = -6$
 $x = -2y + 6$

[13] _____

14. $2x - y = 6$
 $y = -3x + 19$

[14] _____

15. Mr. Frankel bought 5 tickets to a puppet show and spent \$26. He bought a combination of child tickets for \$2 each and adult tickets for \$10 each. Which system of equations below will determine the number of adult tickets, a , and the number of child tickets, c , he bought?

[A] $10a + 2c = 26$
 $a + c = 5$

[B] $a = c - 10$
 $10a + 2c = 26$

[C] $2a + 2c = 31$
 $a + c = 5$

[D] $a + c = 130$
 $a + c = 5$

[15] _____

Solve the system:

16. $2x - 5y + 5z = -18$
 $6x + y - z = 10$
 $5x - 2y - z = 15$

[16] _____

17. $2x + y - 3z = 10$
 $x + 3y + 4z = 9$
 $3x - 5y + z = -35$

[17] _____