

Mod 2 Review

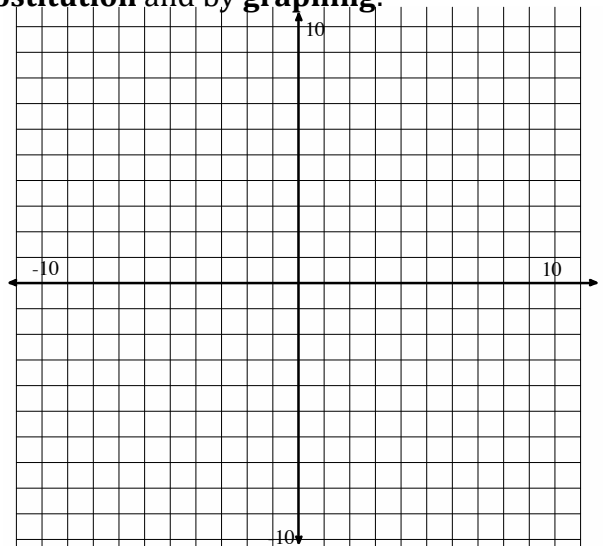
Name _____

Period _____

1. What strategies have we developed to solve systems of equations?
2. What strategies have we developed to solve systems of inequalities?
3. What does the solution set to a system of an equations look like?
4. What does the solution set to a system of inequalities look like?
5. How many solutions are there to a system of equations? Give a graphical example of each possibility.
6. How many solutions are there to a system of inequalities? Give a graphical example.
7. Solve the following system of equations using **substitution** and by **graphing**:

$$\begin{cases} x + y = 16 \\ x - y = 9 \end{cases}$$

Show work for substitution below:

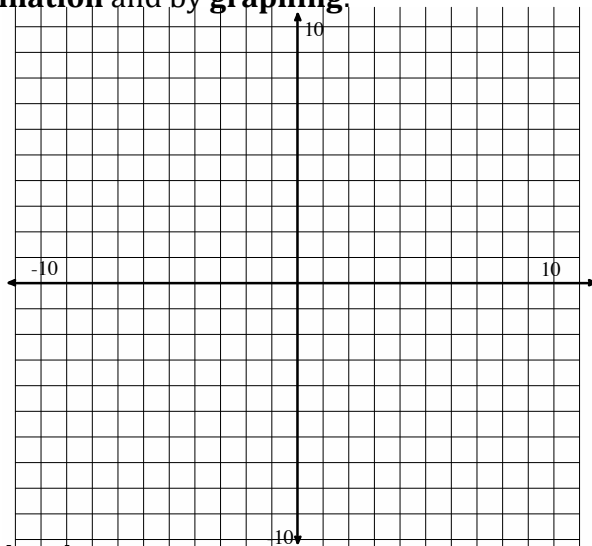


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8. Solve the following system of equations using **elimination** and by **graphing**:

$$\begin{cases} 3x + 5y = 7 \\ 2x - 3y = 11 \end{cases}$$

Show work for elimination below

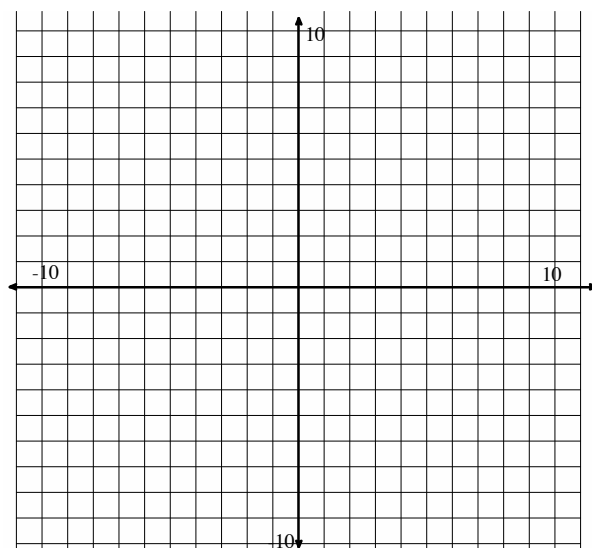


9. Solve the following system of equations **using elimination**:

$$\begin{cases} 2x + 6y = 18 \\ 3x + 2y = 13 \end{cases}$$

10. Solve the following system of inequalities:

$$\begin{cases} y < 3x - 1 \\ y \geq -2x + 4 \end{cases}$$



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Solve each of the systems of equations below using an appropriate method. Use **elimination on one of the two systems**, whichever one the matrix row reduction method fits with best.

11.
$$\begin{cases} y = -x + 2 \\ y = 3x - 6 \end{cases}$$

12.
$$\begin{cases} 3x + 2y = -4 \\ 2x - 2y = -6 \end{cases}$$

Solve the following systems of inequalities.

13.
$$\begin{cases} y \leq \frac{3}{4}x - 5 \\ y > -2x + 1 \end{cases}$$

14.
$$\begin{cases} 4x + 3y \leq 24 \\ 6x + 9y \leq 18 \end{cases}$$

Circle the points that are solutions to the system of inequalities.

15.
$$\begin{cases} x + y > 4 \\ 2x + 3y \leq 12 \end{cases}$$

- a. (0,4)
- b. (4,1)
- c. (2,1)

16.
$$\begin{cases} y \leq \frac{1}{2}x - 3 \\ y \leq 4x - 3 \end{cases}$$

- a. (-2,2)
- b. (2,1)
- c. (3,-1)

Circle the points that are solutions to the system of equations.

17.
$$\begin{cases} y = \frac{1}{2}x - 3 \\ y = 4x - 3 \end{cases}$$

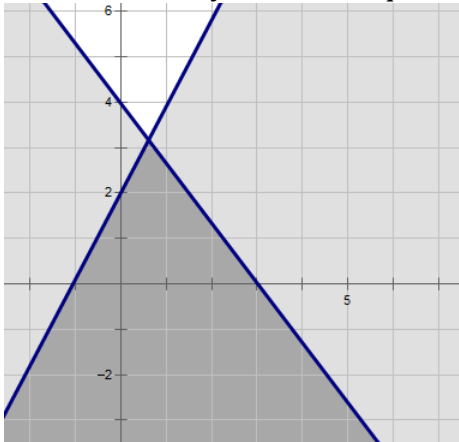
- a. (0,3)
- b. (1,1)
- c. (10,2)

18.
$$\begin{cases} y = 3x + 7 \\ y = -3x - 5 \end{cases}$$

- a. (0,0)
- b. (-2,1)
- c. (-1, 4)

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19. Write the system of inequalities that matches the following graph



20. When graphing an inequality what does a dotted line mean?

Solve the following systems of equations by **using a method other than graphing**. Use whatever method is most efficient for the given system.

Write your answer as a coordinate point.

$$21. \begin{cases} x = y - 1 \\ -3x + 2y = -1 \end{cases}$$

$$22. \begin{cases} -7x - 2y = -13 \\ x - 2y = 11 \end{cases}$$