

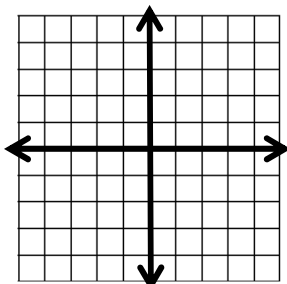
4F System & Inequalities MORE Practice

SHOW YOUR WORK FOR FULL CREDIT. NO WORK IN PEN.

Name: _____ Per: _____

Given the equations, **graph** to estimate the solution sets and then **solve algebraically**. **Explain** your reasoning.

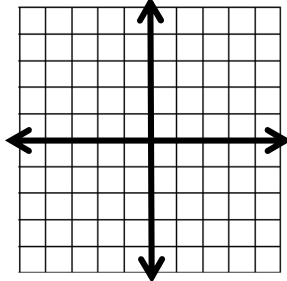
1.
$$\begin{cases} -2y = -2x - 4 \\ 5x = y + 4 \end{cases}$$



What method did you choose: _____

Why?

2.
$$\begin{cases} 6y = -2x + 9 \\ 3y = -2x + 6 \end{cases}$$



What method did you choose: _____

Why?

Solve the following systems of equations by ANY METHOD. **CHECK** your answers or **No Credit!**

3.
$$\begin{cases} y + 1 = 2x \\ 3y - 6x = 3 \end{cases}$$

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

5.
$$\begin{cases} -3x - 4y = 2 \\ 3x + 3y = -3 \end{cases}$$

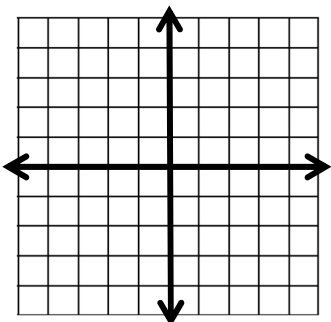
Solution: _____
Check: _____

Solution: _____
Check: _____

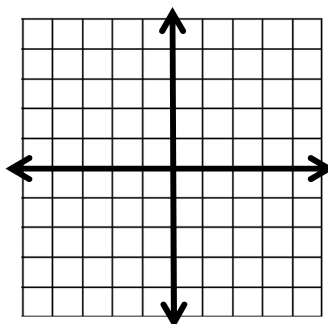
Solution: _____
Check: _____

Solve the following systems of inequalities by graphing. **Circle the solution.**

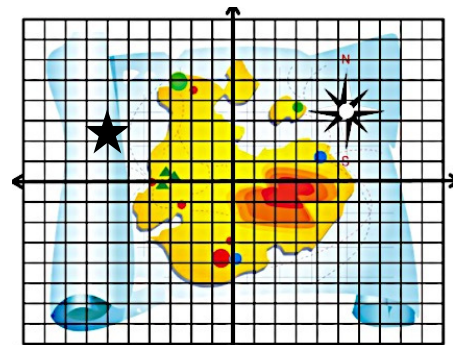
6.
$$\begin{cases} y < -x \\ y \geq \frac{1}{2}x + 3 \end{cases}$$



7.
$$\begin{cases} y \leq -1 \\ x + 2y \geq -5 \end{cases}$$



8.
$$\begin{cases} x + 2y > -5 \\ y \leq x + 3 \end{cases}$$



a. Is the ★ part of the solution set?

State **how many** solutions the following set of equations will have and **how you know**.

$$9. \begin{cases} y - 2(2x - 1) = 9 \\ y = 4x + 7 \end{cases}$$

$$10. \begin{cases} y + 1 = -\frac{1}{3}x \\ 3y = -x + 1 \end{cases}$$

$$11. \begin{cases} y + 1 = -\frac{1}{3}x \\ 3y = -x + 1 \end{cases}$$

12. Tara and Brooklyn each improved their yards by planting flowers and shrubs. They bought their supplies from the same store. Tara spend \$39 on 6 flats of flowers and 5 shrubs. Brooklyn spent \$66 on 9 flats of flowers and 10 shrubs. What is the cost of one flat of flowers and one shrub?

- a. Define your variables.
- b. Write TWO equations
- c. Solve the system of equations

d. What's the cost of one flat of flowers? _____ e. What is the cost of one shrub? _____

13. At Maverick Boden and Cameron are getting snacks. Boden buys 3 soft drinks and 2 hot dogs at a cost of \$7.70, while Cameron buys 2 soft drinks and 1 hot dog at the cost of \$ 4.55.

- a. Define your variables.
- b. Write TWO equations
- c. Solve the system of equations

d. How much does one hot dog cost? _____ e. What is the cost of one soft drink? _____

14. Cody and Abby are selling pies for a band fundraiser. Customers can buy blueberry pies and apple pies. Cody sold 10 blueberry pies and 2 apple pies for **at least** than \$80. Abby sold 4 blueberry pies and 3 apple pies for **no more than** \$72.

- a. Define your variables:
- b. Write two inequalities
- c. Find the intercepts to each inequality.
- d. Using the intercepts, graph the system showing the possible solutions.
- e. Could the Apple pies have cost \$5 and the Blueberry have cost \$15?

