

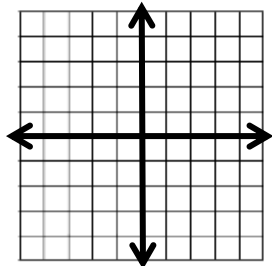
# 5F System & Inequalities MORE Practice

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.

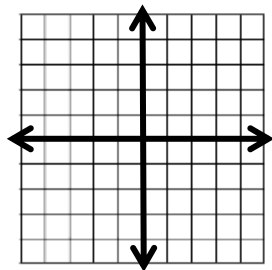
1. 
$$\begin{cases} -2y = -2x - 4 \\ 5x = y + 4 \end{cases}$$



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: \_\_\_\_\_

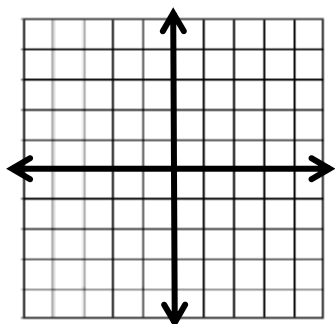
Check:

Solution: \_\_\_\_\_

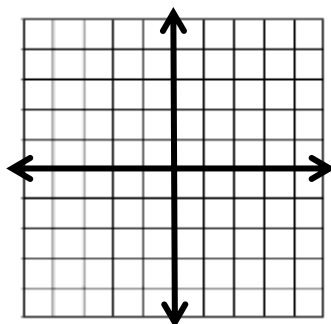
Check:

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

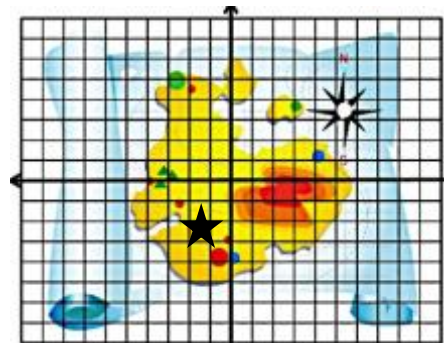
6. 
$$\begin{cases} y < -x \\ y \geq \frac{1}{2}x + 3 \end{cases}$$



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



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



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

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

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

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

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12. Julie and Ashley each improved their yards by planting flowers and shrubs. They bought from supplies from the same store. Julie spend \$39 on 6 flats of flowers and 5 shrubs. Ashley 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 Smith's Kaden and Lucy are getting snacks. Kaden buys 3 soft drinks and 2 hot dogs at a cost of \$7.70, while Lucy buys 2 soft drinks and 1 hot dog at 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 school 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?

