

READY, SET, GO!

Name

Period

Date

**READY**

Topic: System of inequalities

**For each of the systems of inequalities, determine if the given coordinates are solutions to the system. (Show your work.)**

1. $\begin{cases} y \leq 3x - 5 \\ y \geq x + 2 \end{cases}$	2. $\begin{cases} y > -2x + 9 \\ y \geq 5x - 6 \end{cases}$	3. $\begin{cases} y < -\frac{1}{2}x + 9 \\ y > 6x - 10 \end{cases}$
a. (6, 10)	a. (-2, -5)	a. (-2, -5)
b. (1, 4)	b. (-1, 12)	b. (7, 3)
c. (8, 15)	c. (5, 0)	c. (-8, 10)

**SET**

Topic: Determining the number of solutions in a system of equations

**Write each equation in slope-intercept form. Based on slope-intercept form of the equations determine whether the system of equations has zero, one, or infinitely many solutions. How do you know?**

4. $3x - 4y = 13$  $y = -3x - 7$	5. $3x - 3y = 3$  $x - y = 1$	6. $0.5x - y = 30$  $0.5x - y = -30$	7. $4x - 2y = -2$  $3x + 2y = -12$
How many solutions?	How many solutions?	How many solutions?	How many solutions?
How do you know?	How do you know?	How do you know?	How do you know?

**Solve each system. Write your solution as an ordered pair or indicate if it has no solutions or infinitely many solutions.**

8.  $\begin{cases} x + 4y = 6 \\ x + y = 3 \end{cases}$

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

10.  $\begin{cases} y = 2x + 1 \\ 2x - y + 1 = 0 \end{cases}$

$$11. \begin{cases} 4y - 5x = 9 \\ x - 4y = 11 \end{cases}$$

$$12. \begin{cases} y = x - 1 \\ -x + y = 4 \end{cases}$$

$$13. \begin{cases} -2x + 5y = -1 \\ 3x + 2y = 11 \end{cases}$$

$$14. \begin{cases} -3x + 4y = 12 \\ 2x + y = -8 \end{cases}$$

$$15. \begin{cases} 9x - 3y = 3 \\ 3x + 8y = -17 \end{cases}$$

$$16. \begin{cases} -7x + y = -2 \\ 7x - y - 2 = 0 \end{cases}$$

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

$$18. \begin{cases} 2y = 2x - 2 \\ -\frac{1}{2}x + \frac{1}{2}y = 1 \end{cases}$$

$$19. \begin{cases} -2y = 4x + 2 \\ 8x - 4y = -4 \end{cases}$$

$$20. \begin{cases} x + y = 2x + 5 \\ x + y = 6y - 9 \end{cases}$$

$$21. \begin{cases} 5x = -y \\ 5x + 2y = 30 \end{cases}$$

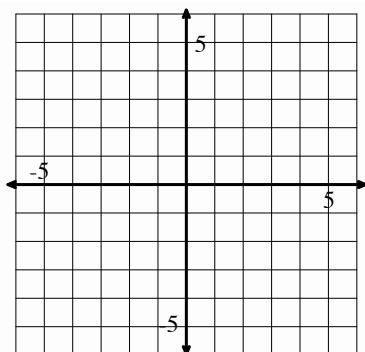
$$22. \begin{cases} 3x + 8y = 9y - 6 \\ 9x - 3y = 3 \end{cases}$$

**GO**

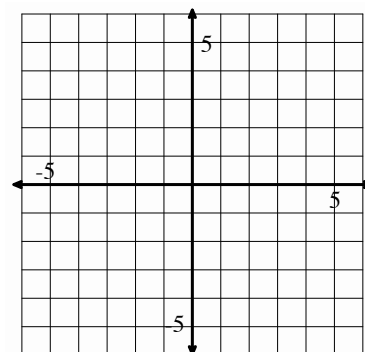
Topic: graphing two variable inequalities

**Graph the following inequalities. Justify the region you shade by showing at least one point in the region as being a solution to each inequality.**

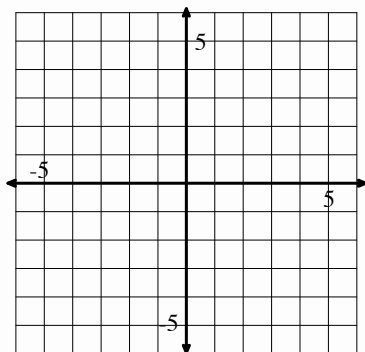
23.  $3x - 4y \geq 12$



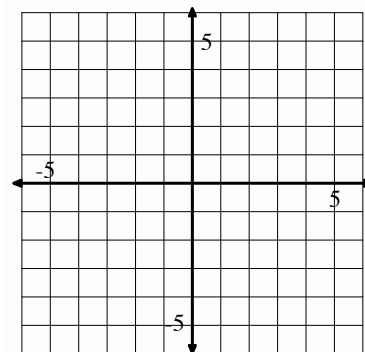
24.  $x + 6y < 6$



25.  $6x + 5y > 1$

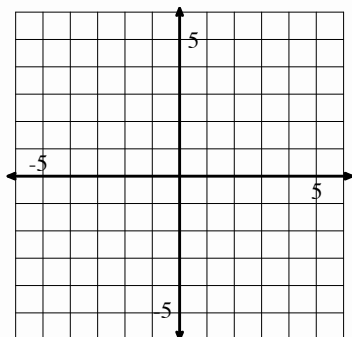


26.  $x - \frac{1}{2}y \geq 3$



27. On the same set of axes graph  
 $y < x + 2$  and  $y > x + 5$ .

Do the solution sets of these two inequalities share any points?  
Explain.



28. On the same set of axes graph  
 $y < x + 2$  and  $y < x + 5$ .

Do the solution sets of these two inequalities share any points?  
Explain.

