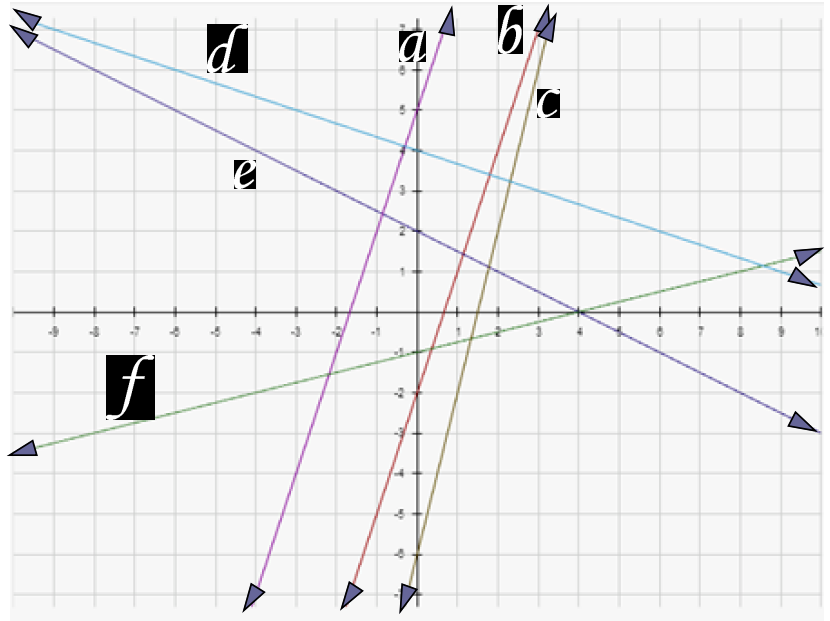


Unit Review: Systems of Equations & Inequalities

1. Which two lines have no common solution?
2. Which two lines have the point (4,0) as the common solution?
3. Which line matches the equation $y = 4x - 6$?
4. True or False?
Lines d and e have no solution.



For # 5-7, tell which method, graphing, substitution, or elimination/combination you would use to solve each system. **Explain why, but do not actually solve the system.**

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

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

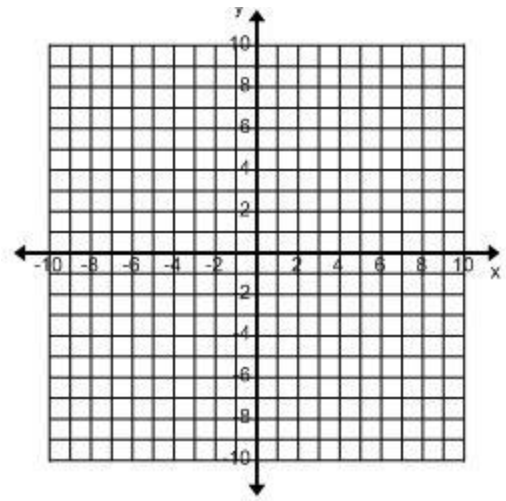
7. $\begin{cases} y = 3x + 2 \\ y = -2x - 3 \end{cases}$

Solve the following systems using any method desired.

8. $\begin{cases} x + y = 7 \\ 6x + y = 2 \end{cases}$

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

10. Draw a system of equations with solution $(-2, 5)$.



Solve the following systems:

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

12.
$$\begin{cases} y = 3x - 1 \\ y = 3x + 5 \end{cases}$$

13.
$$\begin{cases} 3x - y = 4 \\ 2x + 2y = 24 \end{cases}$$

14.
$$\begin{cases} x = 2y - 5 \\ 3x + 2y = 1 \end{cases}$$

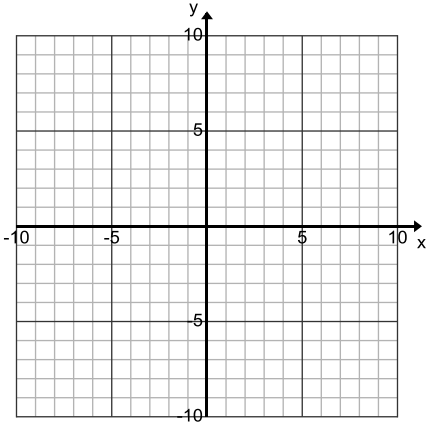
15. Joe buys 5 notebooks and 3 pens for \$10.80. Julia buys 8 notebooks and 3 pens for \$15.30. How much is a notebook? How much is a pen?

Define your variables.

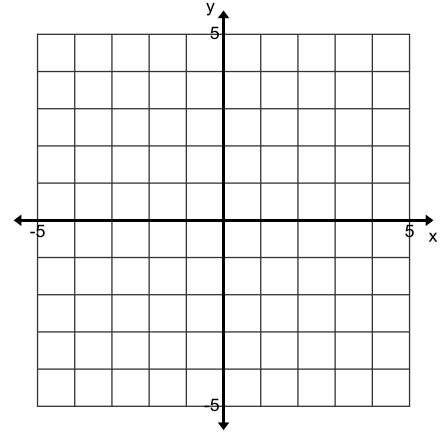
Write a system.

Solve the system:

16. Graph $y > 2x - 7$. Give 2 solutions.

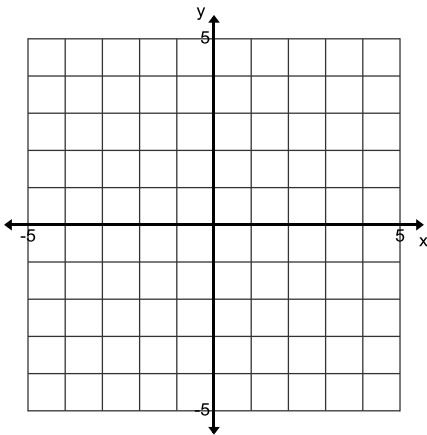


17. Graph $x - 3y > 6$. Give 2 solutions.

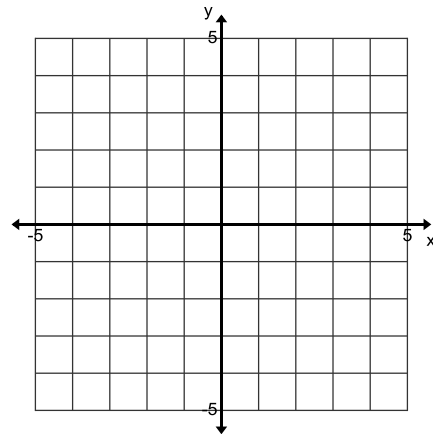


18. Graph $\begin{cases} y \leq 3x - 1 \\ y > -2x + 4 \end{cases}$

Give 2 solutions.



19. Graph $\begin{cases} y \leq 3 \\ y > -x + 3 \end{cases}$



Can $(-2, 2)$ be a solution to the system that you graphed? Explain why or why not.

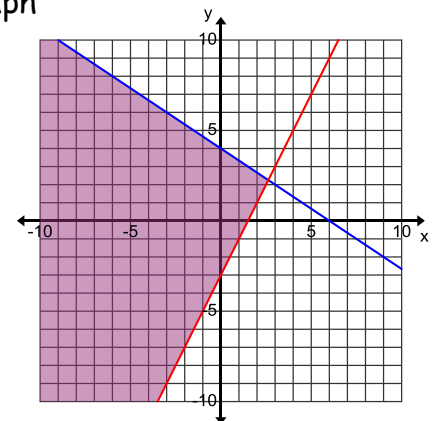
20. Multiple Choice: Which set of equations is graphed on the graph at the right?

a. $\begin{cases} -2x - 3y \leq -12 \\ 2x - y \geq 3 \end{cases}$

b. $\begin{cases} -2x - 3y \geq -12 \\ 2x - y \geq 3 \end{cases}$

c. $\begin{cases} -2x - 3y \leq -12 \\ 2x - y \leq 3 \end{cases}$

d. $\begin{cases} -2x - 3y \geq -12 \\ 2x - y \leq 3 \end{cases}$



Write a system of equations for each problem. Then solve the system.

21. Two numbers have a sum of 15. One number is 3 less than the other number. What is each number?

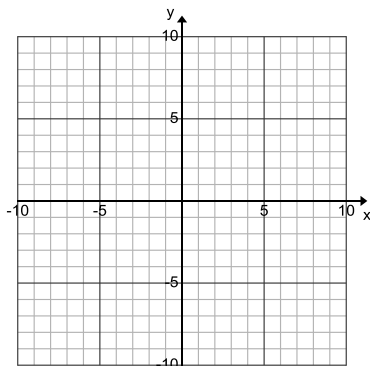
22. You spend \$13 to rent 5 movies for the weekend. New releases rent for \$3 and regular movies rent for \$2. How many regular movies and how many new releases did you rent?

23. Write a system of equations with one solution.

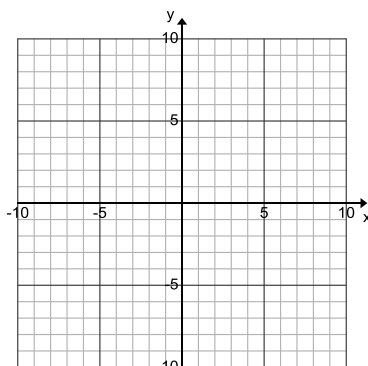
24. Write a system of equations with no solution.

25. Write a system of equations with infinitely many solutions.

26. Graph $y = -x$



27. Graph $x = 4$



28. Graph $y = -6$

