

Name _____

CHAPTER 4 TEST FORM A

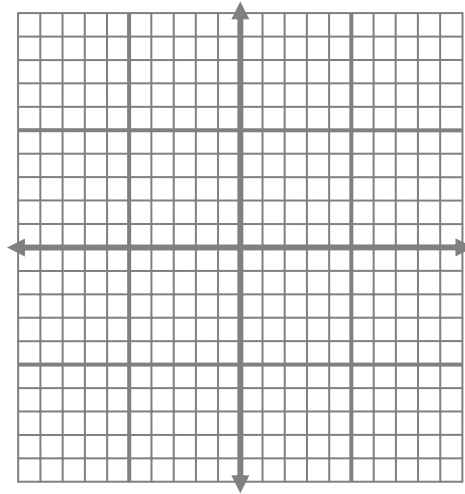
1. A system of equations that has no solution is called a(n) _____ system.

2. A system of _____ equations has infinitely many solutions.

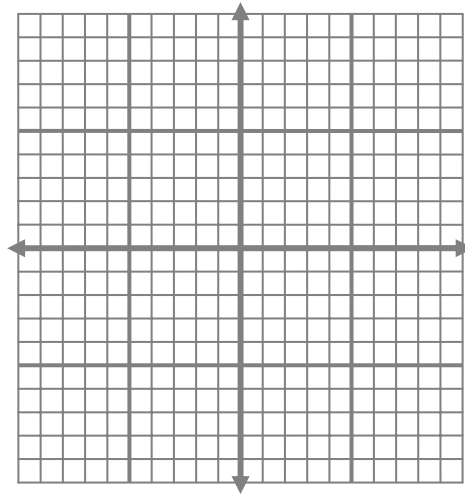
3. Determine if $(1, -3)$ is a solution of $\begin{cases} x + 2y = -5 \\ 2x - 3y = 11 \end{cases}$

4. Determine if $(-2, 3)$ is a solution of $\begin{cases} 4x - y = -11 \\ x - y = 5 \end{cases}$

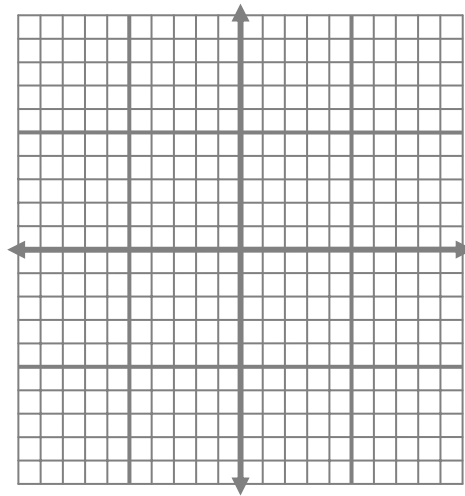
5. Solve by graphing $\begin{cases} x + y = 4 \\ x - y = 6 \end{cases}$



6. Solve by graphing $\begin{cases} 2x + 3y = 6 \\ y = 4 \end{cases}$



7. Solve by graphing $\begin{cases} y = \frac{1}{2}x - 1 \\ x - 2y = 2 \end{cases}$



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

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

10. Solve by substitution $\begin{cases} 6 - y = 4x \\ 2y = -8x - 20 \end{cases}$

11. Solve by elimination (addition) $\begin{cases} x - 2y = 1 \\ 3x + 2y = 7 \end{cases}$

12. Solve by elimination (addition) $\begin{cases} 2x - y = 6 \\ 4x + 3y = 2 \end{cases}$

13. Solve by elimination (addition) $\begin{cases} 3x - 4y = -9 \\ 2x + 5y = 17 \end{cases}$

14. Solve by elimination (addition) $\begin{cases} -\frac{x}{2} + \frac{y}{3} = 2 \\ \frac{x}{3} + \frac{2y}{3} = \frac{4}{3} \end{cases}$

15. Solve by elimination (addition) $\begin{cases} 6x - 8y = 12 \\ 3x - 4y = 3 \end{cases}$

In Problems 16 – 20, solve by writing a system of two equations in two variables.

16. Two angles are complementary. The measure of one angle is 15° more than twice the measure of the other angle. Find the measure of each angle.

17. A movie theatre charges \$4.50 for a children's ticket and \$8.00 for an adult ticket. The theatre had \$1090 in receipts for 180 people for one night. How many children's tickets and how many adult tickets were sold?

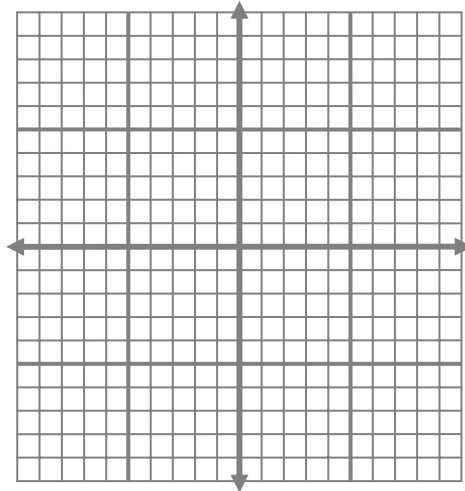
18. A merchant wants to mix peanuts that sell for \$3 a pound and cashews that sell for \$6 a pound to get 48 pounds of mixed nuts that will sell for \$4 a pound. How many pounds of each should the merchant use?

19. Allison invested part of \$5000 in an account that paid 4% and the rest in an account that paid 3%. The total annual interest from both accounts is \$180. How much did she invest at each rate?

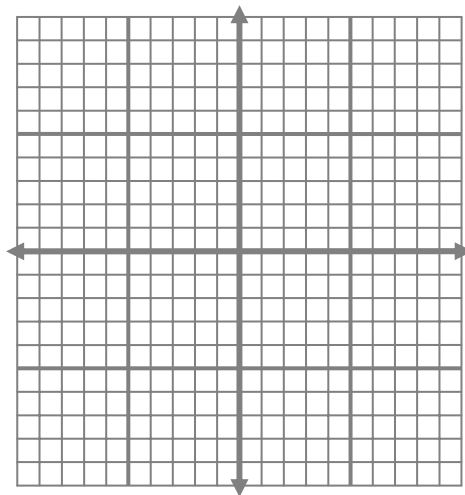
20. How many milliliters of a 6% acid solution and a 12% acid solution should be used to make 250 milliliters of an 8% acid solution?

In Problems 21 and 22, graph the solution of the system of inequalities.

21.
$$\begin{cases} 2x - 3y \leq 6 \\ x + y \geq 2 \end{cases}$$



22.
$$\begin{cases} x > 3 \\ y < -2 \end{cases}$$



23. Would the elimination method or substitution method be easier to use to solve the following system?

$$\begin{cases} y = 3x - 2 \\ 2x + 3y = 8 \end{cases}$$

24. If line 1 has slope 3 and y-intercept 2 and line 2 has slope 3 and y-intercept 4, how many solutions does the system have?
25. A mother wants to spend at least \$75 but no more than \$120 on school clothes for her son. If t-shirts cost \$15 and pants sell for \$25, write a system of inequalities that describes the possible numbers of t-shirts (x) and pants (y) she can buy.