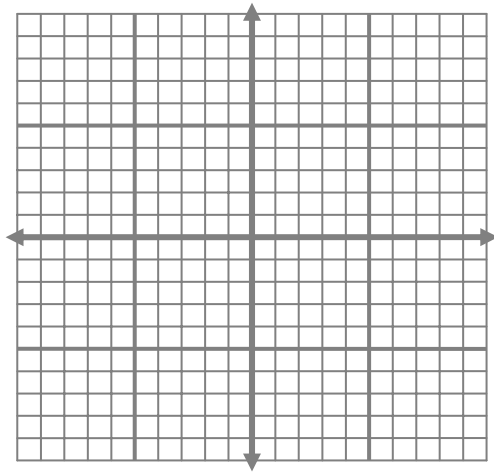


Name _____

CHAPTER 4 TEST FORM B

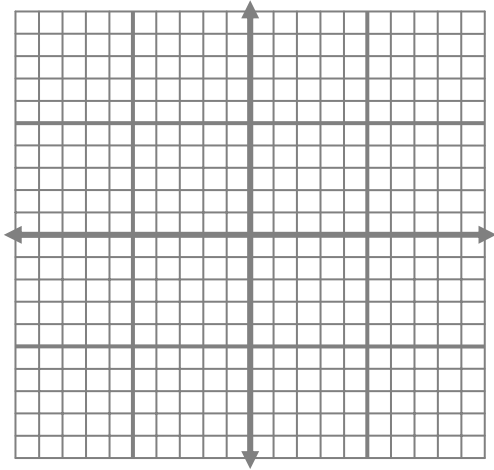
1. A system of equations that has at least one solution is called a(n) _____ system.
2. Two lines in the same plane that do not intersect are called _____ lines.
3. Determine if $(3, -2)$ is a solution of the system $\begin{cases} 2x + y = 4 \\ y = 1 - x \end{cases}$.
4. Determine if $\left(-\frac{1}{2}, 4\right)$ is a solution of the system $\begin{cases} 2x + 3y = 11 \\ 4x + 2y = -6 \end{cases}$.
5. Solve the following system by graphing. Write the solution as an ordered pair.

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



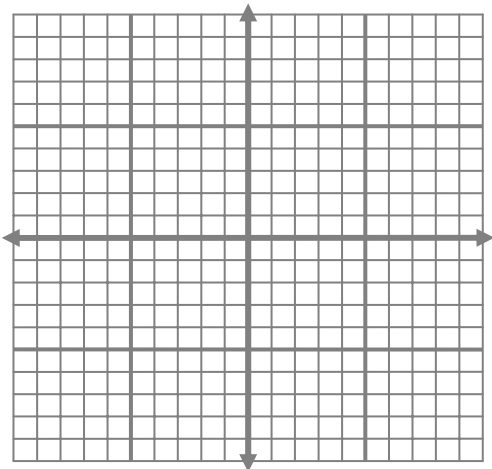
6. Solve the following system by graphing. Write the solution as an ordered pair.

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



7. Solve the following system by graphing. Write the solution as an ordered pair.

$$\begin{cases} x - 2y = 4 \\ y = \frac{1}{2}x - 2 \end{cases}$$



8. If line 1 has slope 4 and y-intercept 3 and line 2 has slope -4 and y-intercept 3, how many solutions does the system have?

Use the substitution method to solve the systems of equations in problems 9, 10, 11, and 12.

9.
$$\begin{cases} y = 6x \\ 2x + y = 4 \end{cases}$$

10.
$$\begin{cases} x - 2y = 5 \\ 3x + 4y = -5 \end{cases}$$

11.
$$\begin{cases} 2 - y = 3x \\ 6x + 2y = 4 \end{cases}$$

12.
$$\begin{cases} y = \frac{1}{2}x + 2 \\ x - 2y = 6 \end{cases}$$

Use the elimination method to solve the systems of equations in problems 13, 14, 15, 16, and 17.

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

$$14. \quad \begin{cases} 2x - 3y = 11 \\ 5x + 6y = 14 \end{cases}$$

$$15. \quad \begin{cases} 3x + 4y = -6 \\ 5x - 3y = 19 \end{cases}$$

$$16. \quad \begin{cases} 4x - 2y = 6 \\ x - \frac{1}{2}y = \frac{3}{2} \end{cases}$$

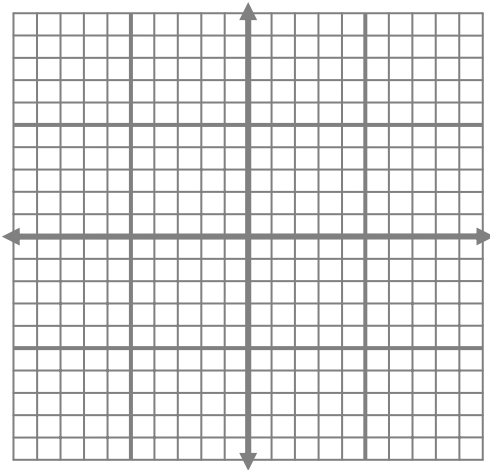
$$17. \quad \begin{cases} 5x + 3y - 1 = 0 \\ 9y = 7 - 15x \end{cases}$$

Solve the applications in problems 18–21 by writing a system of two equations in two variables.

18. The difference of the measures of two supplementary angles is 140° . Find the measure of each angle.
19. At the hospital, a cup of ice cream sold for \$1.75 and a double scoop ice cream cone sold for \$2.30. One day the receipts for a total of 110 cups and cones of ice cream were \$209. How many cups of ice cream were sold?
20. David invested some money at 5% and some at 7%. The interest for 1 year on the combined investment of \$10,000 was \$640. How much was invested at 5%?
21. A merchant wishes to mix peanuts that sell for \$4 a pound and cashews that sell for \$7 a pound to get 52 pounds of mixed nuts that sell for \$5 a pound. How many pounds of peanuts should the merchant use?
22. Suppose that the number c of cookies that a bakery will supply a day is given by $c = 1000p - 300$, and the number c of cookies that are purchased a day is given by $c = -30p + 215$, where p is the price (in dollars) of a cookie. For what price will supply equal the demand?

23. When graphing the linear inequality $2x - 3y < 6$, is the boundary a solid or dotted line?

24. Graph the solution of the system of inequalities $\begin{cases} x - y \leq 2 \\ x + y > 4 \end{cases}$.



25. Graph the solution of the system of inequalities $\begin{cases} x > 3 \\ y < -2 \end{cases}$.

