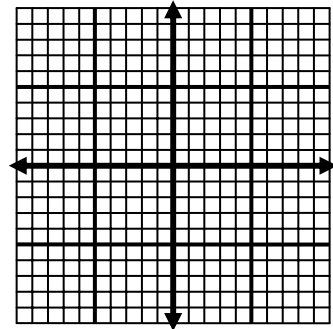


Name _____

CHAPTER 4 TEST FORM J

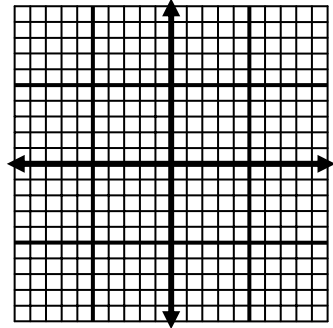
1. Equations with different graphs are called _____ equations.
- dependent
 - independent
 - consistent
 - inconsistent
2. A system of equations that has at least one solution is called a(n) _____ system.
- dependent
 - independent
 - consistent
 - inconsistent
3. Determine if $\left(-\frac{1}{3}, \frac{1}{2}\right)$ is a solution of $\begin{cases} 3x + 4y = 1 \\ 6x - 8y = 6 \end{cases}$.
4. Determine if $(1, -2)$ is a solution of $\begin{cases} 5x - 6y = 17 \\ -x - 4y = 7 \end{cases}$.
5. Solve the following system by graphing. Write the solution as an ordered pair.

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



6. Solve the following system by graphing and then give the x -coordinate of the ordered pair of the solution.

$$\begin{cases} y = -\frac{1}{2}x - 3 \\ y = -2 \end{cases}$$



- a. $x = 2$
 b. $x = -2$
 c. $x = 7$
 d. $x = 0$
7. Suppose that the equation $1 = 5$ is obtained when a system is solved by the substitution method. Draw a possible graph of the solution.
8. If line 1 has slope 5 and y -intercept 3 and line 2 has slope -5 and y -intercept 4, how many solutions does the system have?
- a. one solution
 b. no solution
 c. infinitely many solutions
 d. cannot determine from the information given

9. Without graphing, determine the number of solutions for the system $\begin{cases} 2x - 3y = 6 \\ y = \frac{2}{3}x + 2 \end{cases}$.

- a. one solution
 b. no solution
 c. infinitely many solutions
 d. none of these

10. What must a and b equal so that the following system has infinitely many solutions

$$\begin{cases} 2x - 5y = 10 \\ y = ax + b \end{cases} ?$$

- a. $a = -2, b = 10$
- b. $a = -\frac{2}{5}, b = -2$
- c. $a = \frac{2}{5}, b = 2$
- d. $a = \frac{2}{5}, b = -2$
11. The substitution method will be used to solve the system $\begin{cases} 2x - y = 6 \\ 3x + 4y = -13 \end{cases}$. Solve the first equation for y .
- a. $y = -2x + 6$
- b. $y = -2x - 6$
- c. $y = 2x - 6$
- d. $y = 2x + 6$
12. Solve the system $\begin{cases} 2x - y = 6 \\ 3x + 4y = -13 \end{cases}$ by the substitution method.
13. Elimination (addition) will be used to solve the system $\begin{cases} 5x - 2y = 6 \\ 7x - 6y = -3 \end{cases}$. Which of the following equations is equivalent to the first equation and can be used with the second equation to eliminate y by addition?
- a. $-15x + 6y = 6$
- b. $-15x + 6y = -18$
- c. $-15x + 6y = 18$
- d. $15x - 6y = 9$

14. Find the y-coordinate of the ordered pair of the solution of the system $\begin{cases} 7x - 3y = 23 \\ 4x + 3y = -1 \end{cases}$.

- a. $y = 2$
- b. $y = -2$
- c. $y = 3$
- d. $y = -3$

15. Solve the following system by the elimination (addition) method.

$$\begin{cases} 5x + 4y = 2 \\ 11x - 3y = -31 \end{cases}$$

16. Solve the following system by the elimination (addition) method.

$$\begin{cases} 2x + 3y = 10 \\ 3y = 14 - x \end{cases}$$

17. Find the y-coordinate of the ordered pair of the solution of the system $\begin{cases} \frac{x}{2} - \frac{y}{3} = -2 \\ \frac{x}{3} + \frac{2y}{3} = \frac{4}{3} \end{cases}$.

- a. $y = 3$
- b. $y = -3$
- c. $y = 2$
- d. $y = -2$

18. Two angles are supplementary. The measure of the larger angle is 30° less than six times the smaller angle. Find the measure of the larger angle.

19. There are a total of 336 calories in three ounces of barbeque and eight ounces of soda. There are a total of 520 calories in five ounces of barbeque and ten ounces of soda. How many calories are there in one ounce of soda?
20. A long distance provider offers two plans. Plan 1 has a monthly fee of \$20 plus \$0.10 per minute. Plan 2 has a monthly fee of \$25 plus \$0.08 per minute. For what number of minutes will the costs of the plans be the same?
21. A merchant wishes to mix peanuts that sell for \$3.50 per pound and cashews that sell for \$6 per pound to get 100 pounds of mixed nuts that sell for \$4.50 per pound. Let x equal the number of pounds of peanuts and y equal the number of pounds of cashews. If solving this by writing two equations in two variables, which of the following could be one of the equations?
- a. $3.50x + 6y = 100$
 - b. $3.50x + 6y = 4.50$
 - c. $3.50x + 6y = 450$
 - d. $x + y = 4.50$
22. The solutions for the system $\begin{cases} x < 0 \\ y < 0 \end{cases}$ are in
- a. Quadrant I
 - b. Quadrant II
 - c. Quadrant III
 - d. Quadrant IV

23. When graphing $4x - 5y \leq 7$, is the boundary a solid or dotted line?
24. Which of the following cannot be used as a test point to determine which region to shade for $4x - 3y > -6$?
- a. $(3, 2)$
 - b. $(3, -2)$
 - c. $(-3, -2)$
 - d. $(-3, 2)$
25. Graph the solution of the system of inequalities $\begin{cases} x + y \geq -3 \\ x - y < 2 \end{cases}$.

