

Name _____

CHAPTER 4 TEST FORM H

1. With the elimination method, the basic objective is to obtain two equations whose sum will be one equation in _____ variable(s).
 - a. zero
 - b. one
 - c. two
 - d. three

2. A system with at least one solution is called
 - a. an independent system
 - b. a dependent system
 - c. a consistent system
 - d. an inconsistent system

3. Determine if $\left(\frac{4}{5}, -\frac{1}{2}\right)$ is a solution of the system $\begin{cases} 5x - 2y = 5 \\ 10x - 6y = 5 \end{cases}$.

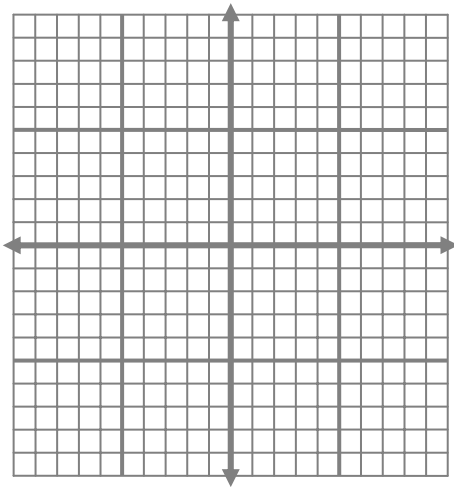
4. Determine if $(-4, 5)$ is a solution of the system $\begin{cases} -2x + 3y = 7 \\ 3x + 2y = -2 \end{cases}$.
 - a. $(-4, 5)$ is only a solution of the first equation
 - b. $(-4, 5)$ is only a solution of the second equation
 - c. $(-4, 5)$ is a solution of both equations
 - d. $(-4, 5)$ is not a solution of either equation

5. Determine the number of solutions for the system $\begin{cases} 4x - 5y = 6 \\ \frac{x}{5} - \frac{y}{4} = \frac{3}{10} \end{cases}$.
 - a. one solution
 - b. no solution
 - c. infinite number of solutions
 - d. none of these

6. If line 1 has slope 2 and y-intercept 4 and line 2 has slope 2 and y-intercept -3 , how many solutions does the system have?
- no solution
 - infinitely many solutions
 - one solution
 - cannot determine from the information given

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

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



8. The equation $2 = 3$ was obtained when solving a system by substitution. Draw a possible graph of the system.
9. The substitution method will be used to solve the system $\begin{cases} 4x + 3y = 2 \\ 2x - y = -3 \end{cases}$. Solve the second equation for y .
- $y = -2x - 3$
 - $y = 2x - 3$
 - $y = -2x + 3$

- d. $y = 2x + 3$
10. The system of equations $\begin{cases} y = -2x + 5 \\ 4x - 3y = 7 \end{cases}$ will be solved by the substitution method. If you substitute the first equation into the second equation, the new equation is
- a. $10x - 15 = 7$
b. $4x - 9 = 7$
c. $-2x - 15 = 7$
d. $10x + 15 = 7$
11. Solve the following system by the substitution method.
- $$\begin{cases} x - 5y = 7 \\ 3y - 2x = -7 \end{cases}$$
12. Which of the following systems is written in the correct form for using the elimination (addition) method?
- a. $\begin{cases} -2x + 3y = 6 \\ -5y + 4x = 8 \end{cases}$
b. $\begin{cases} -2x + 3y = 6 \\ 4x - 8 = 5y \end{cases}$
c. $\begin{cases} -2x + 3y = 6 \\ 4x - 5y = 8 \end{cases}$
d. $\begin{cases} -2x + 3y = 6 \\ 4x = 5y + 8 \end{cases}$
13. Elimination (addition) will be used to solve the system $\begin{cases} 4x - 9y = -2 \\ 3x - 18y = 4 \end{cases}$. 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. $8x - 18y = 4$
b. $-8x + 18y = -2$
c. $8x - 18y = 2$
d. $-8x + 18y = 4$

14. Solve the system $\begin{cases} 2x - 9y = 11 \\ x + 3y = 3 \end{cases}$ by substitution or elimination (addition). Then give the y -coordinate of the ordered pair of the solution.

a. $y = -\frac{1}{3}$

b. $y = -\frac{5}{3}$

c. $y = \frac{1}{3}$

d. $y = \frac{5}{3}$

15. Find the x -coordinate of the ordered pair of the solution of the system $\begin{cases} -4x + 3y = 1 \\ 5x - 6y = -8 \end{cases}$.

a. $x = -2$

b. $x = 3$

c. $x = -3$

d. $x = 2$

16. Solve $\begin{cases} 4x - 3y = 22 \\ 5x + 7y = 6 \end{cases}$ by the elimination (addition) method. Write the solution as an ordered pair.

17. Solve $\begin{cases} 7x - 5y = 2 \\ -\frac{x}{5} + \frac{y}{7} = -\frac{2}{35} \end{cases}$

a. (1,1)

b. (-1,-1)

c. The equations are dependent.

d. The system is inconsistent.

18. Two angles are supplementary. The measure of the larger angle is 10° less than twice the measure of the smaller. If y is the larger angle, choose the system that would solve the problem.

a.
$$\begin{cases} x + y = 180 \\ y = 10 - 2x \end{cases}$$

b.
$$\begin{cases} x + y = 180 \\ y = 2x - 10 \end{cases}$$

c.
$$\begin{cases} x + y = 90 \\ y = 2x - 10 \end{cases}$$

d.
$$\begin{cases} x + y = 90 \\ y = 10 - 2x \end{cases}$$

19. At the concession stand hotdogs sold for \$.75 and hamburgers sold for \$1.25. At the last football game 200 hotdogs and hamburgers were sold and \$187.50 was collected. How many hotdogs were sold?

20. A chemist needs 15 liters of a 25% acid solution. She has a 20% acid solution and a 40% acid solution. Let x equal number of liters of 20% acid solution and y equal number of liters of 40% acid solution. If solving this problem by writing two equations in two unknowns, which of the following could be one of the equations?

a. $.20x + .40y = 3.75$

b. $.20x + .40y = 37.5$

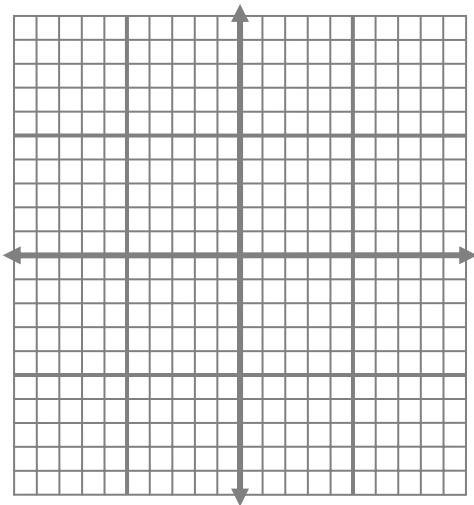
c. $.20x + .40y = .25$

d. $.20x + .40y = 375$

21. The solutions for the system $\begin{cases} x > 0 \\ y < 0 \end{cases}$ are located in

- a. Quadrant I
- b. Quadrant II
- c. Quadrant III
- d. Quadrant IV

22. Graph the solution of the system of inequalities $\begin{cases} 3x + y \leq 6 \\ x + y < 4 \end{cases}$



23. Which of the following points cannot be used as a test point to determine which region to shade for the linear inequality $4x - 3y \geq 6$?

- a. $\left(2, -\frac{2}{3}\right)$
- b. $\left(-2, \frac{2}{3}\right)$
- c. $\left(2, \frac{2}{3}\right)$
- d. $\left(-2, -\frac{2}{3}\right)$

24. Which method would be best to solve the system $\begin{cases} x = 3 \\ y - 2 = 0 \end{cases}$?
- a. substitution method
 - b. graphing method
 - c. elimination method
 - d. none of these
25. When graphing $3x - 2y \geq -6$, is the region above or below the boundary line $3x - 2y = -6$ shaded