

CHAPTER 8

NAME _____

TEST FORM H

CLASS _____ SCORE _____ GRADE _____

1. Solve, if possible, using the substitution method.

$$\begin{aligned} 3x + y &= 4, \\ x - 5y &= -6 \end{aligned}$$

What is the x -coordinate?

- a)
- -7
- b)
- $\frac{1}{7}$
- c)
- $\frac{7}{8}$
- d)
- $\frac{5}{17}$

2. Solve, if possible, using the substitution method.

$$\begin{aligned} 3x + 5y &= -15, \\ y &= -x - 8 \end{aligned}$$

What is the y -coordinate?

- a)
- -5
- b)
- $\frac{2}{9}$
- c)
- 9
- d)
- $\frac{9}{2}$

3. Solve, if possible, using the elimination method.

$$\begin{aligned} x + 3y &= 14, \\ 2x + 4y &= 22 \end{aligned}$$

What is the y -coordinate?

- a)
- 0
- b)
- 3
- c)
- -3
- d) not possible

4. Solve, if possible, using the elimination method.

$$\begin{aligned} 5y - 4x &= 7, \\ x + 3y &= \frac{3}{8} \end{aligned}$$

What is the x -coordinate?

- a)
- $\frac{1}{2}$
- b)
- $-\frac{9}{8}$
- c)
- $\frac{15}{8}$
- d)
- $-\frac{1}{8}$

5. The perimeter of a rectangle is 10. The length of the rectangle is five less than four times the width. Find the width of the rectangle.

- a)
- 4
- b)
- 3
- c)
- 6
- d)
- 2

ANSWERS

1. _____

2. _____

3. _____

4. _____

5. _____

TEST FORM H

ANSWERS

6. _____

6. Between her home mortgage, car loan, and credit card bill, Deena is \$117,000 in debt. Each month, Deena's credit card accumulates 1.5% interest, her car loan 1% interest, and her mortgage 0.8% interest. After one month, her total accumulated interest is \$995. The interest on Deena's mortgage was \$680 more than the interest on her car loan. How much does she owe on her car loan?
- a) \$12,000 b) \$7500 c) \$5000 d) \$1200

7. _____

7. Solve.

$$3x - 5y + 2z = 19,$$

$$5x + 2y - 3z = -8,$$

$$-2x + 3y + 5z = 7$$

What is the z -coordinate?

- a) 2 b) -7 c) 3 d) 4

8. _____

8. Solve.

$$2x + 6y + 4z = -30,$$

$$6x + 4y + 2z = -32,$$

$$4x + 2y + 6z = -34$$

What is the y -coordinate?

- a) 10 b) 6 c) -2 d) -10

9. _____

9. Solve.

$$x - 2y = 2,$$

$$2x - z = -2,$$

$$x - y - 2z = 4$$

What is the x -coordinate?

- a) -2 b) -3 c) 5 d) 2

TEST FORM H

10. Solve using matrices.

$$\begin{aligned} 2x + 7y &= 43, \\ -4x + 7y &= 19, \end{aligned}$$

What is the y -coordinate?

- a) 8 b) 5 c) 7 d) 3

11. Solve using matrices.

$$\begin{aligned} x + 2y + z &= -13, \\ 3x + 4y + 2z &= -28, \\ x + 3y + z &= -17 \end{aligned}$$

What is the x -coordinate?

- a) -5 b) -1 c) -4 d) -2

12. Evaluate.

$$\begin{vmatrix} -7 & 5 \\ -2 & 2 \end{vmatrix}$$

- a) -4 b) 11 c) 24 d) 0

13. Evaluate.

$$\begin{vmatrix} 3 & 0 & 3 \\ -2 & 1 & 4 \\ 5 & -3 & 2 \end{vmatrix}$$

- a) 45 b) 3 c) -20 d) 0

14. Solve using Cramer's rule.

$$\begin{aligned} 4x + 3y &= 3, \\ 6x - 2y &= 24 \end{aligned}$$

What is the x -coordinate?

- a) -1 b) -2 c) 3 d) 6

ANSWERS

10. _____

11. _____

12. _____

13. _____

14. _____

TEST FORM H

ANSWERS

15. _____

15. An electrician, a carpenter, and a plumber are hired to work on a house. The electrician earns \$20 per hour, the carpenter \$25 per hour, and the plumber \$30 per hour. On the first day on the job, the three worked a total of 23.25 hours and earned a total of \$571.25. If the electrician worked 4.75 more hours than the carpenter did, then how many hours did the plumber work?
- a) 6 b) 7.25 c) 8 d) 5.75

Chapter 8, Test Form H

1. c 2. d 3. b 4. b 5. d 6. a 7. c 8. c 9. a 10. b 11. d 12. a 13. a
14. c 15. c