

Matrices

Name: _____

Date: _____

Cramer's Rules

1

$$2x + 3y - z = 1$$

$$4x + y - 3z = 11$$

$$3x - 2y + 5z = 21$$

2

$$-5x + 9y - 2z = 19$$

$$6x - 2y + 4z = -22$$

$$-2x - 6y - 3z = -21$$

3

$$-6x + 2y + 4z = 12$$

$$8x - 3y + 2z = -14$$

$$-6x + 2y - 7z = -21$$

4

$$9x - 3y + 6z = -18$$

$$-6x + 5y - 3z = 12$$

$$-5x + 4y - z = 10$$

5

$$-2x - 12y + 7z = -6$$

$$-9x + 8y - 2z = -4$$

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

6

$$x - 4y + z = 1$$

$$2x + 3y - z = 4$$

$$x + y - z = 0$$

7

$$x - y + z = 4$$

$$2x + y + z = 7$$

$$-x - 2y + 2z = -1$$

8

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

$$3x + y - 3z = 4$$

$$-3x + 4y + 7z = -7$$

9

$$2x - 3y + 6z = -18$$

$$-6x + 5y - 3z = 12$$

$$-5x + 4y - z = 10$$

10

$$4x - y + 3z = 2$$

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

$$3x + 2y + 4z = 6$$

Matrices

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Cramer's Rules

1

$$\begin{array}{l} 2x + 3y - z = 1 \\ 4x + y - 3z = 11 \\ 3x - 2y + 5z = 21 \end{array} \quad \underline{(4, -2, 1)}$$

2

$$\begin{array}{l} -5x + 9y - 2z = 19 \\ 6x - 2y + 4z = -22 \\ -2x - 6y - 3z = -21 \end{array} \quad \underline{(-48, -11, 61)}$$

3

$$\begin{array}{l} -6x + 2y + 4z = 12 \\ 8x - 3y + 2z = -14 \\ -6x + 2y - 7z = -21 \end{array} \quad \underline{(20, 60, 3)}$$

4

$$\begin{array}{l} 9x - 3y + 6z = -18 \\ -6x + 5y - 3z = 12 \\ -5x + 4y - z = 10 \end{array} \quad \underline{(-2, 0, 0)}$$

5

$$\begin{array}{l} -2x - 12y + 7z = -6 \\ -9x + 8y - 2z = -4 \\ -3x - 8y + 5z = -2 \end{array} \quad \underline{(-8, -18, -34)}$$

6

$$\begin{array}{l} x - 4y + z = 1 \\ 2x + 3y - z = 4 \\ x + y - z = 0 \end{array} \quad \underline{(2, 1, 3)}$$

7

$$\begin{array}{l} x - y + z = 4 \\ 2x + y + z = 7 \\ -x - 2y + 2z = -1 \end{array} \quad \underline{(3, 0, 1)}$$

8

$$\begin{array}{l} x + 2y + 3z = -5 \\ 3x + y - 3z = 4 \\ -3x + 4y + 7z = -7 \end{array} \quad \underline{(-1, 1, -2)}$$

9

$$\begin{array}{l} 2x - 3y + 6z = -18 \\ -6x + 5y - 3z = 12 \\ -5x + 4y - z = 10 \end{array} \quad \underline{(12, 18, 2)}$$

10

$$\begin{array}{l} 4x - y + 3z = 2 \\ x + 5y - 2z = 3 \\ 3x + 2y + 4z = 6 \end{array} \quad \underline{(0, 1, 1)}$$