

Cramer's Rule

Evaluate each determinant.

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

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

Use Cramer's Rule to solve each system.

3)
$$\begin{aligned} -x + 4y &= 14 \\ -3x + 6y &= 30 \end{aligned}$$

4)
$$\begin{aligned} -2x + 3y &= 18 \\ -x + 3y &= 10 \end{aligned}$$

Evaluate each determinant.

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

6)
$$\begin{vmatrix} 0 & -4 & -3 \\ 4 & 3 & -4 \\ -2 & 1 & 1 \end{vmatrix}$$

Use Cramer's Rule to solve each system for x.

7)
$$\begin{aligned} 3x - y - 3z &= 20 \\ x - 6y + 2z &= 18 \\ 5x + 4z &= 30 \end{aligned}$$

Use Cramer's Rule to solve each system.

8)
$$\begin{aligned} -4x - 4y - 3z &= 2 \\ 2x + 3y &= 2 \\ -x + y - 2z &= 3 \end{aligned}$$

Cramer's Rule

Evaluate each determinant.

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

-10

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

-6

Use Cramer's Rule to solve each system.

$$3) \begin{cases} -x + 4y = 14 \\ -3x + 6y = 30 \end{cases}$$

$(-6, 2)$

$$4) \begin{cases} -2x + 3y = 18 \\ -x + 3y = 10 \end{cases} \left(-8, \frac{2}{3}\right)$$

Evaluate each determinant.

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

-6

$$6) \begin{vmatrix} 0 & -4 & -3 \\ 4 & 3 & -4 \\ -2 & 1 & 1 \end{vmatrix}$$

-46

Use Cramer's Rule to solve each system for x.

$$7) \begin{cases} 3x - y - 3z = 20 \\ x - 6y + 2z = 18 \\ 5x + 4z = 30 \end{cases}$$

$x = 6$

Use Cramer's Rule to solve each system.

$$8) \begin{cases} -4x - 4y - 3z = 2 \\ 2x + 3y = 2 \\ -x + y - 2z = 3 \end{cases}$$

$(1, 0, -2)$