

Name _____ Daily Quiz Using Determinant to solve a 2x2 and a 3x3 system

Use Cramer's Rule and determinants to solve the given 2x2 and 3x3 systems, if not possible, then state why not

System 1
$$\begin{aligned} 5x - 6y &= -8 \\ -10x + 12y &= -16 \end{aligned}$$

Show the work for the determinant of coefficient matrix	Show the work for the determinant of the replace x matrix	Show the work for the determinant of the replace y matrix
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Show work

State the value of $x =$ _____ state the value of $y =$ _____

Write the related matrix equation to
$$\begin{aligned} 5x - 6y &= -8 \\ -10x + 12y &= -16 \end{aligned}$$

Find the inverse related to
$$\begin{aligned} 5x - 6y &= -8 \\ -10x + 12y &= -16 \end{aligned}$$

Use matrix inverse to solve
$$\begin{aligned} 5x - 6y &= -8 \\ -10x + 12y &= -16 \end{aligned}$$

System 2 $6x - 8y = 30$
 $-5x + 2y = -11$

Show the work for the determinant of coefficient matrix	Show the work for the determinant of the replace x matrix	Show the work for the determinant of the replace y matrix
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Show work

State the value of x = _____ state the value of y = _____

Write the related matrix equation to $6x - 8y = 30$
 $-5x + 2y = -11$

Find the inverse related to $6x - 8y = 30$
 $-5x + 2y = -11$

Use matrix inverse to solve $6x - 8y = 30$
 $-5x + 2y = -11$

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

System 3 $5x + 3y - 2z = 1$

$$2x + 8y - 7z = -15$$

Show the coefficient matrix	Show the replace x matrix	Show the replace y matrix	Show the replace z matrix
Show the determinant of coefficient matrix (use technology)	Show the determinant of the replace x matrix (use technology)	Show the determinant of the replace y matrix (use technology)	Show the determinant of the replace z matrix (use technology)
State the value of x = _____ state the value of y = _____ state the value of z = _____			

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

Write the related matrix equation to $5x + 3y - 2z = 1$

$$2x + 8y - 7z = -15$$

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

Find the inverse related to $5x + 3y - 2z = 1$

$$2x + 8y - 7z = -15$$

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

Use matrix inverse to solve $5x + 3y - 2z = 1$

$$2x + 8y - 7z = -15$$

$$8x + 3y - 7z = -135$$

System 3 $3x + 4y - z = -46$

$$-4x + 6y + 9z = 101$$

Show the coefficient matrix	Show the replace x matrix	Show the replace y matrix	Show the replace z matrix
Show the determinant of coefficient matrix (use technology)	Show the determinant of the replace x matrix (use technology)	Show the determinant of the replace y matrix (use technology)	Show the determinant of the replace z matrix (use technology)
State the value of x = _____ state the value of y = _____ state the value of z = _____			

$$8x + 3y - 7z = -135$$

Write the related matrix equation to $3x + 4y - z = -46$

$$-4x + 6y + 9z = 101$$

$$8x + 3y - 7z = -135$$

Find the inverse related to $3x + 4y - z = -46$

$$-4x + 6y + 9z = 101$$

$$8x + 3y - 7z = -135$$

Use matrix inverse to solve $3x + 4y - z = -46$

$$-4x + 6y + 9z = 101$$