

Student Name: _____

Score: _____

Inverse matrix

ES2

Check whether inverse exists for the following matrices:

$$\begin{bmatrix} 5 & 2 & 8 \\ -1 & 2 & 4 \\ -2 & 1 & 1 \end{bmatrix}$$

$\Delta =$

Conclusion: _____

$$\begin{bmatrix} 3 & -3 & 5 \\ 3 & -3 & 2 \\ -1 & 1 & -1 \end{bmatrix}$$

$\Delta =$

Conclusion: _____

$$\begin{bmatrix} 5 & 9 & 7 \\ -2 & 3 & 2 \\ 1 & 0 & 3 \end{bmatrix}$$

$\Delta =$

Conclusion: _____

$$\begin{bmatrix} 5 & -4 & 1 \\ 2 & -6 & -1 \\ 7 & 1 & 2 \end{bmatrix}$$

$\Delta =$

Conclusion: _____

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Answer Key

Inverse matrix

ES2

$$\begin{bmatrix} 5 & 2 & 8 \\ -1 & 2 & 4 \\ -2 & 1 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 3 & -3 & 5 \\ 3 & -3 & 2 \\ -1 & 1 & -1 \end{bmatrix}$$

$\Delta = 0$

$\Delta = 0$

Conclusion: Inverse does not exist

does not exist

$$\begin{bmatrix} 5 & 9 & 7 \\ -2 & 3 & 2 \\ 1 & 0 & 3 \end{bmatrix}$$

$\Delta = 96 \neq 0$

Conclusion: Inverse exists

does not exist

$$\begin{bmatrix} 5 & -4 & 1 \\ 2 & -6 & -1 \\ 7 & 1 & 2 \end{bmatrix}$$

$\Delta = 33 \neq 0$

Conclusion: Inverse exists

Conclusion: Inverse exists

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