

Student Name: _____

Score: _____

Inverse matrix

ES1

Check whether inverse exists for the following matrices:

$$\begin{bmatrix} -1 & 4 & 5 \\ 3 & 6 & -2 \\ 4 & 3 & 1 \end{bmatrix}$$

$\Delta =$

Conclusion: _____

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

$\Delta =$

Conclusion: _____

$$\begin{bmatrix} -1 & 0 & 1 \\ 2 & 1 & -1 \\ -1 & 1 & 2 \end{bmatrix}$$

$\Delta =$

Conclusion: _____

$$\begin{bmatrix} -7 & 10 & 5 \end{bmatrix}$$

$\Delta =$

Conclusion: _____

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Student Name: _____

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Answer Key

Inverse matrix

ES1

$$\begin{bmatrix} -1 & 4 & 5 \\ 3 & 6 & -2 \\ 4 & 3 & 1 \end{bmatrix}$$

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

$$\Delta = -131 \neq 0$$

$$\Delta = 45 \neq 0$$

Conclusion: Inverse exists

exists

$$\begin{bmatrix} 3 & -2 & -3 \\ 4 & 2 & -8 \\ -4 & 1 & 5 \end{bmatrix}$$

$$\Delta = -6 \neq 0$$

Conclusion: Inverse exists

does not exist

$$\begin{bmatrix} -1 & 0 & 1 \\ 2 & 1 & -1 \\ -1 & 1 & 2 \end{bmatrix}$$

$$\Delta = 0$$

Conclusion: Inverse does not exist

Conclusion: Inverse exists

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