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: _____

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

_____

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

$\Delta =$ ☐

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: _____

Student Name: _____ Score:

Answer Key

Inverse matrix

ES1

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

$\Delta = -131 \neq 0$

Conclusion: Invers exists

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

$\Delta = 45 \neq 0$

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

$\Delta = -6 \neq 0$

Conclusion: Invers 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