Matrices

Name:_____ Date:_____

Find whether inverse does exist for the given matrices:

1) $\begin{bmatrix} 3 & 5 & 7 \\ 2 & 1 & 0 \\ 4 & 6 & 8 \end{bmatrix}$

$\Delta =$ 0

Conclusion: Inverse does not exist

2) $\begin{bmatrix} 3 & 7 & 9 \\ 1 & 2 & 4 \\ 5 & 2 & 3 \end{bmatrix}$

$\Delta =$ $41 \neq 0$

Conclusion: Inverse exist

3) $\begin{bmatrix} 2 & 9 & 5 \\ 3 & 6 & 7 \\ 1 & 2 & 4 \end{bmatrix}$

$\Delta =$ _____

Conclusion: _____

4) $\begin{bmatrix} 3 & 0 & 6 \\ 7 & 3 & 5 \\ 8 & 4 & 2 \end{bmatrix}$

$\Delta =$ _____

Conclusion: _____

5) $\begin{bmatrix} 9 & 8 & 7 \\ 2 & 5 & 4 \\ 6 & 1 & 0 \end{bmatrix}$

$\Delta =$ _____

Conclusion: _____

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

$\Delta =$ _____

Conclusion: _____

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

$\Delta =$ _____

Conclusion: _____

8) $\begin{bmatrix} 5 & 7 & 9 \\ 3 & 2 & 4 \\ 5 & 8 & 6 \end{bmatrix}$

$\Delta =$ _____

Conclusion: _____

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2) $\begin{bmatrix} 3 & 7 & 9 \\ 1 & 2 & 4 \\ 5 & 2 & 3 \end{bmatrix}$

$\Delta =$ $41 \neq 0$

Conclusion: Inverse exist

3) $\begin{bmatrix} 2 & 9 & 5 \\ 3 & 6 & 7 \\ 1 & 2 & 4 \end{bmatrix}$

$\Delta =$ $-25 \neq 0$

Conclusion: Inverse exist

4) $\begin{bmatrix} 3 & 0 & 6 \\ 7 & 3 & 5 \\ 8 & 4 & 2 \end{bmatrix}$

$\Delta =$ $-18 \neq 0$

Conclusion: Inverse exist

5) $\begin{bmatrix} 9 & 8 & 7 \\ 2 & 5 & 4 \\ 6 & 1 & 0 \end{bmatrix}$

$\Delta =$ $-40 \neq 0$

Conclusion: Inverse exist

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

$\Delta =$ 0

Conclusion: Inverse does not exist

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

$\Delta =$ 0

Conclusion: Inverse does not exist

8) $\begin{bmatrix} 5 & 7 & 9 \\ 3 & 2 & 4 \\ 5 & 8 & 6 \end{bmatrix}$

$\Delta =$ $40 \neq 0$

Conclusion: Inverse exist