Matrices

Name:_____ Date:_____

Find whether inverse does exist for the given matrices:

1) $\begin{bmatrix} 0 & \frac{-4}{3} & 1 \\ -4 & 2 & \frac{1}{2} \\ \frac{3}{2} & -1 & 0 \end{bmatrix}$

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

4) $\begin{bmatrix} -3 & 3 & 0 \\ 1 & 7 & 9 \\ 8 & 5 & 4 \end{bmatrix}$

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

6) $\begin{bmatrix} 20 & -8 & -15 \\ -1 & \frac{2}{5} & \frac{3}{4} \\ \frac{-7}{3} & 2 & -4 \end{bmatrix}$

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

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Name:_____ Date:_____

Find whether inverse does exist for the given matrices:

1) $\begin{bmatrix} 0 & \frac{-4}{3} & 1 \\ -4 & 2 & \frac{1}{2} \\ \frac{3}{2} & -1 & 0 \end{bmatrix}$

Δ = 0

Conclusion: Inverse does not exist

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

Δ = 298≠0

Conclusion: Inverse exist

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

Δ = 0

Conclusion: Inverse does not exist

4) $\begin{bmatrix} -3 & 3 & 0 \\ 1 & 7 & 9 \\ 8 & 5 & 4 \end{bmatrix}$

Δ = 255≠0

Conclusion: Inverse exist

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

Δ = 132≠0

Conclusion: Inverse exist

6) $\begin{bmatrix} 20 & -8 & -15 \\ -1 & \frac{2}{5} & \frac{3}{4} \\ \frac{-7}{3} & 2 & -4 \end{bmatrix}$

Δ = 0

Conclusion: Inverse does not exist

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

Δ = 150≠0

Conclusion: Inverse exist

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

Δ = 162≠0

Conclusion: Inverse exist