Matrices

Name:_____ Date:_____

Find whether inverse does exist for the given matrices:

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

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

4) $\begin{bmatrix} -6 & 7 & 1 \\ \frac{1}{2} & 5 & 10 \\ 2 & 3 & 0 \end{bmatrix}$

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

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

Δ = _____

Conclusion: _____

8) $\begin{bmatrix} 3 & 9 & \frac{4}{5} \\ 7 & -8 & 3 \\ 5 & 2 & 1 \end{bmatrix}$

Δ = _____

Conclusion: _____

Matrices

Name:_____ Date:_____

Find whether inverse does exist for the given matrices:

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

$\Delta =$ -160≠0

Conclusion: Inverse exist

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

$\Delta =$ 0

Conclusion: Inverse does not exist

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

$\Delta =$ -33≠0

Conclusion: Inverse exist

4) $\begin{bmatrix} -6 & 7 & 1 \\ \frac{1}{2} & 5 & 10 \\ 2 & 3 & 0 \end{bmatrix}$

$\Delta = \frac{623}{2} \neq 0$

Conclusion: Inverse exist

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

$\Delta = \frac{-623}{2} \neq 0$

Conclusion: Inverse exist

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

$\Delta =$ 0

Conclusion: Inverse does not exist

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

$\Delta =$ 0

Conclusion: Inverse does not exist

8) $\begin{bmatrix} 3 & 9 & \frac{4}{5} \\ 7 & -8 & 3 \\ 5 & 2 & 1 \end{bmatrix}$

$\Delta = \frac{366}{5} \neq 0$

Conclusion: Inverse exist