Kuta Software - Infinite Algebra 2 Name

Inverse Matrices

Date Period

For each matrix state if an inverse exists, if so find the inverse matrix

1) $\begin{bmatrix} -9 & -9 \\ -2 & -2 \end{bmatrix}$

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

3) $\begin{bmatrix} 4 & -5 \\ -9 & 6 \end{bmatrix}$

4) $\begin{bmatrix} 0 & 0 \\ -6 & 4 \end{bmatrix}$

Find the ~~inverse~~ determinant of each matrix.

5) $\begin{bmatrix} 11 & -5 \\ 2 & -1 \end{bmatrix}$

6) $\begin{bmatrix} 0 & -2 \\ -1 & -9 \end{bmatrix}$

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

8) $\begin{bmatrix} 1 & -1 \\ -6 & -3 \end{bmatrix}$

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Determinants of 3×3 Matrices

Date_____ Period____

Evaluate the determinant of each matrix.

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

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

Evaluate each determinant.

3) $\begin{vmatrix} 5 & 3 & 3 \\ -4 & -5 & 1 \\ 5 & 3 & 0 \end{vmatrix}$

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

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

6) $\begin{vmatrix} -2 & 5 & -4 \\ 0 & -3 & 5 \\ -5 & 5 & -6 \end{vmatrix}$

7) $\begin{vmatrix} 3 & 4 & 5 \\ -4 & 6 & 3 \\ 1 & -4 & 3 \end{vmatrix}$

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

9) $\begin{vmatrix} -1 & -8 & 9 \\ 4 & 12 & -7 \\ -10 & 3 & 2 \end{vmatrix}$

10) $\begin{vmatrix} -5 & 5 & 5 \\ -8 & 9 & -3 \\ 8 & 5 & 9 \end{vmatrix}$

11) $\begin{vmatrix} 0 & a & b \\ 0 & c & d \\ 0 & x & y \end{vmatrix}$

12) What value of x makes the determinant -4?

$\begin{vmatrix} -2 & 0 & 0 \\ -6 & x & 1 \\ -4 & 0 & -1 \end{vmatrix}$