Write the matrix equation as a system of equations and solve the system.

$\begin{matrix}1&2&3\\1&1&1\\-1&1&2\end{matrix}$ $ \left\{\begin{array}{c}x\\y\\z\end{array}\right.$ = $\left\{\begin{array}{c}1\\12\\2\end{array}\right.$

Find the determinant of the given matrix.

 $\begin{matrix}1&0&6 -1\\-6&0&2 4\\3&0&6 -2 \end{matrix}$

 3 4 -3 3

Find the determinant of the given matrix.

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

Determine whether the matrix is invertible by finding the determinant of the matrix.

 $\left[\begin{matrix}1/6&-1/7\\ -49&42\end{matrix}\right]$

Find the inverse of the matrix.

 A = 3 0

 -1 -4

Perform the indicated operation, if possible.

 $\left[\begin{matrix}-1&0\\4&3\end{matrix}\right]$ - $\left[\begin{matrix}-1&4\\3&1\end{matrix}\right]$

Decide whether or not matrix B is the inverse of matrix A.

 A = $\left[\begin{matrix}-5&1\\ -7&1\end{matrix}\right]$

 B= $\left[\begin{matrix}\frac{1}{2}&-\frac{1}{2}\\\frac{7}{2}&-\frac{5}{2}\end{matrix}\right]$

The size of two matrices is given. Find the size of the product AB and the product BA, if the products exist.

 A is 4 × 1, B is 1 × 4.

Given matrices A and B, find the indicated matrix if possible.

 A = $\left[\begin{matrix}-2&0\\1&-5\end{matrix}\right]$ B = $\left[\begin{matrix}- 3&\\ -2& \end{matrix}\right]$Find AB.

Write the augmented matrix for the system.

 9x + 2y + 9z = 8

 8x + 5y + 2z = 26

 9x + 2y + 3z = 14

Find the sum, if possible.

+ $\begin{matrix}3&-4\\-7&-5\\5&8\end{matrix}$

Find the minor for the element in the first row and second column of the given matrix.

11 -11 20

-3 19 16

 4 6 -8