

For each matrix state if an inverse exists.

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

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

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

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

Find the inverse of each matrix.

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

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

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

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

For each matrix state if an inverse exists.

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

No

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

Yes

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

Yes

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

No

Find the inverse of each matrix.

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

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

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

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

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

No inverse exists

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

$$\begin{bmatrix} \frac{1}{3} & -\frac{1}{9} \\ -\frac{2}{3} & -\frac{1}{9} \end{bmatrix}$$