

Name : _____

Score : _____

Teacher : _____

Date : _____

Matrix Inverses

State whether each matrix has an inverse.

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

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

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

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

5) $\begin{bmatrix} 6 & 5 \\ -5 & 1 \end{bmatrix}$

6) $\begin{bmatrix} -6 & -3 \\ 5 & -1 \end{bmatrix}$

Find the inverse of each matrix, or "No inverse exists" if no inverse matrix exists.

7) $\begin{bmatrix} 1 & 0 \\ -6 & -5 \end{bmatrix}$

8) $\begin{bmatrix} 4 & 3 \\ 1 & 4 \end{bmatrix}$

9) $\begin{bmatrix} 5 & -6 \\ -1 & 0 \end{bmatrix}$

10) $\begin{bmatrix} -2 & -4 \\ 5 & -2 \end{bmatrix}$

11) $\begin{bmatrix} -1 & 4 \\ -6 & 24 \end{bmatrix}$

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



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Matrix Inverses

State whether each matrix has an inverse.

1) $\begin{bmatrix} -3 & -3 \\ -3 & -3 \end{bmatrix}$ No

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

3) $\begin{bmatrix} 1 & 0 \\ 6 & 6 \end{bmatrix}$ Yes

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

5) $\begin{bmatrix} 6 & 5 \\ -5 & 1 \end{bmatrix}$ Yes

6) $\begin{bmatrix} -6 & -3 \\ 5 & -1 \end{bmatrix}$ Yes

Find the inverse of each matrix, or "No inverse exists" if no inverse matrix exists.

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

8) $\begin{bmatrix} 4 & 3 \\ 1 & 4 \end{bmatrix}$ $\begin{bmatrix} \frac{4}{13} & \frac{-3}{13} \\ \frac{-1}{13} & \frac{4}{13} \end{bmatrix}$

9) $\begin{bmatrix} 5 & -6 \\ -1 & 0 \end{bmatrix}$ $\begin{bmatrix} 0 & -1 \\ \frac{-1}{6} & \frac{-5}{6} \end{bmatrix}$

10) $\begin{bmatrix} -2 & -4 \\ 5 & -2 \end{bmatrix}$ $\begin{bmatrix} \frac{-1}{12} & \frac{1}{6} \\ \frac{-5}{24} & \frac{-1}{12} \end{bmatrix}$

11) $\begin{bmatrix} -1 & 4 \\ -6 & 24 \end{bmatrix}$ No inverse exists

12) $\begin{bmatrix} -1 & 2 \\ -5 & 1 \end{bmatrix}$ $\begin{bmatrix} \frac{1}{9} & \frac{-2}{9} \\ \frac{5}{9} & \frac{-1}{9} \end{bmatrix}$

