

Name : _____

Score : _____

Teacher : _____

Date : _____

Matrix Inverses

State whether each matrix has an inverse.

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

2) $\begin{bmatrix} 2 & 0 \\ -5 & 0 \end{bmatrix}$

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

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

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

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

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

7) $\begin{bmatrix} -6 & 0 \\ 4 & -3 \end{bmatrix}$

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

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

10) $\begin{bmatrix} -2 & -5 \\ -1 & -6 \end{bmatrix}$

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

12) $\begin{bmatrix} 0 & -4 \\ 2 & -5 \end{bmatrix}$



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Matrix Inverses

State whether each matrix has an inverse.

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

2) $\begin{bmatrix} 2 & 0 \\ -5 & 0 \end{bmatrix}$ No

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

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

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

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

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

7) $\begin{bmatrix} -6 & 0 \\ 4 & -3 \end{bmatrix}$ $\begin{bmatrix} -\frac{1}{6} & 0 \\ -\frac{2}{9} & -\frac{1}{3} \end{bmatrix}$

8) $\begin{bmatrix} -1 & -3 \\ -6 & 1 \end{bmatrix}$ $\begin{bmatrix} -\frac{1}{19} & \frac{3}{19} \\ -\frac{6}{19} & \frac{1}{19} \end{bmatrix}$

9) $\begin{bmatrix} -5 & 3 \\ 6 & 6 \end{bmatrix}$ $\begin{bmatrix} -\frac{1}{8} & \frac{1}{16} \\ \frac{1}{8} & \frac{5}{48} \end{bmatrix}$

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

11) $\begin{bmatrix} 3 & -3 \\ -6 & 6 \end{bmatrix}$ No inverse exists

12) $\begin{bmatrix} 0 & -4 \\ 2 & -5 \end{bmatrix}$ $\begin{bmatrix} -\frac{5}{8} & \frac{1}{2} \\ -\frac{1}{4} & 0 \end{bmatrix}$

