

Name : _____

Score : _____

Teacher : _____

Date : _____

Matrix Inverses

State whether each matrix has an inverse.

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

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

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

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

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

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

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

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

8) $\begin{bmatrix} -5 & 2 \\ -3 & 3 \end{bmatrix}$

9) $\begin{bmatrix} -1 & 4 \\ -3 & 12 \end{bmatrix}$

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

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

12) $\begin{bmatrix} 6 & 5 \\ -3 & -2 \end{bmatrix}$



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Matrix Inverses

State whether each matrix has an inverse.

1) $\begin{bmatrix} -6 & 24 \\ 6 & -24 \end{bmatrix}$ No

2) $\begin{bmatrix} -1 & 5 \\ -1 & 4 \end{bmatrix}$ Yes

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

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

5) $\begin{bmatrix} -3 & 0 \\ 1 & 5 \end{bmatrix}$ Yes

6) $\begin{bmatrix} -3 & 1 \\ -5 & -2 \end{bmatrix}$ Yes

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

7) $\begin{bmatrix} -4 & -3 \\ -6 & 6 \end{bmatrix}$ $\begin{bmatrix} -\frac{1}{7} & -\frac{1}{14} \\ -\frac{1}{7} & \frac{2}{21} \end{bmatrix}$

8) $\begin{bmatrix} -5 & 2 \\ -3 & 3 \end{bmatrix}$ $\begin{bmatrix} -\frac{1}{3} & \frac{2}{9} \\ -\frac{1}{3} & \frac{5}{9} \end{bmatrix}$

9) $\begin{bmatrix} -1 & 4 \\ -3 & 12 \end{bmatrix}$ No inverse exists

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

11) $\begin{bmatrix} -2 & 3 \\ 6 & 1 \end{bmatrix}$ $\begin{bmatrix} -\frac{1}{20} & \frac{3}{20} \\ \frac{3}{10} & \frac{1}{10} \end{bmatrix}$

12) $\begin{bmatrix} 6 & 5 \\ -3 & -2 \end{bmatrix}$ $\begin{bmatrix} -\frac{2}{3} & -\frac{5}{3} \\ 1 & 2 \end{bmatrix}$

