

Find the inverse of the matrix.

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

5. $\begin{bmatrix} 7 & 2 \\ 3 & 1 \end{bmatrix}$

2. $\begin{bmatrix} 6 & 2 \\ 8 & 3 \end{bmatrix}$

6. $\begin{bmatrix} -7 & -2 \\ -4 & 1 \end{bmatrix}$

3. $\begin{bmatrix} 1 & 8 \\ 1 & 7 \end{bmatrix}$

7. $\begin{bmatrix} -6 & -7 \\ 2 & 2 \end{bmatrix}$

4. $\begin{bmatrix} -6 & 17 \\ 1 & -3 \end{bmatrix}$

8. $\begin{bmatrix} 5 & -4 \\ -4 & 4 \end{bmatrix}$

Tell whether the matrices are inverses of each other.

9. $\begin{bmatrix} 10 & -3 \\ 3 & -1 \end{bmatrix}$ and $\begin{bmatrix} 1 & 3 \\ 3 & -10 \end{bmatrix}$

10. $\begin{bmatrix} 11 & 2 & -8 \\ 4 & 1 & -3 \\ -8 & -1 & 6 \end{bmatrix}$ and $\begin{bmatrix} 3 & -4 & 2 \\ 0 & 2 & 1 \\ 4 & -5 & 3 \end{bmatrix}$

11. $\begin{bmatrix} 0 & 2 & -1 \\ 5 & 2 & 3 \\ 7 & 3 & 4 \end{bmatrix}$ and $\begin{bmatrix} -2 & -10 & 8 \\ 11 & 7 & -5 \\ 1 & 12 & -10 \end{bmatrix}$

12. What is the identity matrix for 2 x 2 matrices? For 3 x 3 matrices?