

Homework 9-6

Sec 1 H

Identity & Inverse Matrices

Unit 9

Find the inverse of the matrix

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

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

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

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

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

6.
$$\begin{bmatrix} 2.2 & 2.5 \\ 8 & 10 \end{bmatrix}$$

Solve the matrix equation.

7.
$$\begin{bmatrix} -5 & -13 \\ 0 & 5 \end{bmatrix} X = \begin{bmatrix} 3 & 1 \\ -4 & 0 \end{bmatrix}$$

8.
$$\begin{bmatrix} 2 & 4 \\ 0 & 1 \end{bmatrix} X = \begin{bmatrix} 4 & 0 & 6 \\ 3 & -1 & 5 \end{bmatrix}$$

9.
$$\begin{bmatrix} 3 & 7 \\ 1 & 4 \end{bmatrix} X + \begin{bmatrix} 8 & 5 \\ 1 & 15 \end{bmatrix} = \begin{bmatrix} 7 & -3 \\ -2 & -9 \end{bmatrix}$$

10.
$$\begin{bmatrix} 4 & -3 \\ 6 & -2 \end{bmatrix} X - \begin{bmatrix} -1 & 1 \\ 5 & 7 \end{bmatrix} = \begin{bmatrix} 4 & 6 \\ 8 & 2 \end{bmatrix}$$

Tell whether the matrices are inverses of each other.

11.
$$\begin{bmatrix} 10 & -3 \\ 3 & -1 \end{bmatrix} \text{ and } \begin{bmatrix} 1 & 3 \\ 3 & -10 \end{bmatrix}$$