

7.2

Perform the indicated operation (NO Calculator):

1.
$$\begin{bmatrix} -1 & 3 \\ 7 & 0 \\ 2 & -3 \end{bmatrix} \bullet \begin{bmatrix} -2 & 4 & 1 \\ 5 & -1 & 3 \end{bmatrix}$$

2.
$$\begin{bmatrix} 3 & -7 \\ -4 & 0 \end{bmatrix} - \begin{bmatrix} -2 & 2 \\ 3 & -8 \end{bmatrix}$$

Examine the product of the two matrices to determine if each is the inverse of the other (NO Calculator):

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

4.
$$\begin{bmatrix} 1 & 0 & 1 \\ -3 & 1 & -2 \\ 0 & 0 & 1 \end{bmatrix}; \begin{bmatrix} 1 & 0 & -1 \\ 3 & 1 & -1 \\ 0 & 0 & 1 \end{bmatrix}$$

Given A, find A^{-1} , if it exists. (NO Calc for 5, 6; Calc OK for 7,8)

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

6.
$$\begin{bmatrix} 3 & 9 \\ 2 & 6 \end{bmatrix}$$

7.
$$\begin{bmatrix} 1 & -1 & 0 \\ 2 & -1 & 1 \\ 0 & 1 & 1 \end{bmatrix}$$

8.
$$\begin{bmatrix} 1 & 2 & -1 \\ 2 & -1 & 3 \\ -1 & 0 & 1 \end{bmatrix}$$

7.3

Solve using matrices (NO Calculator).

9.
$$\begin{aligned} 3x - y &= 2 \\ x + 2y &= 10 \end{aligned}$$

Solve the systems using matrices (Calc OK).

$$\begin{aligned} x - 3y &= 2 \\ 10. \quad 2y + z &= -1 \\ x - y + z &= 1 \end{aligned}$$

$$\begin{aligned} a - b + 3c - 2d &= 1 \\ 11. \quad -2a + 4b - 3c + d &= 0.5 \\ 3a - b + 10c - 4d &= 2.9 \\ 4a - 3b + 8c - 2d &= 0.6 \end{aligned}$$