

Number:

Textbook Section:

Title:

1. Multiply: $\begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix} \begin{bmatrix} -2 & 5 & 3 \\ 1 & 4 & 6 \end{bmatrix}$

2. Multiply: $\begin{bmatrix} -2 & 5 \\ 6 & 4 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$

3. Let $A = \begin{bmatrix} 2 & -5 \\ 0 & 7 \end{bmatrix}$, $B = \begin{bmatrix} 3 & \frac{1}{2} & 5 \\ 1 & -1 & 3 \end{bmatrix}$, $C = \begin{bmatrix} 2 & -\frac{5}{2} & 0 \\ 0 & 2 & -3 \end{bmatrix}$, and

$D = \begin{bmatrix} 5 & -3 & 10 \\ 6 & 1 & 0 \\ -5 & 2 & 2 \end{bmatrix}$. Find the following, if possible. If it is not possible, say why.

a) AB

b) BA

c) $(AC)D$

d) $BD+C$

e) DB

4. Write the matrix equation as a system of equations.

$$\begin{bmatrix} 2 & -3 \\ 1 & 2 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 0 \\ 7 \end{bmatrix}$$

5. Write the system as a matrix equation.

$$\begin{cases} 3x + 2y + z = 8 \\ x + 2y + z = 5 \\ 2x - y + z = 4 \end{cases}$$