

12.1 Corrective Assignment - Matrix Operations

Simplify. Write "undefined" for expressions that are undefined.

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

2) $\begin{bmatrix} 0 & -5 \\ -1 & -6 \end{bmatrix} + \begin{bmatrix} 6 & 3 \\ 2 & -1 \end{bmatrix} - \begin{bmatrix} -2 & 1 \\ -3 & 4 \end{bmatrix}$

3) $\begin{bmatrix} 1 \\ 5 \\ 4 \end{bmatrix} - \left(\begin{bmatrix} 3 \\ 1 \\ 5 \end{bmatrix} + \begin{bmatrix} -1 \\ 1 \\ -5 \end{bmatrix} \right)$

4) $3(\begin{bmatrix} -2 & -1 & 5 \end{bmatrix} + \begin{bmatrix} 4 & -2 & 5 \end{bmatrix})$

5) $-2\begin{bmatrix} -4 & -5 & -4 & 3 \end{bmatrix} - \begin{bmatrix} 6 & -5 & 5 & 6 \end{bmatrix}$

Solve each equation.

6) $-5Z = \begin{bmatrix} -5 & -5 & 20 \end{bmatrix}$

7) $\begin{bmatrix} 6 & -10 \\ 10 & -2 \end{bmatrix} - 2A = \begin{bmatrix} 20 & -22 \\ 20 & 12 \end{bmatrix}$

Solve for x and y .

8) $\begin{bmatrix} \mathbf{y} & -10 \\ -5 & \mathbf{x} \end{bmatrix} + \begin{bmatrix} 6 & -3 \\ -4 & 8 \end{bmatrix} = \begin{bmatrix} 7 & -13 \\ -9 & 12 \end{bmatrix}$

9) $\begin{bmatrix} 0 & 10 \\ 2 & \mathbf{y} \end{bmatrix} - \begin{bmatrix} \mathbf{x} & -5 \\ -10 & 3 \end{bmatrix} = \begin{bmatrix} -5 & 15 \\ 12 & -4 \end{bmatrix}$

10) $2\begin{bmatrix} 2 & -7 \\ \mathbf{x} & -4 \end{bmatrix} + \begin{bmatrix} \mathbf{x} & -1 \\ \mathbf{y} & 5 \end{bmatrix} = \begin{bmatrix} 10 & -15 \\ 12 & -3 \end{bmatrix}$

11) $\begin{bmatrix} -2 & -3 \\ -7 & 4 \end{bmatrix} - \mathbf{y}\begin{bmatrix} 6 & \mathbf{x} \\ 0 & -5 \end{bmatrix} = \begin{bmatrix} -20 & -9 \\ -7 & 19 \end{bmatrix}$

Answers to 12.1 Corrective Assignment - Matrix Operations (ID: 1)

1) $[0 \ 10]$

2) $\begin{bmatrix} 8 & -3 \\ 4 & -11 \end{bmatrix}$

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

4) $[6 \ -9 \ 30]$

5) $[2 \ 15 \ 3 \ -12]$

6) $[1 \ 1 \ -4]$

7) $\begin{bmatrix} -7 & 6 \\ -5 & -7 \end{bmatrix}$

8) $x = 4, y = 1$

10) $x = 6, y = 0$

9) $x = 5, y = -1$

11) $x = 2, y = 3$