

Matrix Operations 10.2



Overview of Problems



Example Set: A

Perform the indicated operation:

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

2. $2 \begin{bmatrix} -9 & 4 \\ 7 & -2 \end{bmatrix} + \begin{bmatrix} -10 & -2 \\ -8 & 0 \end{bmatrix}$

3. $\begin{bmatrix} 1 & 3 & 5 \\ 0 & 2 & 9 \\ 3 & 4 & -6 \end{bmatrix} + \begin{bmatrix} 3 & 1 & 7 \\ 0 & -2 & 4 \\ 5 & 4 & -6 \end{bmatrix}$



Example Set: B

Perform the indicated operation:

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

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

3. $\begin{bmatrix} 1 & -3 & 5 \\ 0 & 2 & 9 \\ 3 & 4 & -6 \end{bmatrix} - 4 \begin{bmatrix} 3 & 1 & 7 \\ 0 & -2 & 4 \\ 5 & 4 & -6 \end{bmatrix}$

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Example Set: C

Perform the indicated operation:

1. $\begin{bmatrix} 1 & 0 \\ -2 & 4 \end{bmatrix} - 3 \begin{bmatrix} 6 & -3 \\ 5 & 1 \end{bmatrix} + \begin{bmatrix} 2 & 9 \\ 2 & 7 \end{bmatrix}$

2. $\frac{1}{3} \begin{bmatrix} 9 & \frac{2}{3} & 0 \\ 6 & 3 & 1 \end{bmatrix}$

3. $\begin{bmatrix} 6 & 1 \\ 9 & 2 \end{bmatrix} + \begin{bmatrix} 1 & 6 \\ 3 & 0 \\ 9 & 8 \end{bmatrix}$

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Example Set: A - **ANSWER KEY**

Perform the indicated operation:

$$1. \begin{bmatrix} 4 & 1 \\ 2 & 0 \end{bmatrix} + \begin{bmatrix} 6 & 3 \\ 5 & 2 \end{bmatrix} \begin{bmatrix} 10 & 4 \\ 7 & 2 \end{bmatrix}$$

$$2. 2 \begin{bmatrix} -9 & 4 \\ 7 & -2 \end{bmatrix} + \begin{bmatrix} -10 & -2 \\ -8 & 0 \end{bmatrix} \begin{bmatrix} -28 & 6 \\ 6 & -4 \end{bmatrix}$$

$$3. \begin{bmatrix} 1 & 3 & 5 \\ 0 & 2 & 9 \\ 3 & 4 & -6 \end{bmatrix} + \begin{bmatrix} 3 & 1 & 7 \\ 0 & -2 & 4 \\ 5 & 4 & -6 \end{bmatrix} \begin{bmatrix} 4 & 4 & 12 \\ 0 & 0 & 13 \\ 8 & 8 & -12 \end{bmatrix}$$



Example Set: B- **ANSWER KEY**

Perform the indicated operation:

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

$$2. -3 \begin{bmatrix} 3 & 2 \\ -1 & 4 \end{bmatrix} - \begin{bmatrix} 0 & -2 \\ 5 & -7 \end{bmatrix} \begin{bmatrix} -9 & -4 \\ -2 & -5 \end{bmatrix}$$

$$3. \begin{bmatrix} 1 & -3 & 5 \\ 0 & 2 & 9 \\ 3 & 4 & -6 \end{bmatrix} - 4 \begin{bmatrix} 3 & 1 & 7 \\ 0 & -2 & 4 \\ 5 & 4 & -6 \end{bmatrix} \begin{bmatrix} -11 & -7 & -23 \\ 0 & 10 & -7 \\ -17 & -12 & 18 \end{bmatrix}$$

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Example Set: C-ANSWER KEY

Perform the indicated operation:

$$1. \begin{bmatrix} 1 & 0 \\ -2 & 4 \end{bmatrix} - 3 \begin{bmatrix} 6 & -3 \\ 5 & 1 \end{bmatrix} + \begin{bmatrix} 2 & 9 \\ 2 & 7 \end{bmatrix} \begin{bmatrix} -15 & 18 \\ -15 & 8 \end{bmatrix}$$

$$2. \frac{1}{3} \begin{bmatrix} 9 & \frac{2}{3} & 0 \\ 6 & 3 & 1 \end{bmatrix} \begin{bmatrix} 3 & \frac{2}{9} & 0 \\ 2 & 1 & \frac{1}{3} \end{bmatrix}$$

$$3. \begin{bmatrix} 6 & 1 \\ 9 & 2 \end{bmatrix} + \begin{bmatrix} 1 & 6 \\ 3 & 0 \\ 9 & 8 \end{bmatrix} \text{ can not be added}$$