

MORE PRACTICE - Adding, Subtracting and Scalar Multiplication

Perform the following matrix operations. If not possible, state "not possible".

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

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

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

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

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

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

For the given matrices: $A = \begin{bmatrix} 2 & 3 & -1 \\ 1 & 5 & 0 \end{bmatrix}$, $B = \begin{bmatrix} 2 & -2 & 1 \\ 0 & 1 & -1 \end{bmatrix}$, $C = \begin{bmatrix} -3 & 0 & 1 \\ 1 & -2 & 4 \end{bmatrix}$,

find the following:

7. $A + C$

8. $4A$

9. $2B + C$

10. $2A + 3B$