Algebra of Matrix:

Addition/Subtraction of Matrices :

- Let A & B are two comparable matrices , then

$$A \pm B = [a_{ij}]_{m\times n} \pm [b_{ij}]_{m\times n} = [c_{ij}]_{m\times n} \text{ , where } c_{ij} = a_{ij} \pm b_{ij} \ \forall\ i \ \& \ j.$$

Example: If $A = \begin{pmatrix} 2 & -3 & 4 \\ 0 & 1 & 5 \end{pmatrix}$, $B = \begin{pmatrix} -6 & 0 & -2 \\ 1 & 7 & -8 \end{pmatrix}$, find $A + B$, $A - B$.

$$A + B = \begin{pmatrix} -4 & -3 & 2 \\ 1 & 8 & -3 \end{pmatrix}$$

$$A - B = \begin{pmatrix} 8 & -3 & 6 \\ -1 & -6 & 13 \end{pmatrix}$$

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