- Trace of a Matrix : Sum of all elements in the principal diagonal of a matrix is called trace of a matrix.

$$Tr\,(A) = \sum_{i=1}^{n} a_{ii}$$

Example:

$$A = \begin{bmatrix} 2 & -6 & 1 \\ 15 & 9 & 0 \\ -7 & 3 & -8 \end{bmatrix}_{3\times3} \qquad \Rightarrow Tr\,(A) = 2 + 9 - 8 = 3$$

$$B = \begin{pmatrix} 0 & -3 & 5 & 1 \\ -2 & 3 & 6 & -9 \\ 11 & -8 & -5 & 10 \end{pmatrix}_{3\times4} \qquad \Rightarrow Tr\,(B) = 0 + 3 - 5 = -2$$

Return To Top