



# Key Takeaways



## Symmetric and skew symmetric Matrix:

A square matrix  $A$  is said to be symmetric if,  $A' = A$

Let  $A = [a_{ij}]_n$ , then  $a_{ij} = a_{ji}, \forall i \& j$

Example:

$$A = \begin{pmatrix} 3 & -1 & 2 \\ -1 & 4 & 5 \\ 2 & 5 & 7 \end{pmatrix} \longrightarrow \begin{matrix} a_{12} = a_{21} \\ a_{13} = a_{31} \\ a_{23} = a_{32} \end{matrix}$$

$$A' = \begin{pmatrix} 3 & -1 & 2 \\ -1 & 4 & 5 \\ 2 & 5 & 7 \end{pmatrix} = A$$