

Notes

Matrix: Set of numbers or objects or symbols represented in the form of the rectangular array is called a matrix. The order of the matrix is defined by the number of rows and number of columns present in the rectangular array of representation.

Any general element of the matrix is represented by a_{ij} , where a_{ij} represents the elements of the i th row and j th column.

Conjugate of the matrix: If a matrix A has a complex number as it's an element, then the matrix obtained by replacing those complex number by its conjugate is called conjugate of the matrix A and it is denoted by \overline{A} .

The determinant of a matrix: a number which is calculated from the matrix. For determinant to exist, matrix A must be a square matrix. The determinant of a matrix is denoted by $\det A$ or $|A|$.

Minor and cofactor of an element a_{ij} in a matrix/determinant: Minor of any element a_{ij} where i is the number of rows, j is the number of columns, is the det of matrix left over after deleting the i th row and j th column.

Adjoint of the matrix: transpose of the cofactor of the element of the matrix is known as the adjoint of the matrix.

The inverse of a Matrix: A non-singular square matrix "A" is said to be invertible if there exists a non-singular square matrix B such that $AB = I = BA$ and the matrix B is called the inverse of the matrix A .