

## Rank of matrix

A number  $r$  is said to be the rank of a matrix  $A$  if it possesses the following two properties

- ① There is atleast one square submatrix of  $A$  of order  $r$  whose determinant is not equal to zero
- ② If the matrix  $A$  contains any square submatrix of order  $r+1$ , then the determinant of every square submatrix of  $A$  of order  $r+1$  should be zero

In short the rank of a matrix is the order of any highest order non vanishing minor of the matrix.