

## Order of a matrix

Order or dimension of a matrix denotes the arrangement of elements as number of rows and number of columns.

- Order = Number of rows  $\times$  Number of columns =  $m \times n$

Name of a matrix

Order of a matrix

$$A_{m \times n} = \begin{bmatrix} a_{11} & a_{12} & a_{13} & \cdots & a_{1n} \\ a_{21} & a_{22} & a_{23} & \cdots & a_{2n} \\ \vdots & \vdots & \vdots & & \vdots \\ a_{m1} & a_{m2} & a_{m3} & \cdots & a_{mn} \end{bmatrix}$$

Rows

Columns

- Thus, a matrix can also be represented as  $A = [a_{ij}]_{m \times n}$  or  $(a_{ij})_{m \times n}$