

Definition Of A Matrix

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- Matrix is a rectangular array of numbers

$m \times n$
✓ $m \rightarrow$ No of Rows
✓ $n \rightarrow$ No of Cols
Square Matrix ✓
(2×2)

$$2 \times 2 : A = \begin{pmatrix} 1 & 0 \\ 2 & 3 \end{pmatrix}$$

$$3 \times 2 \quad B = \begin{pmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{pmatrix}$$

$$2 \times 3 \quad C = \begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{pmatrix}$$

$$\frac{m \times 1}{m=3}$$

$$x = \begin{pmatrix} a \\ b \\ c \end{pmatrix} \sim \underline{\text{Vector}} (\underline{\text{column}})$$

$$y = (1, 2, 3) \sim \underline{\text{Vector}} (\underline{\text{Row}})$$

$1 \times n \quad (n=3)$

$$\frac{m \times n}{A} = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ \vdots & & & \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix}$$