

Matrix

a rectangular arrangement of numbers enclosed in brackets.

$$\begin{bmatrix} 4 & 2 & -3 \\ -3 & 1 & 6 \\ 5 & 4 & -3 \end{bmatrix} \quad \begin{bmatrix} 3 & 2 \\ 4 & 6 \end{bmatrix} \quad \begin{bmatrix} 6 & 2 & -3 \\ -3 & 1 & 0 \end{bmatrix} \quad \begin{bmatrix} 4 & 2 \\ -3 & 1 \\ 6 & 8 \end{bmatrix}$$

Matrix

Parts of a Matrix

Entries
Each individual value within a matrix

Address
The location of the entry written a_{rc} .

Columns

1 2 3

Rows $\begin{bmatrix} 1 & 4 & 2 & -3 \\ 2 & -3 & 1 & 6 \\ 3 & 5 & 4 & -3 \end{bmatrix}$

Dimensions of a Matrix

Rows $\times$ Columns

3×3

a_{21} : The entry at location: Row 2 Column 1

Matrix

Determine the **dimensions** of the following matrices.

$$\text{Dimensions} = \text{Rows} \times \text{Columns}$$

$$\begin{bmatrix} 4 & 2 \\ -3 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 4 & 2 & -3 \\ -3 & 1 & 6 \end{bmatrix}$$

$$\begin{bmatrix} 4 & 2 \\ -3 & 1 \\ 6 & 8 \end{bmatrix}$$

Matrix

Determine the **entries** at the following **addresses**.

$$a_{rc} = \text{entry at row } r \text{ and column } c$$

$$\begin{array}{l} a_{12} \\ \\ a_{33} \end{array} \begin{array}{c} 1 \quad 2 \quad 3 \\ \begin{bmatrix} 6 & 1 & 4 \\ 2 & -5 & -1 \\ 7 & -7 & 0 \end{bmatrix} \end{array} \begin{array}{l} a_{23} \\ \\ a_{31} \end{array}$$

Matrix

Parts of a Matrix

Columns

1 2 3

Dimensions of a Matrix

Rows $\times$ Columns

3 $\times$ 3

Rows

1	4	2	-3
2	-3	1	6
3	5	4	-3

Entries

Each individual value within a matrix

Address

The location of the entry written a_{rc} .

a_{21} : The entry at location: Row 2 Column 1