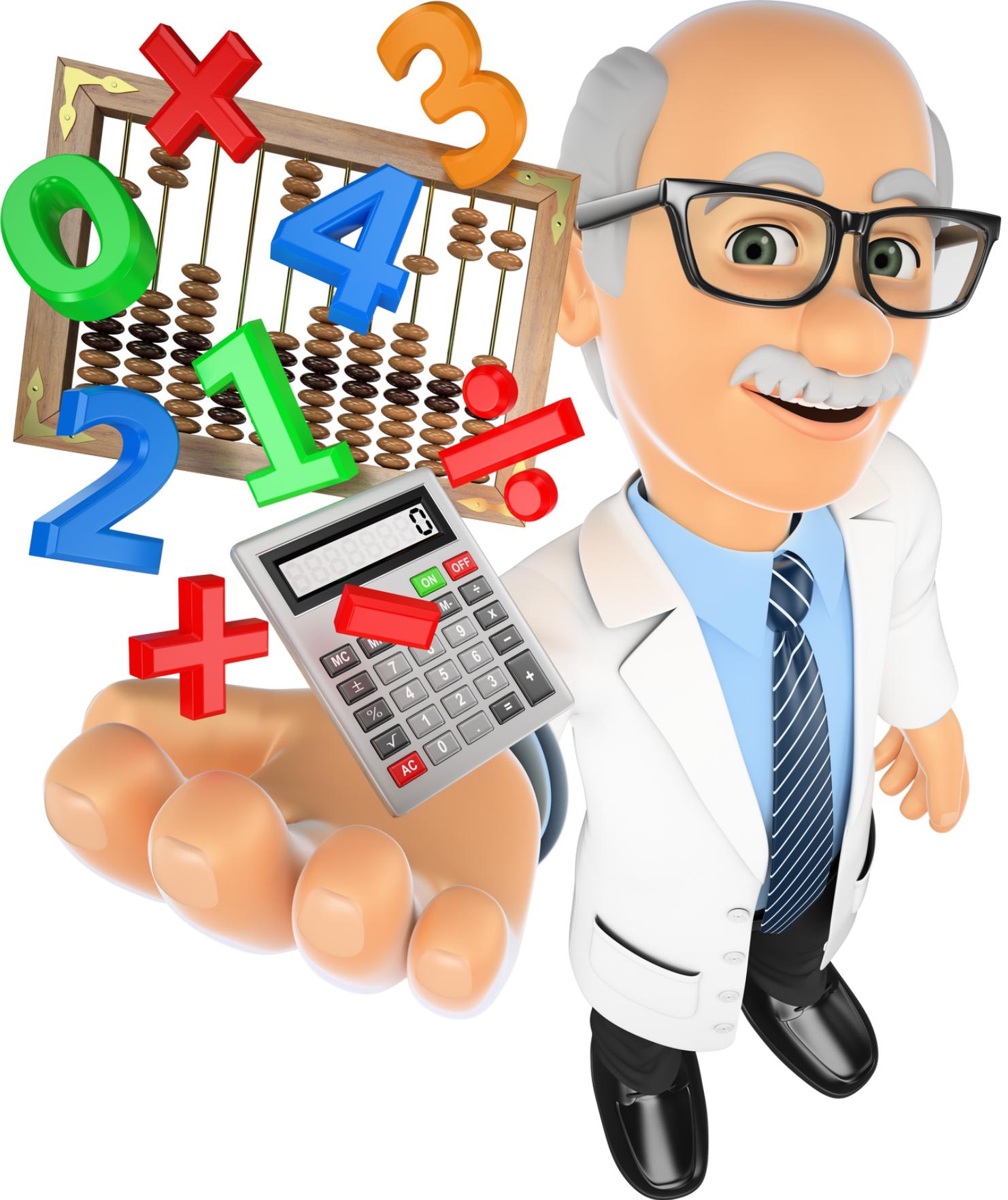


# linear algebra

## INTRODUCTION TO MATRICES

$$\begin{bmatrix} x & y \\ c & z \end{bmatrix}$$



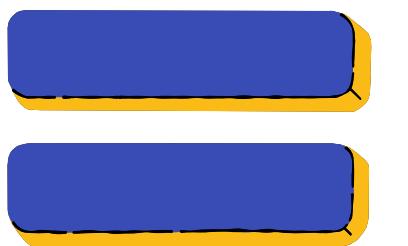


Assalamualikum. This is  
Md Mohaiminul Islam Imran.  
lets learn together

# Introduction to matrices



$$\begin{bmatrix} 5 & 1 & 2 \\ 3 & 0 & -5 \end{bmatrix}$$



A

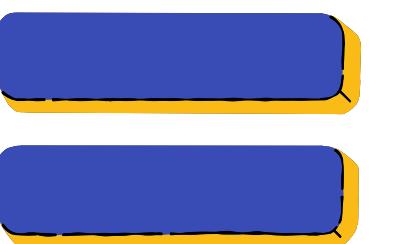
R × C

R = Row

C = Column

A variable

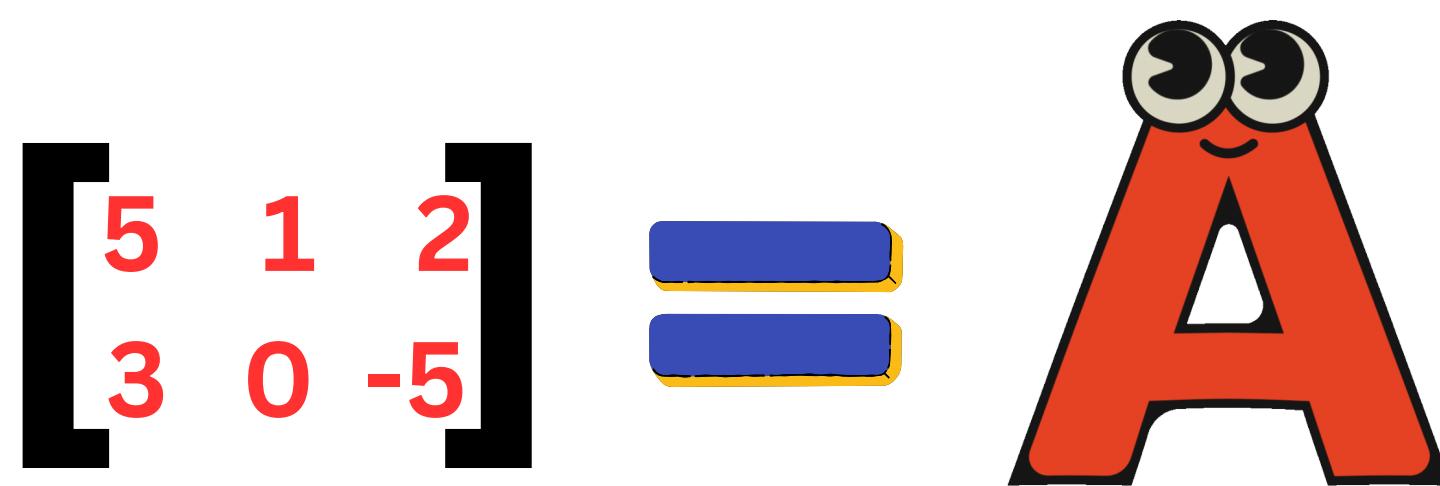
$$\begin{bmatrix} 5 & 1 & 2 \\ 3 & 0 & -5 \end{bmatrix}$$



A

2 × 3

# Position of Metrics



A[2,2]= 0

a2,2= 0

a1,3 =2

# Adding Metrics

$$\begin{bmatrix} 3 & -1 \\ 2 & 0 \end{bmatrix} = A$$

$$\begin{bmatrix} -7 & 2 \\ 3 & 5 \end{bmatrix} = B$$

$$A+B = \begin{bmatrix} (3+(-7)) & (-1+2) \\ (2+3) & (0+5) \end{bmatrix}$$

$$A+B = \begin{bmatrix} -4 & 1 \\ 5 & 5 \end{bmatrix}$$

$$A - B = A + -1 \times B$$

$$A - B = \begin{bmatrix} 3 & -1 \\ 2 & 0 \end{bmatrix} + -1 \begin{bmatrix} -7 & 2 \\ 3 & 5 \end{bmatrix}$$

$$A - B = \begin{bmatrix} 3 & -1 \\ 2 & 0 \end{bmatrix} + -1 \begin{bmatrix} -7 & 2 \\ 3 & 5 \end{bmatrix}$$

$$A - B = \begin{bmatrix} 3 & -1 \\ 2 & 0 \end{bmatrix} + \begin{bmatrix} 7 & -2 \\ -3 & -5 \end{bmatrix}$$

$$A - B = \begin{bmatrix} (3+7) & (-1+-2) \\ (2+-3) & (0+-5) \end{bmatrix}$$

$$A - B = \begin{bmatrix} 10 & -3 \\ -1 & -5 \end{bmatrix}$$

Subtracting Metrics

**Note:** In Addition and substraction matrices  
dimention has to be same .**[3,2]** row  
multiplier matrices and column multiplier  
matrices **[<sup>9</sup>/<sub>7</sub>]** cant add or subtract due to the  
dimention