

### **DEFINITION:-**

A vector is a measurement or a quantity that has both magnitude and direction.

### **NOTATIONS:-**

Standard notation for vectors in Mathematica is {a,b}, which represents that the vector has its tail at the origin and head at the point with x coordinate a and y coordinate b. Another standard notation for this vector is ai+bj, where i and j denote the unit vectors in the x and y directions respectively.



### **OPERATION ON MATHEMATICA:-**

- Addition and scaler multiplication
- Dot product
- Cross product
- Nom
- Angle between vectors
- Vector in plane
- vector addition



#### **COMMAND USED:-**

- Nom
- Arc Cos[(a.b)(Nom[a] Nom[b])]
- %Degree
- Cross
- Graphics [{ Arrow[{{0, 0}, {a, b}}], Arrow[{{0, 0}, {c, d}}]]
- Length
- Vector Q
- Projection

- Projection
- Array
- Constant Array
- Angle Vector[Q]
- Row
- Column

