

Representation of Vectors.

Geometrically a vector is represented by a line segment. For example, $\mathbf{a} = \overrightarrow{AB}$. Here A is called the initial point and B , the terminal point or tip.

Magnitude or modulus of \mathbf{a} is expressed as $|\mathbf{a}| = |\overrightarrow{AB}| = AB$.

Note: The magnitude of a vector is always a non-negative real number.

Every vector \overrightarrow{AB} has the following three characteristics:

Length: The length of \overrightarrow{AB} will be denoted by $|\overrightarrow{AB}|$ or AB .

Support: The line of unlimited length of which AB is a segment is called the support of the vector \overrightarrow{AB} .

Sense: The sense of \overrightarrow{AB} is from A to B and that of \overrightarrow{BA} is from B to A . Thus, the sense of a directed line segment is from its initial point to the terminal point.

