

Supplementary Fundamental Units:

S. No.	Physical Quantity	S.I. Unit	Symbol
1.	Plane angle	radian	rad
2.	Solid angle	steradian	sr

Magnitude of a Physical Quantity

Magnitude of physical quantity (Q) = (numerical value) × (unit)

Magnitude of a physical quantity is always constant. It is independent of the type of unit i.e. if a different unit is chosen for measurement, the numerical value also changes such that the product of the numerical value and the value of unit remains the same.

For example: 35m = 3500cm = 35000mm. The length of a metal rod bar is unchanged whether it is measured in meter, centimeter or in millimeter.

$$Q = n \cdot u = \text{constant}$$

If u_1 and u_2 are two different units of the same quantity, then

$$Q = n_1 u_1 = n_2 u_2 = \text{constant}$$

$$\Rightarrow \text{numerical value} \propto \frac{1}{\text{unit}}$$