

INTRODUCTION

Fundamental 7 Units in SI

Base Quantity	Name of Unit	Symbol
Length	meter	m
Mass	kilogram	kg
Time	second	s
Electrical current	Ampere	A
Temperature	Kelvin	K
Amount of Substance	Mole	mol
Luminous intensity	Candela	Cd

Supplementary Units

There are two supplementary units, which are as follows:

Physical quantity	Supplementary Units	
	Name	Symbol
1. Plane angle	radian	rad
2. Solid angle	steradian	sr

Derived Units in SI

Quantity	S.I. Unit	Special Name
Area	m^2	
Volume	m^3	
Density	kg/m^3	
Velocity	m/s	
Acceleration	m/s^2	
Force	kgm/s^2	newton, N
Frequency	cycles/s	hertz, Hz
Energy	$\text{kg}\cdot\text{m}^2/\text{s}^2$	joule, J
Concentration	mole/m^3	
Molar mass	kg/mol	
Pressure	$\text{kg}/\text{m}\cdot\text{s}^2$	pascal, Pa

SI Prefixes for Multiples and Fractions of SI Units

Multiple	Prefix	Symbol
10^{18}	exa	E
10^{15}	peta	P
10^{12}	tera	T
10^9	giga	G
10^6	mega	M
10^3	kilo	K
10^2	hecto	h
10^1	deca	da
10^{-1}	deci	d
10^{-2}	centi	c
10^{-3}	milli	m
10^{-6}	micro	μ
10^{-9}	nano	n
10^{-12}	pico	p
10^{-15}	femto	f
10^{-18}	atto	a

Meter → It is defined as the length equal to 1,650,763.73 wavelengths in vacuum of the orange red of the spectrum of krypton-86.

- Kilogram** → It is defined as the mass of a cylinder of platinum-iridium alloy kept by the international bureau of weights and measures at Paris.
- Second** → It is defined as the duration of 9,192,631,770 cycles of the radiation associated with specified transition of cesium 133.
- Ampere** → It is defined as the current that, when flowing through each of two long parallel wires separated by 1 meter of free space, results in a force between the wires of 2×10^{-7} newton per meter of length.
- Kelvin** → It is defined as the fraction $\frac{1}{273.16}$ of the **temperature of the absolute zero**, triple point of water.
- Mole** → It is defined as the amount of a substance that contains as many entities as there are atoms in exactly 0.012 kilogram of carbon-12.

Candela → It is defined as the luminous intensity of $\frac{1}{600,000}$ of a square meter of a black body at the temperature of freezing platinum (2045 K).

Do you know?

- Oxalic acid is obtained from : Cane sugar and sorrel plant
- Formic acid is obtained from : Red ants
- Uric acid is obtained from : Urine
- Glycerine is obtained from : Olive oil
- Citric acid is obtained from : Lemon
- Malic acid is obtained from : Apples
- Lactic acid is obtained from : Sour milk