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$$[Velocity] = [L]/[T]$$

Ex: 2 ANY SCIENTIST...

MUST COMBINE INTUITION, CONCENTRATION, AND HARD WORK IF HE IS TO ADVANCE KNOWLEDGE.

• SISTEMA ABSOLUTO DE UNIDADES [M] mass [T] time

$$V = \pi r^2 h \quad [L] \text{ Length}$$

$$V = [L^2][L] = [L^3]$$

$$V = (\pi/4) d^2 h$$

• Meter-Kilogram-Second (MKS) system

↳ 1960 A meter = 1650763.73 wavelengths of a certain orange line in the spectrum of the krypton isotope of atomic mass

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• kilometer = 1000 m centimeters = 10 m millimeters = 1000 m

• Kilogram: "The mass of a body is a quantitative measure of its inertia."

↳ UNIT: MASS OF A certain block of platinum-iridium alloy known as the "international prototype kilogram"

* THE WEIGHT IS THE FORCE OF GRAVITY UPON MASS.

tera	T	$\times 10^{12}$	
Giga	G	$\times 10^9$	1 Giga year = 10 ⁹ years
Mega	M	$\times 10^6$	1 Megaton (TNT weight of recent nuclear)
Kilo	k	$\times 10^3$	1 Kilogram = 1000g
Deci	d	$\times 10^{-1}$	1 decimeter = 0.1 m
Centi	c	$\times 10^{-2}$	1 centimeter = 0.01 m
Milli	m	$\times 10^{-3}$	1 millimeter = 0.001 m
Micro	μ	$\times 10^{-6}$	1 microvolt = 10 ⁻⁶ V
Nano	n	$\times 10^{-9}$	1 nanosecond = 10 ⁻⁹ s
Pico	p	$\times 10^{-12}$	1 picofarad = 10 ⁻¹² F
Femto	f	$\times 10^{-15}$	1 femtometer (approx. size of a proton)
Atto	a	$\times 10^{-18}$	

Ex 2: French Revolution (Age of Reason): Rational basis for EVERY ASPECT OF LIFE.

• Second = 1 / 86 400 of a mean solar day
↳ BASED ON EARTH'S ROTATION MEASURES ON AXIS.
↳ 1955: second = 1 / 31 556 925.9747 of a mean tropical year
↳ 1967: cesium clock "atomic clock"

• [T] and [L] can now be defined in terms of atomic behavior: the wavelength of a certain light, and the frequency of certain atomic vibrations

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