Units and System Conversions

Table of Prefixes [1)]

prefix	symbol	factor
exa	E	10^{18}
peta	P	10^{15}
tera	T	10^{12}
giga	G	10^{9}
mega	M	10^{6}
kilo	k	10^{3}
deka	d	10^{2}
base	none	10^{0}
centi	c	10^{-2}
milli	m	10^{-3}
micro	µ	10^{-6}
nano	n	10^{-9}
pico	p	10^{-12}
femto	f	10^{-15}
atto	a	10^{-18}

System Dimensionality Conversions

From Dimensional_analysis

> There are many possible choices of base physical dimensions. The SI standard selects the following dimensions and corresponding dimension symbols:
> time (T), length (L), mass (M), electric current (I), absolute temperature (Θ), amount of substance (N) and luminous intensity (J).

Dim	SI	UCS[2)]
L	2.54cm	1in
M	2.2046kg	1lb

Temperature Conversions

$T_F = \frac{9}{5}T_C + 32$

$T_C = \frac{5}{9}(T_F-32)$

$0^{\circ}C = 273.15K$

$0^{\circ}F = 456.67^{\circ}R$[3)]

$T_R = \frac{5}{9}T_K$

IEC Binary Prefixes

The primary system in which binary unit magnetudes are represented. Intended to replace SI units for digital measurements, where numbers are represented in base-2 rather than base-10. Thus, when referring to units, generally KB is the SI interpretation of $1\cdot 10^3$ whereas 1KiB referrers to the IEC interpretation of $1\cdot 2^10$ in base-2.

Prefix	Symbol	Factor
base	none	2^{1}
kibi	Ki	2^{10}
mebi	Mi	2^{20}
gibi	Gi	2^{30}
pebi	Pi	2^{40}
exbi	Ei	2^{50}

1)

see NIST Special Publication 1038

2)

United States Customary Units

3)

Rakine is also archaically notated as R or $^{\circ}Ra$

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