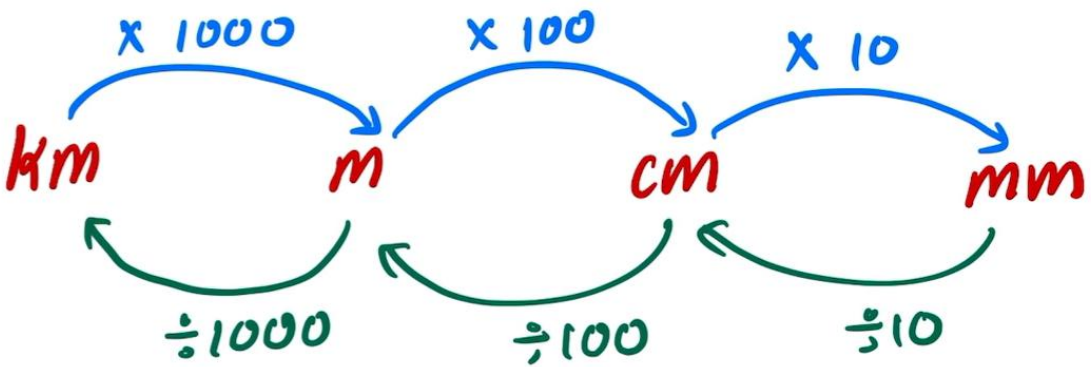
Time conversions

- $1\ hr = 60\ min = 3600\ sec$
- $1\ \frac{km}{hr} = \frac{1 \times 1000\ m}{3600\ sec} = \frac{5}{18}\ m/s$

most common conversion



$1\,mL = 1\,cm^3 = 1\,cc$

$1\,m^3 = 1000\,L$

$0^\circ C = 273\,K$ --- $[K = C + 273]$

$1\ Angstron\ (\mathring{A}) = 1 \times 10^{-10}\,m$

$1\,mol = 6.02 \times 10^{23}$ particles

$1\,cal = 4.18\,J$

$1\,atm = 760\,torr = 760\,mmHg = 101.3\,kPa$

$1 pa = 1 N/m^2 = 1 kg/m \cdot s^2$

$1 mega = 1 \times 10^6$

$1 \mu m = 1 \times 10^{-6} m$ → micrometer

$1 nm = 1 \times 10^{-9} m$ → nanometer

$1 fm = 1 \times 10^{-15} m$ → femtometer

$1 pm = 1 \times 10^{-12} m$ → picometer

$1 mm = 10^{-3} m$ → milimeter

* Point shifting *

43.28×10^5

(+ve) ← (−ve) →

$4.328 \times 10^5 \times 10^1$

4.328×10^6

$432.8 \times 10^5 \times 10^{-1}$

432.8×10^4

Indices

$$x^m \cdot x^n = x^{m+n}$$

e.g

$$10^5 \times 10^4 = 10^{5+4} = 10^9$$

$$\frac{1}{x^m} = 1 \times x^{-m}$$

eg

$$\frac{2}{10^4} = 2 \times 10^{-4}$$

$$\frac{2}{10^{-4}} = 2 \times 10^4$$

0.00984×10^5

$9.84 \times 10^5 \times 10^{-3}$

9.84×10^2

3.46×10^{-4}

$3.4698 \times 10^{-4} \times 10^2$

3.4698×10^{-2}