MOLE CONCEPT

Scientific notation
$N \times 10^n$ → integer
$N < 10$

Density → $\frac{\text{mass}}{\text{volume}}$

Temperature →
$°F = \frac{9}{5}(°C) + 32$
$K = °C + 273.15$

Limiting Reagent
The reactant which present in less quantity.
gets consumed after sometime.
$\frac{\text{given mole}}{\text{moles}}$ by this we can find L.R.

Isotopes - Z same, A diff
Isobars - Z diff, A same
Isoelectronic - Same num e^-s

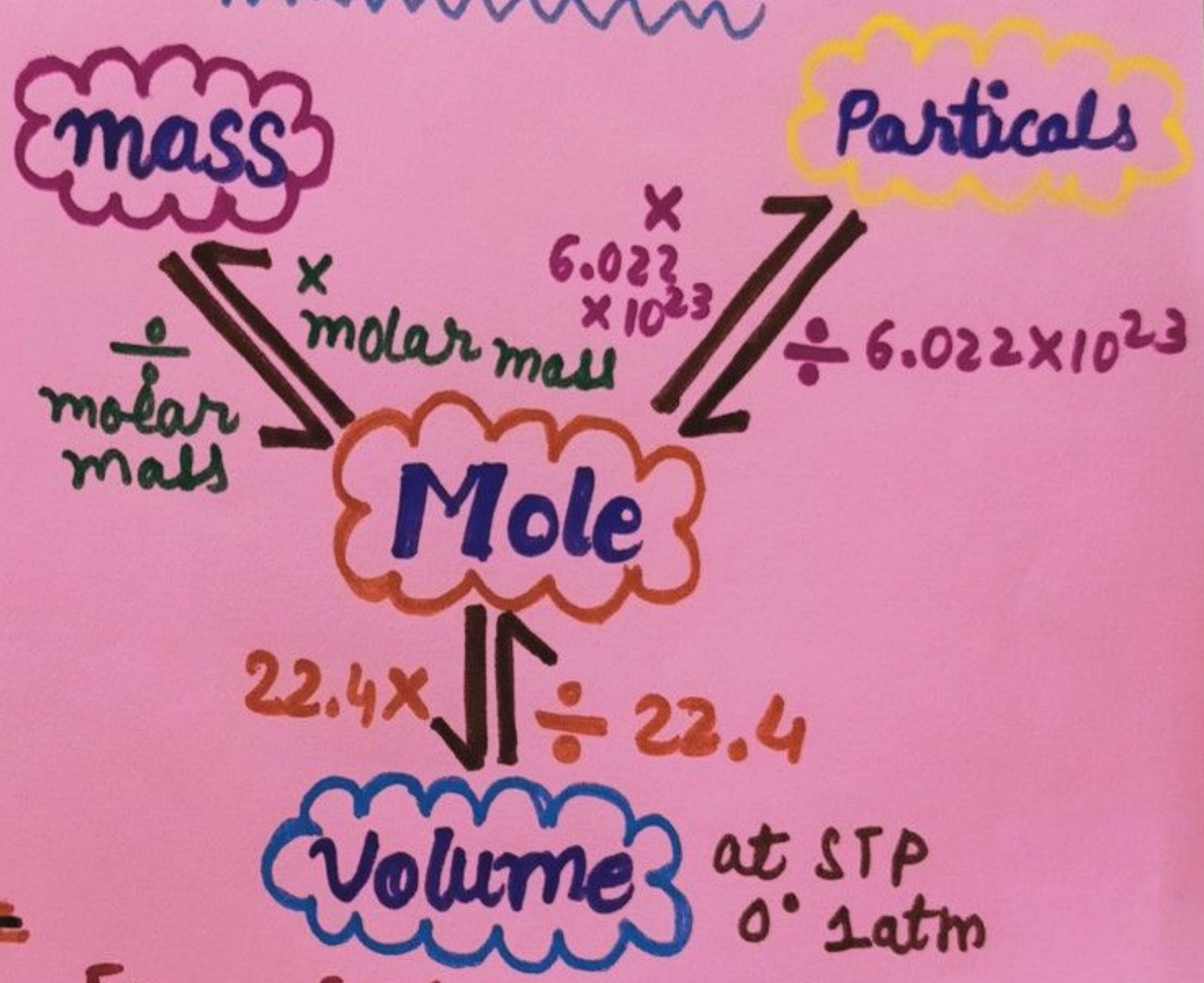
molar mass :- mass of one mole substance in grams.

one mole :- 6.022×10^{23} particles.

percentage composition :- $\frac{\text{mass}_c}{\text{molar mass}_c} \times 100$

Emperical formula = molecular formula

Conversions



★ Mass per cent
$= \frac{\text{Mass of solute}}{\text{Mass of solution}} \times 100$

★ Mole fraction
$= \frac{\text{No. of moles of A}}{\text{No. of moles of solution}}$

★ Molarity
$(M) = \frac{\text{No. of mole of solute}}{\text{volume of solution (Lit)}}$

★ Molality
$(m) = \frac{\text{no. of moles of solute}}{\text{mass of solvent (in kg)}}$

Emperical formula :- gives simplest whole number ratio of various elements in one molecule of compound.
formula of $C_2H_{12}O_6$
Emperical for. CH_2O

Molecular formula :- gives actual ratio of atom of various element in one molecule of com
$MF = n \times EF$
n is a common factor