Element:

An element is a pure substance in which all of the atoms have same atomic number.

Atomic mass:

Atomic mass: The sum of protons and neutrons in an atom is known as atomic mass.

Molecular mass:

The sum of all atomic masses present in a molecule is known as molecular mass.

Formula mass:

The sum of all atomic masse present in an ionic compound is known as formula mass.

Molecular formula:

The formula which represents the actual number of atoms in one molecule of a compound is known as molecular formula.

Empirical formula:

The formula which describes the smallest or the least ratio of the combining atoms of different elements present in a molecule .Empirical formula does not represent the actual number of atoms in a molecule. For example the molecular formula of benzene is C_6H_6 but the empirical formula is CH

Stoichiometry:

The study of relationship between amount of reactants and the amount of products involved in a balanced chemical equation is called Stoichiometry.

Limiting reactant:

The compound or substance which contains less number of moles and consume first in a chemical reaction due to which the reaction stops is called limiting reactant.

Mole:

Atomic mass of an element atom molecular mass of a compound and formula mass of an ionic substance when expressed in gram is called mole.

Example:

12gm C = 1 mole of carbon

24gm Mg = 1 mole of Magnesium

32gm of S =1 mole of Sulphur

18gm of H_2O =1 mole of water

14gm of C_2O =1 mole of Carbondioxide

58.5gm of NaCl =1 mole of Sodium Chloride

Avogadro's number (N_A):

One mole of any substance contains 6.02×10^{23} atoms, molecules and formula unit this number is known as Avogadro's number and denoted by N_A