

Chapter 2 Summary Notes

Main Concepts

Naming Compounds Review: Before naming a compound, it is important to know its type because naming depends upon the type. For naming purposes, we classify compounds as ionic compounds, molecular compounds, and acids.

- **Ionic Compounds** can be identified by the presence of a metal in it. (generally solids) Ex. NaCl, K₂SO₄, PbSO₄
- **Molecular compounds** are made up of all non metals. (generally liquids and gases) Ex. H₂O, N₂O₅
- **Acids** begin with H (generally present as aq solutions or gases) Ex. HCl, H₂SO₄, HClO₃

Coordination compound: compound that contains a complex ion or ions.

Ex. [Cu(NH₃)₄]Cl₂

1. Name **cation** before **anion**; one or both may be a complex. (Follow standard nomenclature for non-complexes.)
2. Within each complex (neutral or ion), name **all ligands** before the **metal**.
 - Name ligands in alphabetical order
 - If more than one of the same ligand is present, use a numerical prefix: *di*, *tri*, *tetra*, *penta*, *hexa*, ...
 - Ignore numerical prefixes when alphabetizing.
- In any (uncharged) atom: The # protons = atomic number (Z)

of e⁻ = # of p

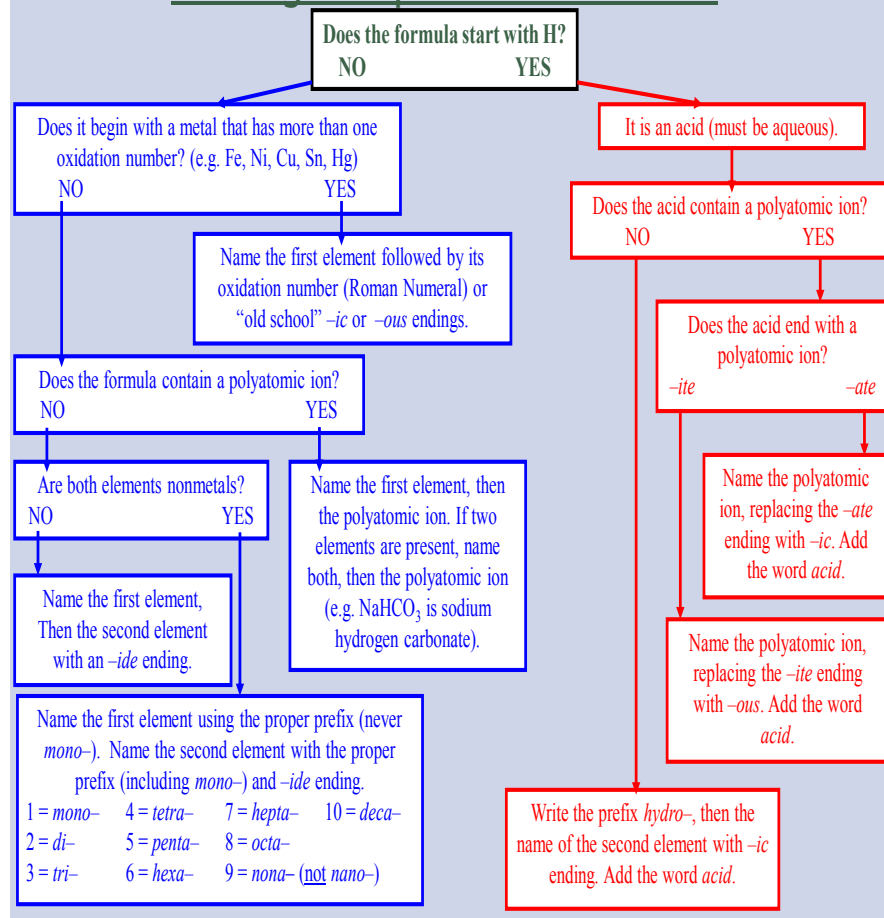
Mass # (A) = atomic # - # of neutrons

Atomic Symbol: ${}_6\text{C}^{12}$

- **Isotopes** are atoms of the same element containing different numbers of neutrons and therefore having different masses.

Explanations

Naming Compounds Flow Chart



Practice: 1. Sodium Sulfide (Na₂S), Potassium Nitrate (KNO₃), Ferrous Sulfate Fe (SO₄), Ammonium Chloride (NH₄Cl), Phosphoric Acid (H₃PO₄)

2. What is the O.N. of P in PO₄³⁻ ion?
3. What is the O.N. of Fe in Fe(NO₃)₃?

Summary of the Chapter and Important things to remember: