**Sec IV Review and Upscaling**

**IUPAC Nomenclature or Name That Compound (cpd)**

**Question 1**

* Is the compound **Ionic** or **Covalent**?

**Ionic** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Covalent** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Therefore **you must identify** the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Identify the following as Ionic (I) or Covalent (C):

MgCl2 \_\_\_\_\_\_\_\_

N2O4 \_\_\_\_\_\_\_\_

H2SO4 \_\_\_\_\_\_\_\_

AuPO4 \_\_\_\_\_\_\_\_

H2S \_\_\_\_\_\_\_\_

SiO2 \_\_\_\_\_\_\_\_

**Question 2**

* Is the compound **Binary**?

**Binary Cpd** ­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Ending**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Binary Covalent AKA Molecular Cpd then say “Thank you Chemistry Gods!!”**

* Non-metal to non-metal
* **Prefices**!!!!!
* Memorize them!

**Mono—Di—Tri—Tetra—Penta—Hexa—Hepta—Octa—Nona--Deca**

**First Element** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Second Element** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**e.g.**

**Non-metals gain or share electrons to become negative ions--ANIONS!**

**e.g. Cl atom e.g. N atom**

**Group I, II or III Ionic Cpd or “Normal” Ionic Cpd**

* Metal to non-metal
* Put **charges** in place
* Obtain charges from the Periodic Table

**Metals lose electrons to become positive ions--CATIONS!**

**e.g. Na atom e.g. Al atom**

**First Element** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Second Element** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**e.g.**

**English sentence as to what just happened!!** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Binary Transitional Metal Cpd = Ionic!! All about the charges!!**

* Identify the **charge** on the non-metal first.
* Figure out how many electrons the metal would have to lose to satisfy the non-metal’s needs!!!!!

**First Element**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Then!!** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Second Element** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**e.g.**

**Question 3**

* Is it a **Ternary** cpd?

**Ternary Cpd** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Ending**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for now!

Most of the terrnary cpds are ionic so they are named exactly like “normal” ionic cpds and transitional metal ionic cpds.

**e.g.**

**Other Stuff**

**Hydrogen (the Freak) Cpds are covalent but are named as if Gr 1A ionic!!**

**e.g.**

**Metalloid Cpds are named as if the first element were a non-metal therefore as covalent.**

**e.g.**

**“Right Angle Triangle” Compounds—have only 1 valence and therefore have no (#).**

**Exceptions**