

## NAMING IONIC COMPOUNDS

- The name of the compound is based on the name of the ions in the compound
- Cation first, anion second

Examples:



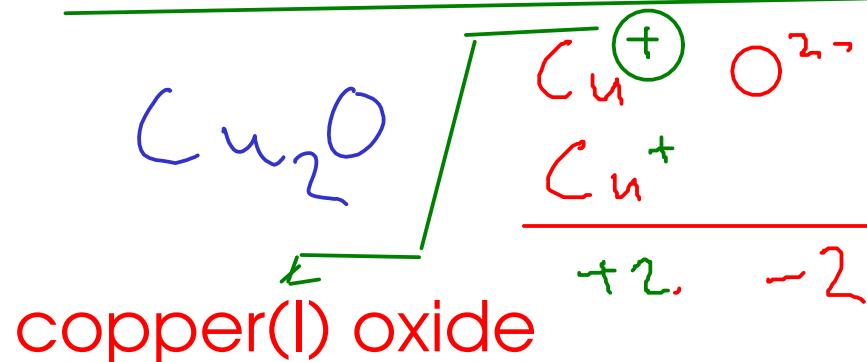
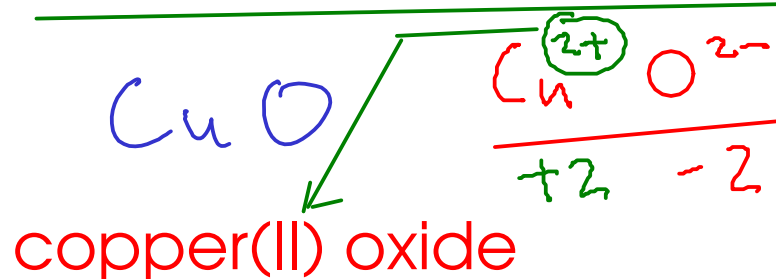
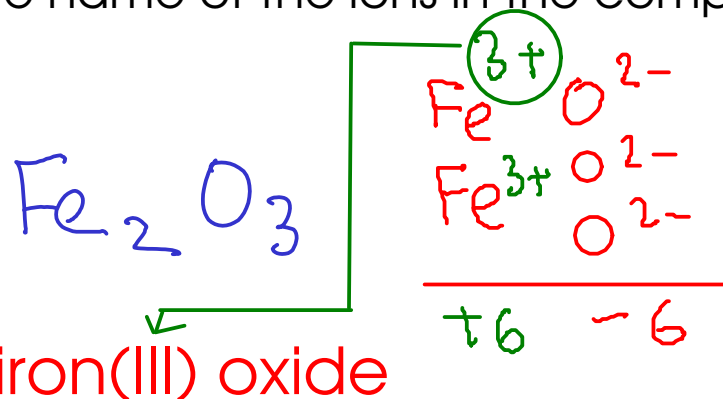
magnesium hydroxide



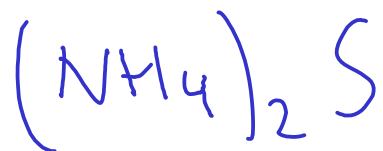
sodium sulfide



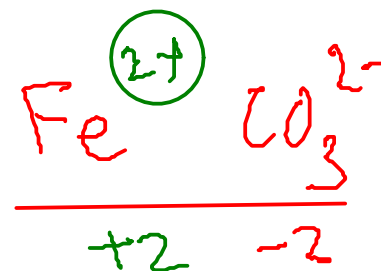
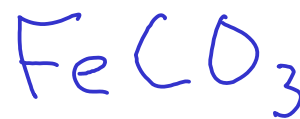
beryllium bromide



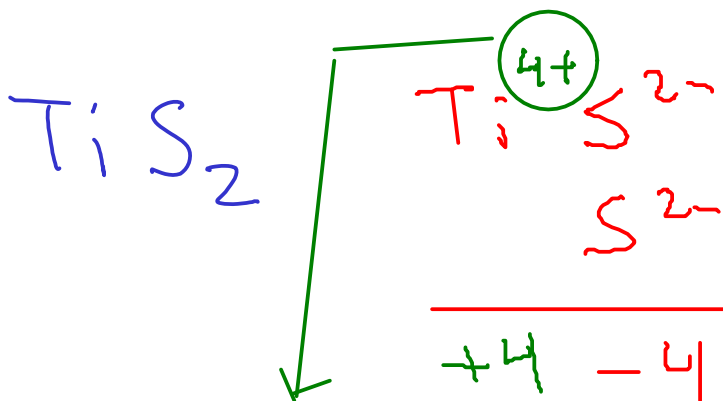
## NAMING IONIC COMPOUNDS



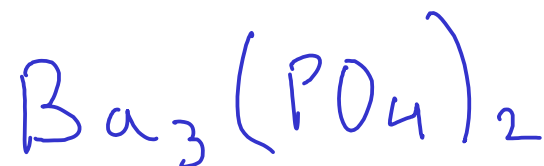
ammonium sulfide



iron(II) carbonate



titanium(IV) sulfide



barium phosphate

Spelling matters!



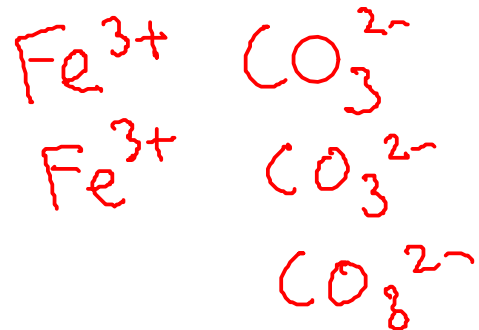
barium phosphide

## DETERMINING THE FORMULA OF AN IONIC COMPOUND FROM THE NAME

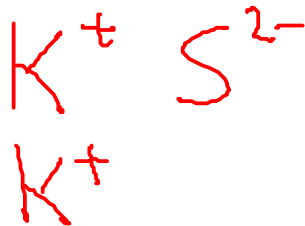
- The name of an ionic compound is made of the names of the CATION and ANION in the compound.
- To get the FORMULA, you must figure out the SMALLEST RATIO of cation to anion that makes the charges balance out

Examples:

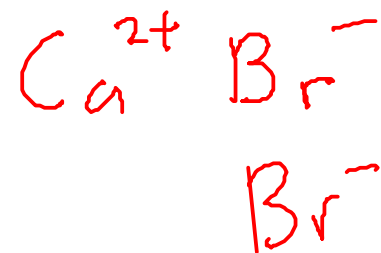
iron(III) carbonate



potassium sulfide

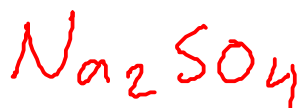
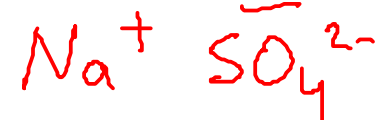


calcium bromide

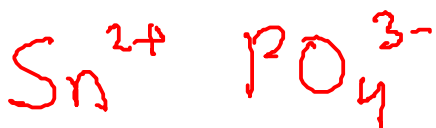


## DETERMINING IONIC FORMULAS

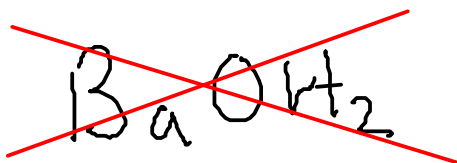
sodium sulfate



tin(II) phosphate



barium hydroxide



Remember: To indicate more than one polyatomic ion, you MUST use parenthesis!

strontium oxide



chromium(III) nitrate



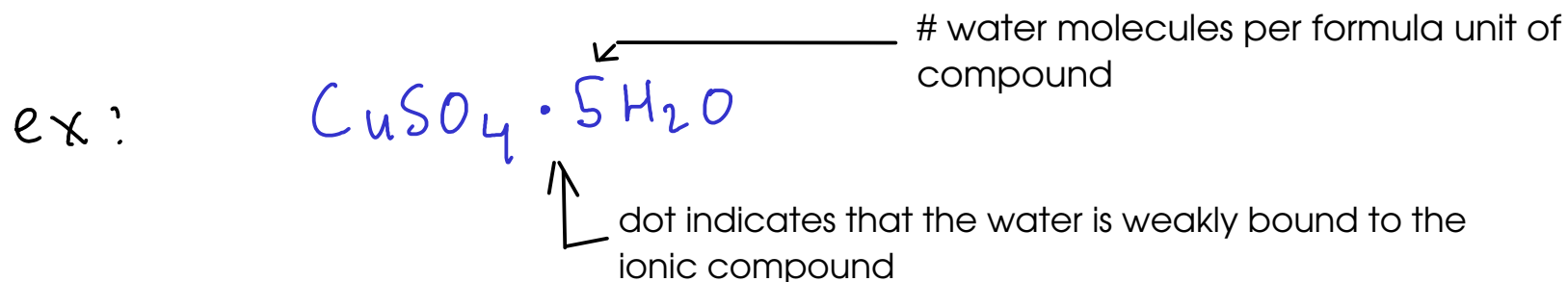
titanium(IV) chloride



## HYDRATES

- many ionic compounds are formed by crystallizing the compound from water. Sometimes, this causes water molecules to become part of the crystal structure.

- This water is present in a definite ratio to the ions in the compound. Can be removed by heating, but will NOT evaporate if the compound is left standing.



- many DESSICANTS are hydrates that have had their water molecules driven off. They will slowly reabsorb water from the air (and keep the environment in a dessicator at a low humidity)

- Hydrates are named using the name of the ionic compound, and a Greek prefix in front of the word "hydrate" to indicate how many water molecules are associated

Copper (II) sulfate pentahydrate

