NAMING AND WRITING THE CHEMICAL FORMULAS FOR COMPOUNDS

Part I. BINARY COMPOUNDS (just two elements) page 201 table 7.1

A. metal (with only 1 possible charge and nonmetal)

1. name the metal
2. root word for nonmetal + -ide

ex. $BaCl_2$ barium chloride

B. metal (with a variable charge) + nonmetal

1. name the metal
2. Use Roman numerals to indicate the charge of the metal and enclose in parentheses.
3. Root word for nonmetal + -ide

ex. CuCl copper (I) chloride

C. metalloid (or nonmetal) + nonmetal (MOLECULAR)

1. prefix to indicate the number of atoms of the metalloid (if more that one) + name of metalloid
2. prefix to indicate the number of atoms of the nonmetal + root word for the nonmetal + -ide

ex. N_2O_3 dinitrogen trioxide

Part II. TERTIARY COMPOUNDS

- metal (with one charge) + polyatomic ion (or radical)
  1. name the metal
  2. name the radical

ex. $CaCO_3$ calcium carbonate

B. metal (with variable charge) + polyatomic ion

3. name the metal
4. use Roman numerals to indicate the charge of the metal
5. name the polyatomic ion

ex. $Mn(OH)_2$ manganese (II) hydroxide

C. Radical + Radical

1. name the radical (mostly ammonium)
2. name the second radical

D. radical + nonmetal

1. name the radical then
2. nonmetal's root word + -ide

ex. NH_4Cl ammonium chloride

Part III. ACIDS (H has a + charge)

- when the anion name ends with -ide: hydro + root word for nonmetal + -ic +acid

  ex. hydrogen chloride HCl hydrochloric acid

- When the anion name ends with -ite: Drop the word hydrogen and then, keep root word for polyatomic ion + -ous + acid

  Ex. hydrogen sulfite H_2SO_3 sulfurous acid

- When the anion name ends with -ate: drop the word hydrogen and then, keep root word for the polyatomic ion and -ic + acid

  Ex. hydrogen sulfate H_2SO_4 sulfuric acid