

NAMING AND WRITING FORMULAS FOR BINARY COMPOUNDS

Name : _____

Writing Chemical Formulas of Ionic Compounds:

A. Find the oxidation number (charge) of each of the ions. Add subscripts if necessary so that the total charge of the compound is zero. (Compounds are neutral!)

| | | |
|----------------------------|---------------------------------------|--------------------------------|
| Examples: silver chloride: | Ag ¹⁺ and Cl ¹⁻ | AgCl |
| aluminum oxide: | Al ³⁺ and O ²⁻ | Al ₂ O ₃ |
| barium chloride: | Ba ²⁺ and Cl ¹⁻ | BaCl ₂ |
| barium oxide: | Ba ²⁺ and O ²⁻ | BaO |

1. barium chloride _____
2. calcium oxide _____
3. silver bromide _____
4. aluminum sulfide _____
5. iron(III) sulfide _____
6. iron (II) sulfide _____
7. sodium oxide _____
8. Potassium azide (N³⁻) _____

B. Look for the patterns when the elements from different families (groups) react with each other!

1. Write formulas for four compounds using elements from the alkali metals and the halogens.
2. Write formulas for four compounds using elements from the alkali metals and group VI.
3. Write formulas for four compounds using elements from the alkali earth metals and the halogens
4. Write formulas for four compounds using elements from Group III and the halogens.
5. Write formulas for four compounds using elements from Group III and group VI.
6. Describe the patterns that you see after writing these formulas.