## Understanding Chemical Formulas

A chemical formula tells you two things about the compound. First, it tells you the <u>types of atoms</u> combined together, shown by the chemical symbols. Second, it tells you the <u>ratio of the atoms</u>, shown by the subscripts.

KCI

H<sub>2</sub>O

C6H12O6

When there are parentheses around a group of elements and a subscript after it, you multiply the number of atoms inside the parentheses by the subscript.

Fe (NO<sub>3</sub>)<sub>2</sub>

<u>Directions</u>: For each chemical formula, write down the name of the elements and the ratio of the atoms.

- 1. CO<sub>2</sub>
- 2. CaCl<sub>2</sub>
- 3.  $H_2(NO_3)$
- 4. H<sub>2</sub>(SO<sub>4</sub>)
- 5. Fe<sub>2</sub>O<sub>3</sub>
- 6. LiBr
- 7. AlO<sub>3</sub>

- 8. BaBr<sub>2</sub>
- 9. CuCl<sub>2</sub>
- $10. Ca(CO_3)$
- 11. Ca (N O<sub>3</sub>)<sub>2</sub>
- 12. Cu (Cl O<sub>3</sub>)<sub>2</sub>
- 13. Cu (N O<sub>3</sub>)<sub>2</sub>
- 14. Mg (O H)2
- 15. Ca (P O<sub>4</sub>)<sub>2</sub>
- 16. Fe<sub>2</sub> (SO<sub>4</sub>) <sub>3</sub>

## Extra Challenge-Naming Chemical Compounds

## When naming a compound, follow the following steps:

- 1. Write the element name of the chemical symbol.
- 2. Write the element name of the second chemical symbol, but change its ending to -ide. (For example: oxygen changes to oxide)

  \*\*If several chemical symbols are in parentheses, the group of symbols has a special name. The names of several groups are listed below.
  - OH Hydroxide
  - 50<sub>4</sub> Sulfate
  - CO<sub>3</sub> Carbonate
  - ClO<sub>3</sub> Chlorate
  - PO<sub>4</sub> Phosphate
  - NO<sub>4</sub> Nitrate

Directions: Now try to name all of the compounds for #1-16.