Nomenclature of Acids

In a formula ALWAYS place an (aq) symbol

* When dissolved in water, certain molecules produce H+ ions (protons).
* These substances are called acids.
* They have a sour taste. Ex: Citric acid is the responsible for the tartness of lemons and limes.
* An acid can be viewed as a molecule with one or more H+ ions attached to an anion.

Rules For Naming Acids:

1. If the anion does **NOT** contain oxygen:
   1. The acid is named with the prefix **hydro-** and the suffix **–ic** attached to the root name for the **anion**.
   2. Place the word **acid** at the end.

Examples:

* + HCl Hydrochloric acid
  + HCN Hydrocyanic acid
  + H2S Hydrosulfuric acid

1. If the anion contains oxygen:
   1. The acid name is formed from the **anion** name with a suffix –**ic** or -**ous**.
      1. When the anion name ends in –**ate** the suffix –**ic** (or –ric) is used.
      2. When the anion name ends in –**ite** the suffix –**ous** is used.

Examples:

* + H2SO4  Sulfuric acid
  + H3PO4 Phosphoric acid
  + H2SO3 Sulfurous acid
  + HNO2 Nitrous acid

Name the following acids:

1. HF (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. HNO3 (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. HNO2 (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. HBr (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. HI (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. H2SO4 (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. H2SO3 (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. HC2H3O2 (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. H2S (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. HClO3 (aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Give the formulas of the following acids:

1. Hydrosulfuric acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Hydrophosphoric acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Phosphoric acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Hydrocyanic acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Hydrobromic acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Acetic acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Hydroiodic acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Chloric acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Carbonic acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10.Nitrous acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_