

## Naming Acids

Name \_\_\_\_\_

Refer to your list of polyatomic ions and a periodic table.

- Binary acids (When the anion does NOT contain oxygen):  
Use the prefix **hydro** + **root of the anion's name – ic** + the word acid  
Examples: HCl - **hydrochloric** acid
- Ternary acids (When the anion contains oxygen):  
The name will depend on the name of the polyatomic anion. DO NOT use the prefix hydro.

Examples:  $\text{H}_2\text{SO}_4$  the anion is **sulfate**, therefore the acid name will end in **ic** :  
**Sulfuric acid.**

$\text{H}_2\text{SO}_3$  the anion is **sulfite**, therefore the name of the acid will end in **ous**:  
**Sulfurous acid.**

$$\begin{array}{l} \text{ATE} \rightarrow \text{IC} \\ \text{ITE} \rightarrow \text{OUS} \end{array}$$

Write the formula for each of the acids listed below:

1.	Acetic acid
2.	Chlorous acid
3.	Hydrofluoric acid
4.	Citric acid
5.	Nitric acid
6.	Phosphorous acid

Name each of the following acids:

7.	$\text{HNO}_{2(\text{aq})}$
8.	$\text{HClO}_{3(\text{aq})}$
9.	$\text{H}_3\text{BO}_{3(\text{aq})}$
10.	$\text{H}_3\text{PO}_{4(\text{aq})}$
11.	$\text{H}_2\text{S}_{(\text{aq})}$
12.	$\text{H}_2\text{CO}_{3(\text{aq})}$

Note the (aq) symbol...we only name these substances as acids when dissolved in water! As pure substances, they are gases and we name them as ionic compounds.