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 - *hydro***chlor***ic* 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: H_2SO_4 the anion is sulf**ate**, therefore the acid name will end in **ic :** **Sulfuric acid.**

H_2SO_3 the anion is sulf**ite**, therefore the name of the acid will end in **ous**: **Sulfurous acid.**

ATE → IC
ITE → OUS

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.	$HNO_{2(aq)}$
8.	$HClO_{3(aq)}$
9.	$H_3BO_{3(aq)}$
10.	$H_3PO_{4(aq)}$
11.	$H_2S_{(aq)}$
12.	$H_2CO_{3(aq)}$

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.