

Name _____ Date _____ Period _____

Activity 10-13 Naming and Writing Formulas for Common Acids

Acids are written with the hydrogen ion first. Compounds that are not acids write the hydrogen ion second.

Binary Acids

Made of the hydrogen ion and a halogen (Group VIIA)

When acidic, binary acids will be dissolved in water, aqueous (aq)

Start with the prefix Hydro-

End with -ic Acid

Name the following Binary Acids:

1. HF (aq) _____
2. HCl (aq) _____
3. HBr (aq) _____
4. HI (aq) _____

Oxyacids

Made of hydrogen ions and oxyanions

Oxyanion ending in -ate changes to -ic Acid

Oxyanion ending in -ite changes to -ous Acid

Does not start with the prefix hydro-

Name the following Oxyacids:

H₂SO₄ _____

H₂CO₃ _____

HNO₃ _____

H₃PO₄ _____

HClO₄ _____

HClO₂ _____

H₂SO₃ _____

H₃PO₃ _____

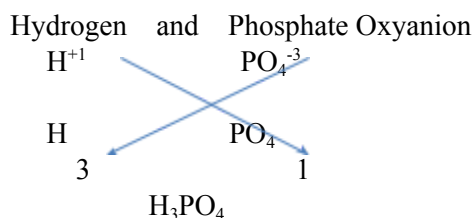
HC₂H₃O₂ _____

HClO₃ _____

Writing Formulas for Common Acids

1. All acids start with the hydrogen ion.
2. Determine if the acid is binary or is an oxyacid by whether it starts with the prefix Hydro-
3. Change oxyanion **-ic Acid** suffixes to the **-ate ion**.
4. Change oxyanion **-ous Acid** suffixes to the **-ite ion**.
5. If binary, hydrogen is first and the halogen is second.
6. Write the oxidation number for the ions.
7. Crisscross the oxidation numbers from superscripts to subscripts.

Write the formula for Phosphoric Acid:



Write the formula for the following common acids:

- | | |
|--------------------------|-----------------------------|
| 1. Sulfuric Acid _____ | 6. Carbonic Acid _____ |
| 2. Nitric Acid _____ | 7. Sulfurous Acid _____ |
| 3. Phosphoric Acid _____ | 8. Nitrous Acid _____ |
| 4. Chlorous Acid _____ | 9. Hydrochloric Acid _____ |
| 5. Hydroiodic Acid _____ | 10. Hypochlorous Acid _____ |