

Chapter 9 – Chemical Names and Formulas

Section 9.1 Regular Metals Review

- ☐ The _____ metals include Group ____ (except H) and ____ and _____.
- ☐ When _____ a compound that starts with a regular metal, _____ the first element and add _____ to the second element (except for polyatomic ions).
- ☐ When _____ the formula, remember to _____ charges.

Sample Problem

- ☐ Write the name or formula for the following:



Sodium sulfate

Practice Problems

- ☐ Write the name or formula for the following:



Barium oxide

Magnesium phosphate

Section 9.2 – Transition Metals Review

- ☐ The _____ metals are in Groups _____ and the _____.
- ☐ When naming compounds that start with a _____ metal, _____ the first element, add a _____ for the charge, and add -ide to the _____ element (except for polyatomic ions).
- ☐ When writing the formula, remember to _____.
- ☐ Remember that for the _____ naming system for transition metals, the _____ ending means the _____ charge and the _____ ending means the _____ charge.

Sample Problem

- ☐ Write the name or formula for the following:



Cupric sulfite

Practice Problem

- ☐ Write the name or formula for the following:

Zinc (II) permanganate

Cu_2O (old name)

Section 9.3 – Nonmetals Review

- ☐ The _____ are located to the right of the _____ line on the periodic table.
- ☐ When naming compounds that start with nonmetals, use _____ to indicate the _____ of atoms (except when the first element has ____ atom) and add _____ to the second element.
- ☐ When writing the formula do _____ balance charges, use the _____ to find the subscripts.

Sample Problem

- ☐ Write the name and formula for the following:



Diphosphorus pentoxide

Practice Problems

- ☐ Write the name and formula for the following.



Nitrogen trihydride

Phosphorous trichloride

Section 9.4 – Naming and Writing Formulas for Acids and Bases

- ☐ An _____ is a compound that produces _____ ions when it dissolves in water.

- ☐ The _____ for an acid normally starts with and ____.
- ☐ When _____ acids, you should first determine the _____ of the anion.
- ☐ Acids containing _____ whose names end in _____ are named by adding the prefix _____ and the suffix _____. Also add _____ at the end.
- ☐ Ex: HCl =

Sample Problem

- ☐ Write the names of the following acids:

HF

HCN

Practice Problem

- ☐ Write the names for the following acids:

HBr

HI

- ☐ When an acid contains a _____, you must determine whether it ends in _____ or _____.
- ☐ If the polyatomic ion ends in _____, then we change the ending to _____. Ex: $\text{HNO}_3 = \text{NO}_3^- = \text{nitrate} =$
- ☐ If the polyatomic ion ends in _____, then we change the ending to _____. Ex: $\text{HNO}_2 = \text{NO}_2^- = \text{nitrite} =$

Sample Problems

- ☐ Write the names of the following acids:

 H_2SO_4

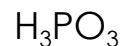
 H_3PO_4

 H_2SO_3

Practice Problems

- ☐ Write the names for the following acids.

 H_2CO_3



- ☐ When writing the _____ for an acid always start with _____ even if it is not in the _____.
- ☐ Remember to _____ the charges.
- ☐ The ending _____ means that the polyatomic ion ends in _____.
- ☐ The ending _____ means that the polyatomic ion ends in _____.

Sample Problem

- ☐ Write the formula for the following acids.

Hydrosulfuric acid

Hypochlorous acid

Acetic acid

Practice Problems

- ☐ Write the formula for the following acids.

Perchloric acid

Chromic acid

Oxalic acid

- ☐ A _____ is a compound that produces _____ in water.
- ☐ When naming a _____, you name it like any other compound that starts with a _____ or transition metal. Ex: NaOH =
- ☐ When writing the _____ for a base, remember to _____ charges. Ex: magnesium hydroxide =

Section 9.4 Assessment

1. How are the formulas for acids determined?
2. How are bases named?
3. Give the name of HMnO_4 .

4. Give the names of these bases.

a. LiOH

b. Pb(OH)_2

c. Al(OH)_3

5. Identify each compound as an acid or a base.

a. Ba(OH)_2

b. HClO_4

c. KOH

6. Write the formula for the following compounds.

a. carbonic acid

b. sulfurous acid

c. iron (III) hydroxide