

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_ #: \_\_\_\_

## **Naming Acids, Bases, and Salts**

### **POLYATOMIC IONS**

$\text{NH}_4^+$ _____	$\text{NO}_3^-$ _____	$\text{SO}_4^{-2}$ _____	$\text{PO}_4^{-3}$ _____
	$\text{NO}_2^-$ _____	$\text{SO}_3^{-2}$ _____	$\text{PO}_3^{-3}$ _____
	$\text{ClO}_3^-$ _____	$\text{CO}_3^{-2}$ _____	
	$\text{ClO}_2^-$ _____		
	$\text{OH}^-$ _____		
	$\text{C}_2\text{H}_3\text{O}_2^-$ _____		

### **SALTS**

Formula: YX

Y = cation, but not  $\text{H}^+$

X = anion, but not  $\text{OH}^-$

1. Salts are ionic compounds. To name an ionic compound say the name of the cation first, followed by the anion. The anion will end in -ide or -ate. (-ate means it contains oxygen)

2. Practice:

$\text{MgCl}_2$	_____
$\text{LiBr}$	_____
$\text{Al}(\text{NO}_3)_3$	_____
$\text{K}_2\text{SO}_4$	_____
$\text{BaCO}_3$	_____
$\text{NH}_4\text{Cl}$	_____
$\text{ZnI}_2$	_____
$\text{Ag}_2\text{SO}_4$	_____
$\text{KClO}_3$	_____
$\text{NH}_4\text{F}$	_____

## **BASES**

Formula: YOH

Y = cation

OH<sup>-</sup> = hydroxide ion

1. You should already know how to name most bases. Remember (OH<sup>-</sup>) is hydroxide. The compound NaOH, for example is \_\_\_\_\_. Ca(OH)<sub>2</sub> is named \_\_\_\_\_.

2. Practice:

Mg(OH) <sub>2</sub>	_____
LiOH	_____
Al(OH) <sub>3</sub>	_____
NH <sub>4</sub> OH	_____

3. One exception to this that requires memorization: NH<sub>3</sub> is \_\_\_\_\_. It's a BASE!

## **ACIDS**

Formula: H X

H<sup>+</sup> = hydrogen ion

X = anion

4. BINARY ACIDS RULE says: If the anion ends in -ide,

hydro \_\_\_\_\_ ic acid

Example: HCl hydrochloric acid

Practice:

HBr	_____
HI	_____
HF	_____

5. TERNARY ACIDS RULE 1 says: If the polyatomic anion ends in -ate

~~Hydro~~ \_\_\_\_\_ ic acid

Example: HClO<sub>3</sub> chloric acid

Practice:

HNO <sub>3</sub>	_____	H <sub>2</sub> CO <sub>3</sub>	_____
H <sub>2</sub> SO <sub>4</sub>	_____	HC <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	_____
H <sub>3</sub> PO <sub>4</sub>	_____		

6. TERNARY RULE 2 says: If the polyatomic anion ends in -ite

~~Hydro~~ \_\_\_\_\_ ous acid

H <sub>2</sub> SO <sub>3</sub>	_____	H <sub>2</sub> ClO <sub>2</sub>	_____
H <sub>3</sub> PO <sub>3</sub>	_____	HNO <sub>2</sub>	_____