

Name: \_\_\_\_\_  
Blk: \_\_\_\_\_ Date: \_\_\_\_\_

**Science 9**  
**Names and Formulas of Ionic Compounds**

Steps for naming ionic compounds with two elements:

Steps	Example: CaF <sub>2</sub>
1. Name the <b><u>metal ion</u></b>	<b><u>Ca<sup>2+</sup></u></b> → <b><u>Calcium</u></b>
2. Name the <b><u>non-metal ion</u></b> and change the ending to <b><u>"ide"</u></b>	<b><u>F<sup>1-</sup></u></b> → <b><u>Fluorine</u></b> → <b><u>Fluoride</u></b>
3. Put it all together	<b><u>Calcium fluoride</u></b>

Example 2: Na<sub>2</sub>S

1. Na<sup>+</sup> → Sodium
2. Cl<sup>1-</sup> → Chlorine → chloride
3. Sodium chloride

Example 3: LiBr

1. Li<sup>1+</sup> → Lithium
2. Br<sup>1-</sup> → Bromine → bromide
3. Lithium bromide

Now do the practice problems page 86 #1 a -o

Steps for writing formulas of **simple ionic compounds using the ratio method**:

Steps	Example 1: Zinc nitride
1. Identify each <b>ion</b> (be sure to write down the <b>charge</b> ) Always metal first non-metal second	<u>Zn<sup>2+</sup></u> <u>N<sup>3-</sup></u>
2. Determine the total charges needed to <b>balance</b> the positive and negative ions	<u>Zn<sup>2+</sup></u> : <u>+2+2+2</u> = <u>+6</u> <u>N<sup>3-</sup></u> : <u>-3-3</u> = <u>-6</u>
3. Note the <b>ratio</b> of positive ions to negative ions	<u>3 Zn<sup>2+</sup></u> <u>2 N<sup>3-</sup></u>
4. Use the ratio as <b>subscripts</b> (note a 1 is not written)	<u>Zn<sub>3</sub>N<sub>2</sub></u>

Example 2: Lithium phosphide

1. Li<sup>1+</sup>  
P<sup>3-</sup>
2.  
Li<sup>1+</sup> = +1+1+1 = +3  
P<sup>3-</sup> = -3
3. 3 Li  
1 P
4. Li<sub>3</sub>P

Example 3: Aluminium Bromide

1. Al<sup>3+</sup>  
Br<sup>1-</sup>
2.  
+3  
-1-1-1=-3
3. 1 Al  
3 Br
4. AlBr<sub>3</sub>

**Now do Practice Problems pg 87 # 2 a-n**