Name:_____
Blk:____Date:_____

Science 9
Names and Formulas of Ionic Compounds Continued

Steps for writing formulas of **ionic compounds with multivalent metals and polyatomic ions:**

Steps	Example 1: Iron (III) hydroxide
1. Identify each **ion** and its appropriate **charge** -Brackets show our charge on the multivalent metal ion. -Use polyatomic ion chart to identify charge on polyatomic ion	**Iron (III)** = **Fe^{3+}** **Hydroxide** = **OH^{1-}**
2. Drop the **(+) and (-)** from the ion charge and **CRISS-CROSS** the numbers, writing them as subscripts (or use ratio method)	**Fe^{3+}** **OH^{1-}** $Fe(OH)_3$
3. Write the Final formula	**$Fe(OH)_3$**
4. (if possible) Remember to **Reduce** subscripts: divide both subscripts by highest common factor	For example: Calcium dichromate Ca^{2+} $Cr_2O_7^{2-}$ $CaCr_2O_7$
5. Remember: **Drop any 1's** from the final formula	**$Fe(OH)_3$**

Example 2: Ammonium carbonate

1. Ammonium= NH_4^{1+} and Carbonate = CO_3^{2-}
2. NH_4^{1+} CO_3^{2-}

3. $(NH_4)_2CO_3$

Example 3: Iron (III) nitrate

1. Iron (III) = Fe^{3+} and nitrate = NO_3^{1-}
2. Fe^{3+} NO_3^{1-}

3. $Fe(NO_3)_3$

Now do Practice Problems page 91 #2 a – j

Name:_____
Blk:____Date:_____

Science 9
Names and Formulas of Ionic Compounds Continued

Steps for writing formulas of _____
_____:

Steps	Example 1: Iron (III) hydroxide
1. Identify each _____and its appropriate _____ -Brackets show our charge on the multivalent metal ion. -Use polyatomic ion chart to identify charge on polyatomic ion	
2. Drop the **(+) and (-)** from the ion charge and _____ the numbers, writing them as subscripts (or use ratio method)	
3. Write the formula	
4. (if possible) Remember to _____ subscripts: divide both subscripts by highest common factor	
5. Remember: _____ from the final formula	

Example 2: Ammonium carbonate

1.
2.

3.

Example 3: Iron (III) nitrate

1.
2.

3.

Now do Practice Problems page 91 #2 a – j