Naming Compounds and Writing Formulas

Name the following compounds:

Example: $Cr(ClO_3)_3$ Cr is a transition metal, so we look on our chart of transition metals and find that there are two charges for Cr, +2 and +3, chlorate, ClO_3 is a polyatomic ion, so we look at that chart and discover that it has a charge of –1 and there are 3 of them in the formula to make a total charge of –3, that means that Cr must be the +3 charge to cancel out the –3 charge and the formula must be called chromium III chlorate

1. CrS

2. $AgNO_3$

3. $PbSO_3$

4. $(NH_4)_3P$

5. SnF_4

6. PH_3

7. CI_4

8. N_2O_4

9. SF_6

10. $Na_2Cr_2O_7$

11. $Ba(CN)_2$

12. $KMnO_4$

13. LiOH

14. $Al(C_2H_3O_2)_3$

15. $FeCO_3$

Write Formulas for the following compounds:

Example: manganese II sulfide Manganese is a transition metal and the roman numeral II tells us it is Mn^{+2}, sulfide is just the negative sulfur ion from the periodic table, and it is in column 16 so it has 6 e^- and needs 2 more e^- so it gets a charge of –2 and is S^{-2}. The +2 and –2 cancel out, so the formula is MnS.

1. copper II phosphate

2. magnesium bromide

3. chromium III nitrite

4. ammonium oxide

5. zinc sulfate

6. lead IV hydroxide

7. sodium nitride

8. mercury II chromate

9. aluminum chlorite

10. iron II oxide

11. iron III oxide

12. potassium iodide

13. strontium cyanide

14. sulfur tetrafluoride

15. beryllium nitrate