

**Chemical Reactions Ws #9: Writing Balanced Equations**

Write balanced equations for each of the following reactions. Include symbols for physical states when indicated. If no reaction would occur, Write "No Rxn" and explain why.

1. The production of Hydrochloric acid from chlorine and hydrogen gas.
2. The formation of aqueous sulfuric acid from liquid water and sulfur trioxide gas.
3. Solid copper is placed in an aqueous solution of Silver I nitrate to yield solid silver and an aqueous solution of copper II nitrate.
4. Hydrogen gas reacts with fluorine gas to produce hydrogen fluoride gas.
5. The combustion of butane,  $C_4H_{10}$ .
6. magnesium carbonate  $\rightarrow$  magnesium oxide + carbon dioxide
7. Mercury (II) oxide breaks down into liquid mercury and oxygen gas.
8. Chlorine gas and lithium iodide react to form lithium chloride and iodine gas.
9. Aluminum metal + Phosphoric acid  $\rightarrow$
10. Solid Iron metal is placed in an aqueous solution of Copper II nitrate
11. Copper metal + Zinc II sulfate  $\rightarrow$
12. Aqueous solutions of lead II nitrate and ammonium chloride are mixed.
13. The reaction which produces aluminum hydroxide from aluminum oxide and water.
14. Zinc metal + tin (II) chloride  $\rightarrow$
15. The reaction involving copper (II) nitrate and barium sulfate solutions.