

## Chemistry Unit 7 Review Extra Credit

### More practice in writing and balancing equations

**Write balanced chemical equations for the following reactions.**

1. Zinc reacts with hydrogen chloride to form zinc chloride and hydrogen gas.
  
2. Sodium oxide reacts with water to form sodium hydroxide.
  
3. Iron metal reacts with water to form  $\text{Fe}_3\text{O}_4$  and hydrogen gas.
  
4. Aluminum bromide reacts with chlorine gas to produce aluminum chloride and liquid bromine.
  
5. Nitric acid ( $\text{HNO}_3$ ) reacts with barium hydroxide to produce barium nitrate and water.
  
6. Calcium sulfite decomposes when heated to form calcium oxide and sulfur dioxide.
  
7. Iron reacts with sulfuric acid ( $\text{H}_2\text{SO}_4$ ) to form iron(II) sulfate and hydrogen gas.
  
8. Ammonia ( $\text{NH}_3$ ) burns in air to form nitrogen dioxide and water.
  
9. Carbon disulfide burns in air to form carbon dioxide and sulfur dioxide.

10. Lead (II) carbonate reacts with nitric acid to form lead (II) nitrate, water and carbon dioxide.
  
11. Hydrogen peroxide ( $\text{H}_2\text{O}_2$ ) decomposes to produce liquid water and oxygen gas.
  
12. Magnesium chlorate decomposes to form magnesium chloride and oxygen gas.
  
13. Sodium sulfide reacts with nickel(II) nitrate to form nickel(II) sulfide and sodium nitrate.
  
14. Aluminum, when hot enough, burns in air to form aluminum oxide.
  
15. Copper(II) oxide, heated in the presence of methane gas ( $\text{CH}_4$ ), produces pure copper metal and the gases carbon dioxide and water.
  
16. Solutions of sodium carbonate and iron(III) chloride react to form solid iron(III) carbonate and sodium chloride in solution.