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**Chapter 7 Worksheet**

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Homework is not collected or graded, but should be worked on seriously every week.

**Part A: Writing Equations and Classifying Reactions**

1. Write balanced chemical equations for each reaction described below, then classify them as either combination, decomposition, combustion, single displacement or double displacement reactions.
  - a. Phosphoric acid reacts with pure sodium metal to form pure hydrogen and aqueous sodium phosphate.  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_
  - b. Benzene liquid (C<sub>6</sub>H<sub>6</sub>) burns in oxygen to form carbon dioxide and water (and heat).  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_
  - c. Calcium nitrate (aq) reacts with lithium sulfide (aq) forming solid calcium sulfide and lithium nitrate (aq).  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_
  - d. Sodium bicarbonate when heated will form solid sodium carbonate, carbon dioxide and water vapor.  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_
  - e. Sulfur naturally exists as S<sub>8</sub> molecules. Sulfur reacts with pure fluorine to form gaseous sulfur hexafluoride.  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_
  - f. Cobalt(III) bromide (aq) reacts with pure chlorine forming pure bromine and cobalt(III) chloride (aq).  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_
  - g. Aqueous potassium hydroxide reacts with sulfuric acid to form water and aqueous potassium sulfate.  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_
  - h. Iron(II) oxide reacts with pure oxygen to form iron(III) oxide.  
Equation: \_\_\_\_\_  
Classification: \_\_\_\_\_