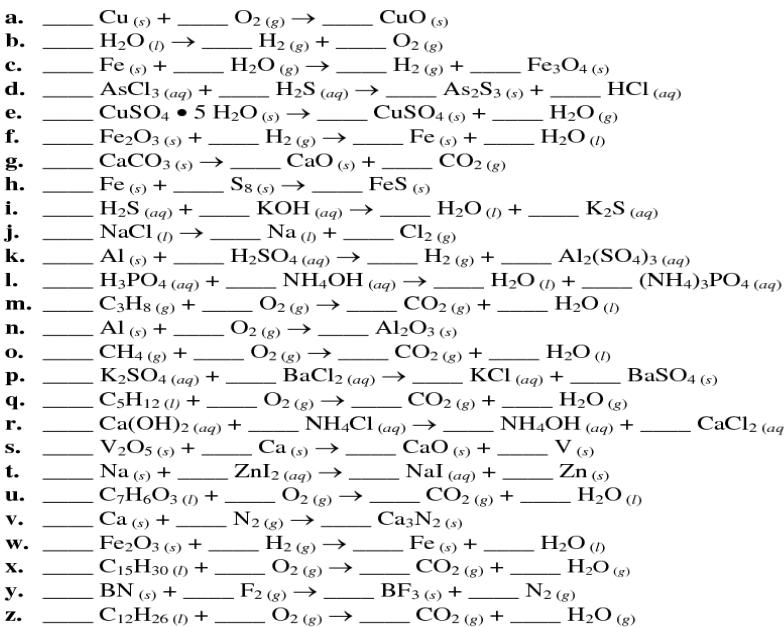


### **Worksheet: Writing and Balancing Chemical Reactions**

1. Balance the following equations and indicate the type of reaction as formation, decomposition, single replacement, double replacement, hydrocarbon combustion, or other.



2. Predict the product(s) along with the states, indicate the type of reaction, and balance the following chemical reactions.

- a. A solution of lead (II) nitrate is mixed with a solution of sodium iodide.  
b. Solid zinc sulfide reacts with oxygen in the air.  
c. Liquid butane ( $\text{C}_4\text{H}_{10(l)}$ ) is used as a fuel to ignite a lighter.  
d. Barium hydroxide solution is neutralized by adding hydrochloric acid ( $\text{HCl}_{(aq)}$ ).  
e. Copper metal is placed in a solution of silver nitrate.  
f. Sulfur burns in oxygen to make sulfur dioxide gas.  
g. A solution of aluminum sulfate is mixed with a solution of calcium hydroxide.  
h. Zinc metal is placed in sulfuric acid ( $\text{H}_2\text{SO}_4_{(aq)}$ ).  
i. Aluminum powder is placed in a container filled with chlorine gas.  
j. Sucrose undergoes cellular respiration.