Word Equation Problems

Write and balance the following chemical reactions:

1. Sodium and sulfur combine to yield sodium sulfide.

2. Carbon and oxygen combine to yield carbon dioxide.

3. Calcium carbonate decomposes to form calcium oxide and carbon dioxide.

4. Dihydrogen monoxide decomposes to form hydrogen and oxygen.

5. Copper (II) chloride and aluminum react to form copper and aluminum chloride.

6. Potassium reacts with water to form potassium hydroxide and hydrogen gas.

7. Hydrogen reacts with chlorine to produce hydrochloric acid.

8. Calcium hydroxide and hydrochloric acid react to produce calcium chloride and water.

9. Glucose ($C_6H_{12}O_6$) combines with oxygen to produce water and carbon dioxide.

10. Carbon reacts with water to form carbon monoxide and hydrogen.

11. Potassium iodide reacts with lead(II) nitrate to yield potassium nitrate and lead(II) iodide.

12. Ammonium sulfate reacts with barium nitrate to produce ammonium nitrate and barium sulfate.

13. C_2H_6 combines with oxygen to produce carbon dioxide and water.

14. Mercury(II) oxide decomposes to produce mercury and oxygen.

Classifying & Balancing Chemical Reactions **Name:**

Balance each chemical reaction below and identify the reaction type by writing the appropriate abbreviation from the box.

Synthesis	SY
Decomposition	DC
Combustion	C
Single Displacement	SD
Double Displacement	DD

Balance	Type
1) $HBr + Mg(OH)_2 \rightarrow MgBr_2 + H_2O$	
2) $PbBr_2 + HCl \rightarrow HBr + PbCl_2$	
3) $CoBr_3 + CaSO_4 \rightarrow CaBr_2 + Co_2(SO_4)_3$	
4) $C_4H_{12} + O_2 \rightarrow CO_2 + H_2O$	
5) $B_2O_3 + H_2O \rightarrow H_3BO_3$	
6) $H_2O \rightarrow H_2 + O_2$	
7) $C_2H_4 + O_2 \rightarrow CO_2 + H_2O$	
8) $Mg + Fe_2O_3 \rightarrow MgO + Fe$	
9) $H_3PO_4 + Ca(OH)_2 \rightarrow Ca_3(PO_4)_2 + H_2O$	
10) $Cl_2 + KBr \rightarrow KCl + Br_2$	
11) $H_3AsO_4 \rightarrow As_2O_5 + H_2O$	
12) $S_8 + O_2 \rightarrow SO_3$	
13) $Bi(NO_3)_3 + Al_2(SO_4)_3 \rightarrow Bi_2(SO_4)_3 + Al(NO_3)_3$	
14) $HgO \rightarrow Hg + O_2$	
15) $P + O_2 \rightarrow P_2O_3$	
16) $HBr + Ba(OH)_2 \rightarrow BaBr_2 + H_2O$	
17) $Fe + H_2O \rightarrow Fe_3O_4 + H_2$	
18) $C_3H_{10} + O_2 \rightarrow H_2O + CO_2$	