Equations #3

Name: _____

Part 1. Supply the correct coefficients to balance the following reaction equations (assume that all formulas are correct). Then classify each reaction as either synthesis, decomposition, single replacement, double replacement or combustion. Type of Reaction

1) _____H_2S (g) + _____O_2 (g) -----> _____H_2O (g) + _____S_6 (s) _____

2) _____C_4H_8 (g) + _____O_2 (g) -----> _____CO_2 (g) + _____H_2O (g) _____

3) _____Fe (s) + _____H_2O (l) -----> _____Fe_3O_4 (s) + _____H_2 (g) _____

4) _____$SiCl_4$ (s) ------> _____Si (s) + _____Cl_2 (g) _____

5) _____CuO (s) + _____HCl (aq) -----> _____$CuCl_2$ (aq) + _____H_2O (l) _____

6) _____$Ca(OH)_2$ (s) + _____ HCl (aq) ------> _____$CaCl_2$ (aq) + _____HOH (l) _____

7) _____$C_{14}H_{28}$ (g) + _____O_2 (g) ------> _____CO_2 (g) + _____H_2O (g) _____

8) _____W (s) + _____F_2 (g) ------> _____WF_5 (s) (l) _____

9) _____NaI (s) + _____F_2 (g) ------> _____I_2 (s) + _____NaF (s) _____

10) _____$Ba(ClO_3)_2$ (aq) ------> _____BaO (aq) + _____Cl_2 (g) + _____ O_2 (g) _____

Part 2. Write the correct formulas for all reactants and products, then supply the necessary coefficients to balance the equations. Then classify each equation according to its reaction type.

11) Solid chromium metal reacts with liquid iodine to form liquid chromium (III) iodide.

12) Rubidium chloride and magnesium sulfate combine to produce rubidium sulfate and magnesium chloride, all in aqueous solution.

13) Aqueous aluminum sulfide reacts with hydrogen gas to produce aqueous hydrosulfuric acid (H_2S) and aluminum metal.

14) Using electrolysis, the compound dinitrogen pentaoxide (N_2O_5) can be broken down into nitrogen gas and oxygen gas.

15) Liquid octane (C_8H_{18}) in gasoline burns in the presence of oxygen to form carbon dioxide gas and liquid water.

Part 3: Identify each of the following reactions by writing the name of the reaction on the line to the left of the chemical reaction. Complete the reaction on the line to the right. Be sure to balance the equation.

	Reaction Type	Reaction		
16)	_____	____$CaBr_2$ + ___ O_2	-->	_____
17)	_____	____NaCl + ___ $AgNO_3$	-->	_____
18)	_____	____Mg + ___ $NiCl_3$	-->	_____
19)	_____	____$Pb(NO_3)_2$ + ___ KBr	-->	_____
20)	_____	____AuF_3 + ___ Na	-->	_____
21)	_____	____Mg + ___ O_2	-->	_____
22)	_____	____$C_{11}H_{24}$ + ___ O_2	-->	_____