Equations 2

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, or combustion.

Type of Reaction

1) ____P_4 (s) + ____S_8 (s) ------> ____P_2S_3 (s) _____

2) ____C_8H_{18} (l) + ____O_2 (g) ------> ____CO_2 (g) + ____H_2O (g) _____

3) ____N_2 (g) + ____H_2 (g) -----> ____NH_3 (g) _____

4) ____$K_2Cr_2O_7$ (s) ----> ____K_2CrO_4 (s) + ____Cr_2O_3 (s) + ____O_2 (g) _____

5) ____H_2CO_3 (l) ------> ____CO_2 (g) + ____H_2O (g) _____

6) ____C_4H_{10} (g) + ____O_2 (g) ------> ____CO_2 (g) + ____H_2O (g) _____

7) ____U (s) + ____F_2 (g) ------> ____UF_6 (s) _____

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.

8) Solids iron and sulfur react to form solid iron (III) sulfide.

9) Solid glucose ($C_6H_{12}O_6$) reacts with oxygen gas to form carbon dioxide gas and liquid water.

10) Over time, the solid copper on a penny will react with nitrogen in the air to make a solid black copper (II) nitride coating.

11) Solid aluminum oxide mineral can be separated into solid aluminum and oxygen gas.

12) Under the right conditions, bleach (aqueous sodium hypochlorite) can be decomposed into aqueous sodium chloride and oxygen gas,

Equations 2

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, or combustion.

Type of Reaction

1) ____$Fe(OH)_3$ (s) -----> ____Fe_2O_3 (s) + ____H_2O (l) _____

2) ____As_4 (s) + ____O_2 (g) -----> ____As_2O_5 (s) _____

3) ____C_9H_{16} (g) + ____O_2 (g) ------> ____CO_2 (g) + ____H_2O (g) _____

4) ____P (s) + ____O_2 (g) ------> ____P_2O_5 (s) _____

5) ____H_2O_2 (aq) ------> ____O_2 (g) + ____H_2O (l) _____

6) ____Cr (s) + ____Br_2 (s) ------> ____$CrBr_3$ (s) _____

7) ____C_3H_8 (l) + ____O_2 (g) ------> ____CO_2 (g) + ____H_2O (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.

8) When solid calcium oxide is placed in liquid water, an aqueous solution of calcium hydroxide is produced.

9) Solid silver chloride, when placed in sunlight, will convert into solid silver and chlorine gas.

10) Liquid pentane (C_5H_{12}) can be burned in the presence of oxygen gas to make carbon dioxide gas and water vapor.

11) Iron metal slowly reacts with oxygen gas to produce solid "rust" (iron (III) oxide).

12) Solid molybdenum (VI) oxide can be broken down into solid molybdenum metal and oxygen gas.