Chemical Equations Review

Writing Chemical Equations

*Formula Equations. Write an **unbalanced** equation for each of the following reactions. If states of matter are included in the reaction, you must include them in your equation.*

1. In the presence of a spark, hydrogen gas reacts explosively with oxygen to produce water vapor.

2. Magnesium oxide decomposes to form magnesium and oxygen.

3. lead (II) oxide reacts with lead (II) sulfide to yield elemental lead and sulfur dioxide.

4. Ammonium dichromate decomposes to yield elemental nitrogen, water vapor, and solid chromium (III) oxide.

5. An aqueous solution of silver nitrate reacts with an aqueous solution of barium chloride to yield an aqueous solution of barium nitrate and a silver chloride precipitate.

Balancing Chemical Equations

Formula Equations. Balance the following equations using the lowest possible coefficients.

1. __Li + __O_2 → __Li_2O

3. __K + __KNO_3 → __K_2O + __N_2

4. __Fe_2O_3 + __CO → __Fe + __CO_2

5. __$KClO_3$ → ___ KCl + ___ O_2

6. __C_3H_8 + __O_2 → __CO_2 + __H_2O

7. __$NaNO_3$ → __$NaNO_2$ + __O_2

8. __Fe_3O_4 + __CO → __Fe + __CO_2

9. __H_3PO_4 + __$Mg(OH)_2$ → __$Mg_3(PO_4)_2$ + __H_2O

10. __$AlCl_3$ + __$AgNO_3$ → __AgCl + __$Al(NO_3)_3$

Word Equations. *Write a **balanced** equation for each of the following reactions. If states of matter are included in the reaction, you must include them in your equation.*

1. Rubidium hydroxide reacts with sulfur dioxide to yield rubidium sulfite and water.

2. Hydrochloric acid reacts with an aqueous solution of silver nitrate to yield nitric acid and a silver chloride precipitate.

3. Magnesium metal reacts with an aqueous solution of copper (II) sulfate to yield an aqueous solution of magnesium sulfate and copper metal.