Review Pak #2

"If I Mix These Chemicals Will It Explode?"

1. Fill in the blanks.

   (a) The _____ are new substances that are created following a chemical reaction.

   (b) The _____ are either elements or compounds which are present prior to a chemical reaction.

2. Indicate the elements and the number of each atom in each of the following compounds.

   (a) $MgSO_4$

   (b) $CaCO_3$

   (c) $Ca(OH)_2$

   (d) $Al_2(SO_4)_3$

(e) $3HCl$

(f) $4H_2O$

(g) $2Mg(NO_3)_2$

(h) $3Fe_2(SO_4)_3$

3. What is the law of Conservation of Mass?

4. Indicate if the following chemical equations are balanced (B) or unbalanced (U)?

   (a) _____ $CH_4 + O_2 \rightarrow CO_2 + 2H_2O$

   (b) _____ $NaBr + CaF_2 \rightarrow NaF + CaBr_2$

   (c) _____ $4Fe + 3O_2 \rightarrow 2Fe_2O_3$

   (d) _____ $SnO_2 + 2H_2 \rightarrow Sn + 2H_2O$

   (e) _____ $K + 2MgBr \rightarrow KBr + Mg$

5. Balance the following chemical equations.

   (a) _____ Mg + _____ $O_2 \rightarrow$ _____ MgO

   (b) _____ $H_2O \rightarrow$ _____ H_2 + _____ O_2

   (c) _____ Na + _____ $Br_2 \rightarrow$ _____ $NaBr$

   (d) _____ $SiCl_4 \rightarrow$ _____ Si + _____ Cl_2

(e) _____ Na_2O + _____ CO_2→ _____ Na_2CO_3

(f) _____ Mg + _____ HCl→ _____ $MgCl_2$ + _____ H_2

(g) _____ $TiCl_4$ + _____ H_2O→ _____ TiO_2 + _____ HCl

(h) _____ Na + _____ $AlCl_3$ → _____ NaCl + _____ Al

(i) _____ Ag_2SO_4 + _____ $CaCl_2$ → _____ AgCl + _____ $CaSO_4$

(j) _____ Zn + _____ HCl → _____ $ZnCl_2$ + _____ H_2