## **Check Homework - Worksheet**

$$- Mg_3N_2 + 6 H_2O \rightarrow 3 Mg(OH)_2 + 2 NH_3$$

$$2 A1 + 3 H_2SO_4 \rightarrow 3 H_2 + Al_2(SO_4)_3$$

$$- CaSO_4 \cdot 2H_2O + 2 SO_3 \rightarrow - CaSO_4 + 2 H_2SO_4$$

## **Types of Chemical Reactions**

There are five types of chemical reactions:

- I. Formation/Combination reactions occur when two substances (normally elements) react to form an ionic or molecular compound
- -when a metal and nonmetal react, the product will be the ionic compound formed by the most common ions.

$$\begin{array}{ccc} \text{Mg}^{2+} & \text{O}^{2-} \\ \text{Ex2Mg}_{(s)} + \text{O}_{2(g)} & \rightarrow 2 \text{MgO}_{(s)} \\ & \text{elements} & \text{compound} \\ & \text{reactants} & \text{product} \end{array}$$

II. A decomposition reaction is the result of an ionic or molecular compound breaking down into its elements.

⇒ it is the reverse of a formation reaction

$$\begin{array}{ccc} Ex2H_2O_{(l)} \rightarrow 2H_{2(g)} & + & O_{2(g)} \\ & & \text{compound} & & \text{elements} \\ & & \text{products} \end{array}$$

$$(K_{(s)} + N_{2(g)} \longrightarrow 2 K_3 N_{(s)})$$
 $(K_{(s)} + N_{3})$ 

$$\begin{array}{cccc} Pb^{2+} & O^{2-} \\ Pb_{(s)} + O_{2(g)} & & PbO_{(s)} \end{array}$$

$$C_6H_{12}O_{6(s)}$$
  $\longrightarrow$   $C_{(s)} + (H_{2(g)} + 3O_{2(g)})$ 

$$H_3PO_{4(1)} \longrightarrow (H_{2(9)} + P_{4(5)} + 8O_{2(9)})$$

## Homework

Worksheet

p. 331 #13, 14

p. 332 #15, 16