

Lesson 11: Formation/Synthesis/Composition Reactions

- 2 or more elements combine to make a new substance
- Element + element \rightarrow compound



Ex.) Write and balance the following formation/synthesis reactions:

1. Sulfur burns in air and makes sulfur dioxide

$$S_{8(5)} + 80_{2(9)} \longrightarrow 850_{2(9)}$$

2. Hydrogen and nitrogen form to make ammonia (NH₃)

$$3H_{2(9)} + N_{2(9)} \longrightarrow 2NH_{3(9)}$$

LCM(2,3) = 6

3. Magnesium and carbon and oxygen form to make magnesium carbonate

$$2Mg(s) + 2C(s) + 3O_{2(g)} \rightarrow 2MgCO_{3(s)}$$

2 | 2 | 3 | 2



4. Sodium plus silicon plus oxygen to make sodium silicate

 $4Na_{(s)}+25_{i(s)}+30_{2(g)} \rightarrow 2Na_25i0_{3(aq)}$

5. Magnesium plus fluorine to make magnesium fluoride

 $Mg(s) + F_{2(g)} \longrightarrow MgF_{2(s)}$

6. Silver plus oxygen to make $5i |_{Ver} 2-$

 $4 Ag(s) + O_{2(g)} \rightarrow 2 Ag_2O(s)$

Worksheet