

### Word Equations & Balancing Practice

*Write the following chemical reactions and balance if necessary. Additionally, identify what type of reaction it is.*

1. Sodium combines with chlorine to produce sodium chloride.
2. When solid copper reacts with aqueous silver (I) nitrate, the products are aqueous copper (II) nitrate and silver metal.
3. Solid iron (III) oxide and carbon monoxide gas produce iron metal and carbon dioxide gas.
4. Sulfuric acid ( $\text{H}_2\text{SO}_4$ ) and sodium hydroxide react to form sodium sulfate and water.
5. Vanadium (II) oxide with iron (III) oxide results in the formation of vanadium (V) oxide and iron (II) oxide.
6. Aluminum reacts with oxygen to produce aluminum oxide.
7. Mercury (II) oxide decomposes to produce mercury and oxygen

8. Sodium carbonate decomposes to produce sodium oxide and carbon dioxide
  
9. Carbon dioxide gas reacts with solid lithium hydroxide to produce solid lithium carbonate and water.
  
10. Ammonia gas reacts with oxygen gas to produce nitrogen monoxide gas and steam.
  
11. Solid ammonium nitrate decomposes to produce dinitrogen monoxide gas and water.
  
12. Carbon monoxide reacts with hydrogen to produce methanol (CH<sub>3</sub>OH)