

### Combination (Synthesis) Reactions

1.  $\underline{\quad}$ P<sub>4</sub> +  $\underline{\quad}$ O<sub>2</sub> →  $\underline{\quad}$ P<sub>2</sub>O<sub>5</sub>
2.  $\underline{\quad}$ Ca +  $\underline{\quad}$ O<sub>2</sub> →  $\underline{\quad}$ CaO
3.  $\underline{\quad}$ Cu +  $\underline{\quad}$ S<sub>8</sub> →  $\underline{\quad}$ CuS
4.  $\underline{\quad}$ S<sub>8</sub> +  $\underline{\quad}$ O<sub>2</sub> →  $\underline{\quad}$ SO<sub>2</sub>
5.  $\underline{\quad}$ H<sub>2</sub> +  $\underline{\quad}$ N<sub>2</sub> →  $\underline{\quad}$ NH<sub>3</sub>
6.  $\underline{\quad}$ H<sub>2</sub> +  $\underline{\quad}$ Cl<sub>2</sub> →  $\underline{\quad}$ HCl
7.  $\underline{\quad}$ Cr +  $\underline{\quad}$ O<sub>2</sub> →  $\underline{\quad}$ Cr<sub>2</sub>O<sub>3</sub>
8.  $\underline{\quad}$ Al +  $\underline{\quad}$ Br<sub>2</sub> →  $\underline{\quad}$ AlBr<sub>3</sub>
9.  $\underline{\quad}$ Na +  $\underline{\quad}$ I<sub>2</sub> →  $\underline{\quad}$ NaI
10.  $\underline{\quad}$ H<sub>2</sub> +  $\underline{\quad}$ O<sub>2</sub> →  $\underline{\quad}$ H<sub>2</sub>O
11.  $\underline{\quad}$ Al +  $\underline{\quad}$ O<sub>2</sub> →  $\underline{\quad}$ Al<sub>2</sub>O<sub>3</sub>

### Decomposition Reactions

12.  $\underline{\quad}$ AlCl<sub>3</sub> →  $\underline{\quad}$ Al +  $\underline{\quad}$ Cl<sub>2</sub>
13.  $\underline{\quad}$ MgCO<sub>3</sub> →  $\underline{\quad}$ MgO +  $\underline{\quad}$ CO<sub>2</sub>
14.  $\underline{\quad}$ K<sub>2</sub>CO<sub>3</sub> →  $\underline{\quad}$ K<sub>2</sub>O +  $\underline{\quad}$ CO<sub>2</sub>
15.  $\underline{\quad}$ Zn(OH)<sub>2</sub> →  $\underline{\quad}$ ZnO +  $\underline{\quad}$ H<sub>2</sub>O
16.  $\underline{\quad}$ Fe(OH)<sub>2</sub> →  $\underline{\quad}$ FeO +  $\underline{\quad}$ H<sub>2</sub>O
17.  $\underline{\quad}$ Ni(ClO<sub>3</sub>)<sub>2</sub> →  $\underline{\quad}$ NiCl<sub>2</sub> +  $\underline{\quad}$ O<sub>2</sub>
18.  $\underline{\quad}$ NaClO<sub>3</sub> →  $\underline{\quad}$ NaCl +  $\underline{\quad}$ O<sub>2</sub>
19.  $\underline{\quad}$ H<sub>2</sub>SO<sub>4</sub> →  $\underline{\quad}$ H<sub>2</sub>O +  $\underline{\quad}$ SO<sub>3</sub>
20.  $\underline{\quad}$ H<sub>2</sub>CO<sub>3</sub> →  $\underline{\quad}$ H<sub>2</sub>O +  $\underline{\quad}$ CO<sub>2</sub>
21.  $\underline{\quad}$ Al<sub>2</sub>O<sub>3</sub> →  $\underline{\quad}$ Al +  $\underline{\quad}$ O<sub>2</sub>
22.  $\underline{\quad}$ Ag<sub>2</sub>O →  $\underline{\quad}$ Ag +  $\underline{\quad}$ O<sub>2</sub>

### Single Replacement Reactions

23.  $\underline{\quad}$ AlBr<sub>3</sub> +  $\underline{\quad}$ Cl<sub>2</sub> →  $\underline{\quad}$ AlCl<sub>3</sub> +  $\underline{\quad}$ Br<sub>2</sub>
24.  $\underline{\quad}$ NaI +  $\underline{\quad}$ Br<sub>2</sub> →  $\underline{\quad}$ NaBr +  $\underline{\quad}$ I<sub>2</sub>
25.  $\underline{\quad}$ Ca +  $\underline{\quad}$ HCl →  $\underline{\quad}$ CaCl<sub>2</sub> +  $\underline{\quad}$ H<sub>2</sub>
26.  $\underline{\quad}$ Al +  $\underline{\quad}$ Fe<sub>2</sub>O<sub>3</sub> →  $\underline{\quad}$ Al<sub>2</sub>O<sub>3</sub> +  $\underline{\quad}$ Fe

27.  $\underline{\text{Al}} + \underline{\text{CuCl}_2} \rightarrow \underline{\text{Cu}} + \underline{\text{AlCl}_3}$   
 28.  $\underline{\text{CuBr}} + \underline{\text{F}_2} \rightarrow \underline{\text{CuF}} + \underline{\text{Br}_2}$   
 29.  $\underline{\text{Zn}} + \text{CuSO}_4 \rightarrow \underline{\text{ZnSO}_4} + \underline{\text{Cu}}$   
 30.  $\underline{\text{Li}} + \underline{\text{HF}} \rightarrow \underline{\text{LiF}} + \underline{\text{H}_2}$   
 31.  $\underline{\text{Mg}} + \underline{\text{HNO}_3} \rightarrow \underline{\text{Mg(NO}_3)_2} + \underline{\text{H}_2}$   
 32.  $\underline{\text{Zn}} + \underline{\text{H}_2\text{SO}_4} \rightarrow \underline{\text{ZnSO}_4} + \underline{\text{H}_2}$   
 33.  $\underline{\text{K}} + \underline{\text{H}_2\text{O}} \rightarrow \underline{\text{KOH}} + \underline{\text{H}_2}$   
 34.  $\underline{\text{Na}} + \underline{\text{H}_2\text{O}} \rightarrow \underline{\text{NaOH}} + \underline{\text{H}_2}$

### Double Replacement Reactions

35.  $\underline{\text{AlI}_3} + \underline{\text{HgCl}_2} \rightarrow \underline{\text{AlCl}_3} + \underline{\text{HgI}_2}$   
 36.  $\underline{\text{CuBr}_2} + \underline{\text{AlCl}_3} \rightarrow \underline{\text{CuCl}_2} + \underline{\text{AlBr}_3}$   
 37.  $\underline{\text{FeS}} + \underline{\text{HCl}} \rightarrow \underline{\text{FeCl}_2} + \underline{\text{H}_2\text{S}}$   
 38.  $\underline{\text{Ag}_2\text{S}} + \underline{\text{CuCl}_2} \rightarrow \underline{\text{AgCl}} + \underline{\text{CuS}}$   
 39.  $\underline{\text{CaS}} + \underline{\text{HCl}} \rightarrow \underline{\text{CaCl}_2} + \underline{\text{H}_2\text{S}}$   
 40.  $\underline{\text{CaBr}_2} + \underline{\text{KOH}} \rightarrow \underline{\text{Ca(OH)}_2} + \underline{\text{KBr}}$   
 41.  $\underline{\text{HCl}} + \underline{\text{NaOH}} \rightarrow \underline{\text{NaCl}} + \underline{\text{H}_2\text{O}}$   
 42.  $\underline{\text{H}_2\text{SO}_4} + \underline{\text{KOH}} \rightarrow \underline{\text{K}_2\text{SO}_4} + \underline{\text{H}_2\text{O}}$   
 43.  $\underline{\text{Ca(OH)}_2} + \underline{\text{H}_2\text{SO}_4} \rightarrow \underline{\text{CaSO}_4} + \underline{\text{H}_2\text{O}}$   
 44.  $\underline{\text{BaCl}_2} + \underline{\text{H}_2\text{SO}_4} \rightarrow \underline{\text{BaSO}_4} + \underline{\text{HCl}}$

### Combustion Reactions

45.  $\underline{\text{CH}_4} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 46.  $\underline{\text{C}_2\text{H}_6} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 47.  $\underline{\text{C}_3\text{H}_8} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 48.  $\underline{\text{C}_4\text{H}_{10}} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 49.  $\underline{\text{C}_5\text{H}_{12}} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 50.  $\underline{\text{C}_6\text{H}_{14}} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 51.  $\underline{\text{C}_2\text{H}_4} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 52.  $\underline{\text{C}_2\text{H}_2} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$   
 53.  $\underline{\text{C}_6\text{H}_6} + \underline{\text{O}_2} \rightarrow \underline{\text{CO}_2} + \underline{\text{H}_2\text{O}}$