

## 5 • Reaction in Aqueous Solution

### TYPES OF REACTIONS

To help make sense of all the different chemical reactions that exist, we classify reactions into several types. There are four types of reactions besides *Combustion*.

Types	Pattern	Example
Double Replacement	$XY + AB \rightarrow XB + AY$	$2AgNO_3 + K_2CrO_4 \rightarrow Ag_2CrO_4 + 2KNO_3$
Single Replacement	$XY + A \rightarrow AY + X$	$Zn + 2HCl \rightarrow H_2 + ZnCl_2$
Synthesis	$X + Y \rightarrow XY$	$2H_2 + O_2 \rightarrow 2H_2O$
Decomposition	$AB \rightarrow A + B$	$H_2CO_3 \rightarrow H_2O + CO_2$

Classify each of the following reactions as **DR**, **SR**, **S**, **D** or **C** and then balance the equation.

