

# ANSWER KEY

Instructions: Balance the following chemical equations then tell what type of chemical reaction is displayed in the chemical equation.

- $2 \text{Mg}_{(s)} + 1 \text{O}_{2(g)} \rightarrow 2 \text{MgO}_{(s)}$  Synthesis
- $1 \text{BaCl}_{2(aq)} + 1 \text{Na}_2 \text{SO}_{4(aq)} \rightarrow 2 \text{NaCl}_{(aq)} + 1 \text{BaSO}_{4(s)}$  D-R
- $1 \text{C}_{(s)} + 1 \text{O}_{2(g)} \rightarrow 1 \text{CO}_{2(g)}$  Synthesis
- $2 \text{Na}_{(s)} + 2 \text{H}_2\text{O}_{(l)} \rightarrow 2 \text{NaOH}_{(aq)} + 1 \text{H}_{2(g)}$  S-R
- $1 \text{MgO}_{(s)} + 1 \text{H}_2\text{O}_{(l)} \rightarrow 1 \text{Mg(OH)}_{2(s)}$  Synthesis
- $2 \text{Na}_{(s)} + 1 \text{Cl}_{2(g)} \rightarrow 2 \text{NaCl}_{(s)}$  Synthesis
- $1 \text{Ba}_{(s)} + 2 \text{H}_2\text{O}_{(l)} \rightarrow 1 \text{Ba(OH)}_{2(aq)} + 1 \text{H}_{2(g)}$  S-R
- $2 \text{NaHCO}_{3(s)} \rightarrow 1 \text{Na}_2\text{O}_{(aq)} + 1 \text{H}_2\text{O}_{(l)} + 2 \text{CO}_{2(g)}$  Decomposition
- $2 \text{P}_{(s)} + 3 \text{Cl}_{2(g)} \rightarrow 2 \text{PCl}_{3(g)}$  Synthesis
- $2 \text{HCl}_{(aq)} + 1 \text{FeS}_{(s)} \rightarrow 1 \text{FeCl}_{2(aq)} + 1 \text{H}_2\text{S}_{(g)}$  D-R
- $1 \text{CH}_4(g) + 2 \text{O}_2(g) \rightarrow 1 \text{CO}_2(g) + 2 \text{H}_2\text{O}(g)$  Combustion
- $1 \text{CaCO}_{3(s)} \rightarrow 1 \text{CaO}_{(s)} + 1 \text{CO}_{2(g)}$  Decomposition
- $1 \text{Zn}_{(s)} + 2 \text{HCl}_{(aq)} \rightarrow 1 \text{ZnCl}_{2(aq)} + 1 \text{H}_{2(g)}$  S-R
- $1 \text{Ca(OH)}_{2(s)} \rightarrow 1 \text{CaO}_{(s)} + 1 \text{H}_2\text{O}_{(l)}$  Decomposition
- $2 \text{KClO}_{3(s)} \rightarrow 2 \text{KCl}_{(s)} + 3 \text{O}_{2(g)}$  Decomposition
- $1 \text{H}_2\text{SO}_{4(l)} \rightarrow 1 \text{SO}_3(g) + 1 \text{H}_2\text{O}(l)$  Decomposition
- $1 \text{HCl}_{(aq)} + 1 \text{NaOH}_{(aq)} \rightarrow 1 \text{NaCl}_{(aq)} + 1 \text{H}_2\text{O}(l)$  D-R
- $2 \text{HgO}_{(s)} \rightarrow 2 \text{Hg}_{(l)} + 1 \text{O}_{2(g)}$  Decomposition
- $2 \text{C}_4\text{H}_{10(g)} + 13 \text{O}_{2(g)} \rightarrow 8 \text{CO}_{2(g)} + 10 \text{H}_2\text{O}(g)$  Combustion
- $1 \text{Cl}_{2(g)} + 2 \text{NaBr}_{(aq)} \rightarrow 2 \text{NaCl}_{(aq)} + 1 \text{Br}_{2(l)}$  S-R
- $2 \text{H}_2\text{O}_{(l)} \rightarrow 2 \text{H}_{2(g)} + 1 \text{O}_{2(g)}$  Decomposition

## ANSWER KEY

