

Balancing Chemical Equations Handout 1 Page 1 ANSWERS	Type of Reaction
$2\text{H}_{2(\text{G})} + \text{O}_{2(\text{G})} \rightarrow 2\text{H}_2\text{O}_{(\text{G})}$	Synth
$\text{Sr}(\text{OH})_{2(\text{AQ})} + \text{Li}_2\text{CrO}_{4(\text{AQ})} \rightarrow \text{SrCrO}_{4(\text{S})} + 2\text{LiOH}_{(\text{AQ})}$	DR
$3\text{ZnBr}_{2(\text{AQ})} + 2\text{Al}_{(\text{S})} \rightarrow 2\text{AlBr}_{3(\text{AQ})} + 3\text{Zn}_{(\text{S})}$	SR
$4\text{C}_{(\text{S})} + \text{S}_{8(\text{S})} \rightarrow 4\text{CS}_{2(\text{S})}$	Synth
$2\text{Na}_{(\text{S})} + \text{O}_{2(\text{G})} \rightarrow \text{Na}_2\text{O}_{2(\text{S})}$	Synth
$2\text{N}_{2(\text{G})} + 5\text{O}_{2(\text{G})} \rightarrow 2\text{N}_2\text{O}_{5(\text{G})}$	Synth
$2\text{P}_{(\text{S})} + 5\text{Cl}_{2(\text{G})} \rightarrow 2\text{PCl}_{5(\text{S})}$	Synth
$4\text{Na}_{(\text{S})} + \text{O}_{2(\text{G})} \rightarrow 2\text{Na}_2\text{O}_{(\text{S})}$	Synth
$16\text{Al}_{(\text{S})} + 3\text{S}_{8(\text{S})} \rightarrow 8\text{Al}_2\text{S}_{3(\text{S})}$	Synth
$2\text{H}_2\text{O}_{(\text{L})} \rightarrow 2\text{H}_{2(\text{G})} + \text{O}_{2(\text{G})}$	Decomp
$\text{Mg}_{(\text{S})} + \text{Cl}_{2(\text{G})} \rightarrow \text{MgCl}_{2(\text{S})}$	Synth
$\text{C}_{15}\text{H}_{32(\text{S})} + 23\text{O}_{2(\text{G})} \rightarrow 15\text{CO}_{2(\text{G})} + 16\text{H}_2\text{O}_{(\text{G})}$	Combustion
$2\text{C}_6\text{H}_6_{(\text{G})} + 15\text{O}_{2(\text{G})} \rightarrow 12\text{CO}_{2(\text{G})} + 6\text{H}_2\text{O}_{(\text{G})}$	Combustion
$\text{N}_{2(\text{G})} + 3\text{H}_{2(\text{G})} \rightarrow 2\text{NH}_{3(\text{G})}$	Synth

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$3\text{Li}_{(s)} + \text{AlCl}_{3(\text{AQ})} \rightarrow 3\text{LiCl}_{(\text{AQ})} + \text{Al}_{(s)}$	SR
$2\text{C}_2\text{H}_{6(\text{G})} + 7\text{O}_{2(\text{G})} \rightarrow 4\text{CO}_{2(\text{G})} + 6\text{H}_2\text{O}_{(\text{G})}$	Comb
$3\text{Rb}_{(s)} + \text{P}_{(s)} \rightarrow \text{Rb}_3\text{P}_{(s)}$	Synth
$\text{CH}_{4(\text{G})} + 2\text{O}_{2(\text{G})} \rightarrow \text{CO}_{2(\text{G})} + 2\text{H}_2\text{O}_{(\text{G})}$	Comb
$2\text{Na}_{(s)} + \text{I}_{2(\text{s})} \rightarrow 2\text{NaI}_{(s)}$	Synth
$16\text{Rb}_{(s)} + \text{S}_{8(\text{s})} \rightarrow 8\text{Rb}_2\text{S}_{(s)}$	Synth
$\text{NH}_{3(\text{AQ})} + \text{HCl}_{(\text{AQ})} \rightarrow \text{NH}_4\text{Cl}_{(\text{AQ})}$	Synth
$4\text{Li}_{(s)} + \text{SnCl}_{4(\text{AQ})} \rightarrow 4\text{LiCl}_{(\text{AQ})} + \text{Sn}_{(s)}$	SR
$2\text{NH}_{3(\text{G})} \rightarrow \text{N}_{2(\text{G})} + 3\text{H}_{2(\text{G})}$	Decomp
$6\text{Cs}_{(s)} + \text{N}_{2(\text{G})} \rightarrow 2\text{Cs}_3\text{N}_{(s)}$	Synth
$\text{CaCO}_{3(\text{s})} \rightarrow \text{CaO}_{(s)} + \text{CO}_{2(\text{G})}$	Decomp
$2\text{C}_{10}\text{H}_{22(\text{s})} + 31\text{O}_{2(\text{G})} \rightarrow 20\text{CO}_{2(\text{G})} + 22\text{H}_2\text{O}_{(\text{G})}$	Comb
$\text{C}_{(s)} + \text{O}_{2(\text{G})} \rightarrow \text{CO}_{2(\text{G})}$	Synth
$\text{C}_3\text{H}_{8(\text{G})} + 5\text{O}_{2(\text{G})} \rightarrow 3\text{CO}_{2(\text{G})} + 4\text{H}_2\text{O}_{(\text{G})}$	Comb