

Use with textbook pages 206-211.

Balancing equations

Starting with the skeleton equations, balance the following equations by adding coefficients where appropriate.

- $\text{H}_2 + \text{F}_2 \rightarrow \text{HF}$ $\text{H}_2 + \text{F}_2 \rightarrow 2\text{HF}$
- $\text{Sn} + \text{O}_2 \rightarrow \text{SnO}$ $2\text{Sn} + \text{O}_2 \rightarrow 2\text{SnO}$
- $\text{MgCl}_2 \rightarrow \text{Mg} + \text{Cl}_2$ $\text{MgCl}_2 \rightarrow \text{Mg} + \text{Cl}_2$
- $\text{KNO}_3 \rightarrow \text{KNO}_2 + \text{O}_2$ $2\text{KNO}_3 \rightarrow 2\text{KNO}_2 + \text{O}_2$
- $\text{BN} + \text{F}_2 \rightarrow \text{BF}_3 + \text{N}_2$ $2\text{BN} + 3\text{F}_2 \rightarrow 2\text{BF}_3 + \text{N}_2$
- $\text{CuI}_2 + \text{Fe} \rightarrow \text{FeI}_2 + \text{Cu}$ $\text{CuI}_2 + \text{Fe} \rightarrow \text{FeI}_2 + \text{Cu}$
- $\text{Li} + \text{H}_2\text{O} \rightarrow \text{LiOH} + \text{H}_2$ $2\text{Li} + 2\text{H}_2\text{O} \rightarrow 2\text{LiOH} + \text{H}_2$
- $\text{NH}_3 + \text{O}_2 \rightarrow \text{N}_2 + \text{H}_2\text{O}$ $4\text{NH}_3 + 3\text{O}_2 \rightarrow 2\text{N}_2 + 6\text{H}_2\text{O}$
- $\text{V}_2\text{O}_5 + \text{Ca} \rightarrow \text{CaO} + \text{V}$ $\text{V}_2\text{O}_5 + 5\text{Ca} \rightarrow 5\text{CaO} + 2\text{V}$
- $\text{C}_9\text{H}_6\text{O}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ $2\text{C}_9\text{H}_6\text{O}_4 + 17\text{O}_2 \rightarrow 18\text{CO}_2 + 6\text{H}_2\text{O}$
- $\text{H}_2\text{S} + \text{PbCl}_2 \rightarrow \text{PbS} + \text{HCl}$ $\text{H}_2\text{S} + \text{PbCl}_2 \rightarrow \text{PbS} + 2\text{HCl}$
- $\text{C}_3\text{H}_7\text{OH} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ $2\text{C}_3\text{H}_7\text{OH} + 9\text{O}_2 \rightarrow 6\text{CO}_2 + 8\text{H}_2\text{O}$
- $\text{Zn} + \text{CuSO}_4 \rightarrow \text{Cu} + \text{ZnSO}_4$ $\text{Zn} + \text{CuSO}_4 \rightarrow \text{Cu} + \text{ZnSO}_4$
- $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ $\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 \rightarrow 6\text{CO}_2 + 6\text{H}_2\text{O}$
- $\text{C}_2\text{H}_5\text{OH} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ $\text{C}_2\text{H}_5\text{OH} + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 3\text{H}_2\text{O}$
- $\text{Al} + \text{H}_2\text{SO}_4 \rightarrow \text{H}_2 + \text{Al}_2(\text{SO}_4)_3$ $2\text{Al} + 3\text{H}_2\text{SO}_4 \rightarrow 3\text{H}_2 + \text{Al}_2(\text{SO}_4)_3$
- $\text{FeCl}_3 + \text{Ca}(\text{OH})_2 \rightarrow \text{Fe}(\text{OH})_3 + \text{CaCl}_2$ $2\text{FeCl}_3 + 3\text{Ca}(\text{OH})_2 \rightarrow 2\text{Fe}(\text{OH})_3 + 3\text{CaCl}_2$
- $\text{Pb}(\text{NO}_3)_2 + \text{K}_2\text{CrO}_4 \rightarrow \text{PbCrO}_4 + \text{KNO}_3$ $\text{Pb}(\text{NO}_3)_2 + \text{K}_2\text{CrO}_4 \rightarrow \text{PbCrO}_4 + 2\text{KNO}_3$
- $\text{Cd}(\text{NO}_3)_2 + (\text{NH}_4)_2\text{S} \rightarrow \text{CdS} + \text{NH}_4\text{NO}_3$ $\text{Cd}(\text{NO}_3)_2 + (\text{NH}_4)_2\text{S} \rightarrow \text{CdS} + 2\text{NH}_4\text{NO}_3$
- $\text{Ca}(\text{OH})_2 + \text{NH}_4\text{Cl} \rightarrow \text{NH}_3 + \text{CaCl}_2 + \text{H}_2\text{O}$ $\text{Ca}(\text{OH})_2 + 2\text{NH}_4\text{Cl} \rightarrow 2\text{NH}_3 + \text{CaCl}_2 + 2\text{H}_2\text{O}$