

Skill Builder

Chapter 10

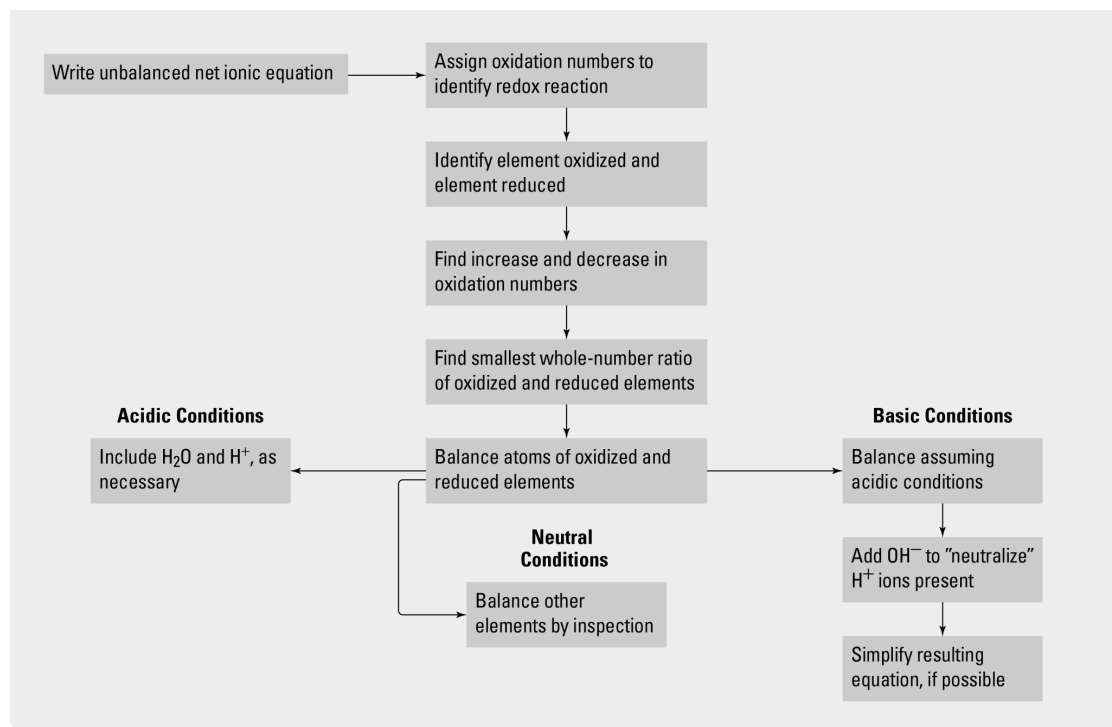
BLM 10-3

The Oxidation Number Method for Balancing Equations

Goal

Review the oxidation number method for balancing redox reactions and practise using this method.

The Oxidation Number Method



Procedure

On a separate sheet of paper, balance the following equations using the oxidation number method. Assume neutral conditions. Refer to the above concept organizer for the steps of the oxidation number method.

- $\text{NaI} + \text{HClO} \rightarrow \text{NaIO}_3 + \text{HCl}$
- $\text{I}_2 + \text{HNO}_3 \rightarrow \text{HIO}_3 + \text{NO}_2 + \text{H}_2\text{O}$
- $\text{C}_3\text{H}_8\text{O} + \text{CrO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{Cr}_2(\text{SO}_4)_3 + \text{C}_3\text{H}_6\text{O} + \text{H}_2\text{O}$
- $\text{KCl} + \text{MnO}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{K}_2\text{SO}_4 + \text{MnSO}_4 + \text{Fe}_2(\text{SO}_4)_3 + \text{H}_2\text{O}$
- $\text{Cu} + \text{H}_2\text{SO}_4 \rightarrow \text{CuSO}_4 + \text{H}_2\text{O} + \text{SO}_2$
- $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2\text{S} + \text{H}_2\text{O}$