

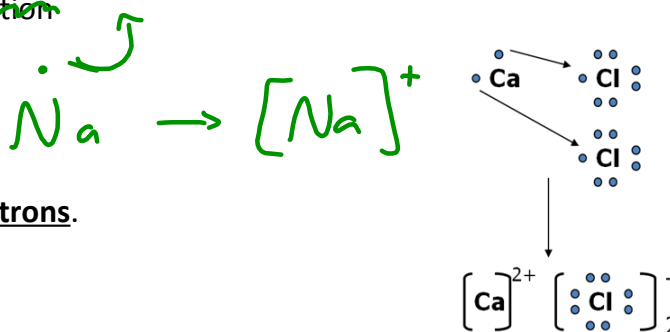
Topic 3: Reduction and Oxidation

■ When **simple ionic compounds** form from their elements, there is always a loss and a gain of electrons by the atoms involved.

■ We use **half reactions** to show the loss and the gain of electrons separately.

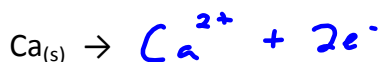
■ 2 types of half reaction **Oxidation**

- Reduction
- Oxidation



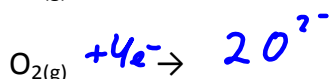
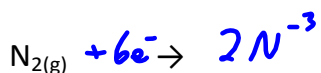
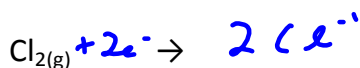
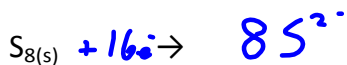
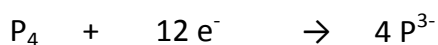
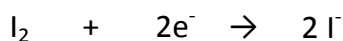
■ **Oxidation** is the **loss of electrons**.

Examples:



■ **Reduction** is the **gain of electrons**.

Examples:



OIL RIG

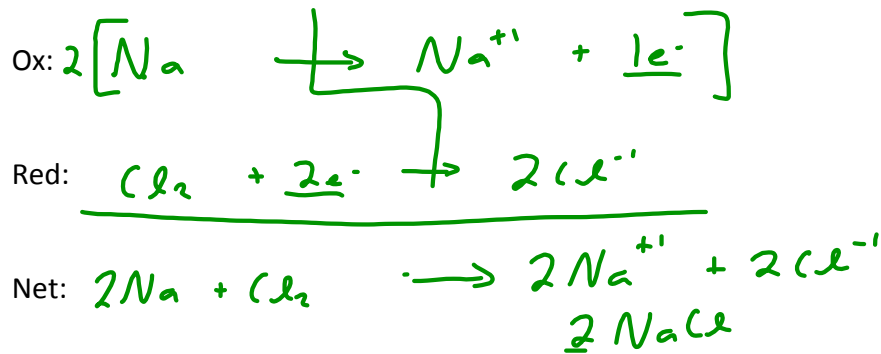
■ Remember LEO says GER

■ Loss of electrons is oxidation, gain of electrons is reduction

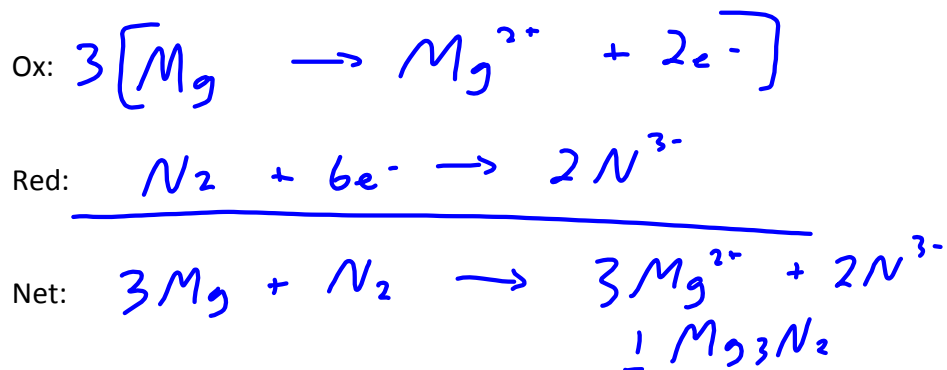
Net Reactions:

- A net reaction combines the reduction and oxidation half reactions together.
- e- lost in the oxidation half reaction must equal the e- gained in the reduction half reaction

Example: Determine the net reaction of sodium and chlorine



Example: Determine the net reaction of magnesium and nitrogen



Example: Determine the net reaction of aluminum and sulfur

