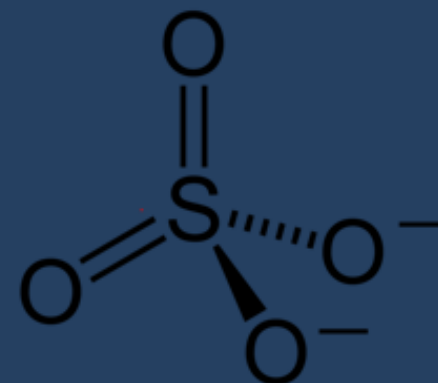
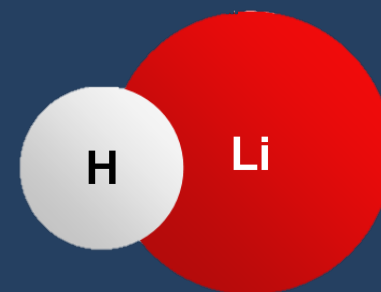
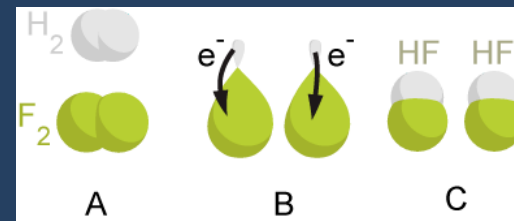


Oxidation Number

- Review
- Oxidation-Reduction Reactions
- Oxidation Number
- Rules for Assigning Oxidation Number
- Questions to Help You Assign Oxidation Number
- Assigning Oxidation Numbers
- Check Your Understanding



TeachWithFergy

Preview File

Please enjoy this preview of your Student Version of the lesson. I've created this PDF for ease of viewing and to decrease the file size but of course, your lesson will be in PowerPoint format.

- Some slides appear blank because they have been removed.
- Student versions have portions of the text removed which is given in the teacher version and appear as _____
- Other slides may have on them, this represents writing that has been removed.

This slide has been removed

Recall

-

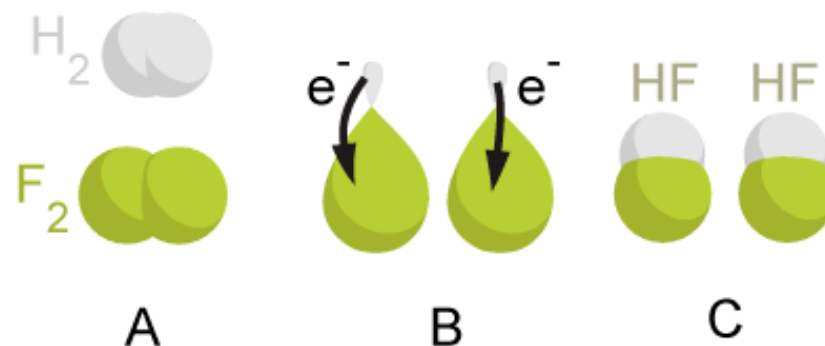
- Oxidation number (total number of electrons to gain or lose to form chemical bond) changes

-

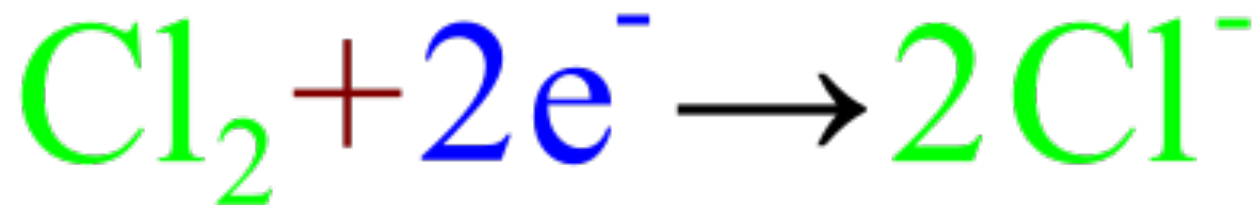
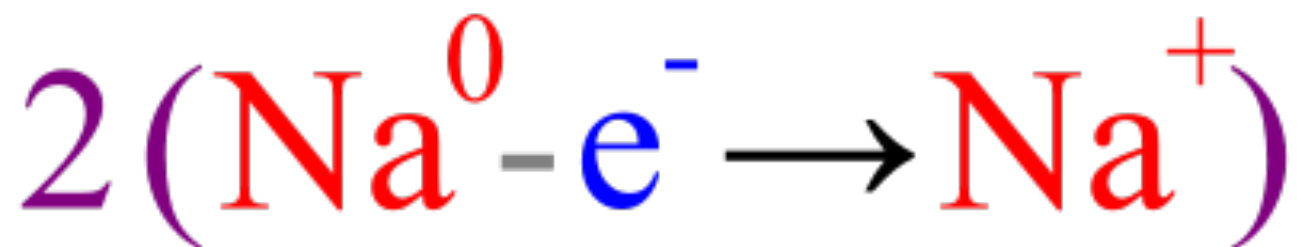
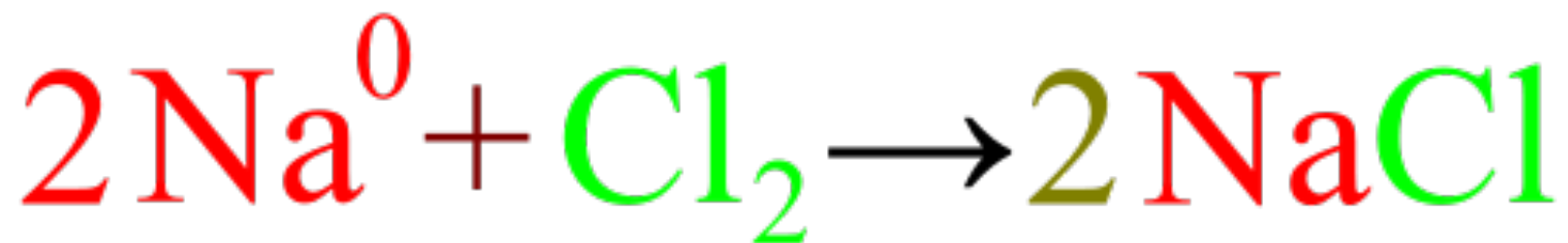
- _____

-

-



Oxidation-Reduction Reactions



Oxidation Number

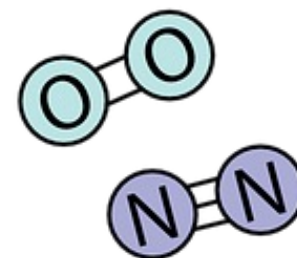
- _____
- Charge the atom would have if it were made of ions
- _____
 - E.g. Fe^{3+} , oxidation number +3: can get 3 electrons to form a chemical bond
 -

Rules for Assigning Oxidation Number

1. Oxidation number of elemental (natural, free) state is 0

- _____

- E.g. Fe, O₂, Al, H₂, Zn, N₂, S₈



2. Oxidation number of monatomic ion is the same as its charge

- _____

- E.g. Al³⁺, oxidation number is +3

-



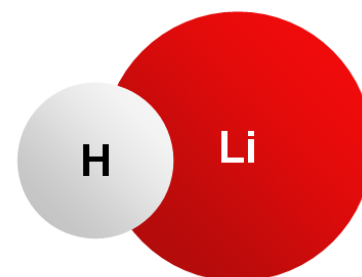
This slide has been removed

Rules for Assigning Oxidation Number

5.

—
• E.g. CH₄, H₂O

—
• E.g. LiH, CaH₂

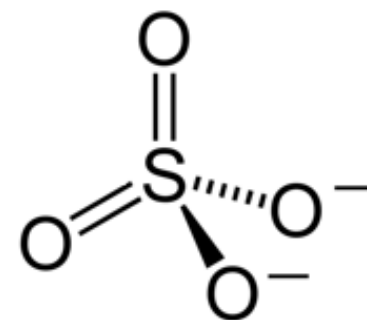


6. In a neutral compound, sum of oxidation numbers is 0. In a polyatomic ion, sum of oxidation numbers is the same as the ion's charge

—

— Neutral example: H₂O – 2(+1) + (-2) = 0

— Polyatomic ion example: SO₄²⁻ - (+6) + 4(-2) = -2



This slide has been removed

This slide has been removed

Check Your Understanding

- Assign oxidation numbers to each atom in the following compounds
 - Al_2O_3
 - Al:
 - O:
 - XeF_4
 - Xe:
 - F:
 - NO_2^-
 - N:
 - O:

Check Your Understanding

- Assign oxidation numbers to each atom in the following compounds

—

- Mo:

- O:

— NH_4^+

- N:

- H:

—

- Al:

- P:

- O: