Chem 28.1

Goals: define and compare oxidation and reduction, assign oxidation numbers

Plan:

Redox and Oxidation Numbers

Bellwork:

1) What are the negative particles of atoms?

2) How do we determine the number of electrons in an element?

3) How many electrons in the following?
   a. Neon
   b. Fe^{2+}
   c. Cl^{1-}

Notes: Redox and Oxidation Numbers

L E O the lion says G E R

Oxidation _____ electrons, becomes more _____

Reduction _____ electrons, becomes more _____

Oxidation numbers

Definition:

Oxidation number rules

1) If an element is not part of a compound or is diatomic with itself…

2) Element written as an ion:

3) Oxygen in a compound:

Exceptions:

4) Hydrogen in a compound:

5) Group 1 and 2 elements in compounds:

6) Polyatomics:

Example: Sulfate: SO_4^{2-}

7) Use above rules to determine the oxidation numbers of any other elements not listed above.

Examples: Find the oxidation numbers of every element in the substances described below:

1) Sulfur Dioxide

2) Disulfur trioxide

3) Calcium metal

4) Calcium Sulfate

HW: oxidation numbers problems

Chem 28.2

Goals: review oxidation numbers, determine in a reaction what element is oxidized and which is reduced

Plan:

Kahoot: oxidation numbers

Mini-lecture: changing oxidation numbers in a reaction

Practice: assigning oxidation numbers and determining the change

Chem 28.3

Goals: review redox problems, identifying when something is being oxidized or reduced.

Plan: Redox jeopardy