

# 8.2 - Reduction / Oxidation Reaction

Red Ox

★ Transfer of electrons ★

- Assign oxidation number to each atom in a reaction to track the transfer of electrons.

## Rules

- All pure substances = 0

- monoatomic ions = Charge

★ molecules the oxidation #s

within a molecule must equal 0

or polyatomic ions the ox #s

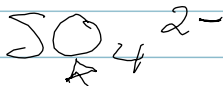
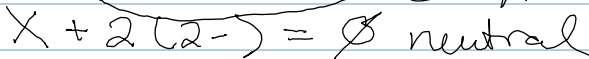
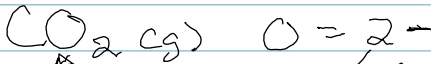
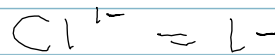
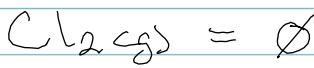
must = charge

or polyatomic ions

• oxygen ox # 2-

• hydrogen ox # 1+

ex



8-

= 2- Charge of the ion

Example:

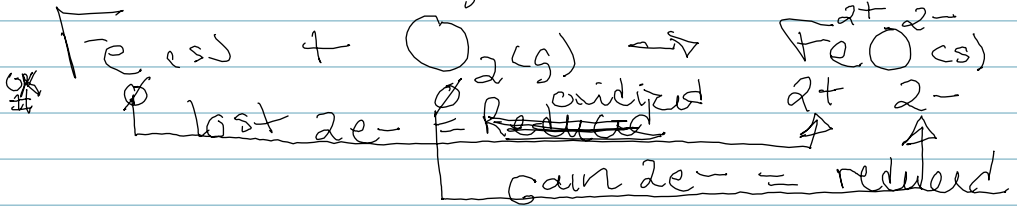
Who                      What                      How

~~What~~ Who are ~~the~~ <sup>What #</sup> atoms ~~are~~ involved in Red Ox      of electrons are transferred      How are the electrons transferred using 1/2 reaction

\* iron \*

\* oxygen \*

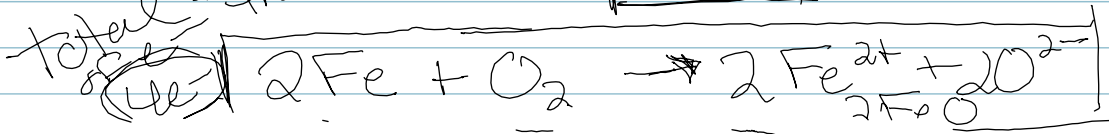
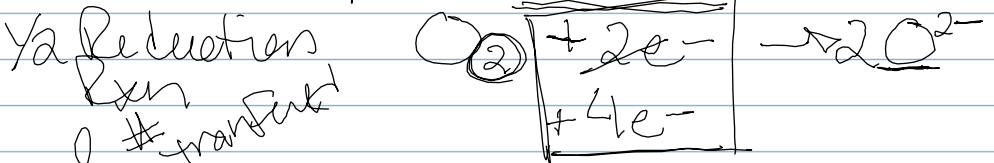
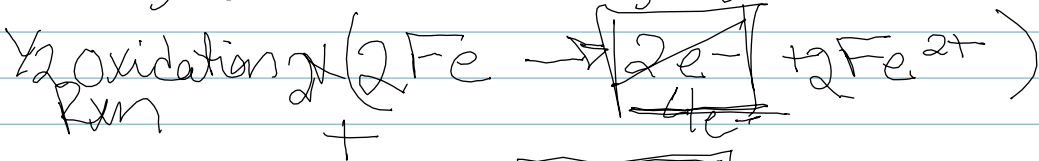
\* rust \*



LEO says GER

Loss of electrons  
Oxidation  
Reducing Agent

Gain of electrons  
Reduction  
Oxidizing Agent



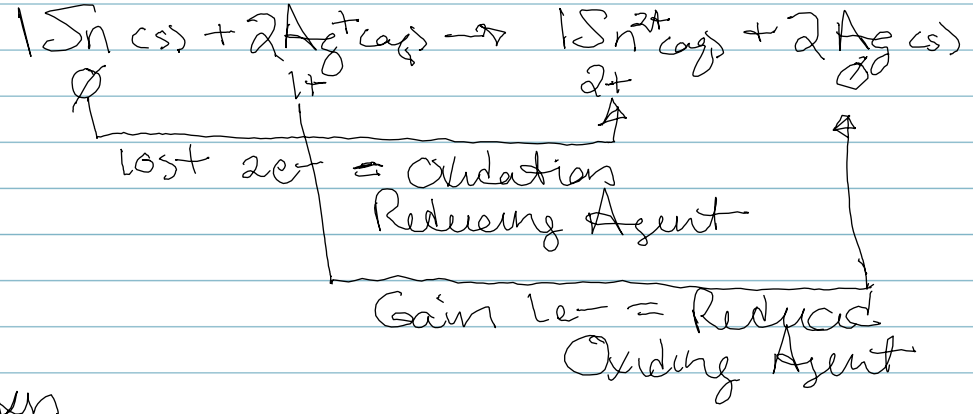
Who Red Ox

What #

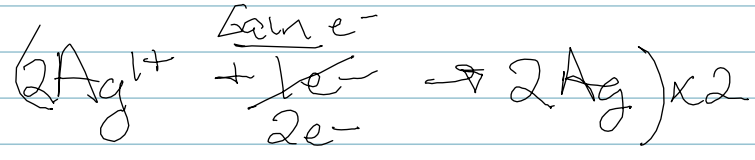
How Many

#1

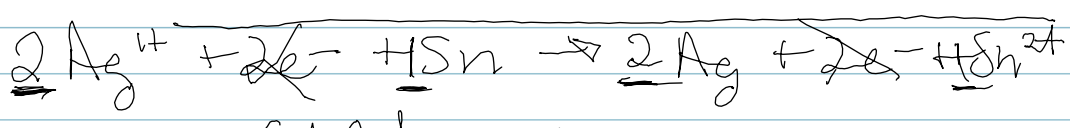
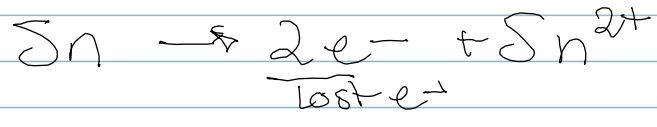
or #1



1/2 Rxn Reduction



1/2 Rxn Oxidation



cancel out electrons

Total # of electrons transferred = 2e<sup>-</sup>