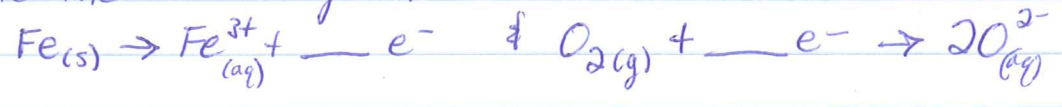


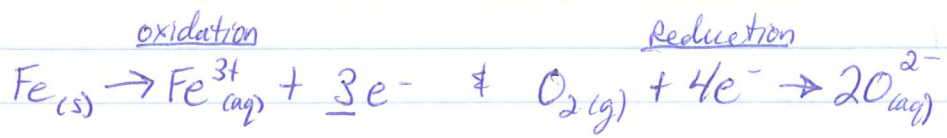
# Balancing Redox Rxns (Cont'd)

- We have reviewed writing Net Ionic Rxns, then used them to determine the Oxidation & Reduction Half rxns
- we also learned to balance Half Rxns using electrons
- The last skill you need is to be able to start with Half rxns and then work backwards to determine the Net Ionic Equation.

ex) Determine N.I.E. given:

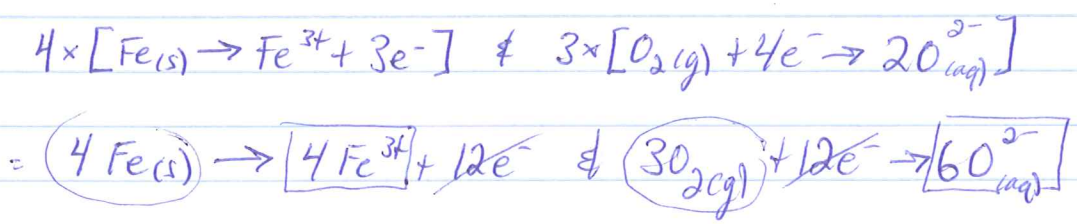


\* Determine the # of e<sup>-</sup>s in each half rxn

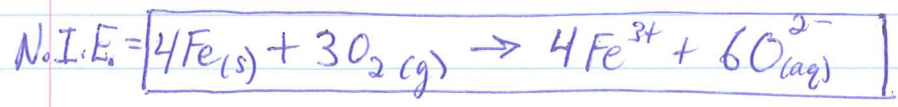


\* To make the balanced N.I.E. the # of electrons must be the same in each half rxn

$$3e^- \neq 4e^- \quad \text{-so find a common factor} = \underline{12}$$



\* Cancel out electrons & write N.I.E. with remaining species



reactants for both 1/2 Rxn stay on Left, products stay on right

②

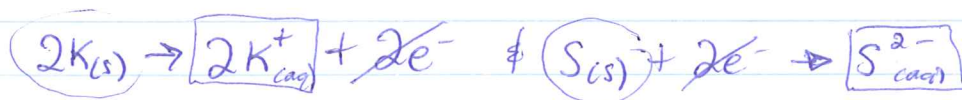
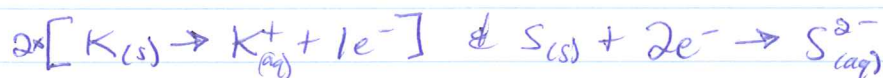


Oxidation

Reduction



\* make both reactions involve same # of  $e^- \rightarrow 2e^-$



\* Cancel out electrons & write N.I.E.

