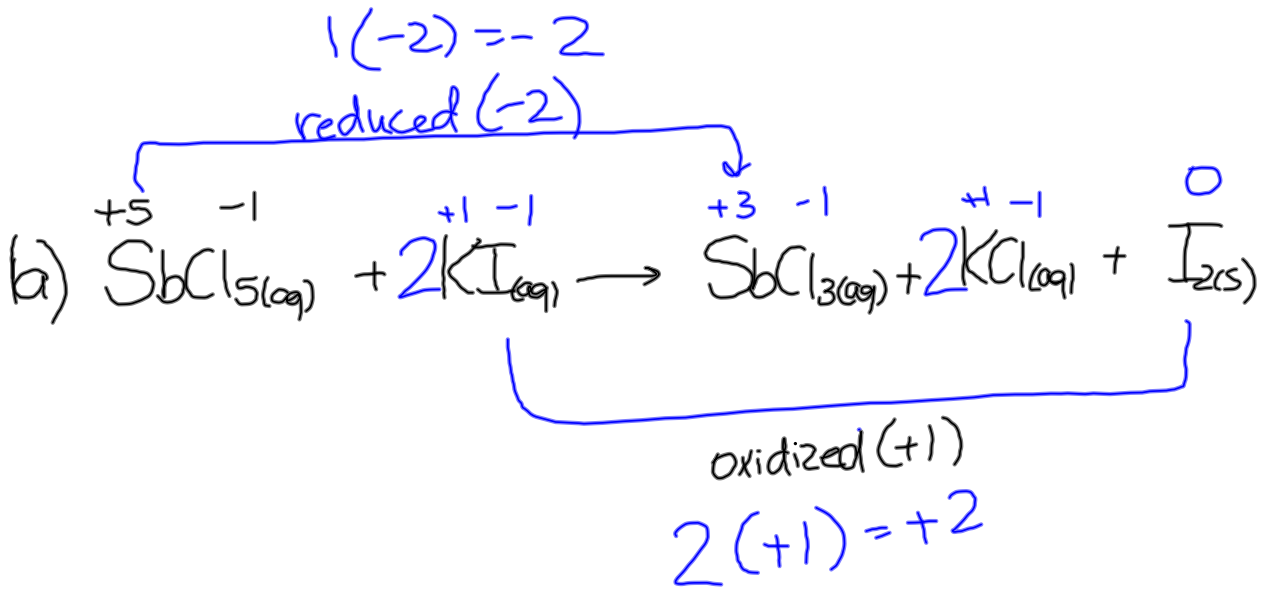
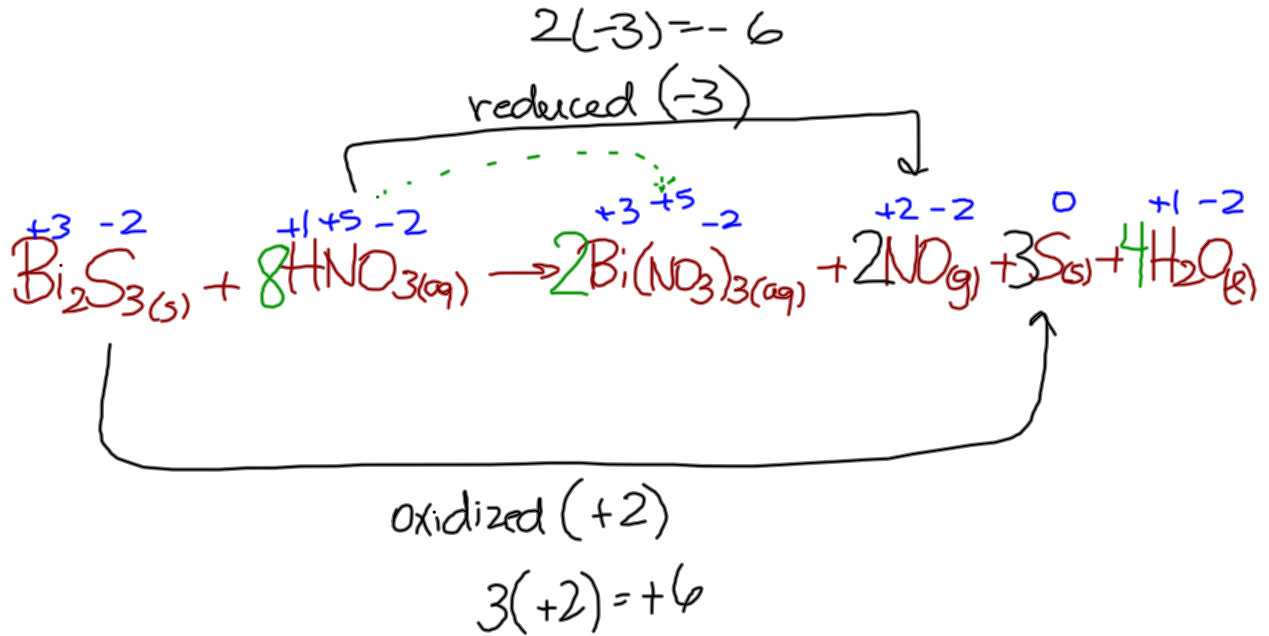
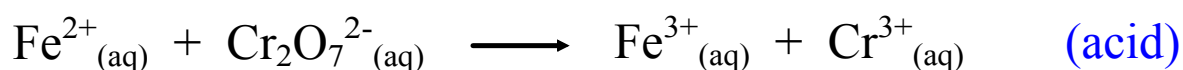


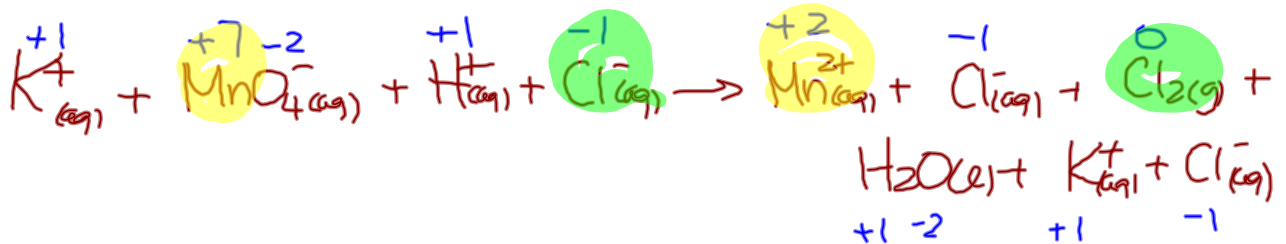
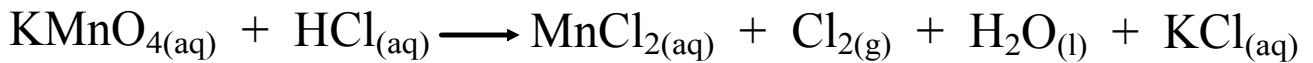
# Homework - #20



## Balancing Redox Reactions in Acid Solution



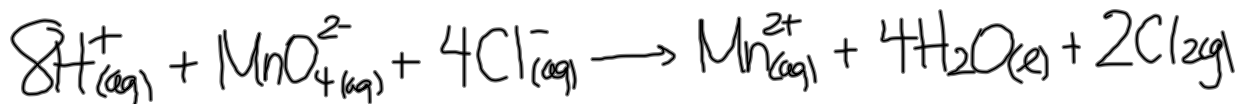
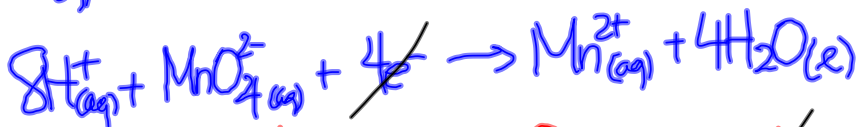
1. Identify elements being reduced and oxidized by looking at their oxidation states.
2. Write separate equations for oxidation and reduction half reactions.
3. For each half reaction:
  - (a) balance all elements except H and O
  - (b) balance O by adding  $\text{H}_2\text{O}$
  - (c) balance H by adding  $\text{H}^+$
  - (d) balance charge by adding  $e^-$
4. Multiply half reaction by an integer to equalize the number of electrons transferred.
5. Add half reactions; cancel identical species.



Reduction



Oxidation





# Homework

