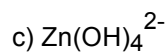
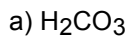
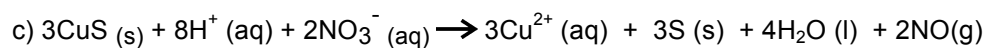
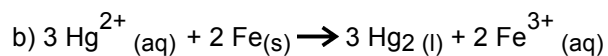
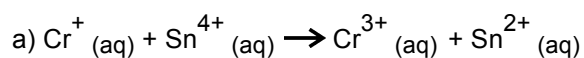


**Part A: Chem 1A review**

1) Determine the oxidation number of the elements in each of the following compounds:

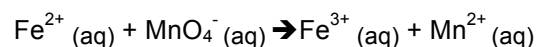


2) Identify the species being oxidized and reduced in each of the following reactions:



**Part B: Balancing Oxidation - Reductions under Acidic Conditions**

3) Balance the redox reaction in acidic solution



Step 1) Assign oxidation numbers.

Step 2) Separate the overall reaction into two half-reactions: one for oxidation and one for reduction.

***Oxidation:***

***Reduction:***

Step 3) Balance each half-reaction with respect to mass (reminder: acidic conditions)

Step 4) Balance each half reaction with respect to charge by adding electrons.

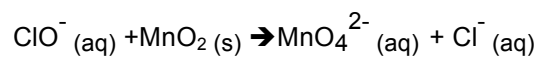
Step 5, 6) Multiply the half reactions by a number to get the electrons to balance and add the two half reactions together

Step 7) Double check!

**Part C: Balancing Oxidation - Reductions under Basic Conditions**

4) What is the difference between balancing a Redox reaction in a basic solution than in an acidic solution? Is there a difference?

5) Balance the following reaction occurring in basic solution



Step 1) Assign oxidation numbers.

Step 2) Separate the overall reaction into two half-reactions: one for oxidation and one for reduction.

***Oxidation:***

***Reduction:***

Step 3) Balance each half-reaction with respect to mass (tip: balance in acidic then basic conditions)

Step 4) Balance each half reaction with respect to charge by adding electrons.

Step 5, 6) Multiply the half reactions by a number to get the electrons to balance and add the two half reactions together

Step 7) Double check!