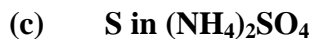
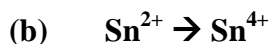
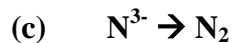
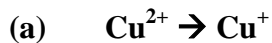


Oxidation-Reduction Reactions

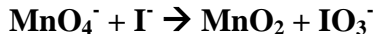
1) Give the oxidation number of the element indicated.



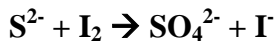
2) Write a balanced half-reaction for each of the following and tell if the reaction is oxidation or reduction.



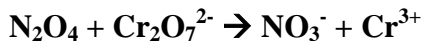
3) Complete and balance the following equation.



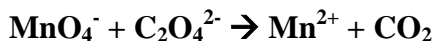
4) Complete and balance the following equation for a basic solution.



5) Complete and balance the following equation for a basic solution.

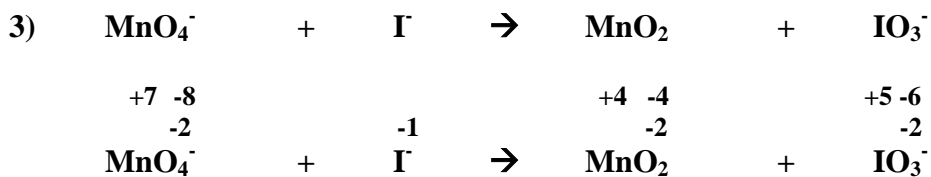


6) Complete and balance the following equation.

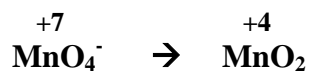


Solutions

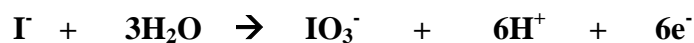
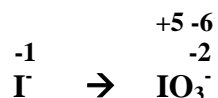
- 1) (a) As^{3+} (d) Mn^{4+}
(b) N^{5+} (e) C^{4+}
(c) S^{6+} (f) Se^{6+}
- 2) (a) $\text{Cu}^{2+} + \text{e}^- \rightarrow \text{Cu}^+$ reduction
(b) $\text{Sn}^{2+} \rightarrow \text{Sn}^{4+} + 2\text{e}^-$ oxidation
(c) $2\text{N}^{3-} \rightarrow \text{N}_2 + 6\text{e}^-$ oxidation
(d) $\text{Br}_2 + 2\text{e}^- \rightarrow 2\text{Br}^-$ reduction



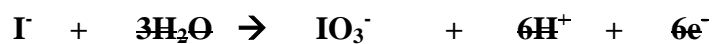
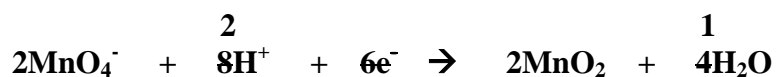
reduction:

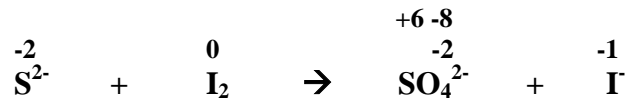


oxidation:

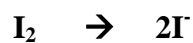
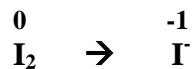


adding equations:

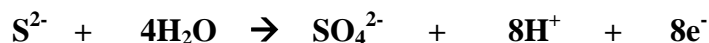
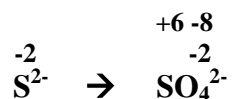




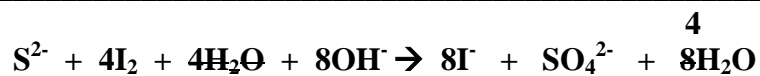
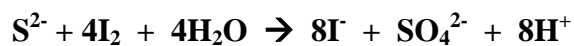
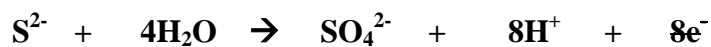
reduction:

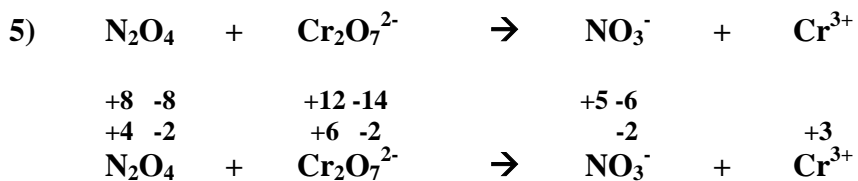


oxidation:

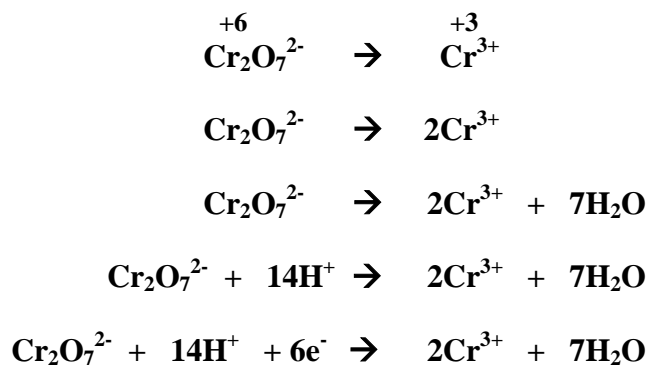


adding equations:

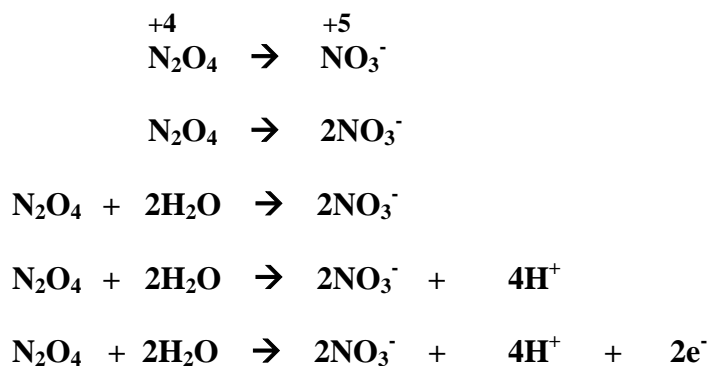




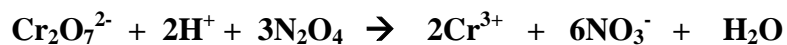
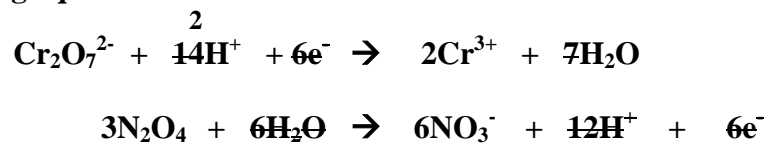
reduction:

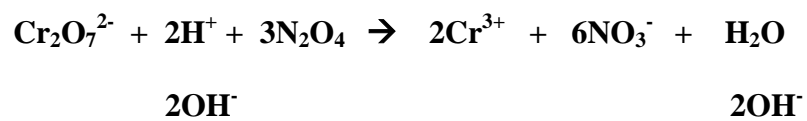


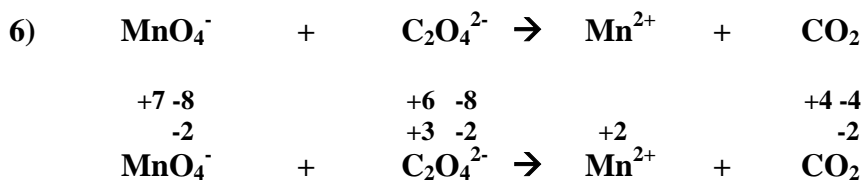
oxidation:



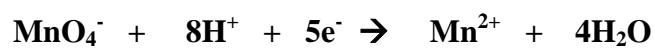
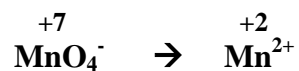
adding equations:



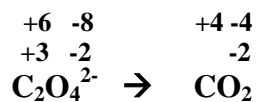




reduction:



oxidation:



adding equations:

