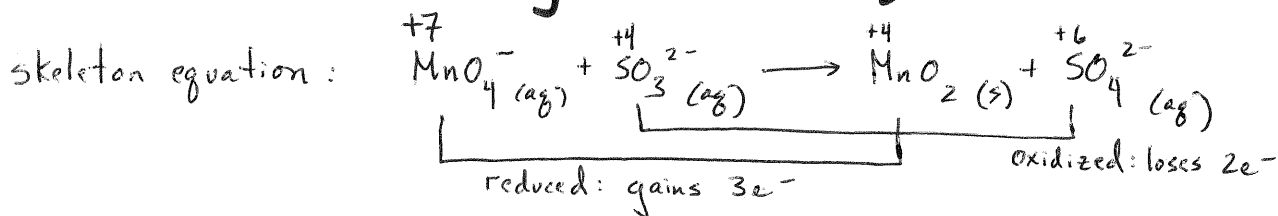
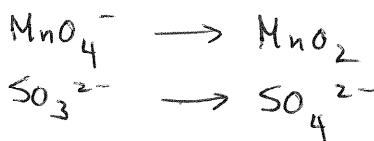


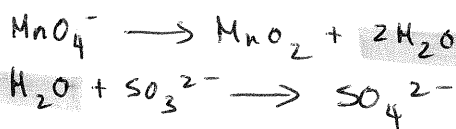
Half-Reaction Method for Balancing Redox Equations



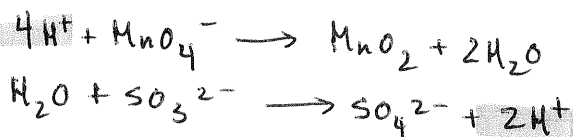
write $\frac{1}{2}$ rxns - unbalanced



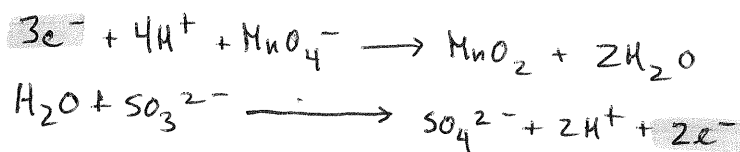
balance atoms that change ox. state, and balance oxygen with H_2O



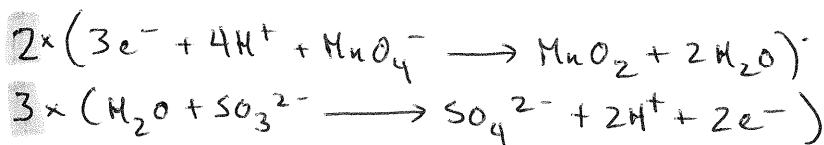
balance hydrogen with H^+



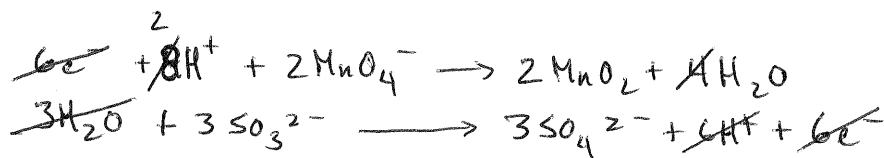
balance charge with e^-



multiply each $\frac{1}{2}$ rxn by a factor that will give the same # of e^- in each equation



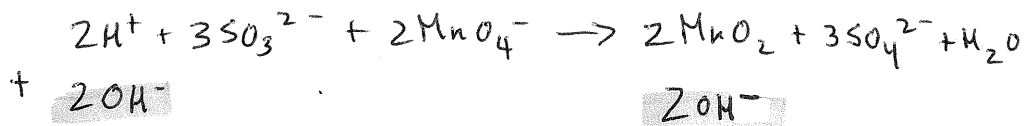
add the two half-rxns canceling where needed



overall eqn in acid



to convert to in base add to each side of the acidic overall equation an amount of OH^- equal to the amount of H^+ .



Remember $\text{H}^+ + \text{OH}^- = \text{H}_2\text{O}$.
Cancel species as needed.

