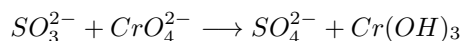
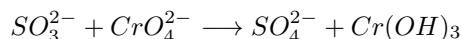


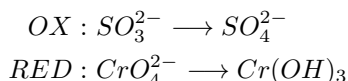
Balance Redox reactions - April 27, 2013 www.askmath.weebly.com



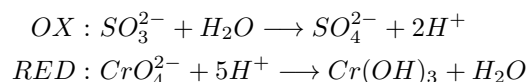
1. Write the unbalanced equation in net-ionic form:



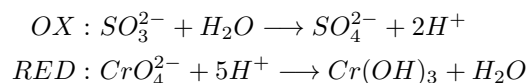
2. Separate the net-ionic equation into two half-reactions (an oxidation half-reaction and a reduction half-reaction):



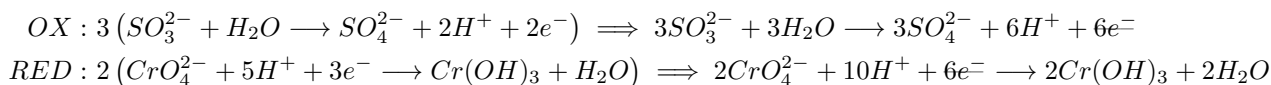
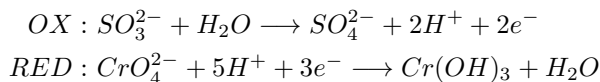
3. Balance the atoms other than O and H in each half-reaction separately.



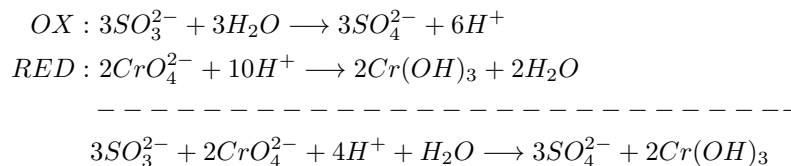
4. Add H_2O to balance the O atoms and H^+ atoms to balance the H atoms.



5. Add electrons to one side of each half-reaction to balance the charges. If required, equalize the number of electrons in the two half-reactions by multiplying one or both half-reactions by appropriate coefficients.



6. Add the two half-reactions together and balance the final equation by inspection. The electrons on both sides must cancel out.



7. Double-check your work, by making sure that there are equal numbers of atoms on both sides of the equation and that the overall charge is the same on both sides.

8. If the reaction is in basic solution, add an equal number of OH^- ions as there are H^+ ions to both sides of the equation. Combine H^+ and OH^- ions to form H_2O .

