

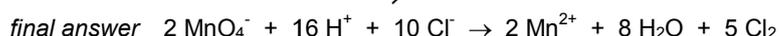
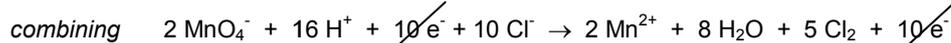
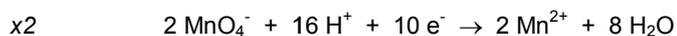


COMBINING HALF EQUATIONS

The two half equations are added together so that the electrons cancel out.

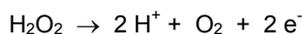
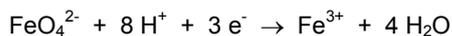


The first equation has 5 electrons and the second has 2 electrons. To balance these out, multiply the first by 2 (to give 10 electrons) and the second by 5 (to give 10 electrons)



Sometimes H^+ and/or H_2O may appear on both sides of the combined equation – these should be cancelled down. For example if there are 10 H_2O on the left and 2 H_2O on the right, this cancels down to 8 H_2O on the left.

Look at the following half equations. Use these to create the redox equations stated below.



1) oxidation of Ce^{3+} by $\text{H}^+/\text{MnO}_4^-$

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2) oxidation of H_2O_2 by $\text{H}^+/\text{MnO}_4^-$

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3) oxidation of $\text{C}_2\text{O}_4^{2-}$ by $\text{H}^+/\text{MnO}_4^-$

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.....

4) oxidation of Ce^{3+} by $\text{H}^+/\text{FeO}_4^{2-}$

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5) oxidation of H_2O_2 by $\text{H}^+/\text{FeO}_4^{2-}$

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6) oxidation of $\text{C}_2\text{O}_4^{2-}$ by $\text{H}^+/\text{FeO}_4^{2-}$

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