



Chem!stry

Name: ()

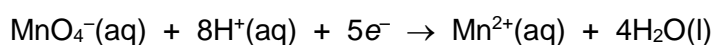
Class:

Date: / /

Ionic Equations for Redox Reactions

Balance the number of electrons between the two ionic half-equations and then combine the two ionic half-equations together to create the overall ionic equation for the reaction.

Question 1:

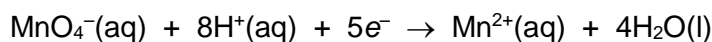


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What is the oxidation state of S in $\text{SO}_3^{2-}(\text{aq})$? and in $\text{SO}_4^{2-}(\text{aq})$?

What is the oxidising agent? What is the reducing agent?

Question 2:

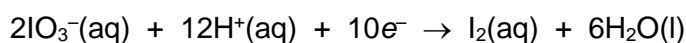


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What is the oxidation state of Mn in $\text{MnO}_4^-(\text{aq})$? and in $\text{Mn}^{2+}(\text{aq})$?

What has been oxidised? What has been reduced?

Question 3:

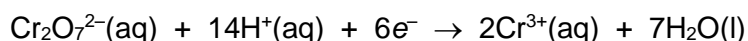


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What is the oxidation state of I in $\text{IO}_3^-(\text{aq})$? and in $\text{I}_2(\text{aq})$?

What is the oxidising agent? What is the reducing agent?

Question 4:

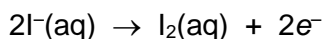
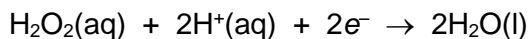


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What is the oxidation state of Cr in $\text{Cr}_2\text{O}_7^{2-}(\text{aq})$?

What has been oxidised? What has been reduced?

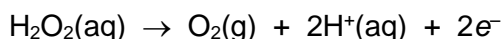
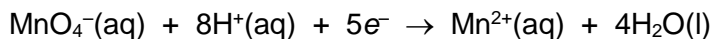
Question 5:



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What is the oxidation state of O in $\text{H}_2\text{O}_2(\text{aq})$?

What is the oxidising agent? What is the reducing agent?

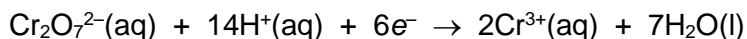
Question 6:



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What is the oxidation state of Mn in $\text{Mn}^{2+}(\text{aq})$?

What has been oxidised? What has been reduced?

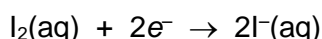
Question 7:



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What is the oxidation state of Cr in $\text{Cr}^{3+}(\text{aq})$?

What is the oxidising agent? What is the reducing agent?

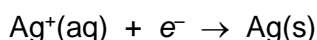
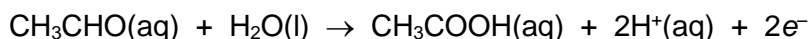
Question 8:



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What is the oxidation state of S in $\text{S}_2\text{O}_3^{2-}(\text{aq})$? and $\text{S}_4\text{O}_6^{2-}(\text{aq})$?

What has been oxidised? What has been reduced?

Question 9:



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What is the oxidation state of C in $\text{CH}_3\text{CHO}(\text{aq})$?

What is the oxidising agent? What is the reducing agent?

Question 10:

a) Write an ionic half-equation to show hydrogen peroxide acting as an *oxidising agent*.

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b) Write an ionic half-equation to show hydrogen peroxide acting as a *reducing agent*.

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- Scan the QR code below for the answers to this assignment.



http://www.chemist.sg/redox/ionic_equations_ans.pdf