



1 a Write an equation for the reaction of chlorine with water.

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b Describe and explain what you would see if universal indicator was added to a solution of chlorine in water.

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c By referring to oxidation states, explain why this is a disproportionation reaction.

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2 a When concentrated sulfuric acid is added to solid sodium bromide, white fumes and orange fumes are formed. Complete the table about the formation of these substances.

observation	formula of gas	equation for formation	type of reaction
white fumes			
orange fumes			

b What would you see if a similar reaction was done using solid sodium chloride with concentrated sulfuric acid? Explain any difference in detail.

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