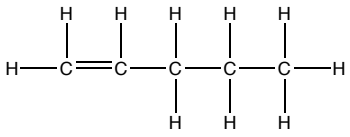
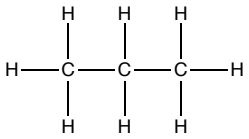
1 Complete this table with the names and structures of some hydrocarbons.

Displayed formula			
Name			propene

2 **a** Hexane is an alkane containing 6 carbon atoms. Give its molecular formula. .....

b Hexene is an alkene containing 6 carbon atoms. Give its molecular formula. .....

3 Ethene can be made by cracking alkanes such as dodecane ($C_{12}H_{26}$) in the kerosene fraction.

a Why are fractions containing larger alkanes cracked? .....

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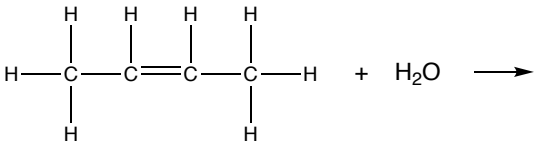
b Write a balanced equation for this reaction. .....

4 Butene reacts with steam at high temperature and pressure and with concentrated phosphoric acid as catalyst.

a Name the type of reaction taking place. .....

b Complete the equation for this reaction.



5 The alkanes in crude oil are separated into fractions by fractional distillation.

a Is each fraction a pure substance or a mixture? Explain how you can tell. .....

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b Describe and explain how this separation is done at an oil refinery.

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