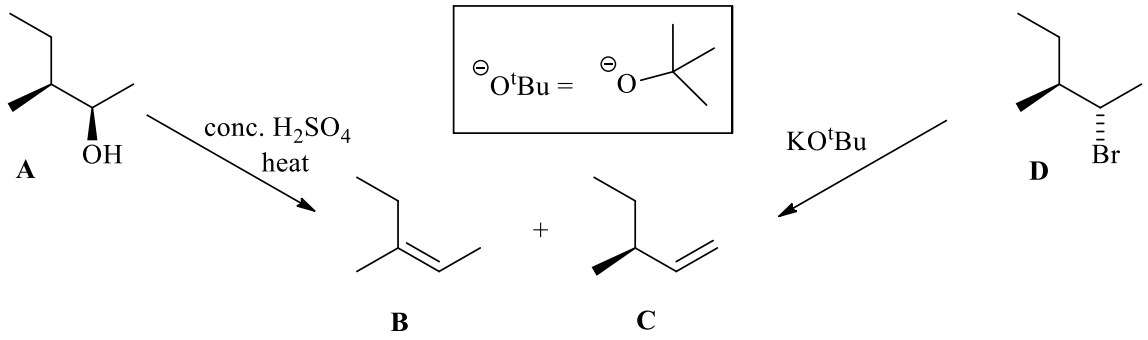
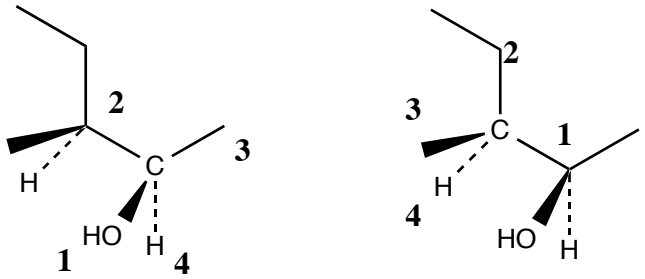
Marks 7

- The elimination of H_2O from alcohol **A** can form the isomeric alkenes **B** and **C**. Elimination of HBr from the alkyl halide **D** can generate the same two alkenes.



Assign the absolute configuration of alcohol **A**. Show your working.



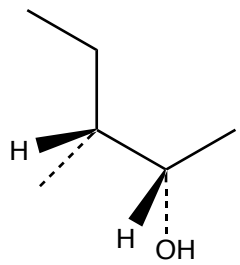
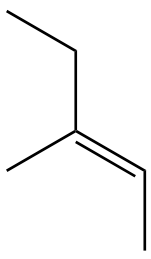
(*R*) (*S*)

There are 2 chiral centres. On the diagram on the left, the priorities are as shown and are in an (*R*) configuration. On the diagram on the right, the priorities are in an (*S*) arrangement.

Name compound **B** fully.

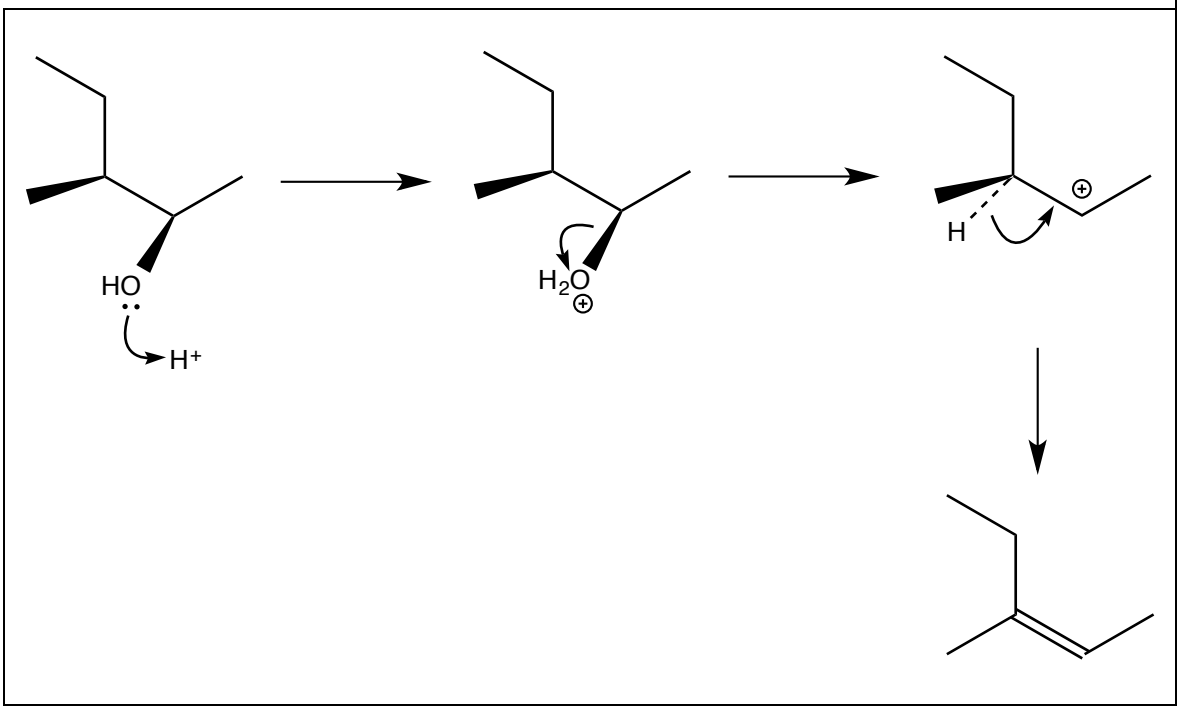
(*Z*)-3-methylpent-2-ene

A diastereoisomer of **B** is also formed in these reactions. Draw the enantiomer of **A** and the diastereoisomer of **B**.

enantiomer of **A**	diastereoisomer of **B**
	

ANSWERS CONTINUES ON THE NEXT PAGE

Propose a mechanism for the formation of **B** from **A** under the conditions shown.
Use curly arrows and draw the structures of any intermediates.



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