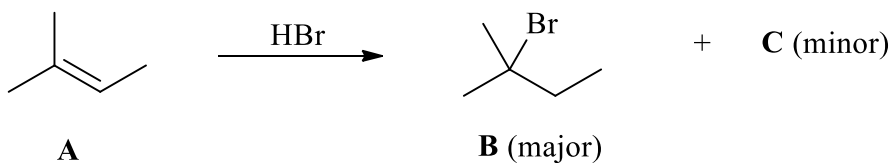
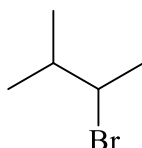


**Marks**  
**3**

- When alkene **A** is reacted with HBr, the major reaction product is **B**. However, a minor product, **C**, is also formed that is isomeric with **B**.

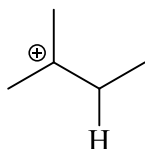


What is the structure of product **C**?

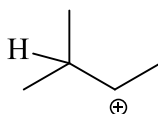


By describing an intermediate formed in this reaction, explain why less of **C** is formed than **B**.

**Two possible intermediate carbocations can be formed. The tertiary carbocation is more stable and leads to the major product **B**, whilst the secondary carbocation is less stable and leads to the minor product **C**.**



tertiary carbocation  
(more stable)



secondary carbocation  
(less stable)

**THE REMAINDER OF THIS PAGE IS FOR ROUGH WORKING ONLY.**