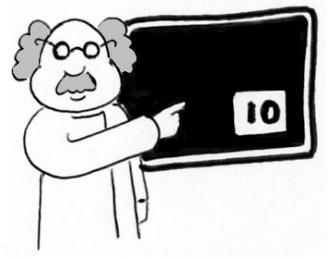



# STARTER FOR 10...

## 5.2.10 Isomerism in alkanes and alkenes

**1.** The simplest alkane to show isomerism is $C_4H_{10}$.

(d) Predict the number of isomers $C_4H_{10}$ displays (1 mark)

(e) Draw the isomers of $C_4H_{10}$ (1 mark)

**2.** The next member of the homologous series is $C_5H_{12}$

(a) Predict the number of isomers $C_5H_{112}$ displays (1 mark)

(b) Draw the isomers of $C_5H_{112}$ (2 marks)

**3.** There are 2 geometric isomers of the alkene $C_4H_8$. Draw both isomers and label them E and Z.

(1 mark)

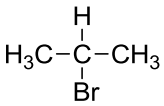
**4.** Draw a pair of geometric isomers for the alkene $C_5H_{10}$ and label them E and Z. (2 marks)

**5.** Draw 2 isomers of the alkene $C_5H_{10}$ that do not show geometric isomerism. (2 marks)

**4.** B = 2-bromo-butane, D = 3-bromo-3-methylpentane (½ mark each)

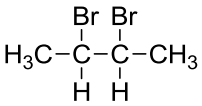
**5.** Stability of carbocation (1 mark)

**5.2.9**

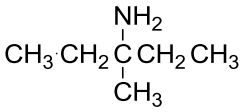


**A**

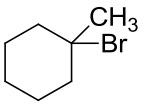
**B**



**C**



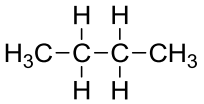
**D**

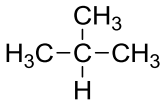


**E**

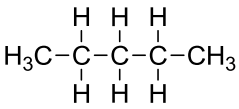
**5.2.10**

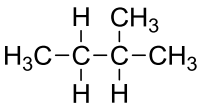
**1.**

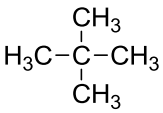




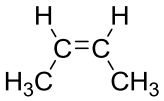
**2.**



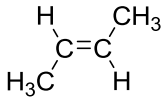




**3.**

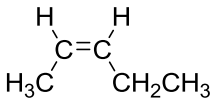


**Z**

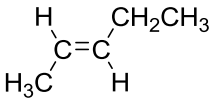


**E**

**4.**

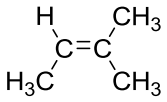


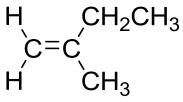
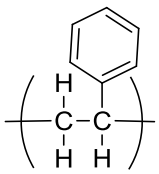
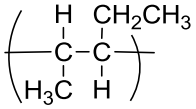
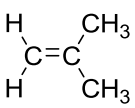
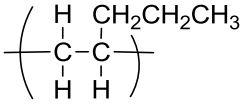
**Z**



**E**

**5.**





**5.2.11**