

13 Isomerism – Part 2 — Answers

Answers

Work through these after trying the questions yourself.

13.1 Compounds with the same molecular formula but a different arrangement of atoms.

13.2 Chain, positional and functional-group isomerism.

13.3 The pi bond fixes the two carbons, so there is restricted rotation about the double bond.

13.4 In the cis form the two groups are on the same side of the double bond; in the trans form they are on opposite sides.

13.5 It has four different groups attached.

13.6 Enantiomers.

13.7 In but-2-ene each carbon of the C=C carries a different pair of groups (an H and a CH₃), so they can be arranged cis or trans. In but-1-ene one carbon of the C=C carries *two* hydrogen atoms, so swapping them gives the same molecule — there is no cis/trans.