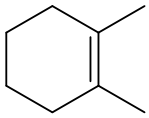
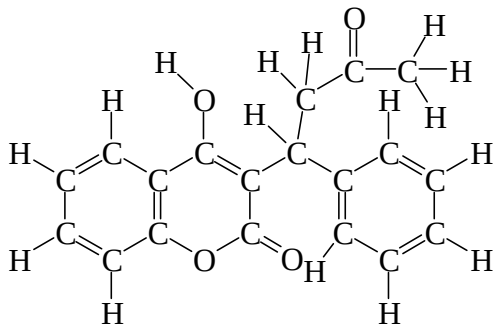
- Complete the following table. Make sure you indicate any relevant stereochemistry.

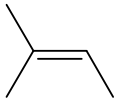
Marks 2

STARTING MATERIAL	REAGENTS/ CONDITIONS	CONSTITUTIONAL FORMULA(S) OF MAJOR ORGANIC PRODUCT(S)
$H-C\equiv C-CH_3$	excess Br_2 in diethyl ether solvent	
	H_2 / Pd / C ethanol solvent	

	Marks
• A structural formula for Warfarin, an anticoagulant, showing all atoms and bonds is shown below. Draw a stick representation of the formula in the adjacent box.	**1**



• Consider the alkene, 2-methyl-2-butene (**B**).	**4**



(**B**)

When (**B**) is treated with hydrogen chloride in methanol, two carbocations can be formed. The major carbocation reacts with nucleophiles that are present in the reaction to give an alkyl halide and an ether. Provide constitutional formulas of these intermediates and products in the appropriate boxes below.

major carbocation	minor carbocation
alkyl halide product	ether product