

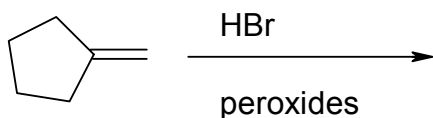
First Day

Naming



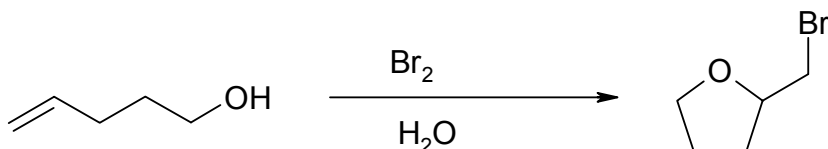
Part II: Reactions

Please write the major product(s). Include all regio- and stereochemistry. Use wedges and dashes if necessary.

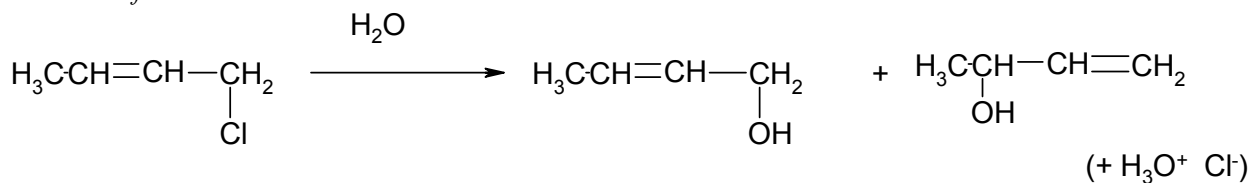


Mechanisms

Please write the mechanism for the addition reaction below. Include all intermediates and show the movement of electrons with curved arrows.



Allylic halogens undergo substitution through a S_N1 type mechanism like tertiary halides. The halide below undergoes hydrolysis in water to give a mixture of allylic alcohols. Propose a mechanism for their formation. . Show all intermediates and use arrows to show movement of all electrons.



Part V: Identify the following compound from the IR and NMR spectra. Identify all important IR peaks and match each NMR peak with the protons of your compound. If you are unable to find a good compound, discuss the chemical shift and splitting of each peak. Formula $C_6H_{10}O_3$

