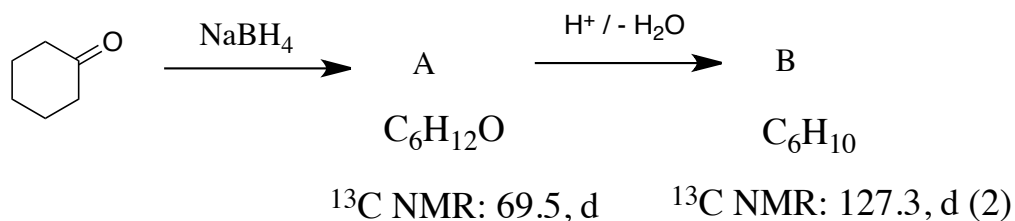
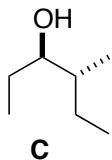


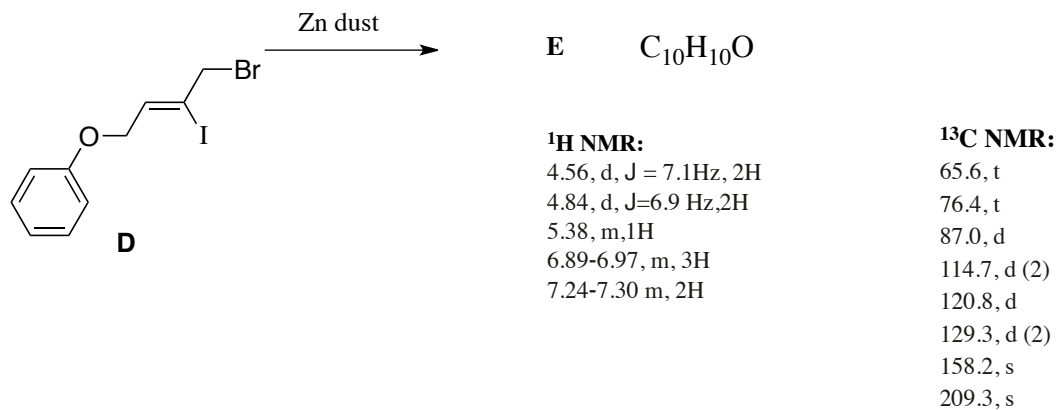
1. (10 points) Deduce the structures of **A** and **B**, and name **A** and **B**.



2. (10 points) Using any starting materials that contribute three or fewer carbons to the final product, outline a synthetic route to **C**. Absolute configuration is not important, but relative configuration is.



3. (10 points) Deduce the structure of **E**, and draw an arrow-pushing mechanism for its formation.



For other examples of this functional group, an allene, go to <http://www.chem.wisc.edu/areas/reich/Handouts/nmr-c13/cdata.htm>, and click on allene