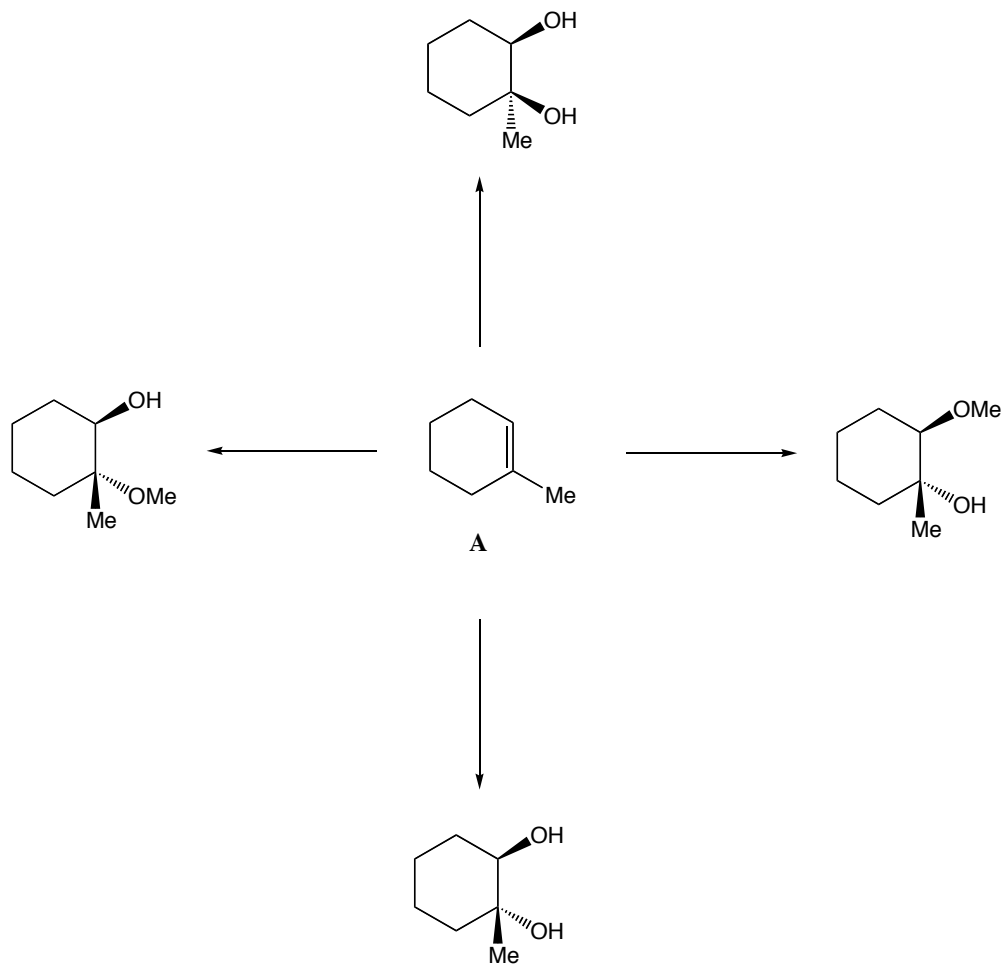
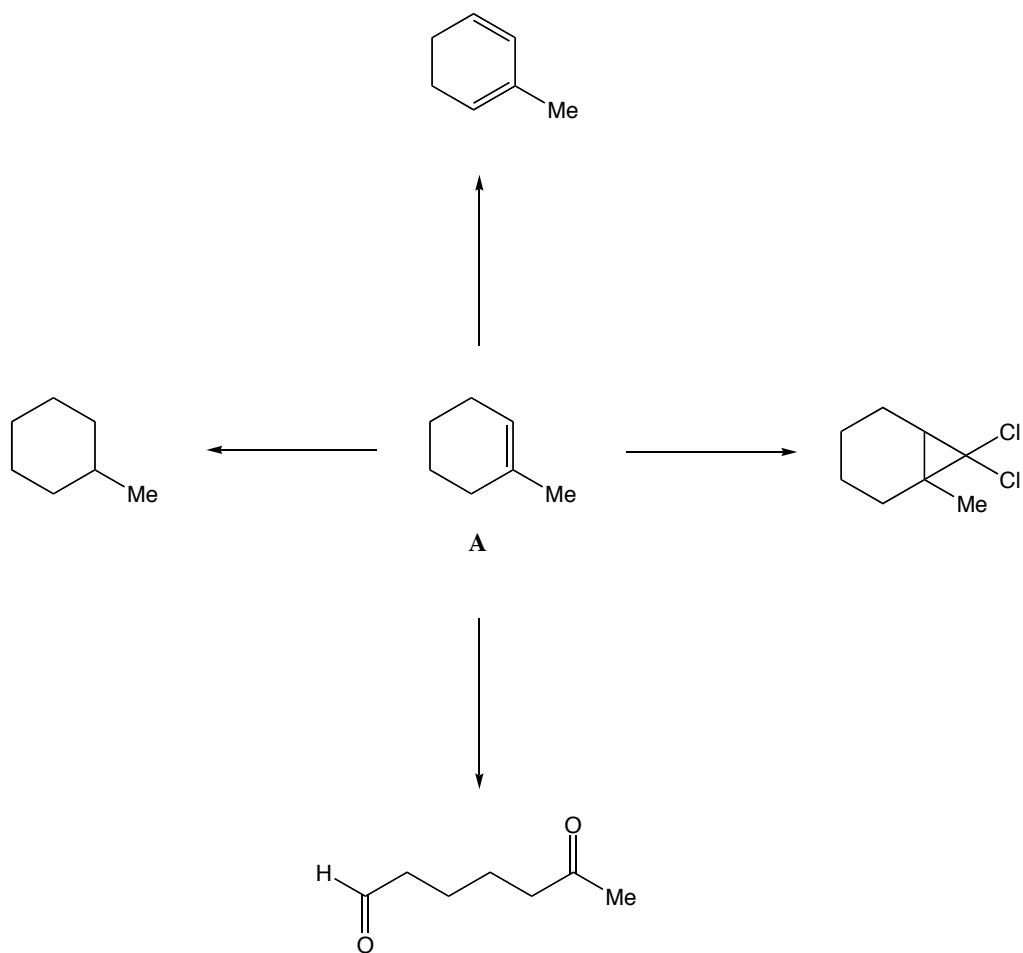


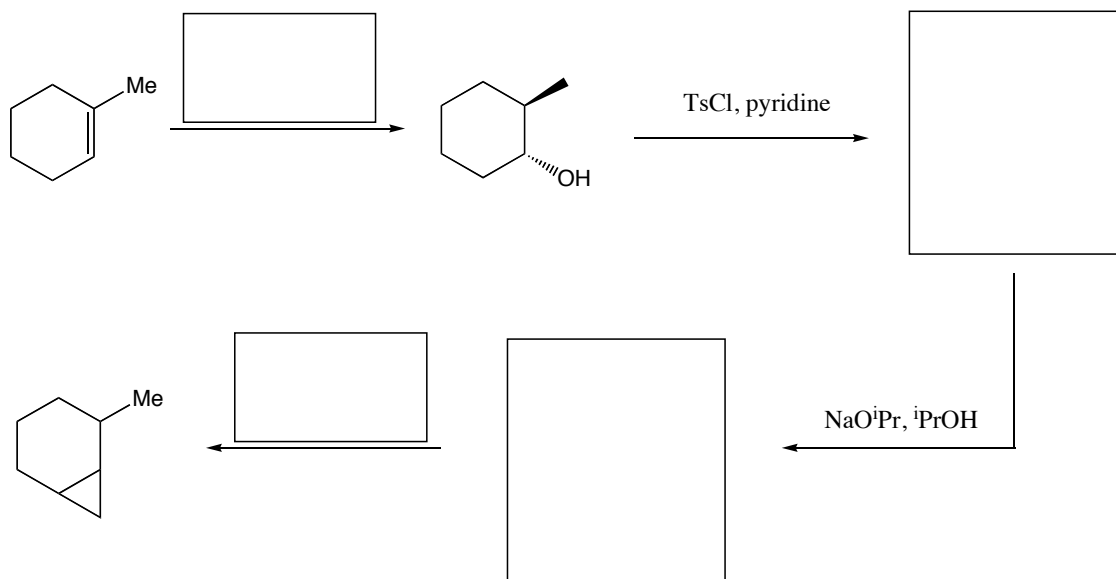
Problem Set 11

Question 1. Starting from 1-methylcyclohexene (A), show how you can synthesize each of the following compounds.

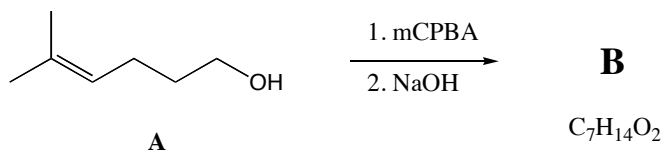




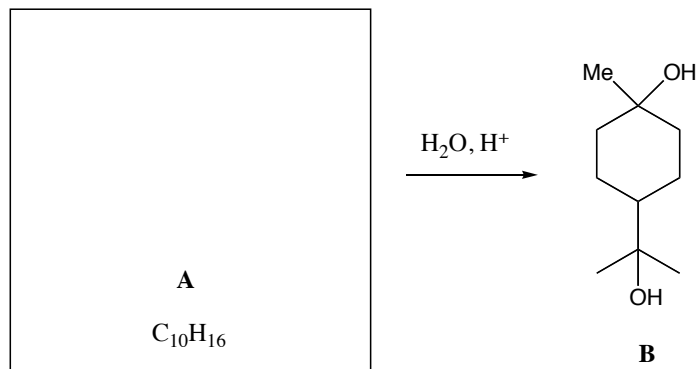
Question 2. In the boxes provided, fill in the missing reagents and structures to complete the synthetic sequence.



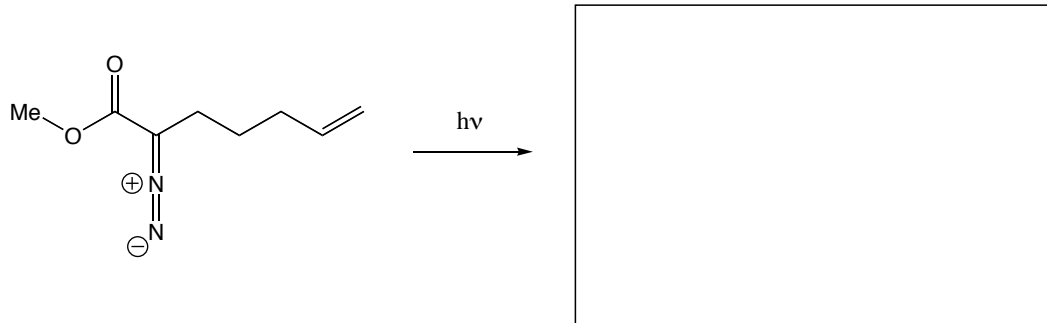
Question 3. When alcohol **A**, below, is treated with mCPBA followed by sodium hydroxide, compound **B** is produced as the major product. Identify **B** and provide a mechanism for step 2 of the process.



Question 4. Compound **A**, when dissolved in acidic water, produces diol **B**. Provide a possible structure for **A**.



Question 5. Provide the major product of the following reaction.



Question 6. Provide reagents that will accomplish the following transformations.

