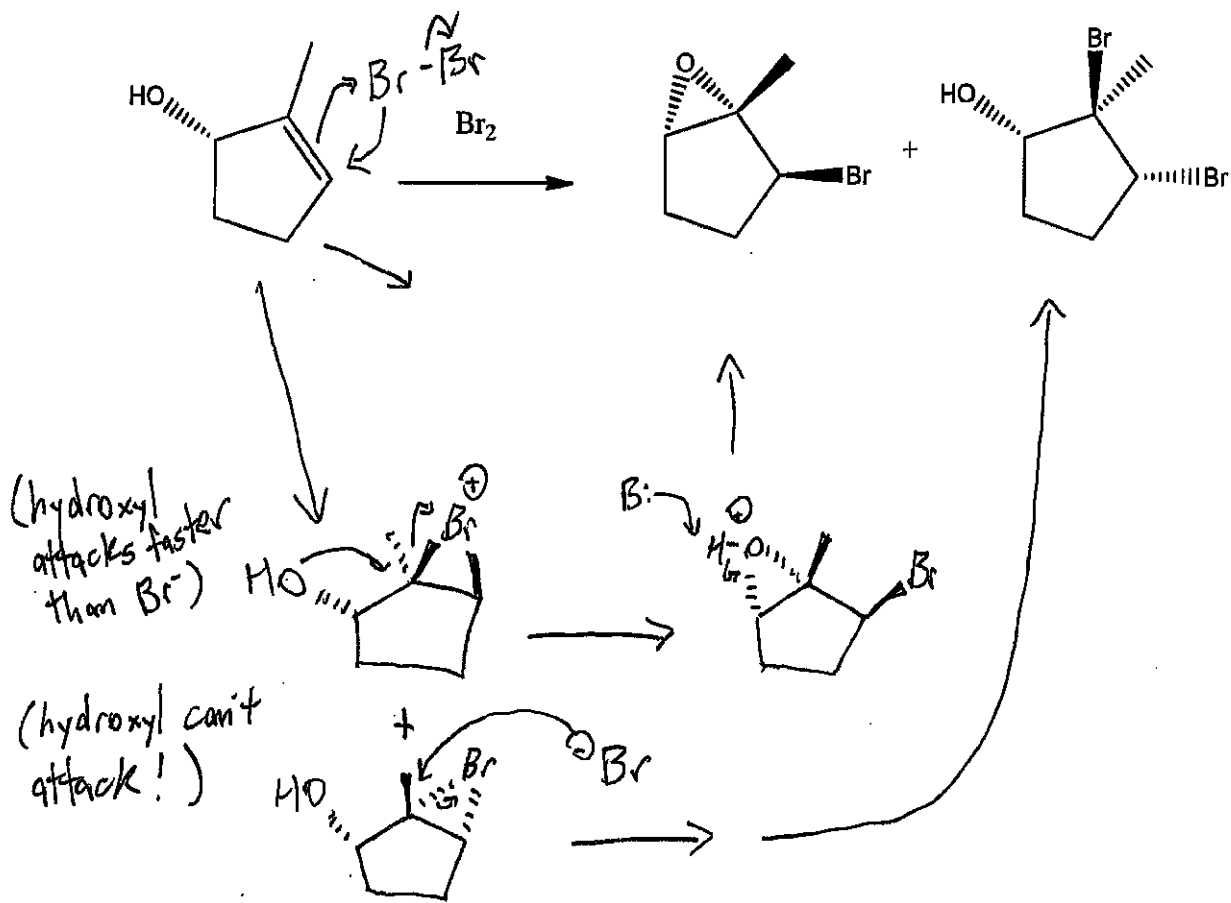


Chapter 9 Practice Exam

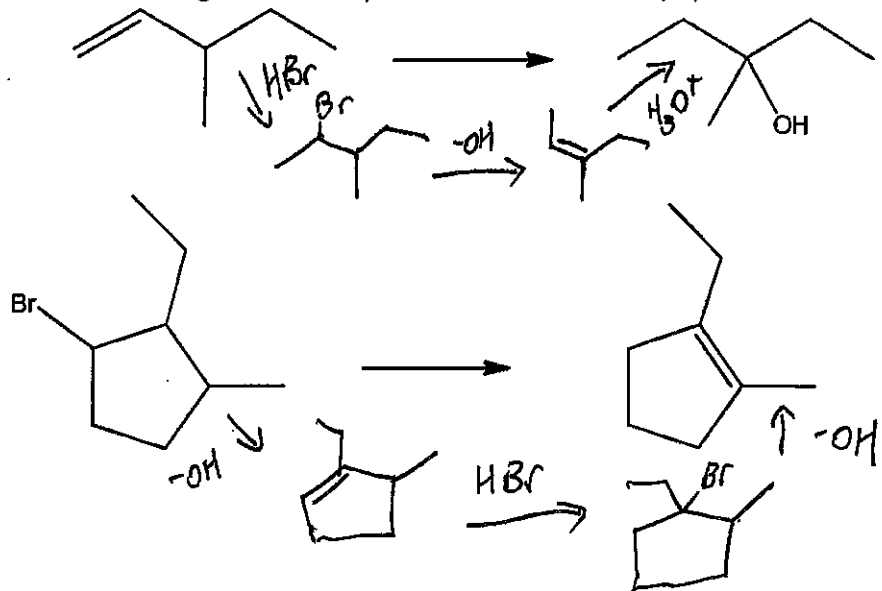
Types of problems:

Predict the product, provide the reagent, mechanism, questions based on mechanism, multistep

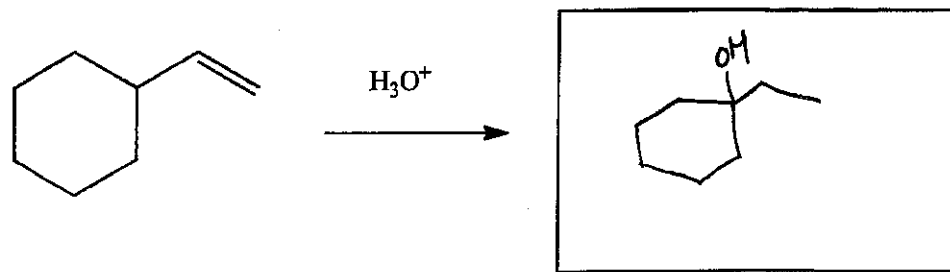
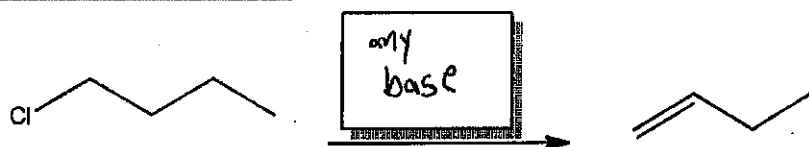
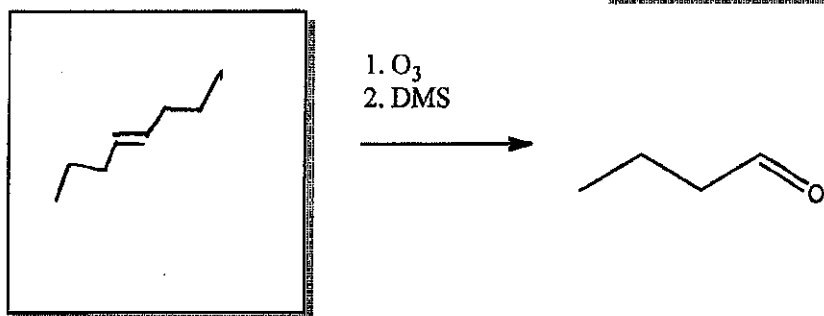
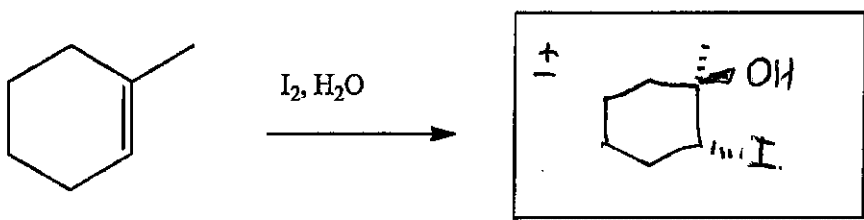
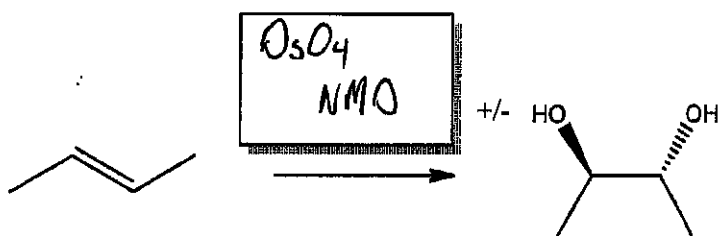
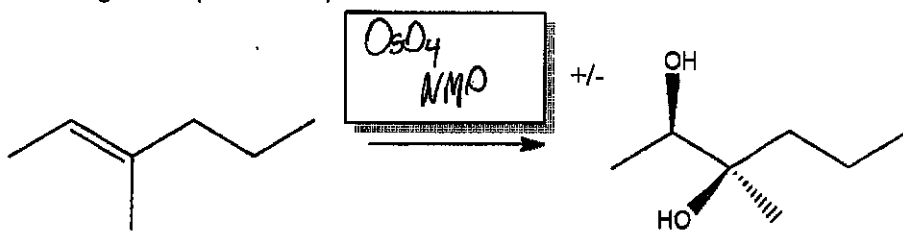
1. Use an arrow mechanism to explain the following products, including stereochemistry.



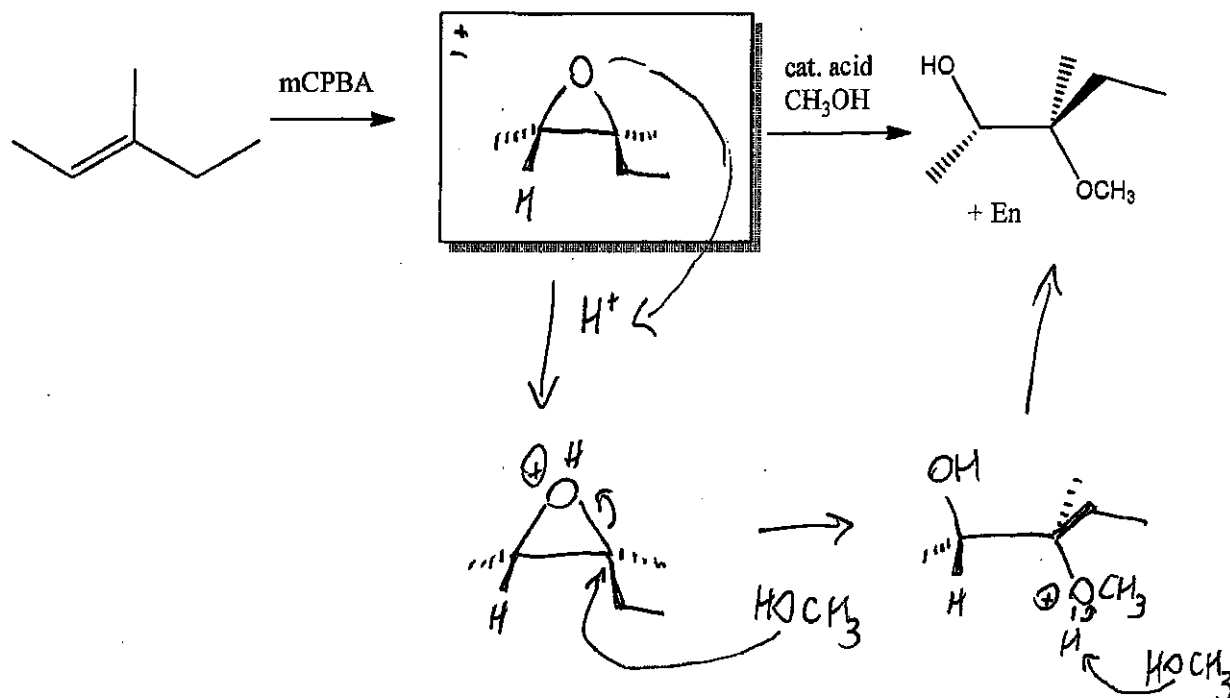
2. Provide all reagents necessary to achieve these multistep syntheses.



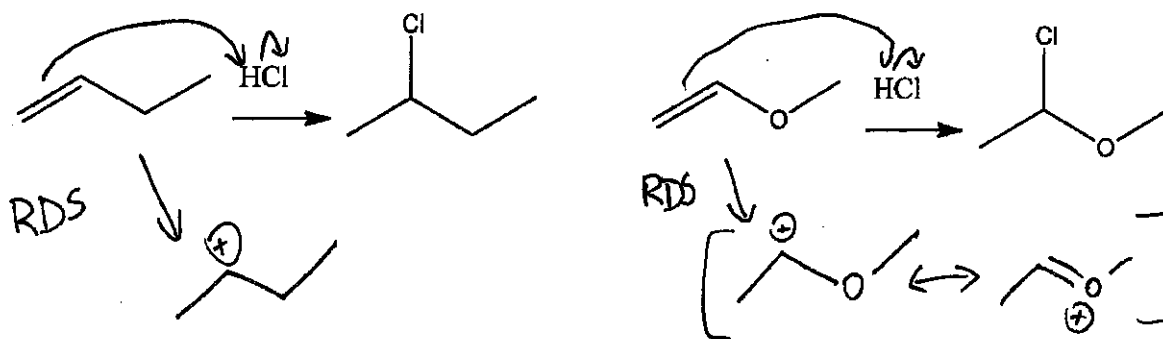
3. Provide reagents or predict the products



4. Predict the product of the first step of this two step process. Then provide a mechanism for the second step of this reaction. How does this mechanism explain the regiochemistry and stereochemistry of the product?



5. Which of these two reactions would you expect to proceed faster? Explain.



The second rxn would be expected to be faster because it has a lower Activation energy. According to Hammond's postulate, the TS resembles the intermediate. The second carbocation is much more stable by resonance, so the TS leading to it is lower in energy, decreasing the E_A.