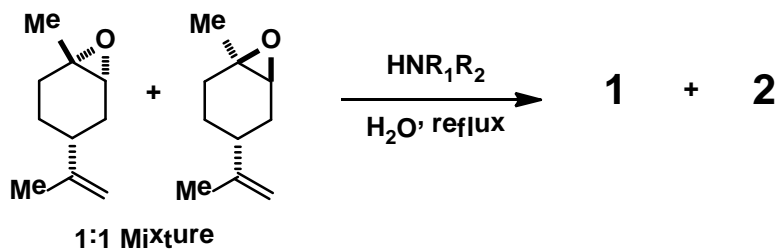




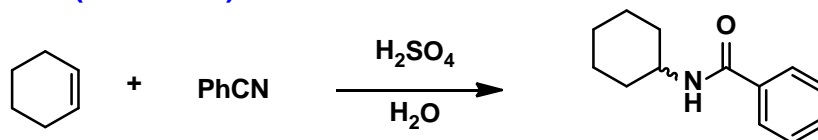
2. **Problem:** Based on what you learned about the Furst-Plattner Rule, determine the structures of **1** and **2**. To determine the structures you will need to show your insights (mechanism) for my understanding of how/where the nucleophile attacks. (20 PTS)



Answer:



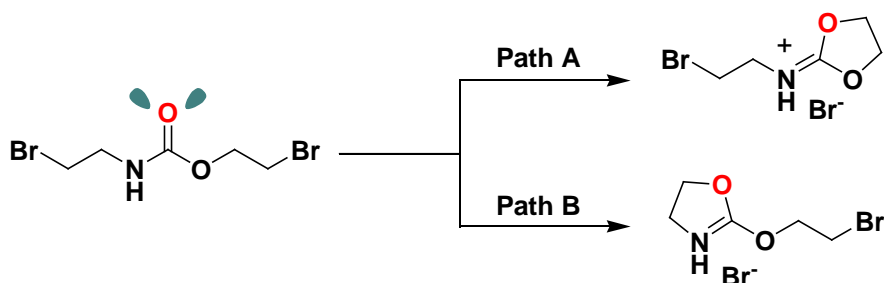
3. **Problem:** Using the curved arrow formalism, provide a reasonable mechanism for the following reaction. (20 Points).



Answer:



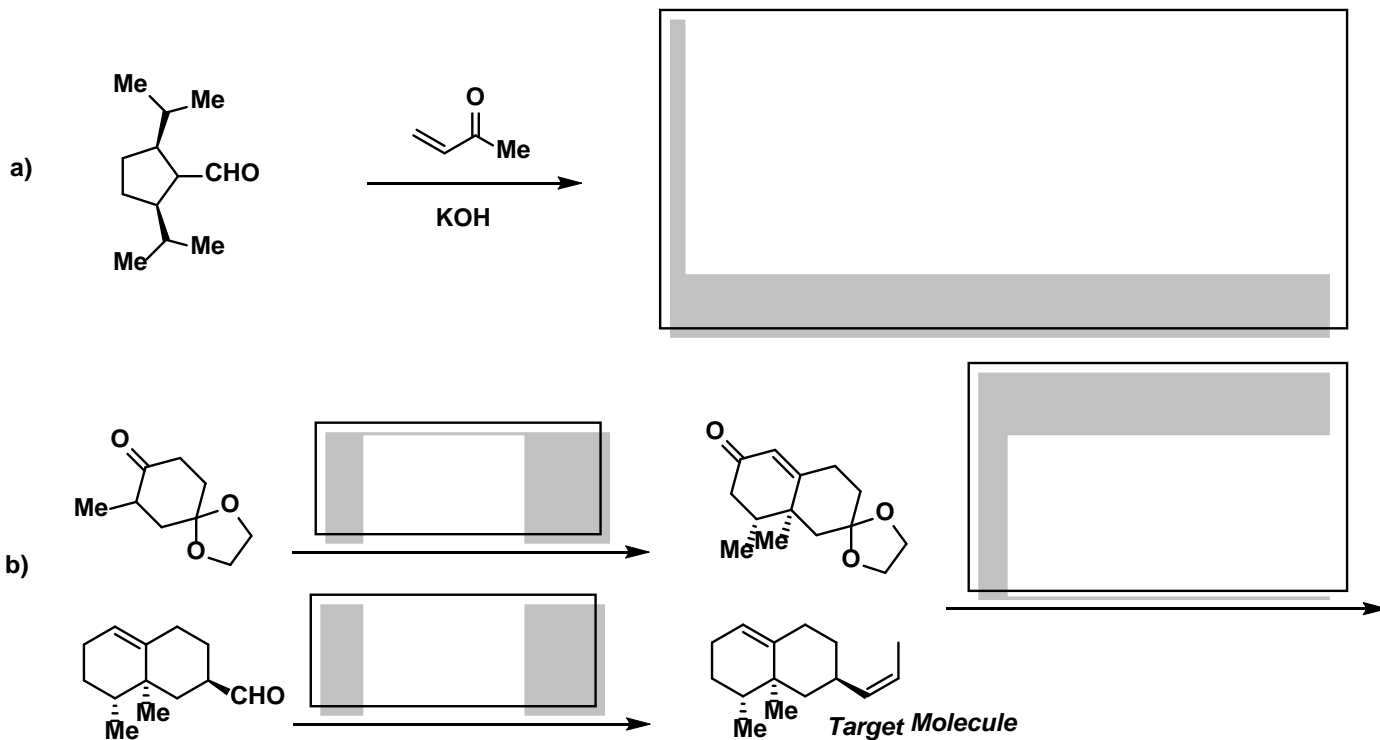
4. **Problem:** The molecule illustrated below can react through either **Path A** or **Path B** to form the bromine salts as illustrated. In both instances the carbonyl oxygen functions as the nucleophile in an intramolecular alkylation. What is the **preferred** path for the transformation in question?



Answer:



5. **Problem:** Fill in the blanks. There may be more than one reagent necessary to carry out some of the indicated transformations. (15 PTS)



Answer: