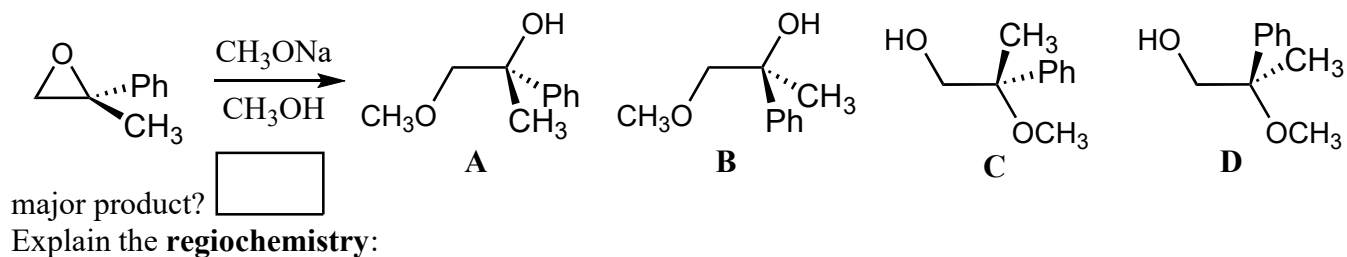
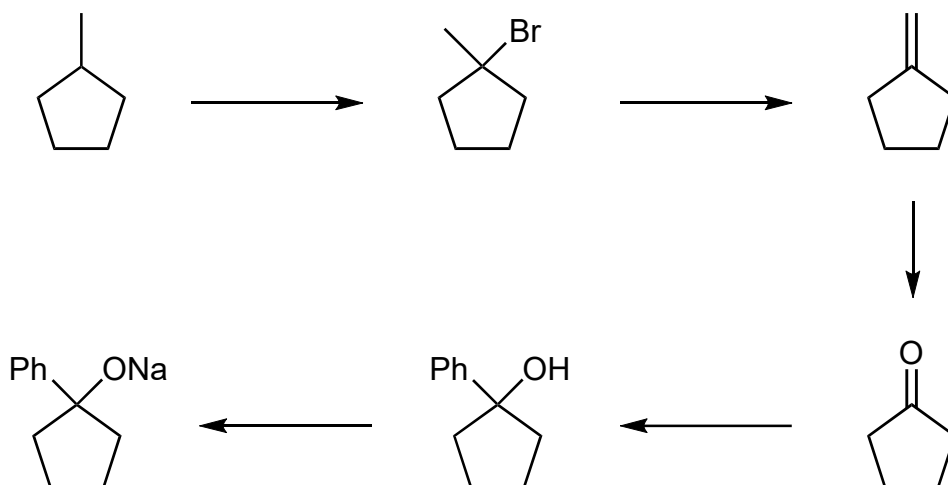


4A) (6 pts) Predict the major product and explain the **regiochemistry** of the reaction.



4B) (16 pts) Provide the missing reagent(s) for each step of the following synthetic sequence. Each transformation is only one or two steps.



4B) (8 pts) Provide a complete mechanism for the following reaction. Pay close attention to details, including lone pairs, formal charges, and the use of curved arrows.

