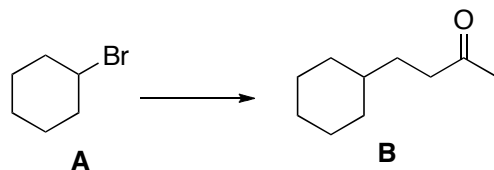
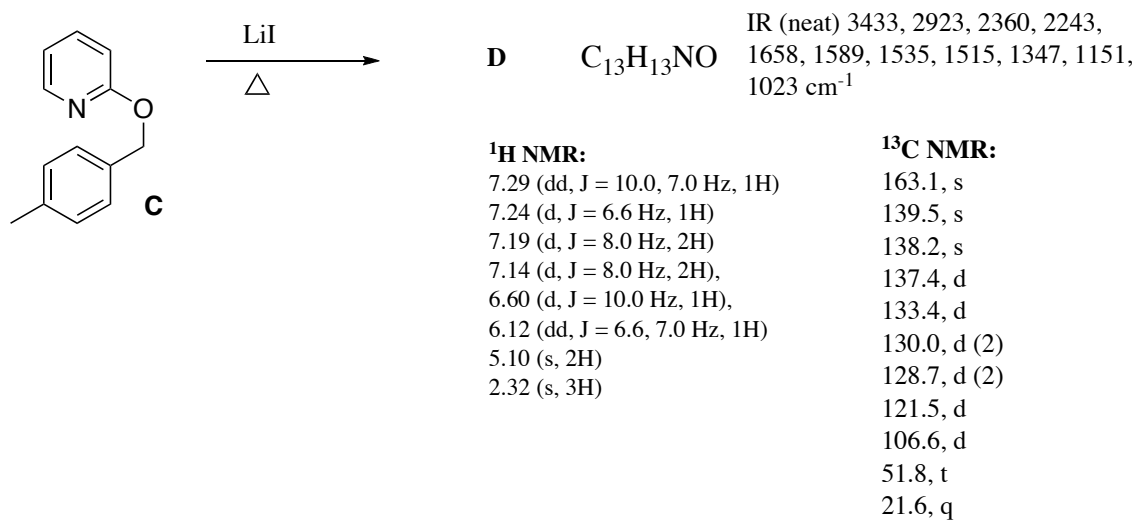


1. (10 points) Using any starting materials that contribute three or fewer carbons to the final product, outline a synthetic route for converting **A** into **B**.



2. (10 points) Deduce the structure of **D**, and draw an arrow-pushing mechanism for its formation.



3. (10 points) Draw a detailed arrow-pushing mechanism for the conversion of **E** to **F**.

