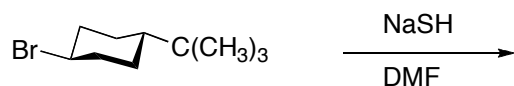
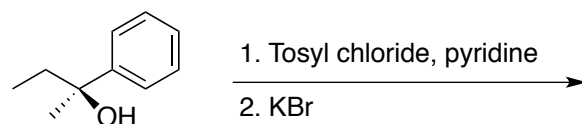
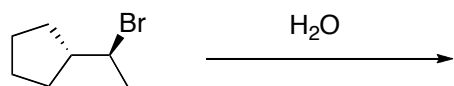
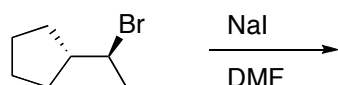


## Organic Chemistry II

### Take Home Problem Set

Draw the structure of the major organic product(s) for each of the following reactions (no mechanism required). Indicate the stereochemistry for each reaction when appropriate. Write the name of the reaction mechanism to the right of each structure (these are all either  $S_N1$  or  $S_N2$  reactions).



A racemic mixture of 2-bromo-3,3-dimethyl-butane reacts with sodium acetate to form the following products, where the MAJOR product does NOT result from direct substitution at the 2-position. Provide an arrow pushing mechanism that accounts for the formation of the MAJOR product.

