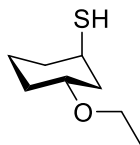




1. Give IUPAC names for the following compounds. Be sure to indicate stereochemistry when appropriate (12 pts).

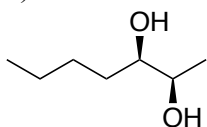
A)



B)



C)



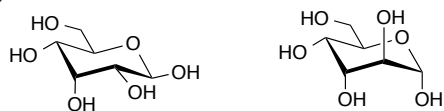
2. Draw structures corresponding to the following IUPAC names (6 pts).

A) 2,2-dimethyloxirane

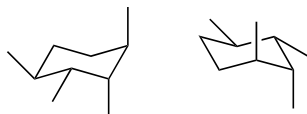
B) (*E*)-3-(iodomethyl)-4,4-dimethyl-2-pentene

3. Describe the relationship between each pair of stereoisomers (6 pts).

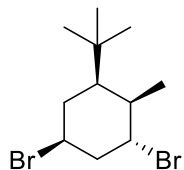
A)



B)

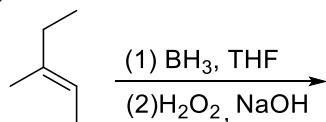


4. Draw the most stable chair conformation of the following compound (4 pts).

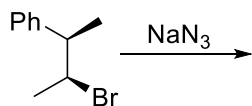


5. For each of the following reactions, provide the structures of all major products, including stereoisomers (48 pts).

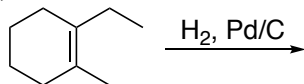
A)



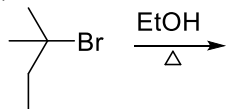
B)



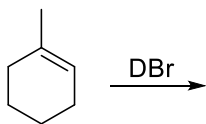
C)



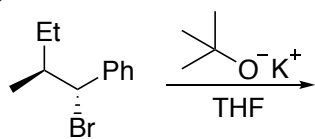
D)



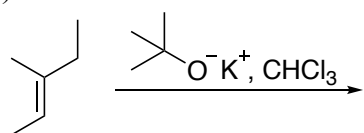
E)



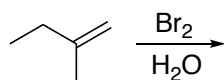
F)



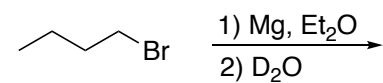
G)



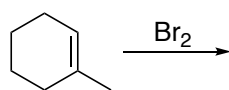
H)



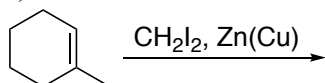
I)



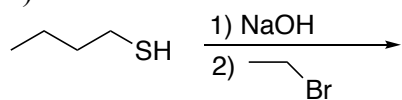
J)



K)

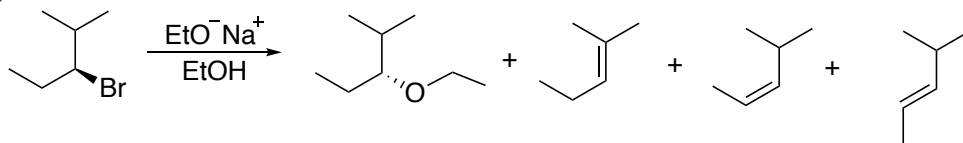


L)

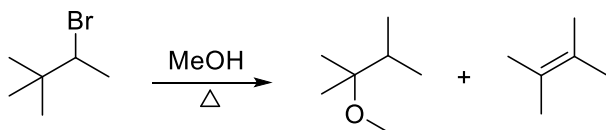


6. Using the curved arrow notation, suggest a mechanism for the formation of each of the products in the following reactions (24 pts).

A)



B)



C)

