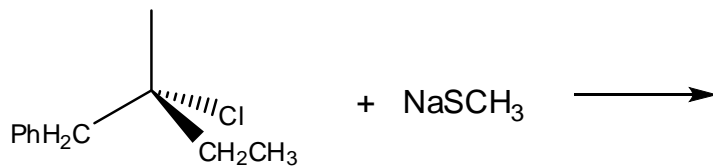


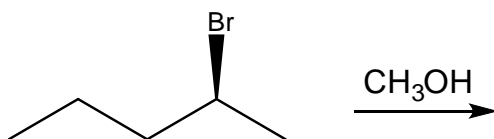
Chemistry 2500 (Fall 2017): Assignment #17 – Synthesis

1. Predict the products of the following reactions:

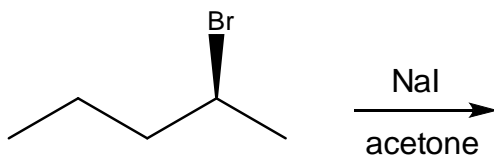
a)



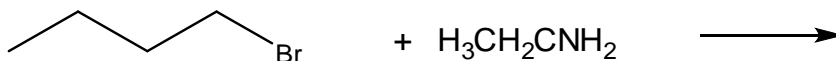
b)



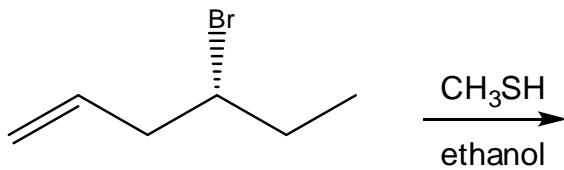
c)



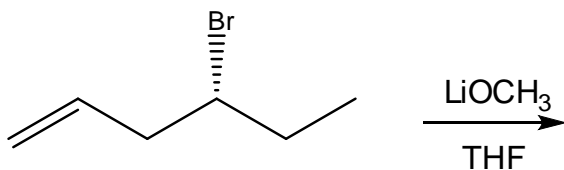
d)



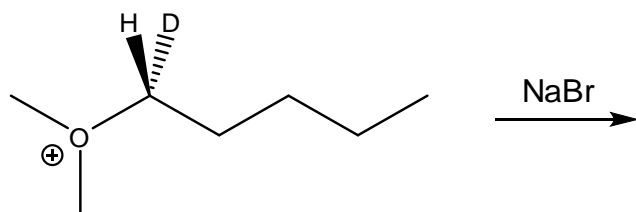
e)



f)

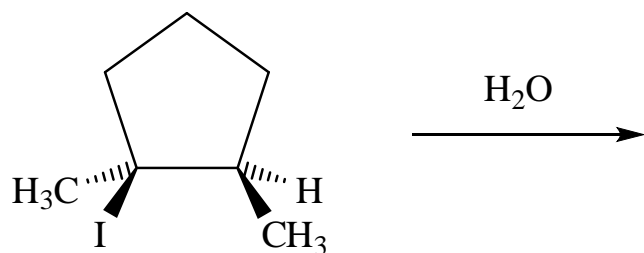


g)

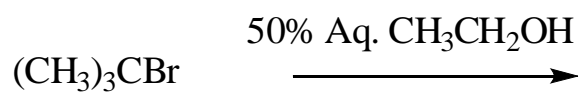


2. For each of the following reactions, give the expected product including the correct stereochemistry. If a mixture of products is formed, then show all products. Where possible indicate which are the major product(s). In addition, indicate which mechanism(s) are operative and show all electron movement using appropriate arrows. If no reaction occurs, then give a reason why this is the case.

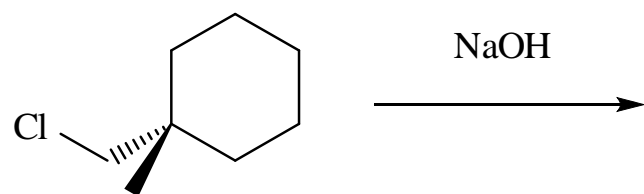
a)



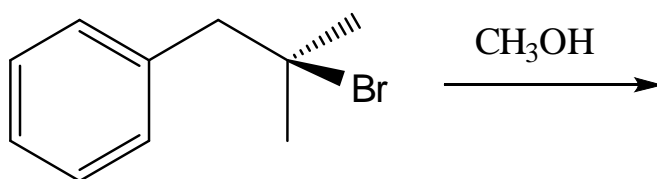
b)



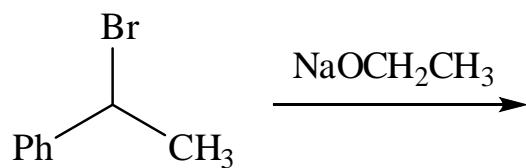
c)



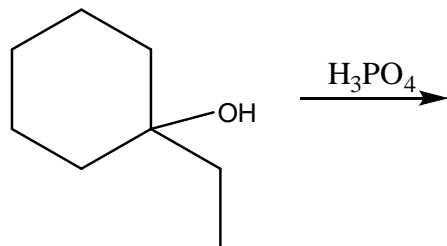
d)



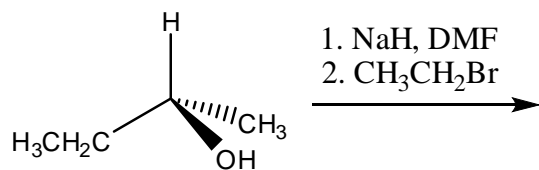
e)



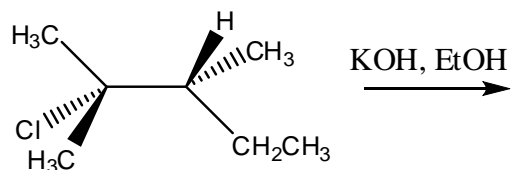
f)



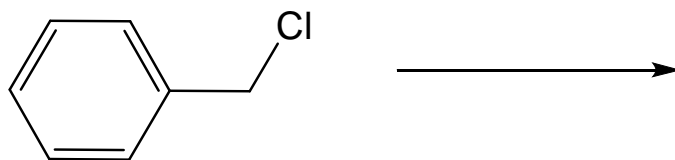
g)



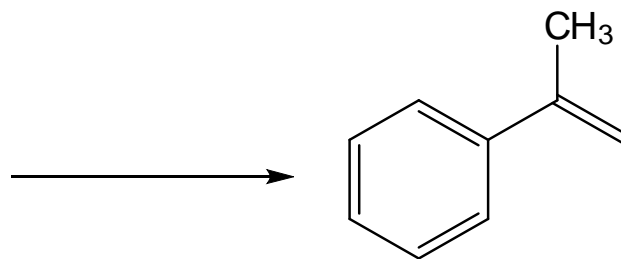
h)



3. Give an example of a substitution reaction including all reactants and showing the structure of the product, which has the following organic starting material:

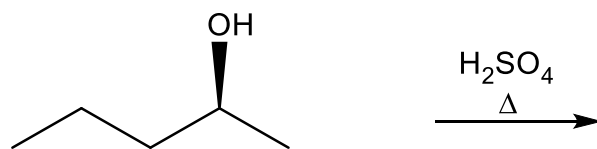


4. Give an example of an elimination reaction, including all reactants and showing the structure of the organic starting material, which has the following product:

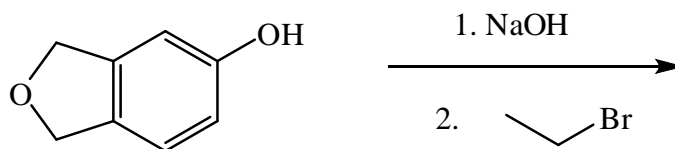


5. Provide the product(s) of the following reactions.

a)



b)



c)

