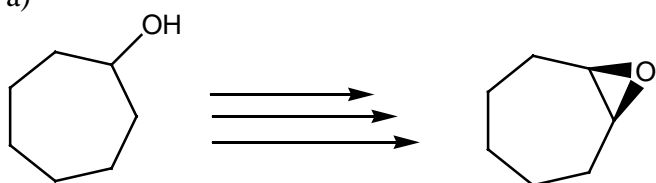


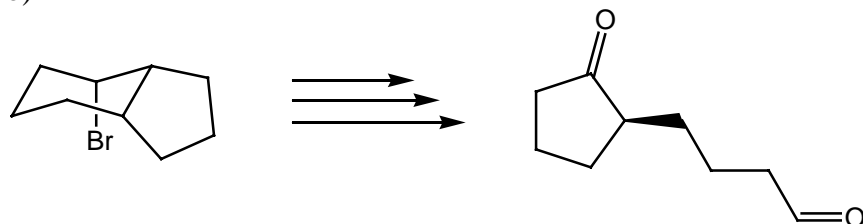
Chem 141
Problem-Set
Wednesday 6th December 2006.

1. Outline a synthetic strategy (provide the reagents) to perform the following transformation.

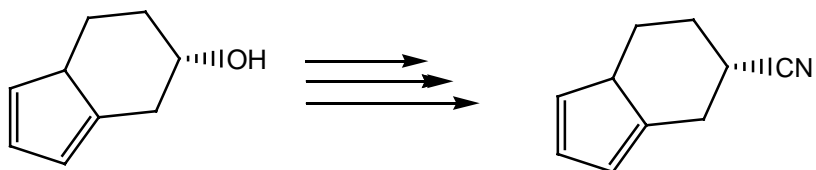
a)



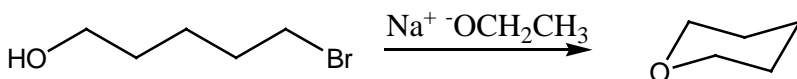
b)



c)

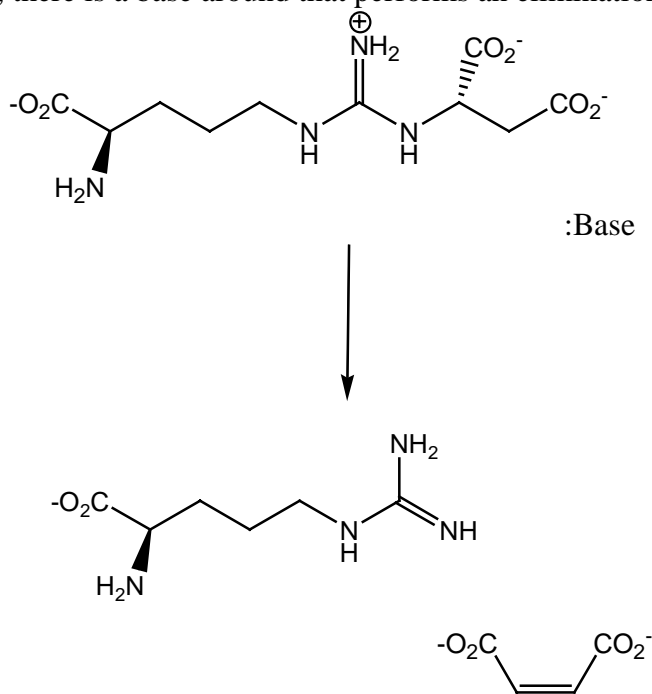


2) Provide a mechanism for the following reaction that would explain the product formed.



In class we looked at protecting groups to protect the alcohol of 3-bromopropanol. Why would this cyclization mechanism not be a problem with 3-bromopropanol.

3) One step in the urea cycle to rid our bodies of ammonia is the conversion of argininosuccinate to the amino-acid arginine and fumarate. Propose a mechanism for this reaction. (Hint, there is a base around that performs an elimination E2).



4) Suggest a full mechanism and the likely product of the following reaction. (Include stereochemistry)

