

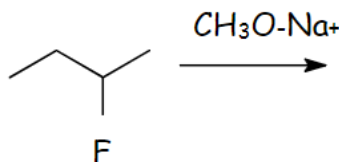
PILOT Learning  
Organic Chemistry I – Dr. Townsend  
Problem Set #12  
Fall 2018

1. The SN1 reaction mechanism is observed when the carbocation formed is tertiary. What other substrates might also proceed through an SN1 mechanism?

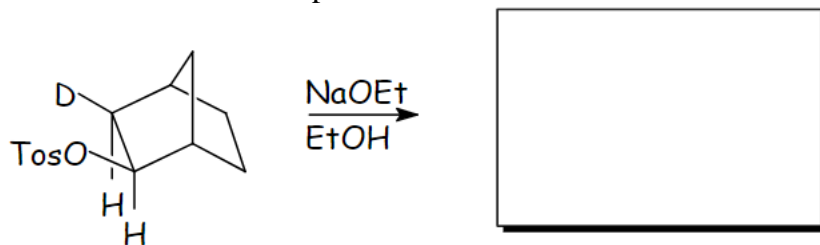
2. What type of reaction mechanism could be followed by the following molecule?



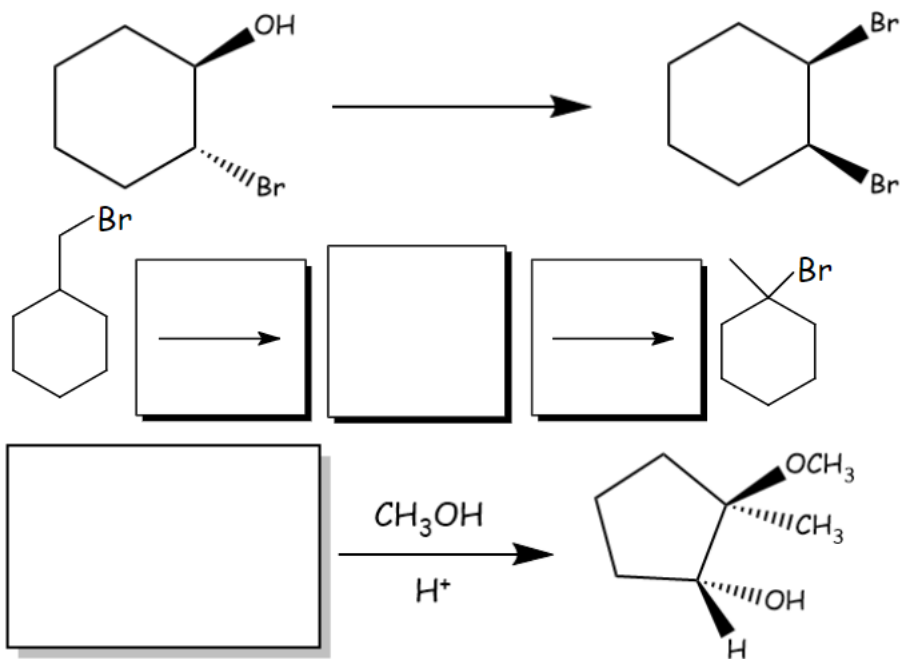
3. Consider the following molecule. Why does it produce the less-substituted alkene upon elimination? If the fluorine is replaced by a bromine, what changes?



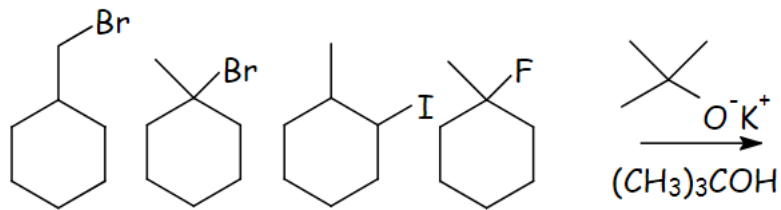
4. Draw the elimination product and the mechanisms for the following reaction.



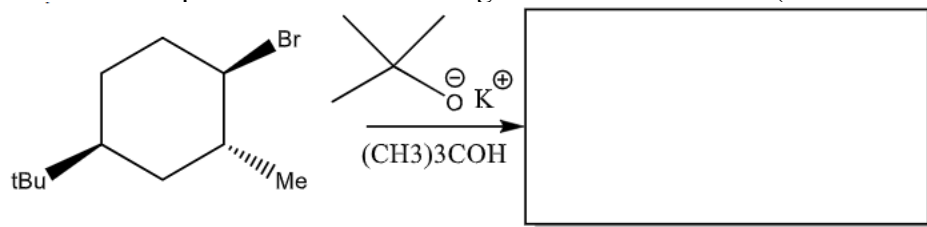
5. Draw the starting material, product, or reagents for the following reactions.



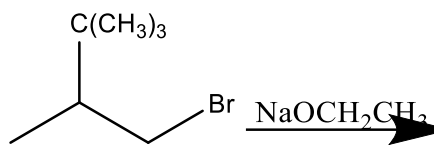
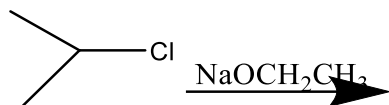
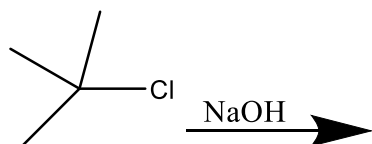
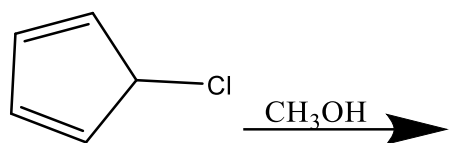
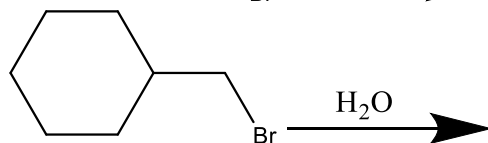
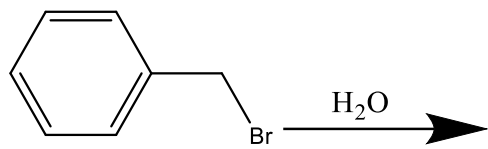
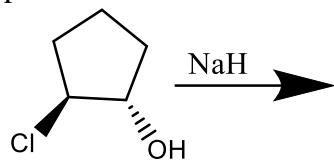
6. Consider the products of the following reactions with each of the starting products.



7. Predict the product of the following elimination reaction. (Hint: Draw a chair conformer)



8. Predict the products of the following reactions and indicate which mechanism(s) would take place.



12. Provide syntheses for the following compounds.



