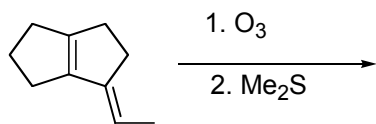


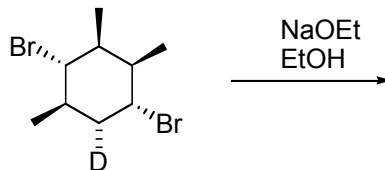
Chem. 30A- Week 10

Final prep:

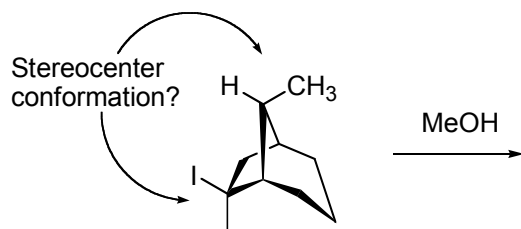
1.



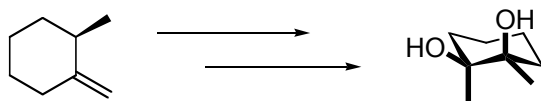
1b.



2.



3.

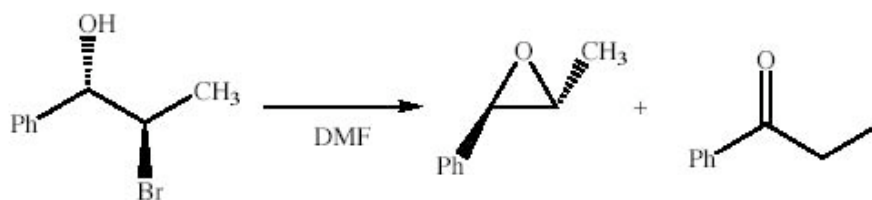


4. Draw the orbital diagram that explains why backside attack is favored for SN_2 reactions.

5. Account for the fact that the rate of reaction of 1-chlorooctane with acetate ion to give octyl acetate is greatly accelerated by the presence of a small quantity of iodide ion.

6.

Write an S_N1 mechanism that accounts for the reactions products shown.



7. Compound X is optically inactive and has the formula $C_{16}H_{16}Br_2$. On treatment with strong base, X gives hydrocarbon Y, $C_{16}H_{14}$. Compound Y absorbs two equivalents of hydrogen when reduced over a Pd catalyst and reacts with ozone to give two fragments. One fragment, Z, is an aldehyde with formula C_7H_6O . The other fragment is glyoxal, $CHOCHO$. Formulate the reactions involved, and suggest structures for X, Y, and Z. What is the stereochemistry of X?