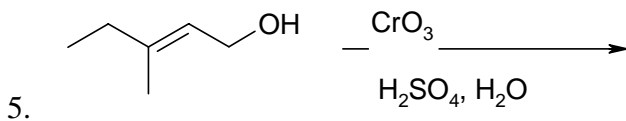
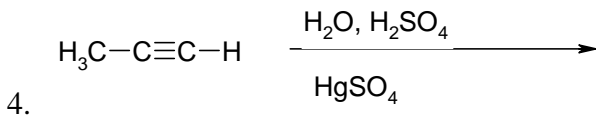
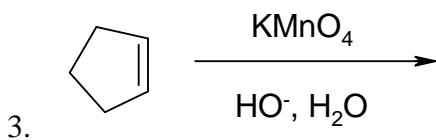
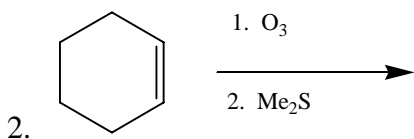
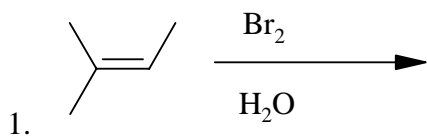


Pretest 3; November 1, 2007
CHM 2210C, Organic Chemistry I

Part I: Nomenclature. Please provide the unambiguous name for each of the following structures or provide the structure for any of the following names.

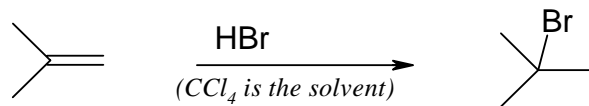
<u>Structure</u>	<u>Name</u>
1. (include stereochemistry) 	
2.	(Z)-2-bromo-2-hexene

Part II: Reactions. Fill in the starting material, reaction conditions or products.

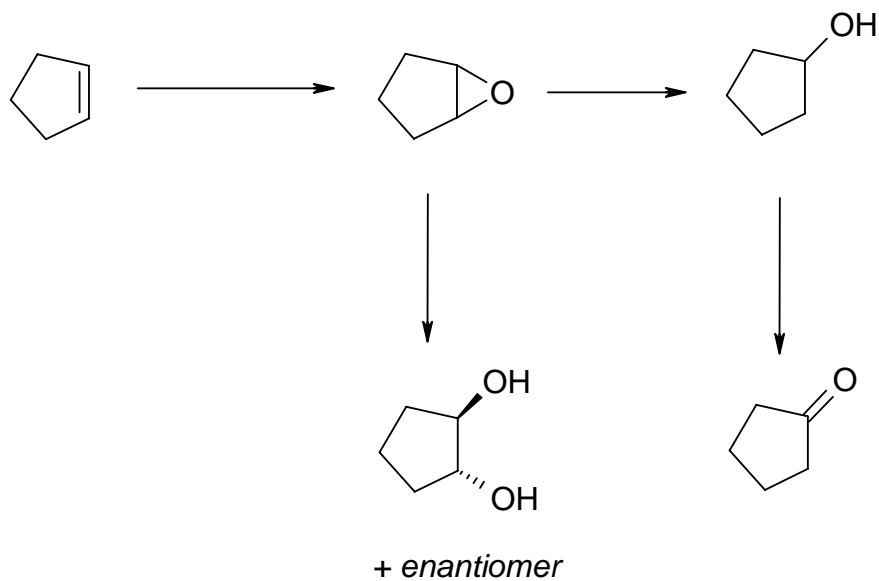


Part III: Mechanisms.

Please draw the mechanism for the following reaction. Show all intermediates and use arrows to show movement of electrons.



Part V: Look at the power you now have! You can convert cyclopentene into many products. Show the reagents you would use to do each of these conversions.

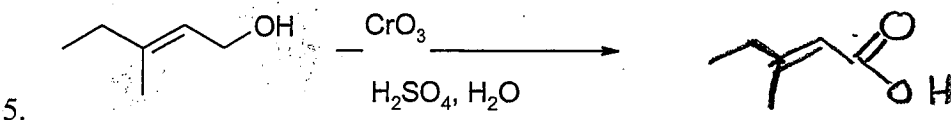
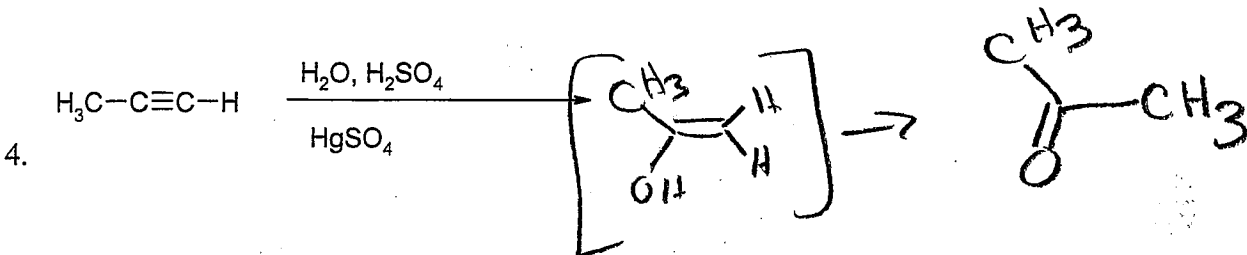
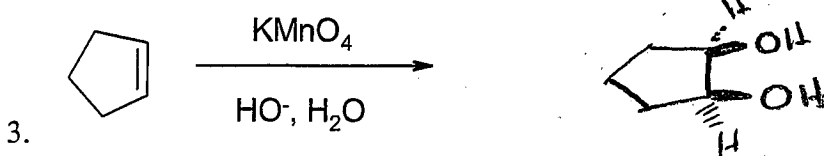
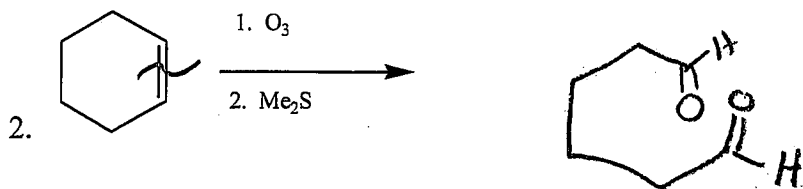
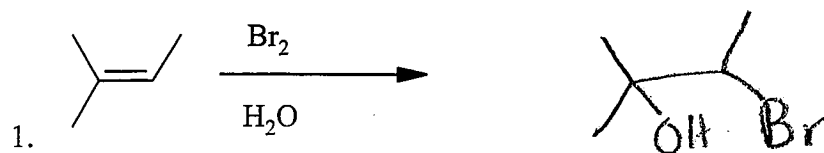


Pretest 3; November 7, 2006
 CHM 2210C, Organic Chemistry I

Part I: Nomenclature. Please provide the unambiguous name for each of the following structures or provide the structure for any of the following names.

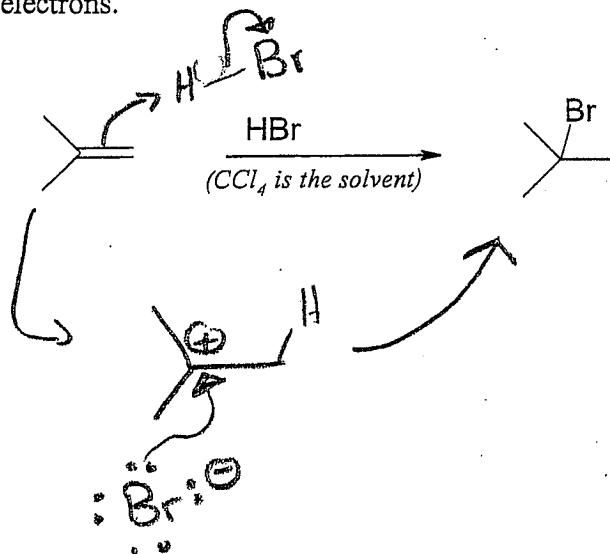
Structure	Name
1. (include stereochemistry) 	(3S)-3-chloro-1-butene
2. 	(Z)-2-bromo-2-hexene

Part II: Reactions. Fill in the starting material, reaction conditions or products.

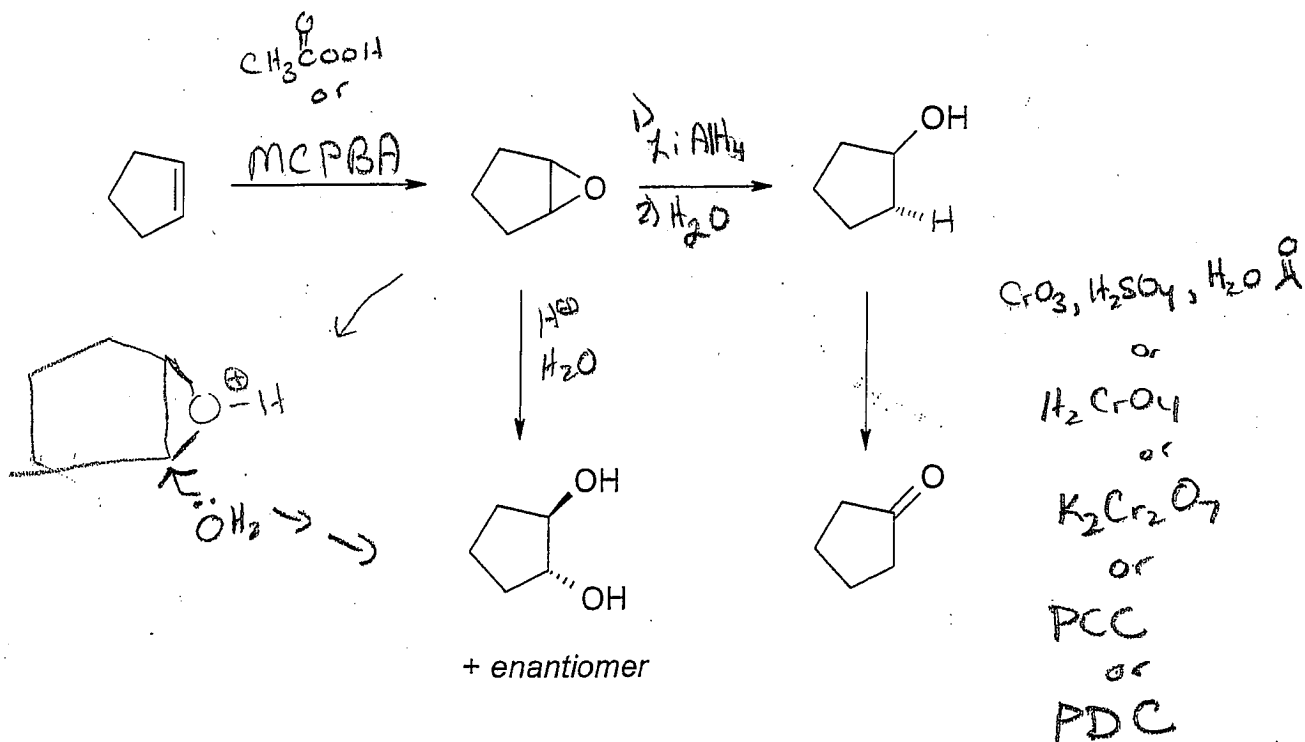


Part III: Mechanisms.

Please draw the mechanism for the following reaction. Show all intermediates and use arrows to show movement of electrons.



Part V: Look at the power you now have! You can convert cyclopentene into many products. Show the reagents you would use to do each of these conversions.

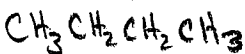
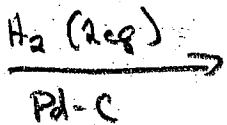
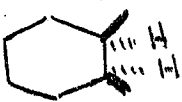
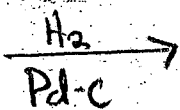
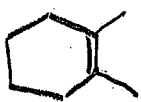


Starting material

Rxn Cond

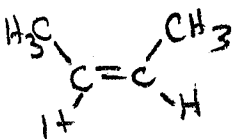
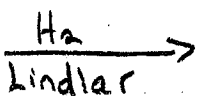
Prod.

syn addn



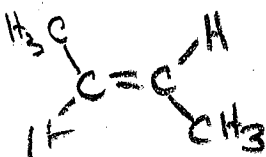
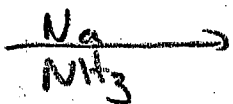
add H_2 twice

ii

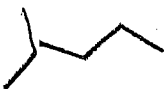
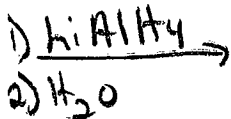


Lindlar is a poisoned catalyst **still syn**

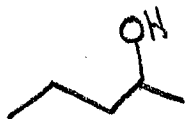
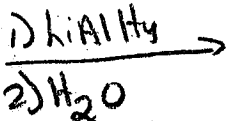
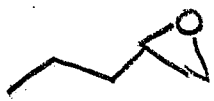
iii



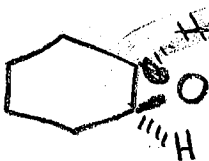
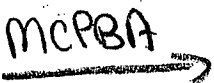
trans addn of H_2



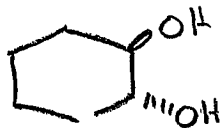
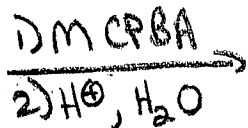
$\text{H}:\ominus$ does $\text{S}_\text{N}2$ on chloride



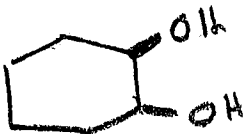
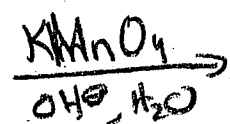
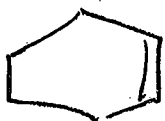
$\text{H}\ominus$ attacks less substituted side



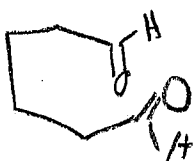
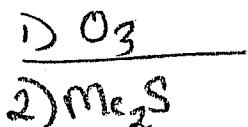
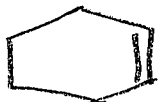
$\text{CH}_3\text{-COOH}$ also works



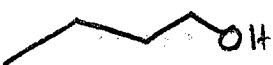
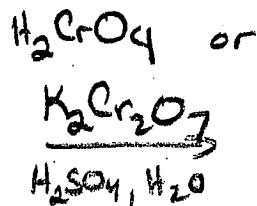
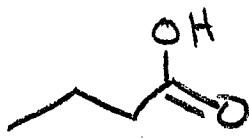
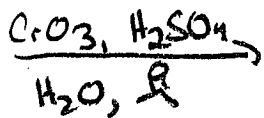
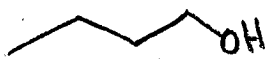
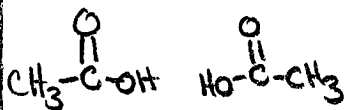
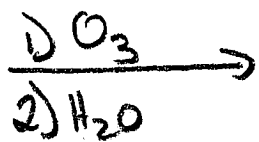
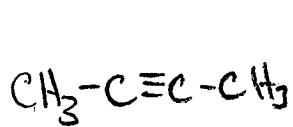
2nd step can also be $\text{OH}\ominus, \text{H}_2\text{O}$



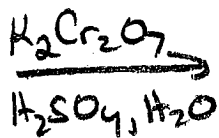
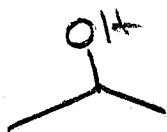
or $\xrightarrow[2) \text{NaHSO}_3, \text{H}_2\text{O}]{1) \text{OsO}_4}$



2nd step can also be Zn, HOAc



or PDC



any of the last
2 will work