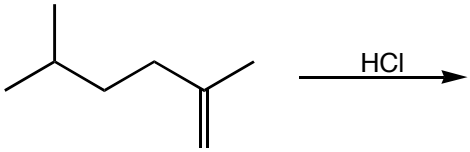
Name _____ Test 2 (11/10)
CHEM 0201 (Organic) Fall 2010

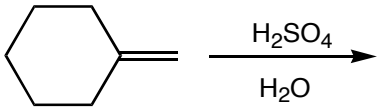
1. (6 pts. each) Predict the major product(s) for the following reactions.

1. _____

a. 

2. _____

3. _____

b. 

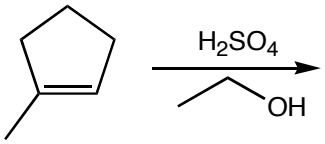
4. _____

5. _____

c. 

6. _____

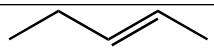
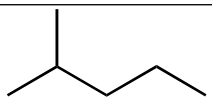
7. _____

d. 

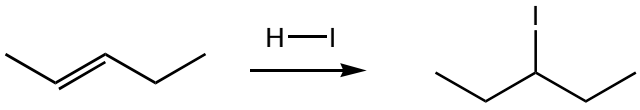
8. _____

9. _____

2. (2 pts. each) Label the following molecules (atoms/ions) as nucleophilic, electrophilic, or neither.

	HCl	H_2O	H^+
CH_3OH		$CH_3CH_2CH_3$	CH_2CHCH_3

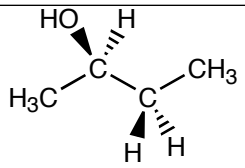
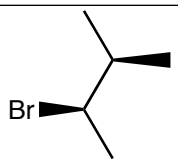
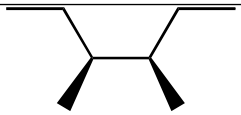
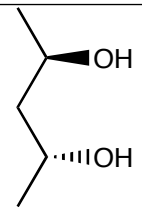
3. (10 pts.) Draw a mechanism that accounts for the formation of the product in the following reaction.



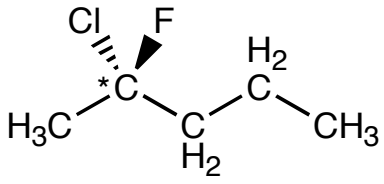
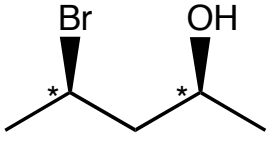
4. (10 pts.) Consider the hybridization of the carbon atoms and the location of the electrons in the bonds of an alkene and the hybridization of the carbon atoms and the location of the electrons in the bonds of an alkane and explain why alkenes are more reactive than alkanes toward electrophilic addition.

5. a. (3 pts. ea.) Identify (place a star next to) the chiral atoms on the following molecules

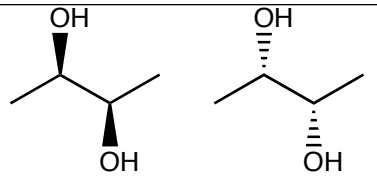
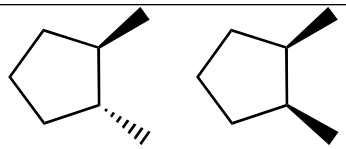
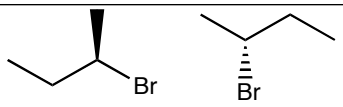
b. (3 pts. ea.) Circle the chiral molecules.

i. 	ii. 
iii. 	iv. 

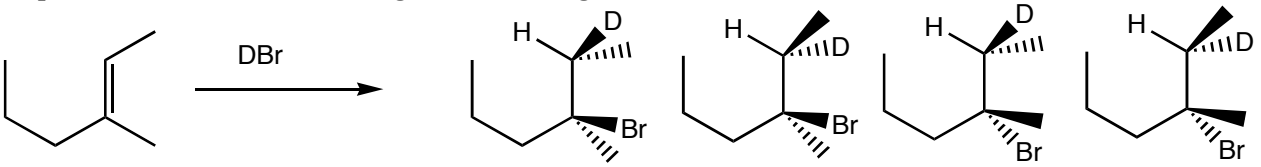
6. (6 pts. each) Determine the configuration of the starred atoms in the following molecules.

i. 	ii. 

7. (4 pts. each) For each pair of molecules, determine whether the molecules are enantiomers, diastereomers, or different views of the same molecule.

a. 	b. 	c. 

8. (10 pts.) Consider the mechanism of an electrophilic addition reaction and explain why four products are formed during the following reaction.



9. (10 pts) Would you expect the molecules drawn below to have the same melting points or different melting points? Explain your response.