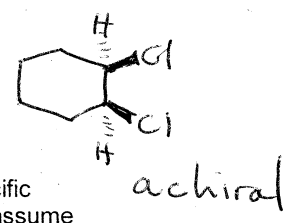
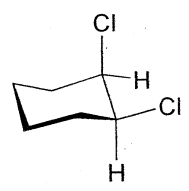
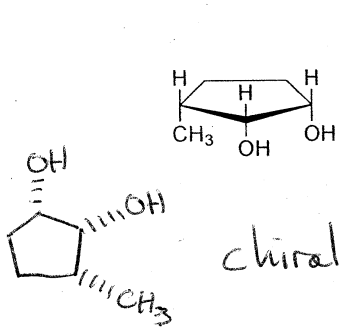
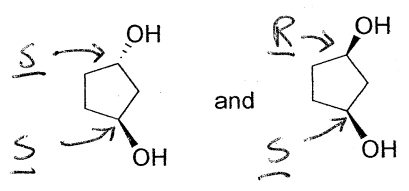


1. (3 pts each) Identify the following molecules as chiral or achiral.

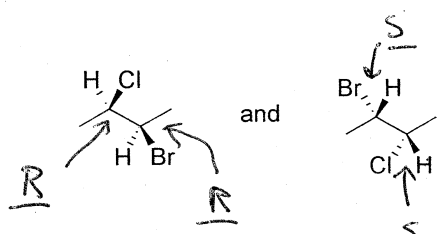


Although I've drawn a specific conformation, you should assume this molecule rapidly equilibrates.

2. (3 pts each) State the relationship between each pair of compounds. Examples are: identical, diastereomers, constitutional isomers, enantiomers, different compounds (i.e. not related).

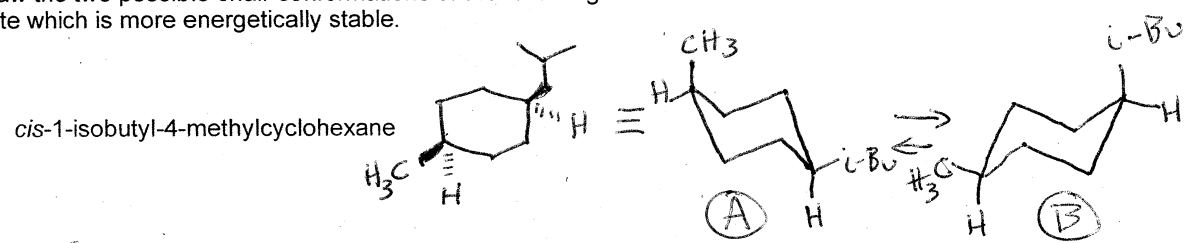


(S,S) and (R,S):  
1 stereocenter changed ∴  
diastereomers



(R,R) and (S,S)  
Both stereocenters changed ∴  
enantiomers

3. Draw the two possible chair conformations of the following molecule AND indicate which is more energetically stable.



(A) is more stable: larger group is equatorial

4. (5 pts) Rank the priority of the groups on the stereocenter in the following molecule, and then indicate the configuration (R or S) of the stereocenter.

