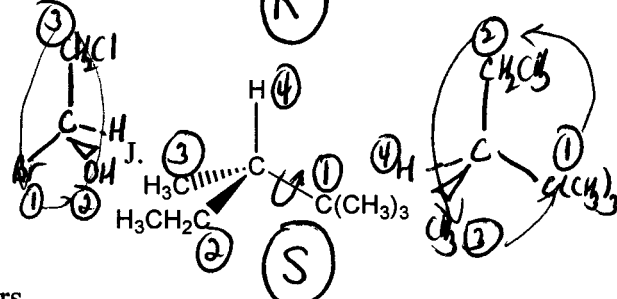
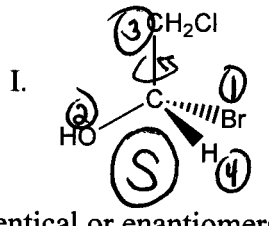
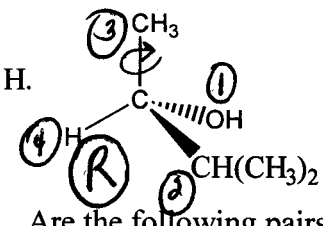
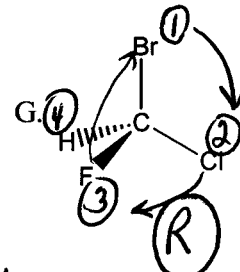
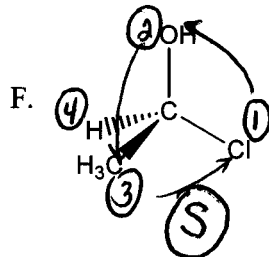
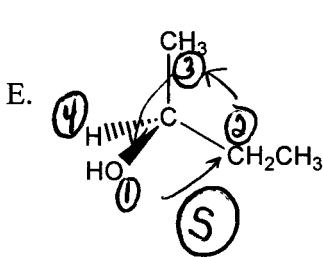
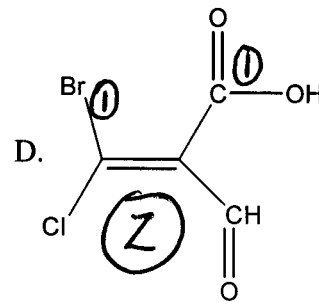
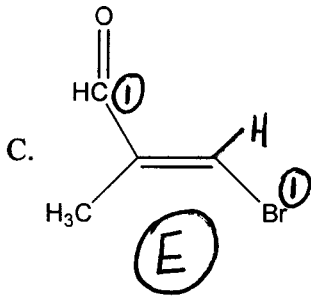
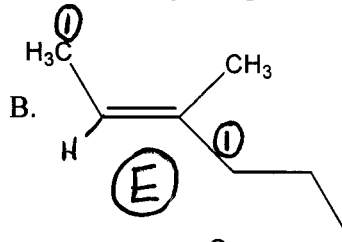
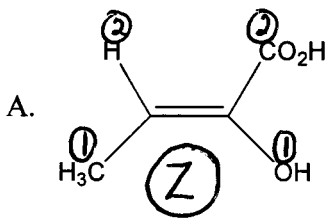
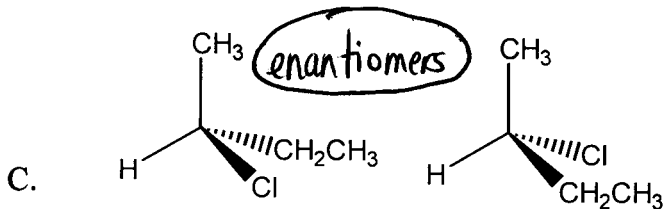
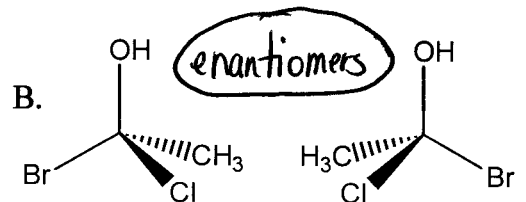
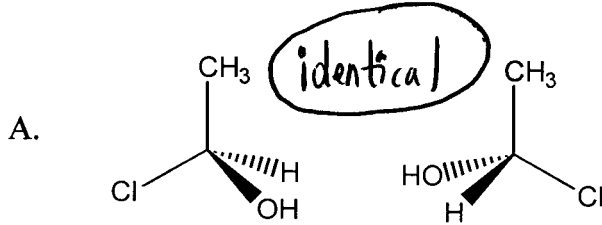


Chem 231: Problem Set #5 (on Chapter 5)

1. Determine the stereochemistry of the following compounds (R, S or E, Z).

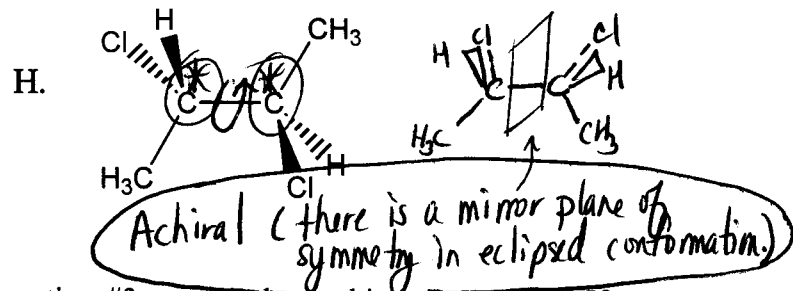
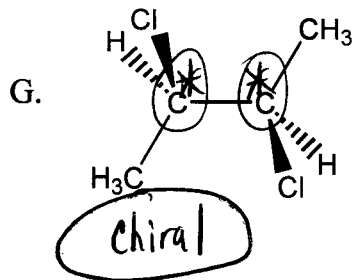
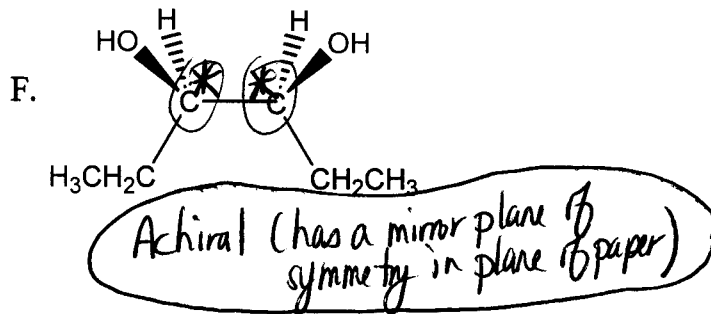
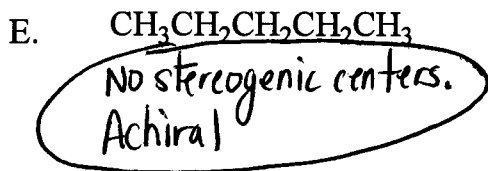
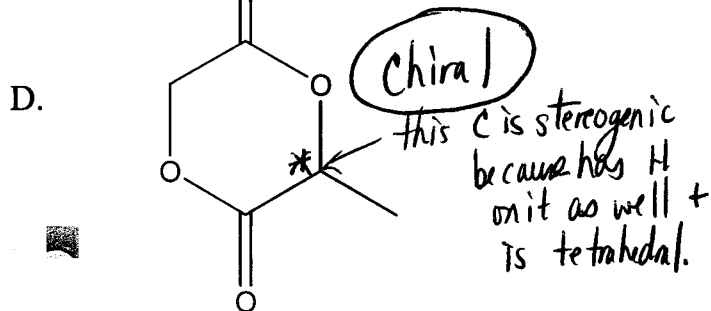
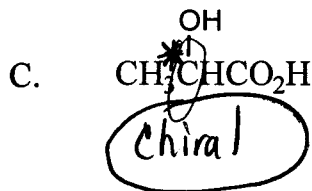
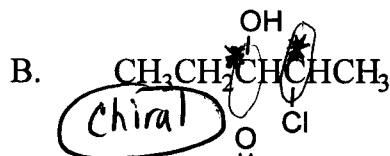
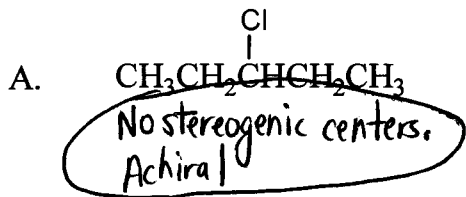


Are the following pairs identical or enantiomers.



3. For each compound shown below, find and label all stereogenic centers.

tetrahedral (or sp^3 hybridized) atom with 4 different groups attached.



4. Determine if the compounds shown in question #3 are chiral or achiral. Remember: If a compound has a mirror plane of symmetry in any one of its conformations, then it is achiral.

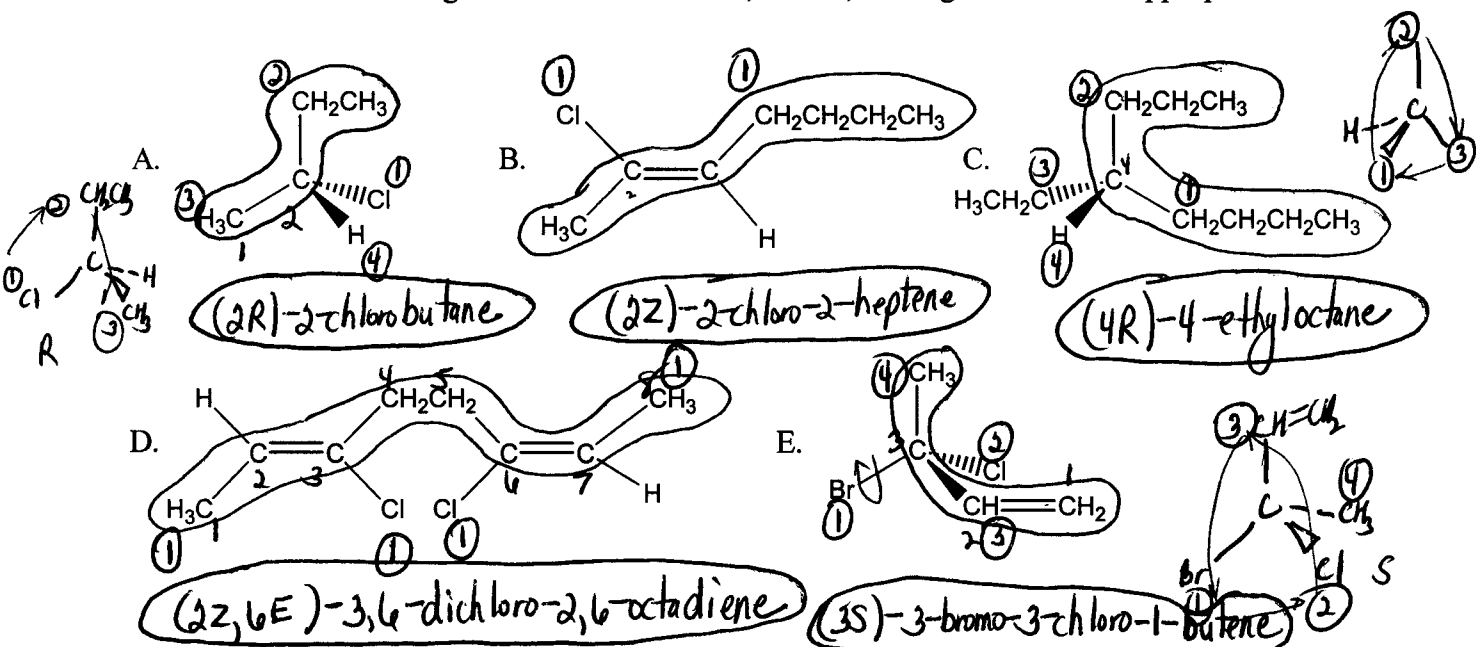
Chiral Cmpds: B, C, D, G

Achiral cmpds: A, E, F, H

5. Which of the compounds shown in question #3 are meso (i.e. have stereogenic centers but are achiral)?

F + H are meso cmpds

6. Name the following molecules. Include E, Z or R, S designation where appropriate.



7. For the two compounds shown below, complete the Fischer Projections and determine if each stereogenic center is R or S. Also, draw a Fischer projection for the enantiomer of the original compound and label each stereogenic center as R or S. Remember: Free rotation occurs about the C-C single bond.

