

CH0310, ORGANIC CHEMISTRY I
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Quiz 5, Take home, due midnight Friday, Feb. 13, 2009

Submit the quiz in pen, or Xerox/fax/scan your pencil copy

Hand in before/after class
Drop off at 1101 CSC (before 5 pm)
Fax to 412-624-9861 (till midnight)
Email to lynnec@pitt.edu (till midnight, pdf file only)

Enantiomers, Diastereomers and Chirality

To prepare:

- read Chapter 5
- review lecture notes for February 6, 9 and 11
- Do problems 28-32 in Chapter 5

You need to be able to inspect structures and decide whether or not the depicted molecules are chiral. You need to be able to compare structures and decide whether they are the same, or different. If different, are they isomers or not? If isomers, are they constitutional isomers or stereoisomers? If stereoisomers, are they enantiomers or diastereomers?

The quiz is on the other side

NAME

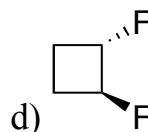
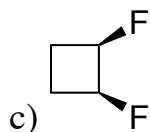
SIGNATURE

Enantiomers, Diastereomers and Chirality

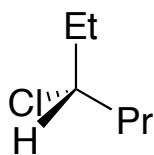
1) Indicate whether each of the following molecules is chiral or achiral. (4 points)

a) 3-methylhexane

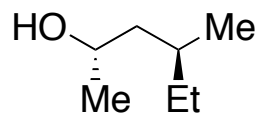
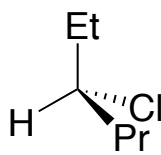
b) 3-methylpentane



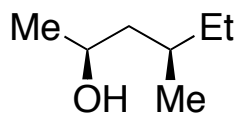
2) Indicate the relationship of each pair of structures: Are they the same, constitutional isomers, enantiomers or diastereomers? (6 points)



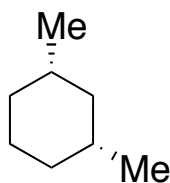
and



and



Me = CH₃
Et = CH₂CH₃
Pr = CH₂CH₂CH₃



and

