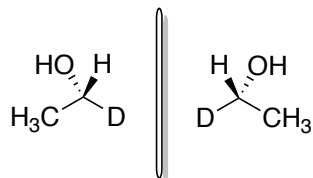


Chem 236 - Homework Assignment #3

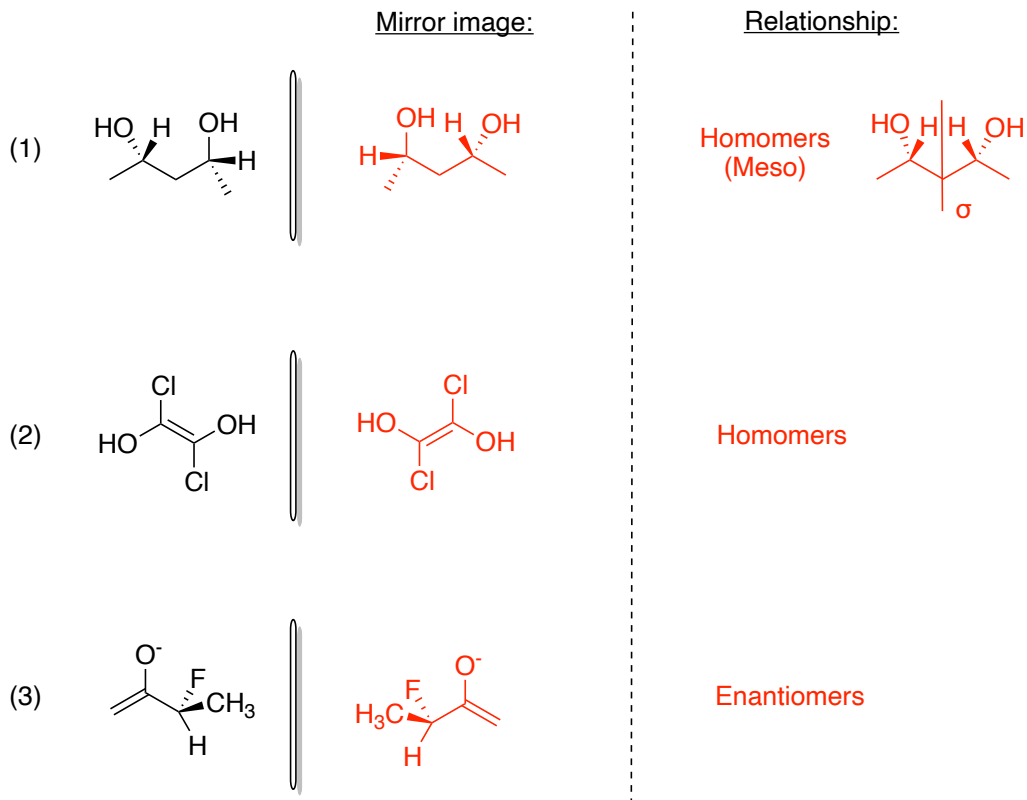
Due October 11th, 2023 (Before Lecture Begins)

1. Draw the mirror image of the following compounds and determine their stereochemical relationship:

ex.

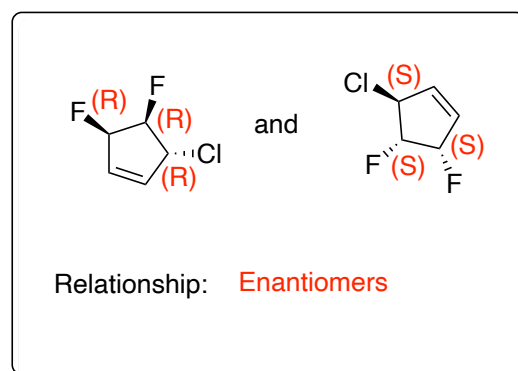
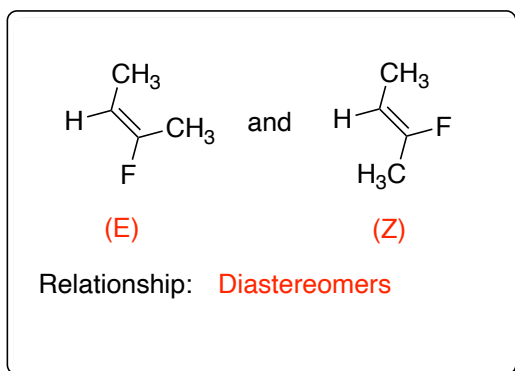
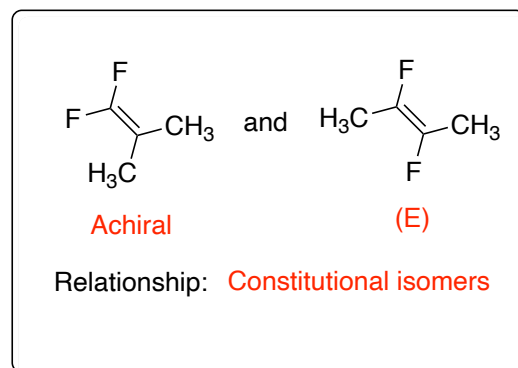
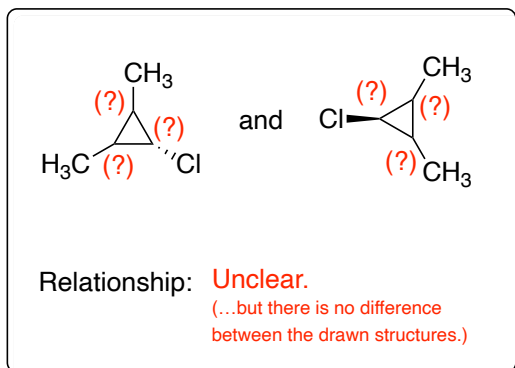


These compounds are enantiomers.

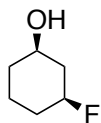


Note: If a compound is a mirror image of another compound, it *cannot* be a diastereomer.

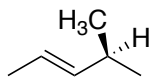
- 2.
- (a). Identify any chiral centers in the following molecules and assign them (e.g. R or S).
- (b). Are any of the paired molecules stereoisomers? If so, identify the relationship between them.



3. Determine whether each molecule is chiral or achiral:



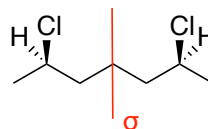
Chiral



Achiral

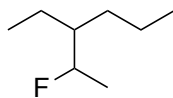
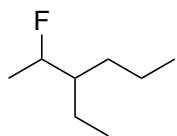


Achiral

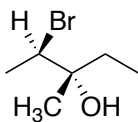
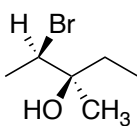


Achiral (meso)

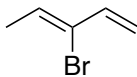
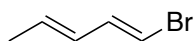
4. Determine the relationship between each pair of molecules:



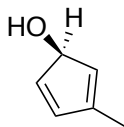
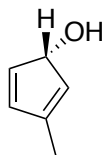
Identical (homomers)



Diastereomers



Constitutional isomers



Enantiomers