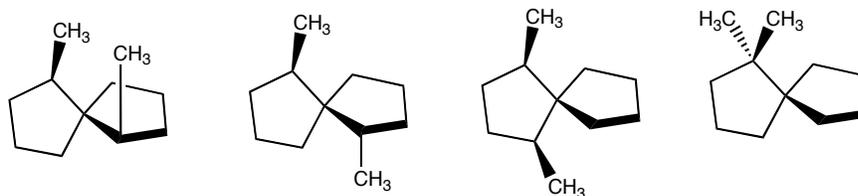
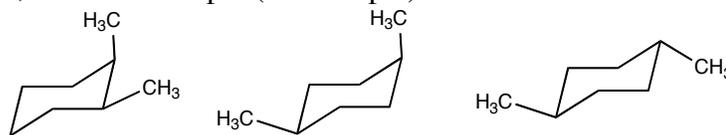
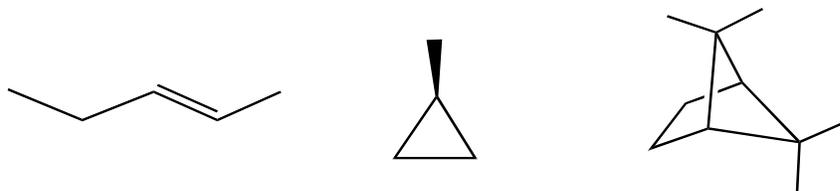


### Additional Problems for Stereochemistry

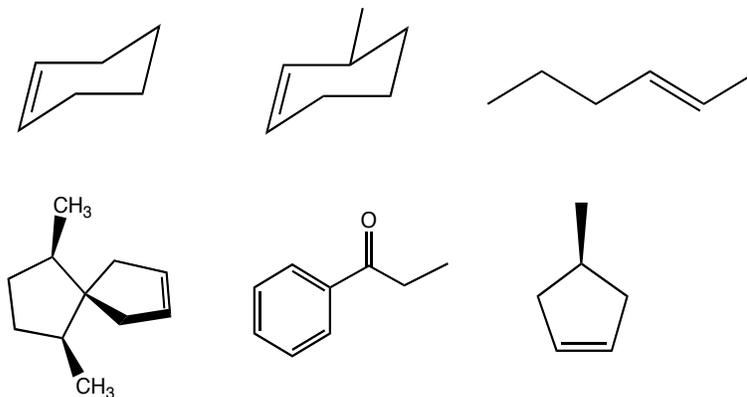
1. For each structure shown, label the pair of methyl groups as homotopic, enantiotopic, or diastereotopic (heterotopic).



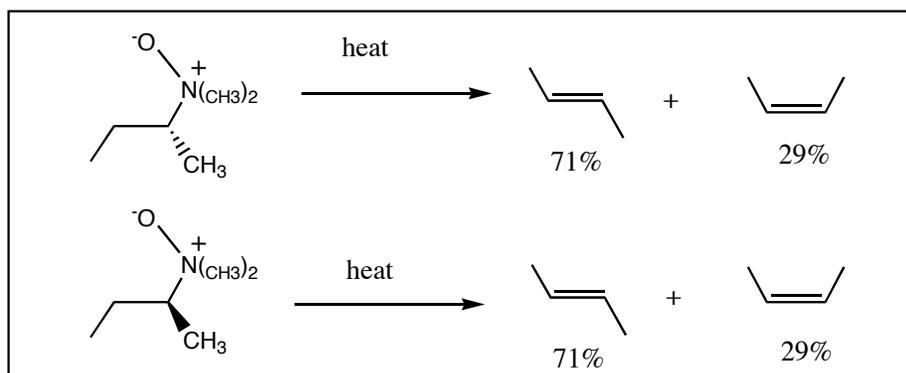
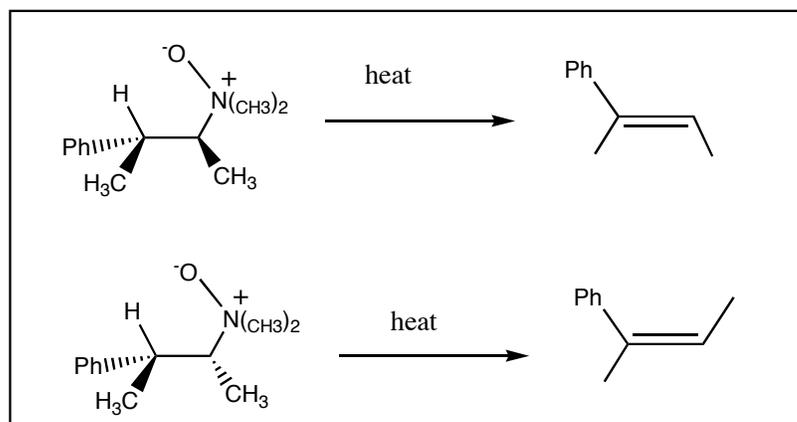
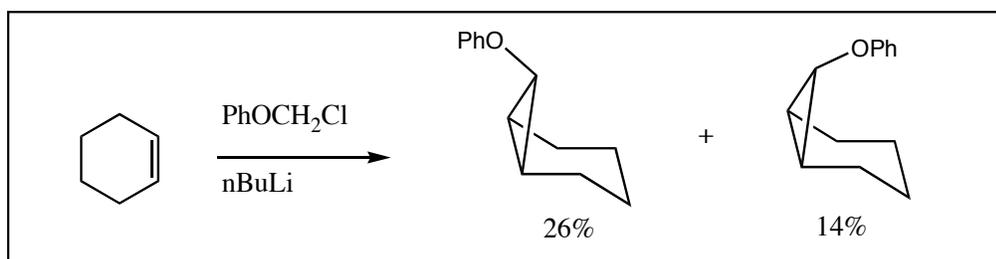
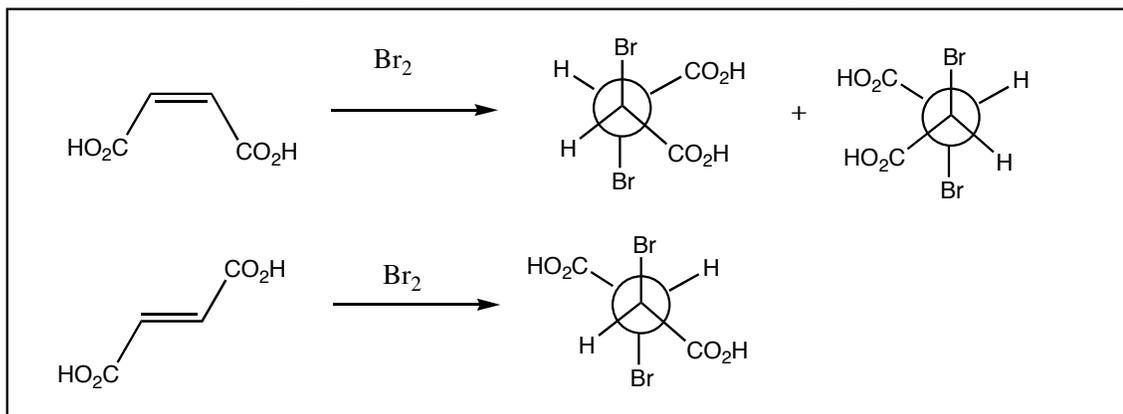
2. Find the prochiral Hydrogens in the following molecules, and circle any pro-S hydrogens. If there are no prochiral hydrogens, state this.



3. For each molecule shown, determine whether the two faces of the alkene or carbonyl are homotopic, enantiotopic, or diastereotopic.



4. Define the following reactions as stereoselective and/or stereospecific:



:

5. Predict whether the product ratio of the following reactions will be 50:50 or a number other than 50:50.

