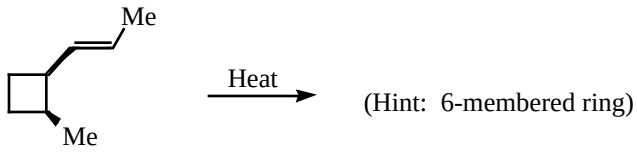
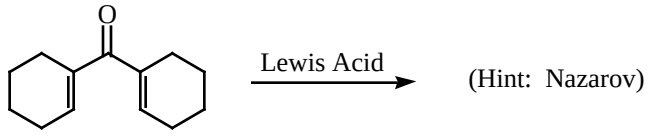
Organic Cumulative Exam
November 1997

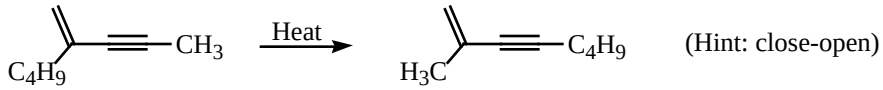
1. (5 pts) List the three major classes of pericyclic reactions.

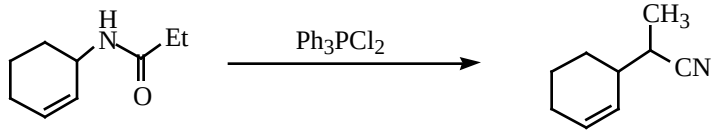
2. (15 pts) Construct a correlation diagram for the disrotatory ring closure of butadiene to cyclobutene. Is the reaction allowed or not?

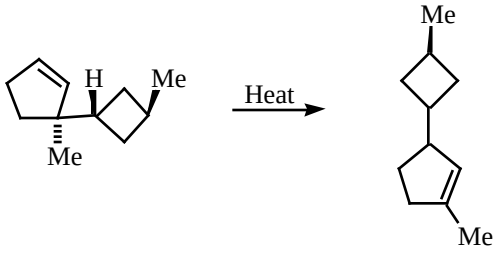
3. (55 pts) Draw mechanisms for the following pericyclic reactions. **Show the stereochemistry of the products. Explain why the stereochemistry turns out the way it does.**











4. (25 pts) Predict the products of the following reactions. **Show stereochemistry!! Explain the stereochemical result.**