In anticipation of one of the topics to be covered in lecture 7 (Monday's class), try your hand at these ...

1. When heated, threo-3,4-dimethyl-1,5-hexadiene undergoes a Cope rearrangement to afford 90% of the trans-trans product, 10% of the cis-cis, and <1% of the trans-cis product. Provide a rationale for the stereochemical outcome. (Doering/Roth *Tetrahedron*, 18, 67 (1962))

2. Convince yourself that cis-1,2-divinylcyclopropane cannot undergo a Cope rearrangement via a chair-like transition state.