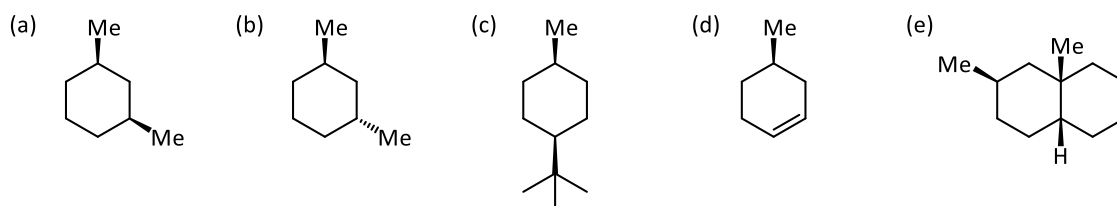
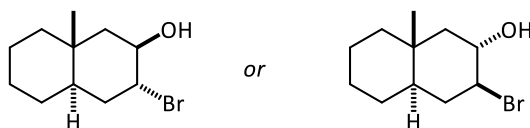


Alicyclic Chemistry – Tutorial Questions

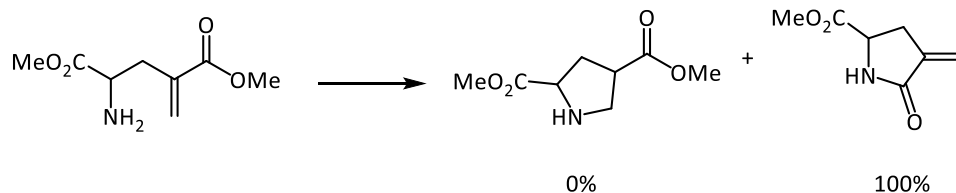
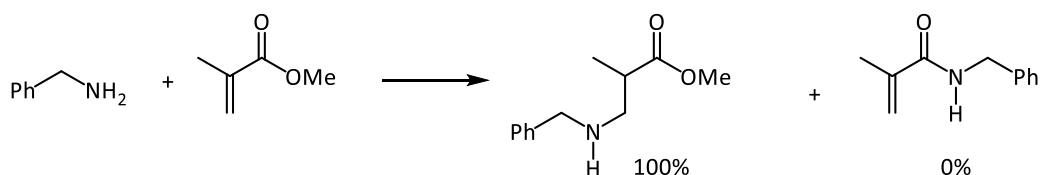
1) Draw three-dimensional representations of the following molecules. By considering their conformational equilibria say which form will predominate.



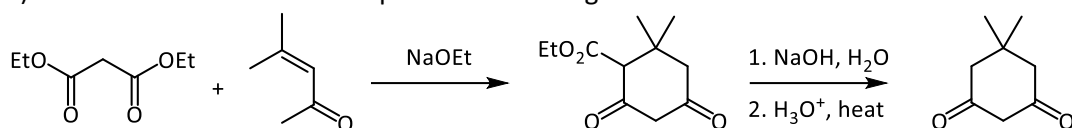
2) Which of these compounds will form an epoxide when treated with base? Explain with a clear three-dimensional diagram.



3) Draw mechanisms for the two transformations below and explain the difference in the regiochemistry for the intramolecular versus intermolecular reactions.



4) Give mechanisms for all steps in the following reaction:



5) Use retrosynthetic analysis to determine the starting materials **A** and **B** required to generate **C**, an intermediate in the synthesis of cytochalasin. Give a clear drawing of the reaction transition state to explain the stereochemical outcome, and show the frontier molecular orbitals involved.

