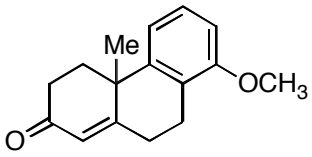
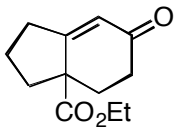
Problem Set #8
Due: December 4, 2006, 12:00 PM

1. Propose a one-step synthesis for the following compounds using the Robinson annulation.

a)

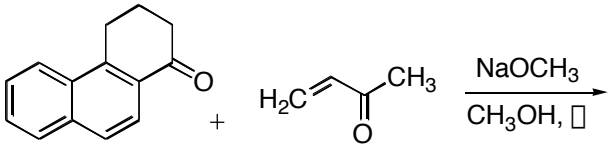


b)

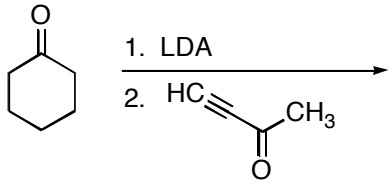


2. Write the products for the following reactions.

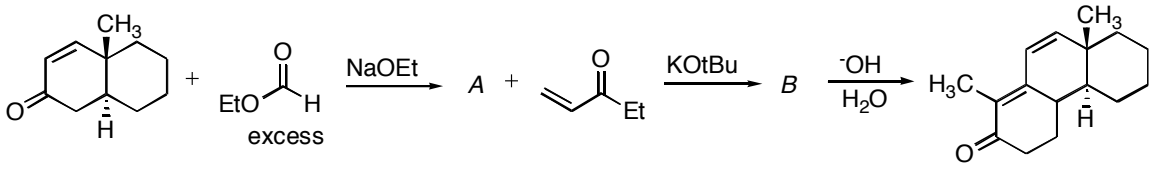
a)



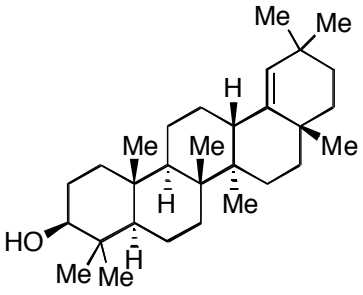
b)



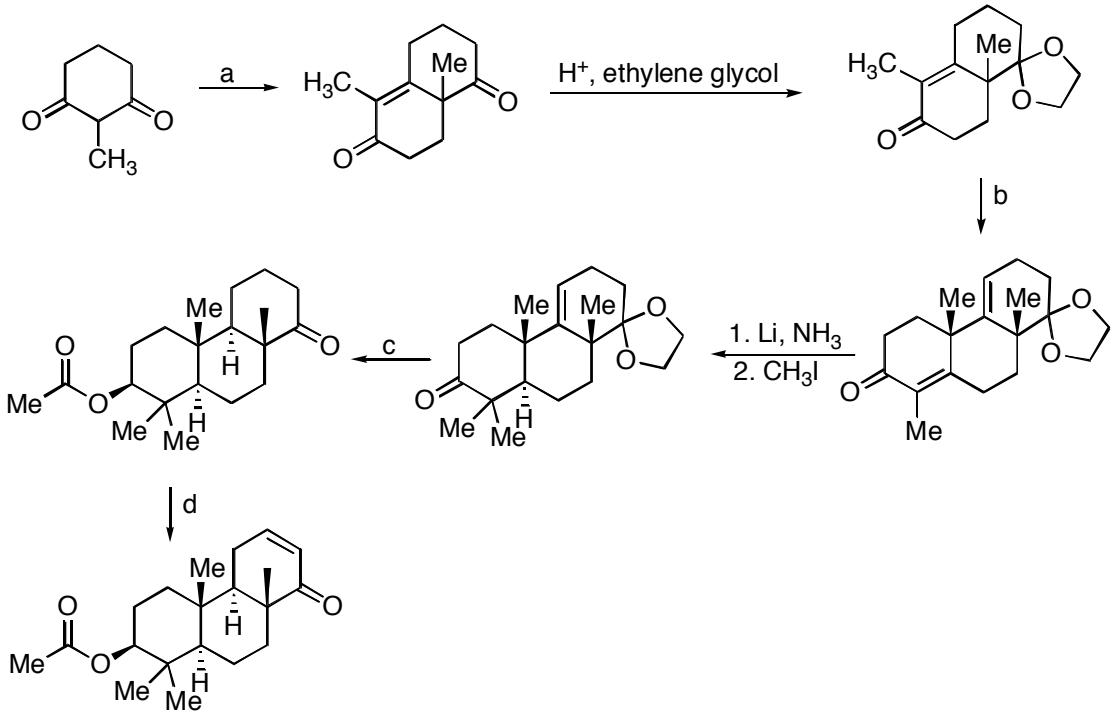
3. Identify the intermediates *A* and *B* in the transformation below and show how they are formed (mechanism).



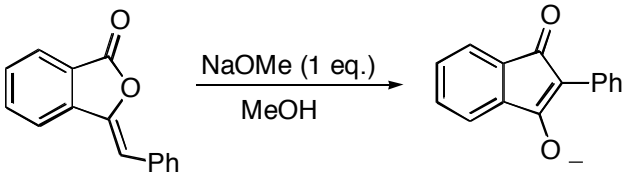
4. Write reagents (a, b, c, d) where they have been omitted from the following synthetic sequence. Each letter may correspond to one or more reaction steops. This sequence is the beginning of a synthesis of germanicol, a naturally occurring triterpene.

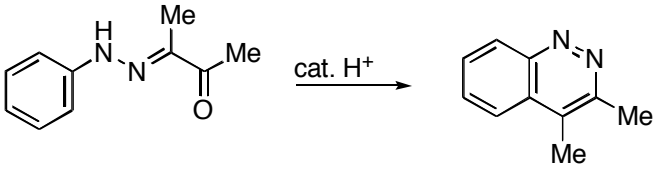


Germanicol

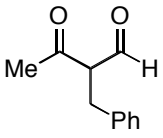


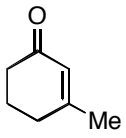
5. Provide a mechanism for each of the following transformations.

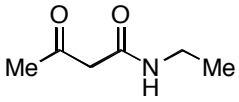
a) 

b) 

6. Provide a synthesis for each of the following products.

a) 

b) 

c) 

d)