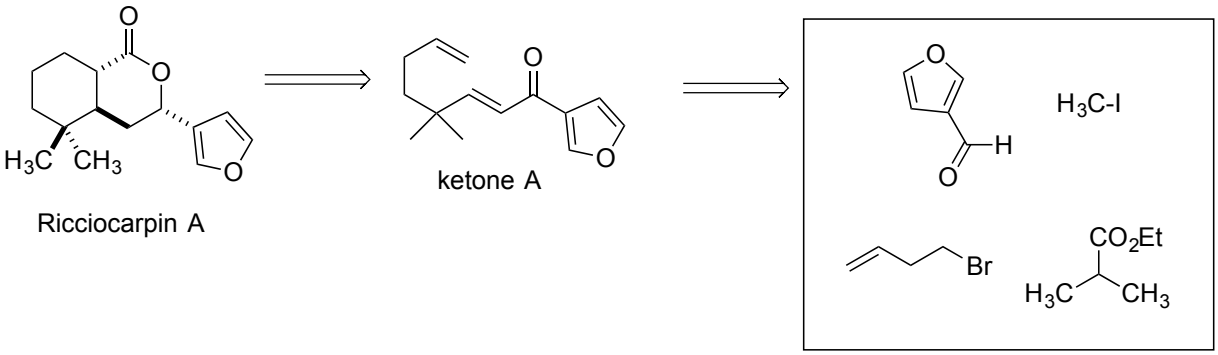
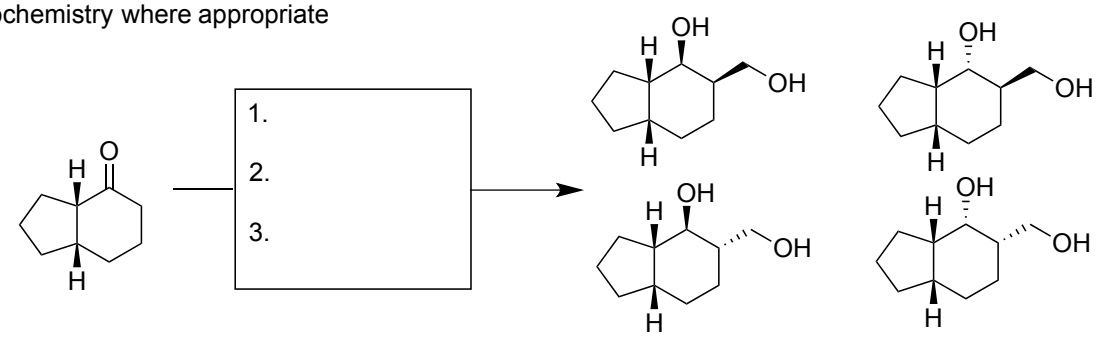
Worksheet 6, Chem 51C, Jarvo

1. The ketone below has been utilized in syntheis of ricciocarpin A. Propose a synthesis of the ketone A from the given starting materials. All carbons must come from the given starting materials.

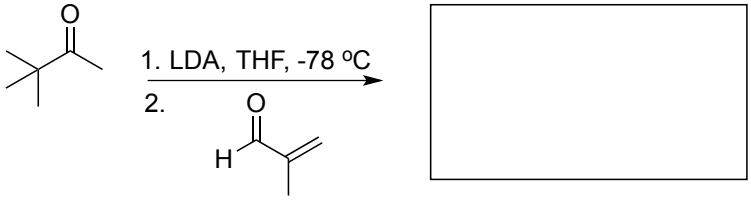


2. Fill in the boxes with the appropriate starting material, reagent or major product.
Show stereochemistry where appropriate

a.

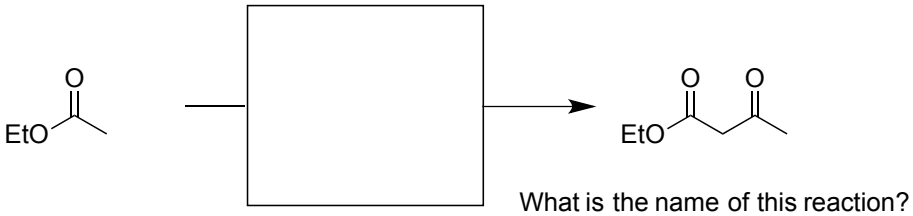


b.



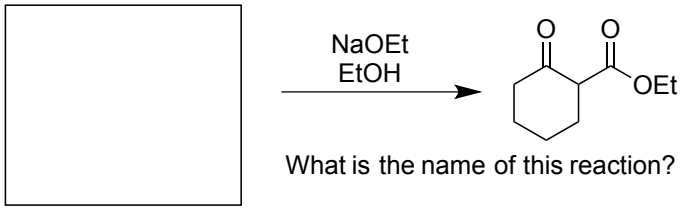
What is the name of this reaction?

c.



What is the name of this reaction?

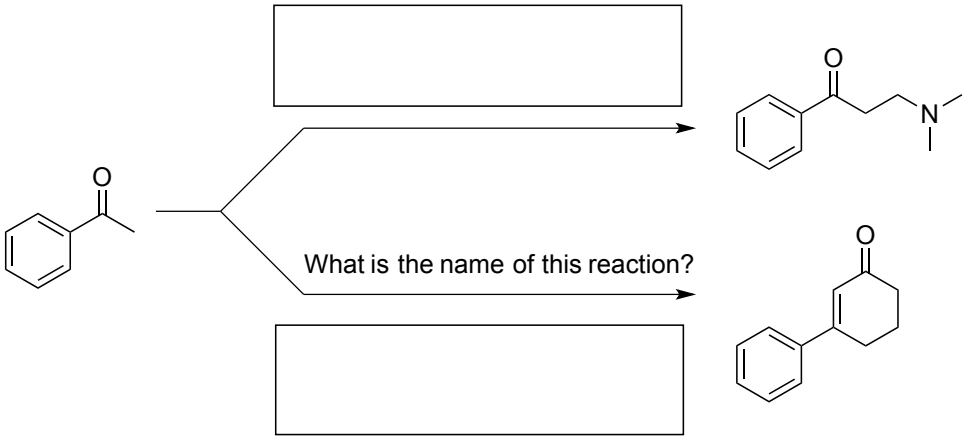
d.



What is the name of this reaction?

e.

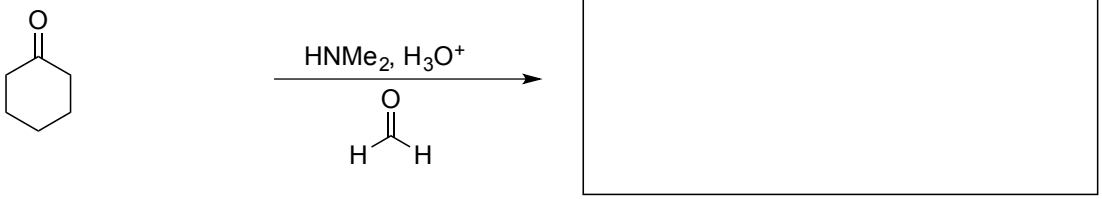
What is the name of this reaction?



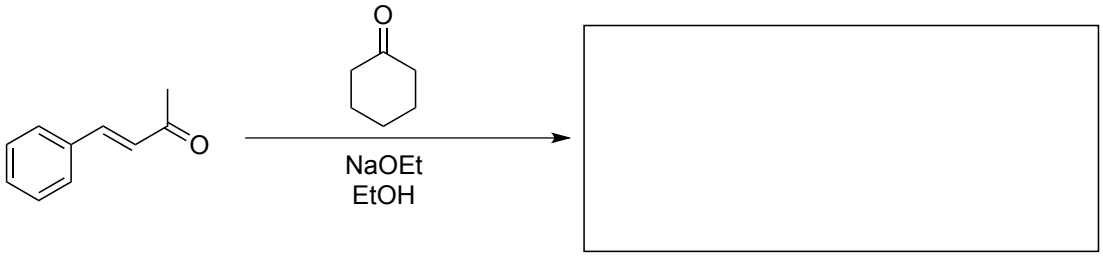
What is the name of this reaction?

3. Fill in the blank and provide an arrow-pushing mechanism.

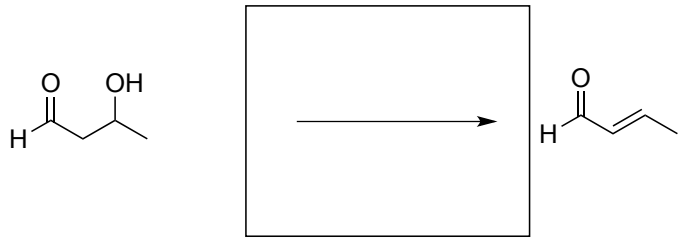
a.



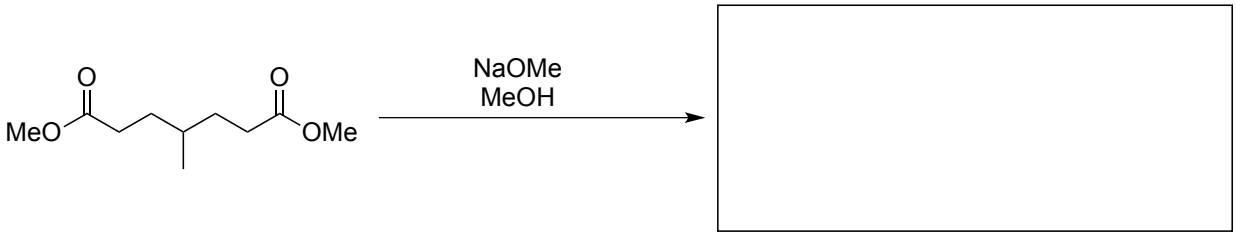
b.



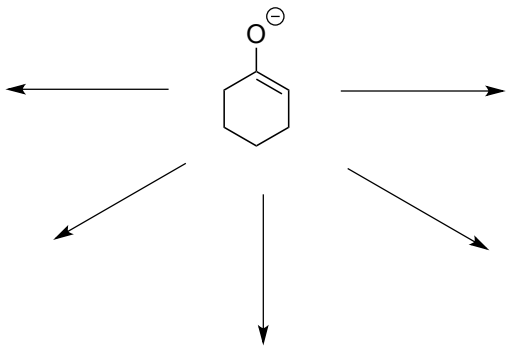
c.



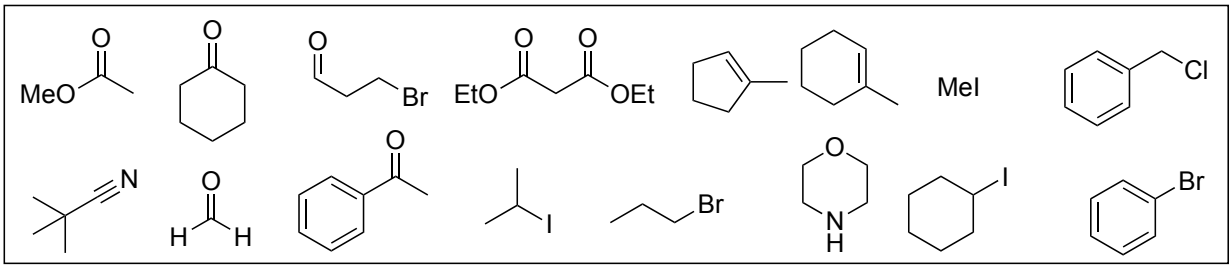
d.



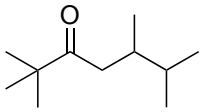
4. Draw five different reactions of the enolate shown below, each leading to different products.



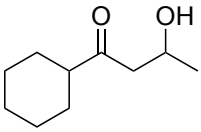
5. Propose syntheses of the targets shown below.
All carbons in the product must come from the starting materials provided, you can use any reagent you wish.



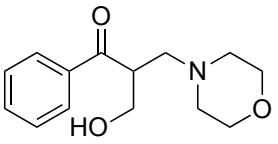
Target A.



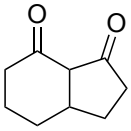
Target B.



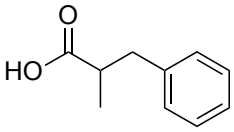
Target C.



Target D.



Target E.



Target F.