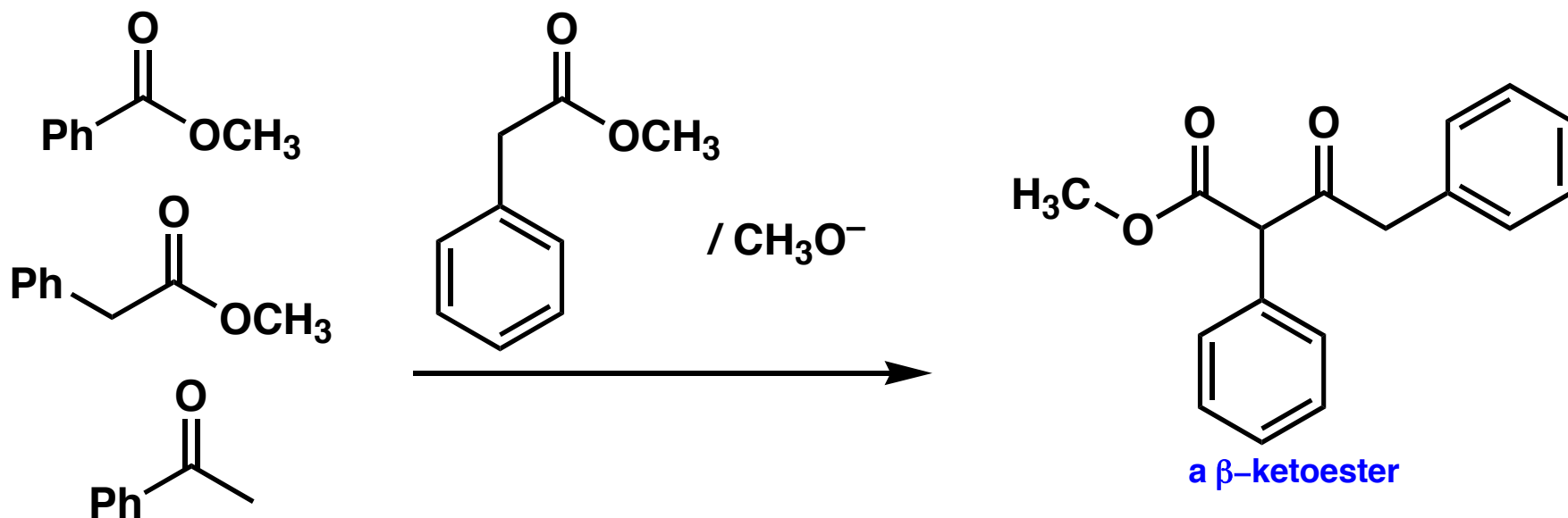


# Summary

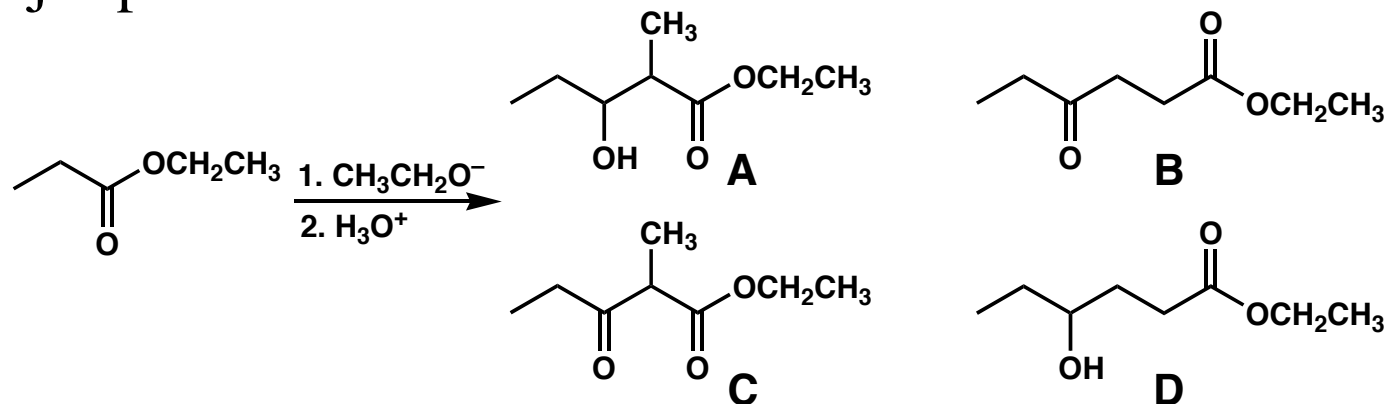
## Claisen Reactions - Synthesis



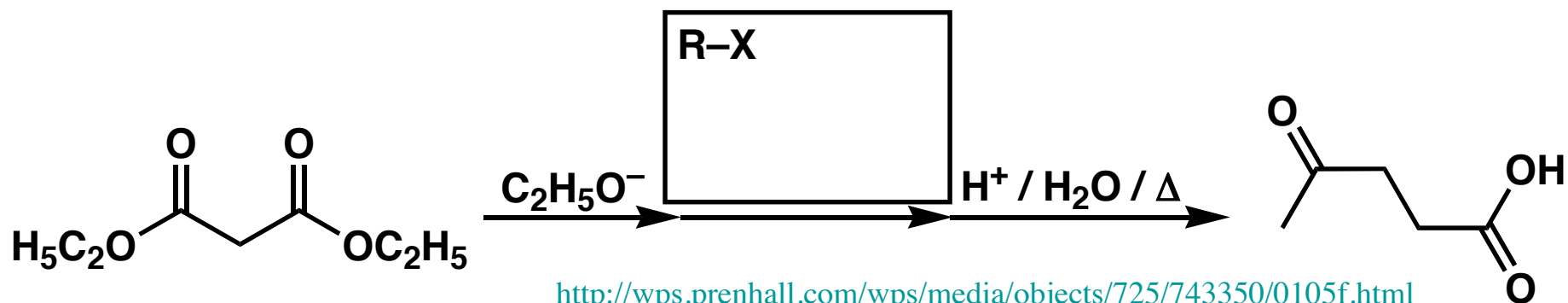
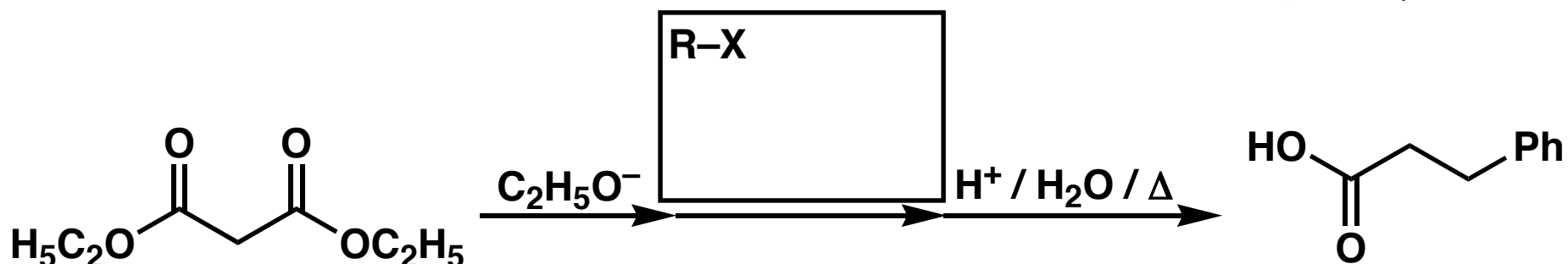
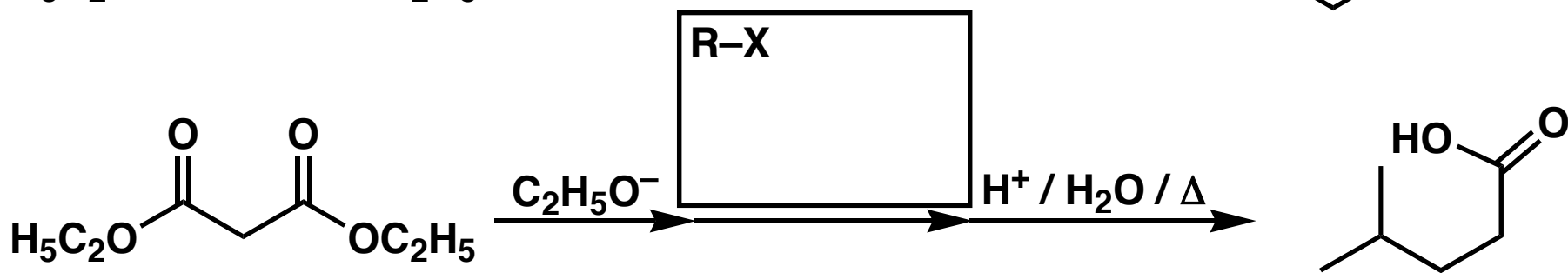
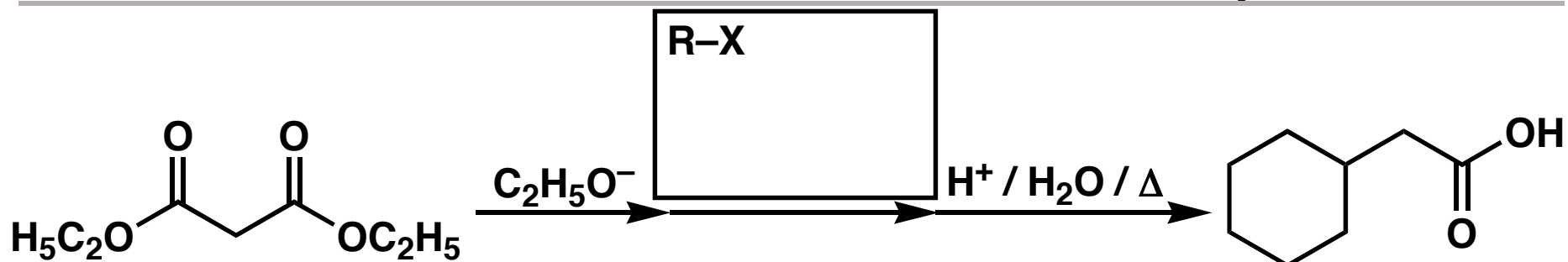
<http://wps.prenhall.com/wps/media/objects/725/743350/0108f.html>

What is the major product of this reaction?

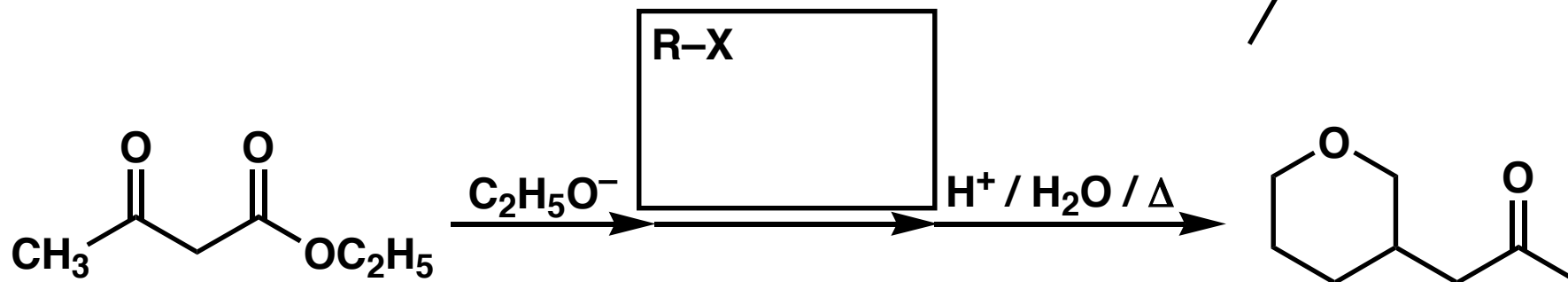
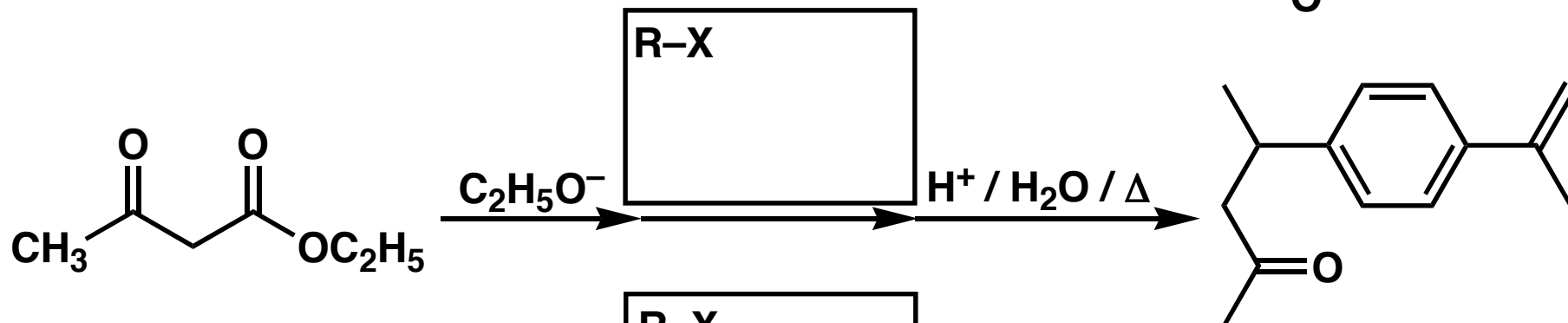
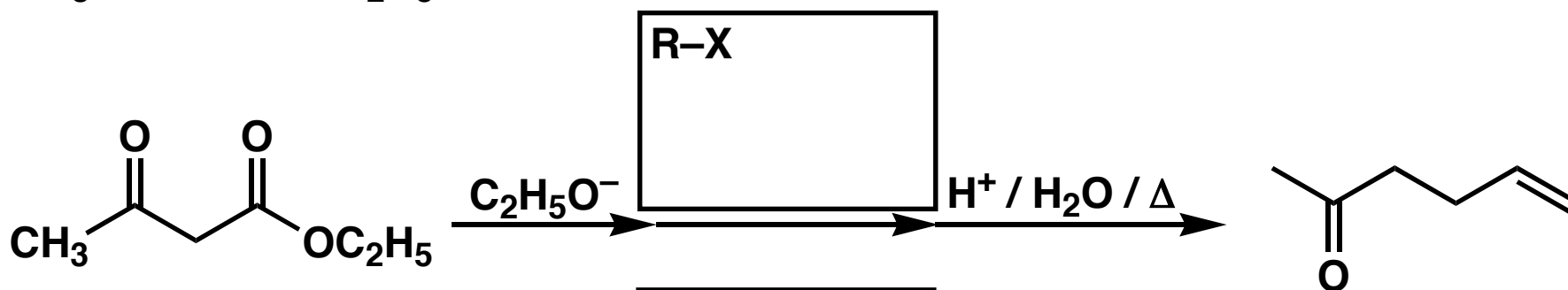
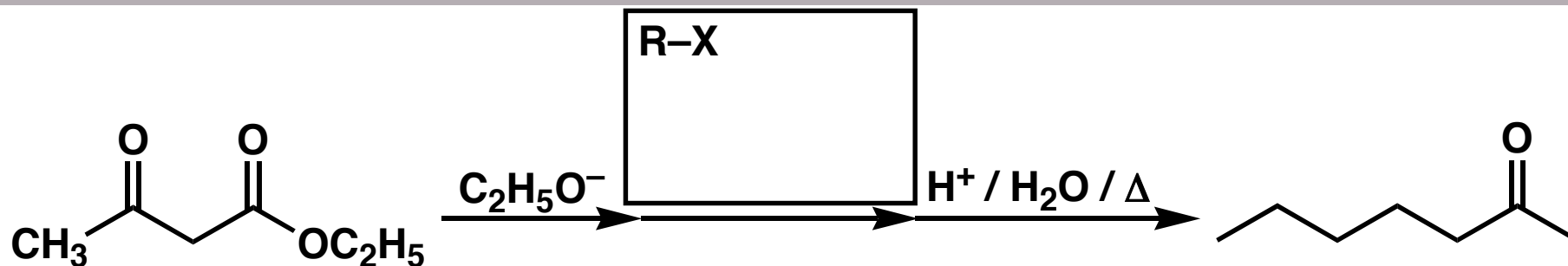
- A
- B
- C
- D



# Discussion Problems: Malonic Ester Synthesis




# Discussion Problems: Acetoacetic Ester Synthesis



# Discussion Problem:

## Examples of Retrosynthesis

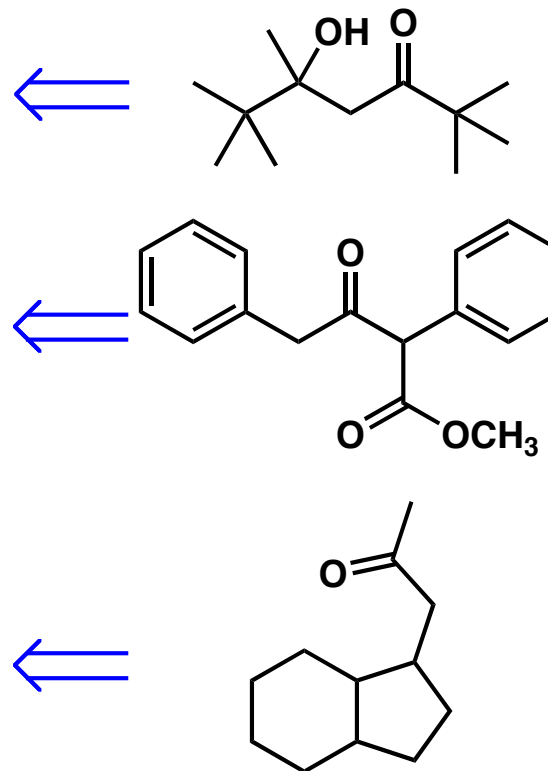
 Click on the reaction that was used to make the molecule shown below.

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### Retrosynthesis

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aldol addition  
Claisen condensation  
ketone + ester condensation  
Robinson annulation  
malonic ester synthesis  
acetoacetic ester synthesis  
aldol condensation

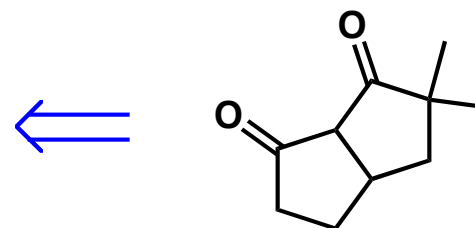
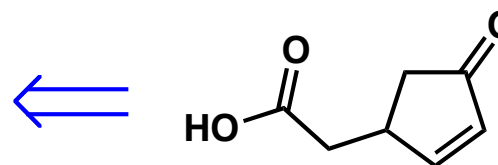
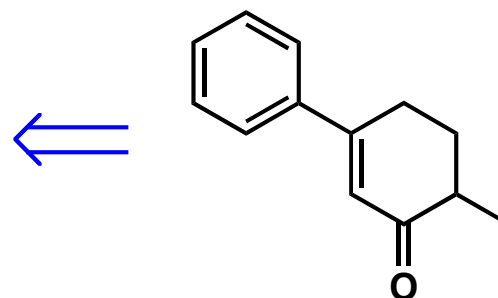


# Discussion Problems: More Retrosynthesis Examples

 Click on the reaction that was used to make the molecule shown below.

## Retrosynthesis

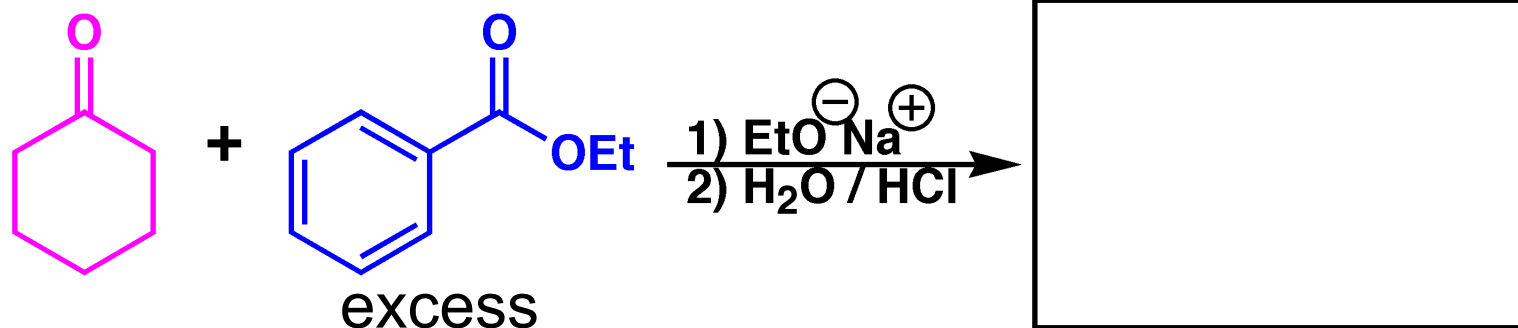
aldol addition  
Claisen condensation  
ketone + ester condensation  
Robinson annulation  
malonic ester synthesis  
acetoacetic ester synthesis  
aldol condensation



# Discussion Problems (Predict the Products)

In these reactions the electrophile is in excess to favor crossed product formation.

1) Condensation between a ketone and an ester



2) Intramolecular Claisen condensation of a dicarboxylic ester

