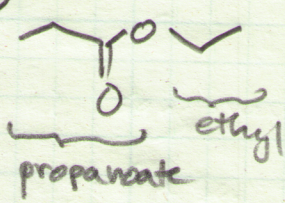
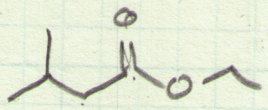
Learning by doing

(A)



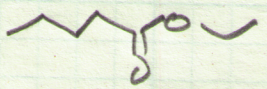
ethyl propanoate

(B)



ethyl 3-methylbutanoate

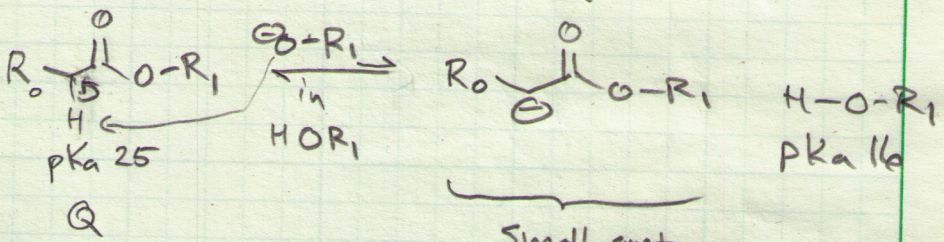
(C)

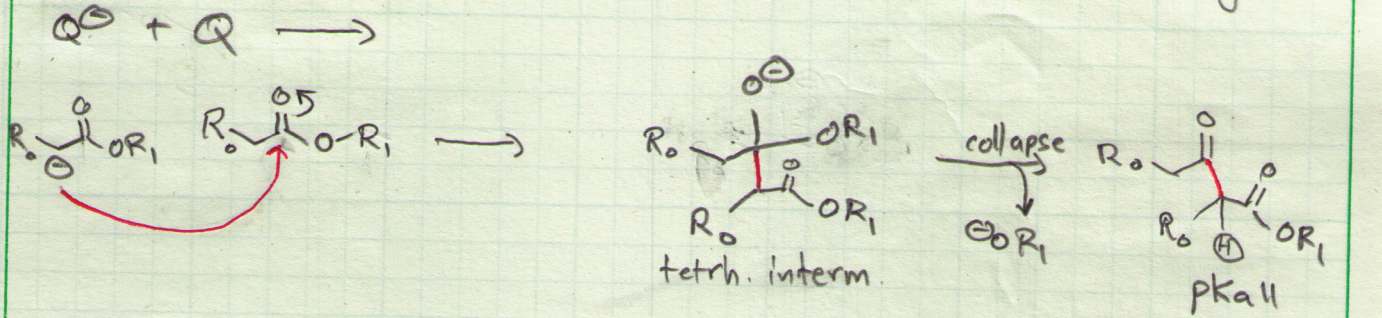


name?

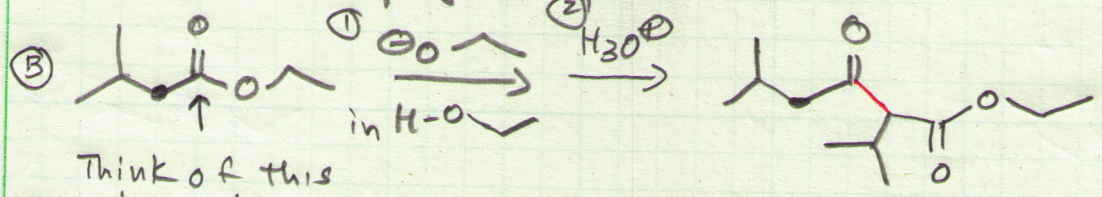
Claisen condensation products of (B)

General Scheme

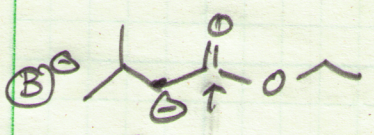


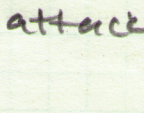


(B) from Previous page

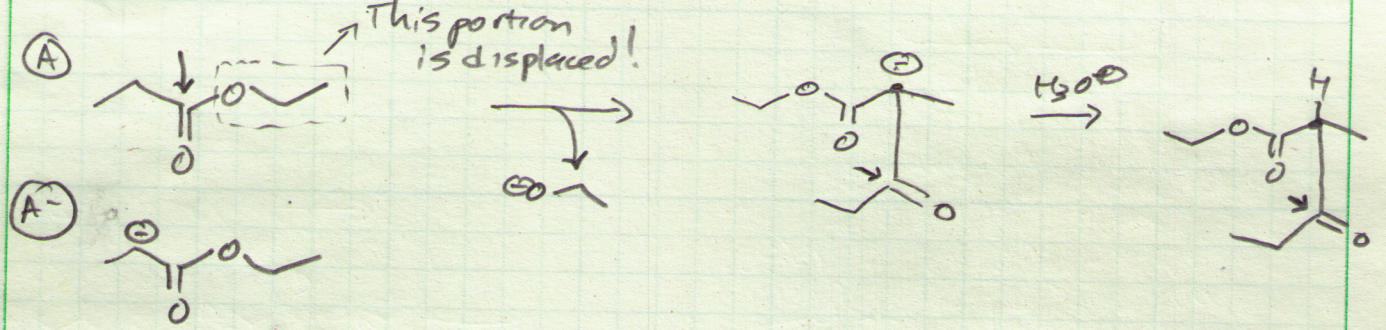


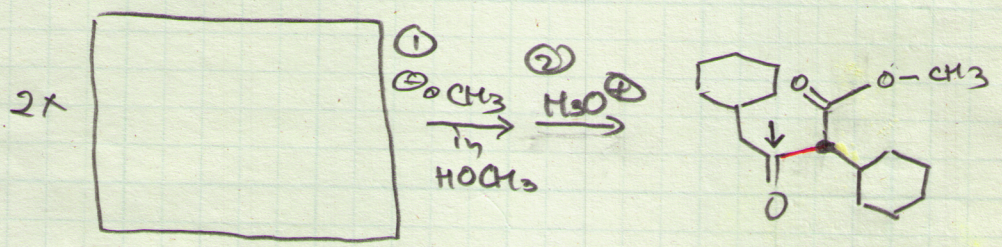
Think of this paired with



This anionic C attacks  of (B)

Try it

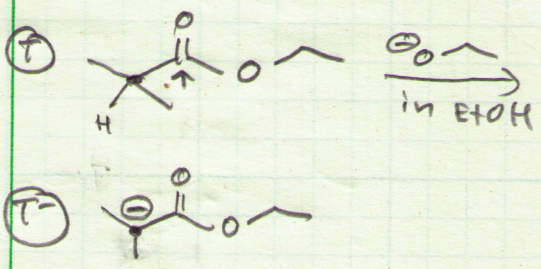




Claisen condensat^n REQUIREMENT

The ester must have 2 α-Hs

Here's an ester w/ 1 αH

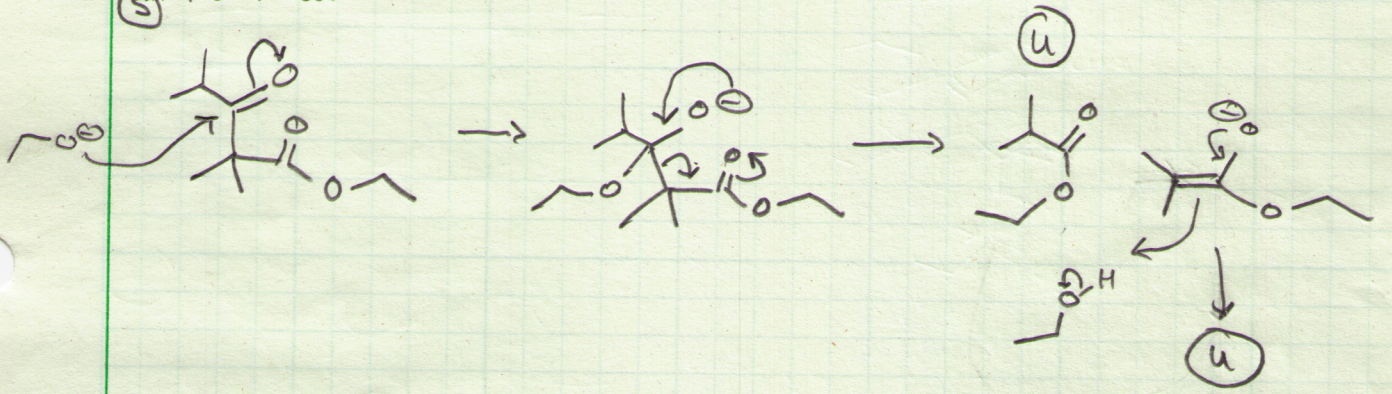


no acidic α-H to drive equil to product!

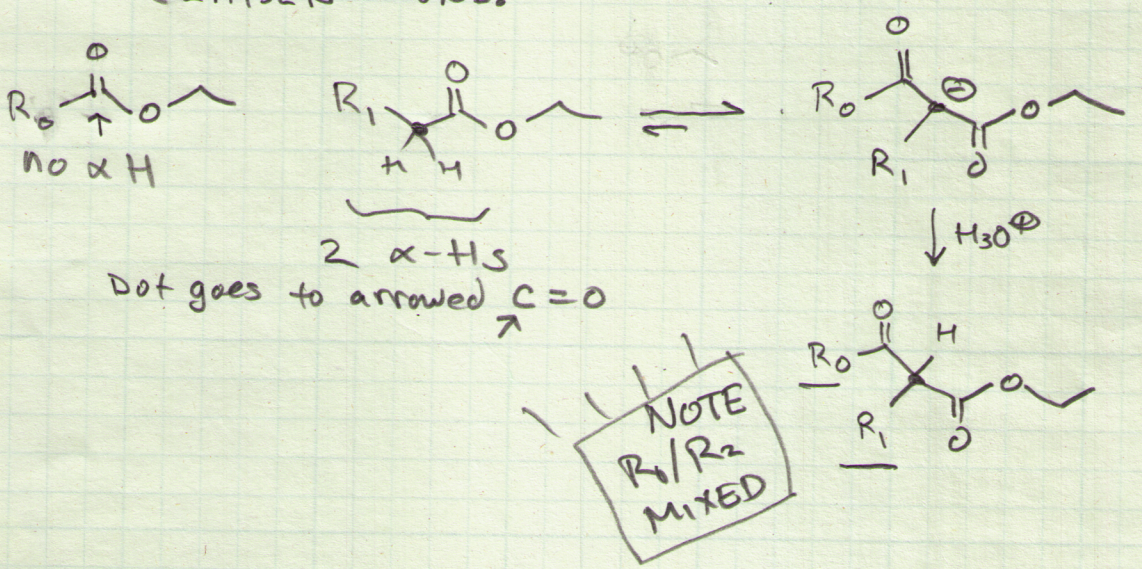
∴ Reaction will reverse

RETRO CLAISEN CONDENSATION

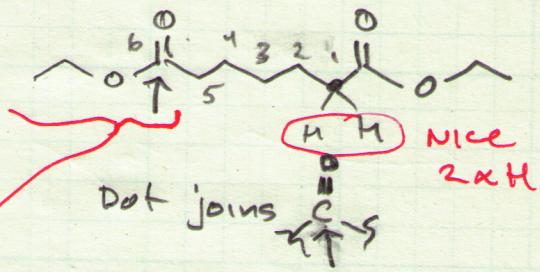
S from above

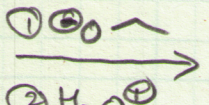


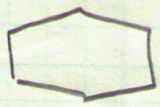
MIXED CLAISEN COND.



Intramolecular Claisen Cond.



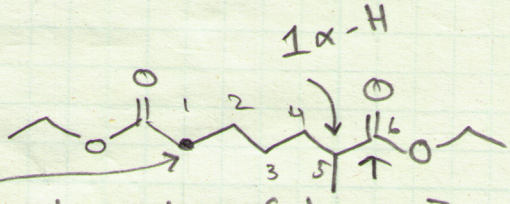




complete structure

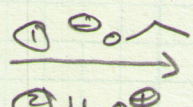
arrow C is an ester!

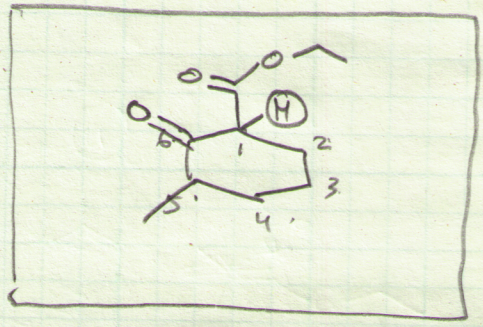
Claisen ready!



Where does (•) go?

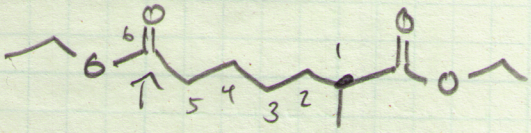
Where does (↑) go?



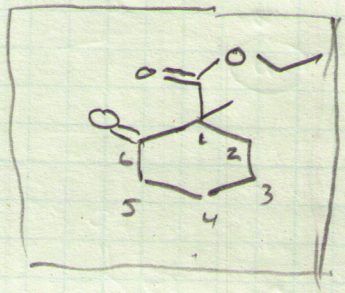


complete structure

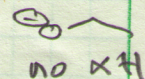
Try the other way!



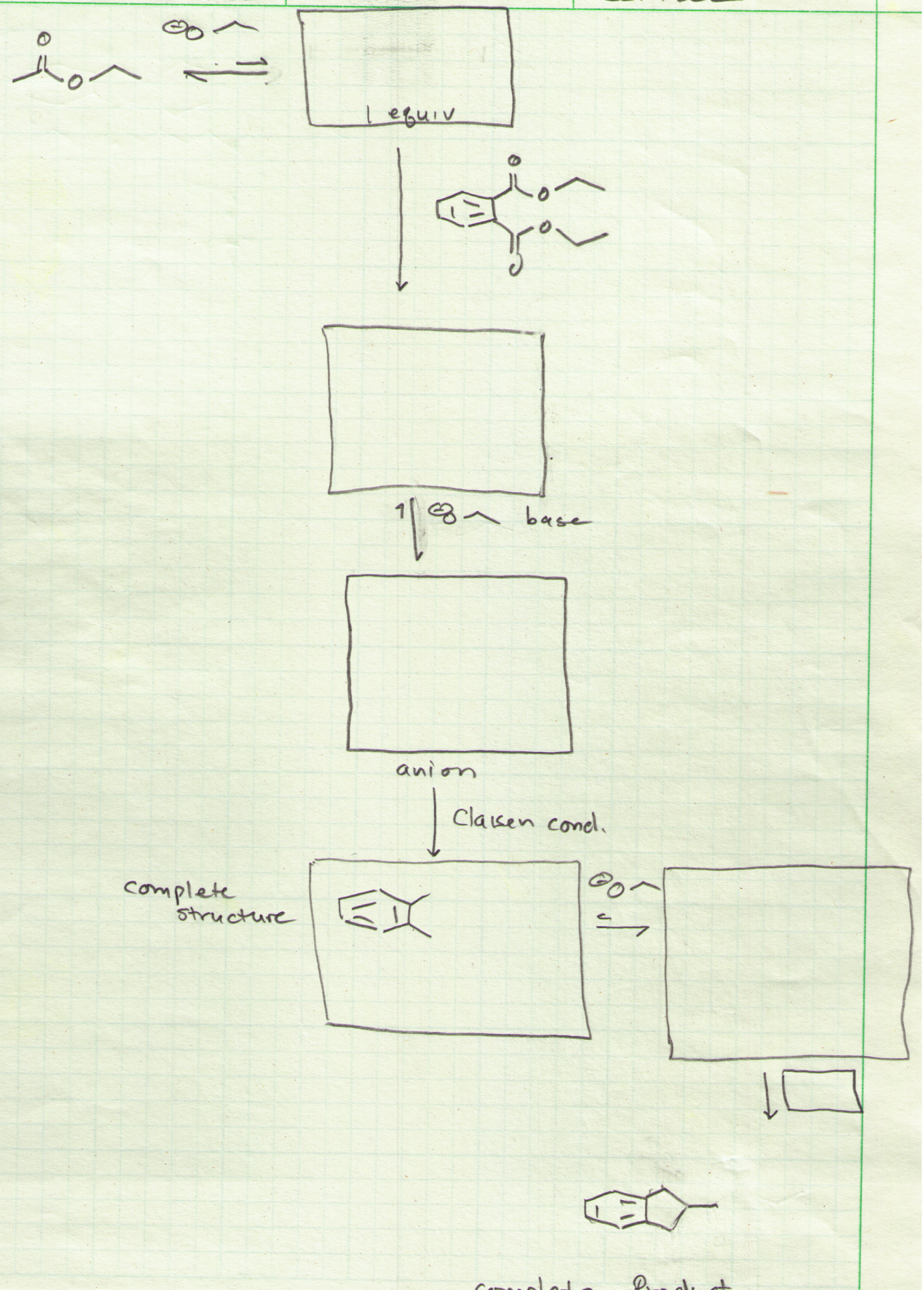
RETRO IS FAVORED!



complete str.



no α H to draw EQ to enolate!


1 equiv
1
base
anion
Claisen cond.
complete structure
complete Product