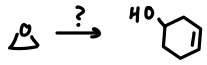
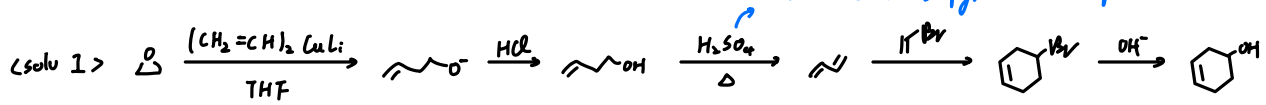
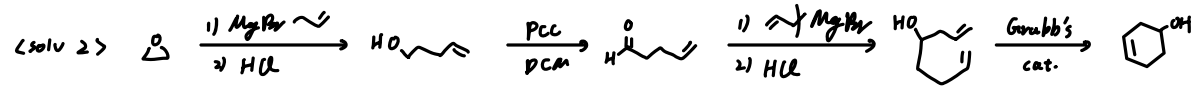
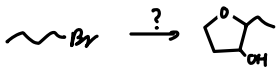
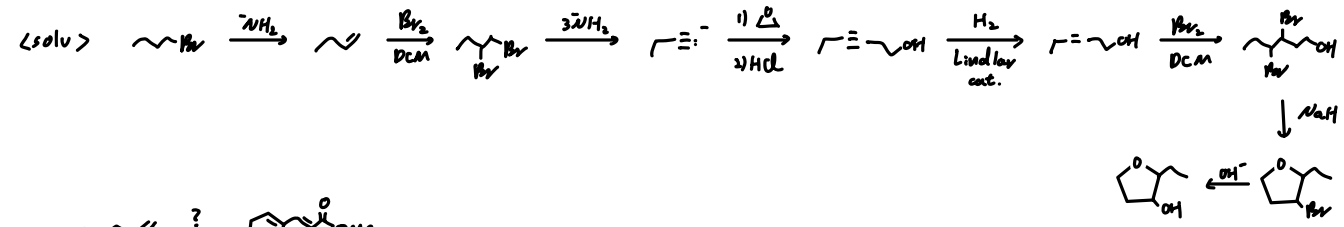
✳ 因為這張考卷有八題很難，所以 額外拿出來寫詳解

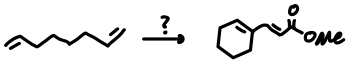
1. (a) 

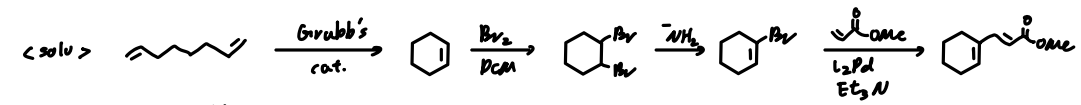


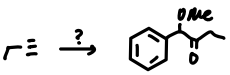


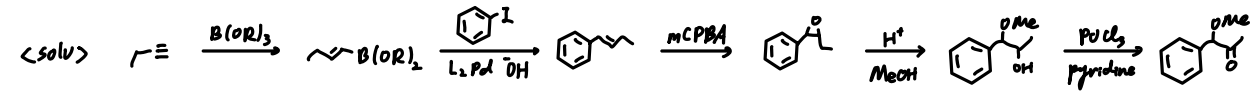
(b) 



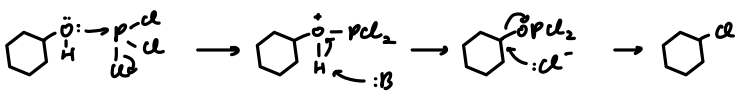
(c) 

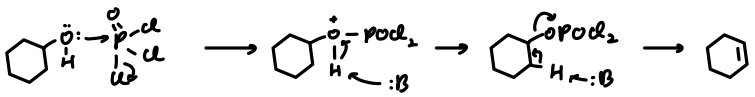


(d) 



2. (a) Suzuki (b) Swern reagent

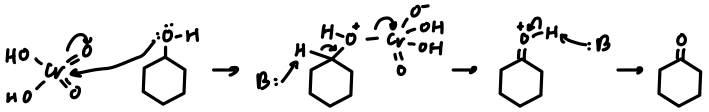
4. for PCl_3, 

for $POCl_3$, 

∵ The polarity of $OPOCl_2$ group is bigger than that of $OPCl_2$ group ∴ The β-H in $POCl_3$ rxn. is more acidic

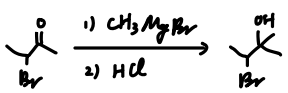
withdrawing ability

⇒ easy to withdraw ⇒ In $POCl_3$ rxn., it prefer to undergo E rxn., and in PCl_3, it prefer S rxn.

for H_2CrO_4, 

∵ The withdrawing ability of  group is so strong that α-H will be eliminated to stable the O on α-C ⇒ oxidation rxn.

7. (g) ∵ HBr in alkyne is anti addition ∴ the final product will be Z form.

8. (c)  ∵ CH_3MgBr will attack functional group, making double resonate to O