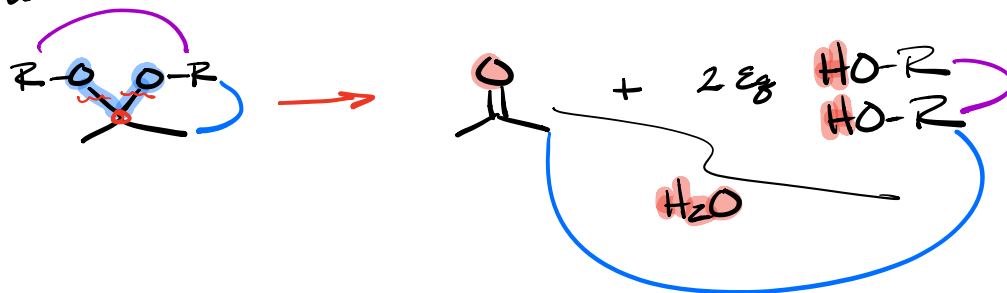
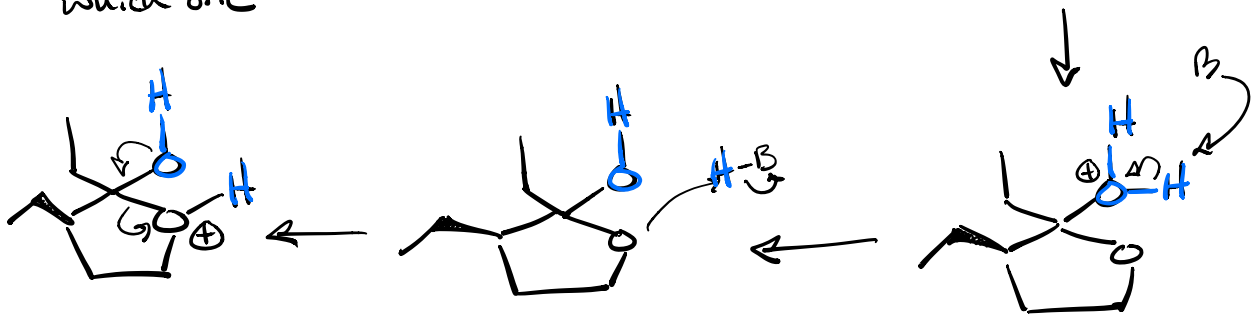
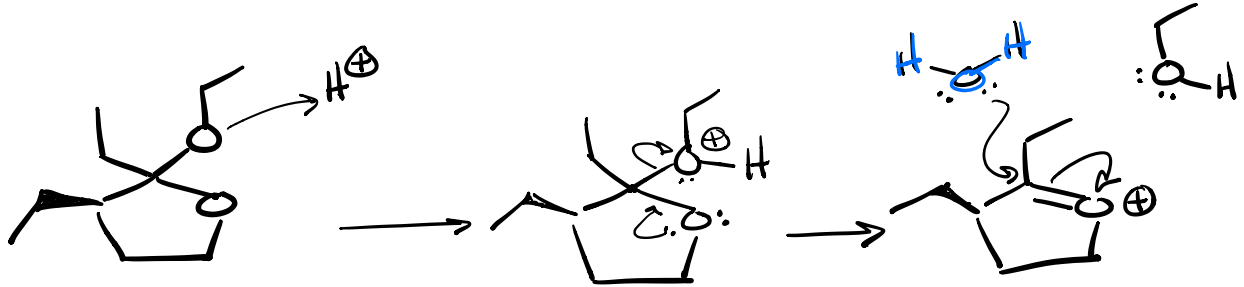


What functional groups are present? **Ketal**

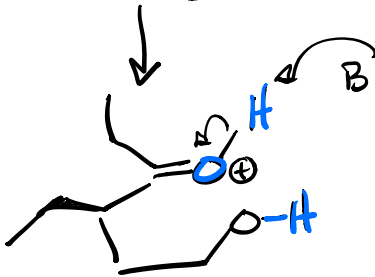
What reaction are we being asked to perform? **Hydrolysis**

What is the mechanism of the reaction?

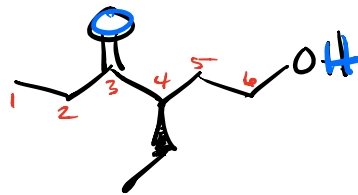
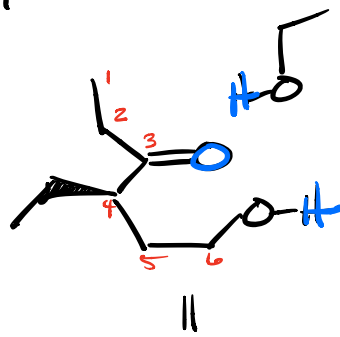


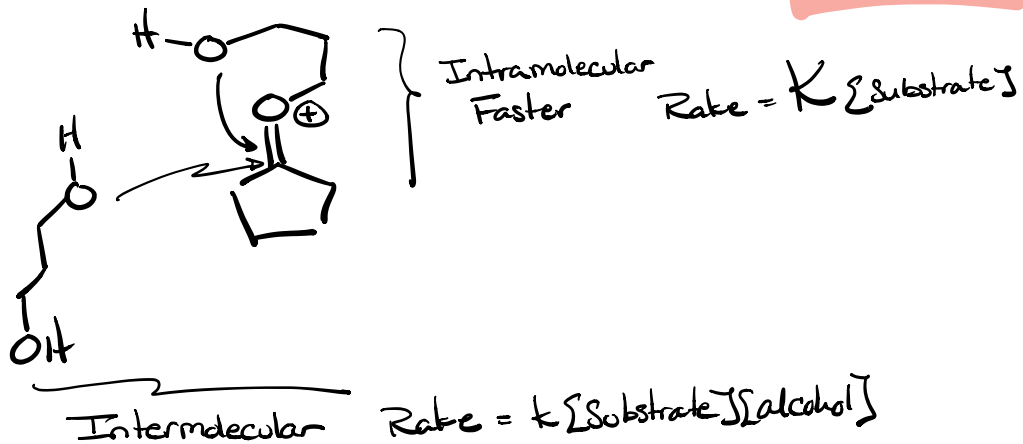
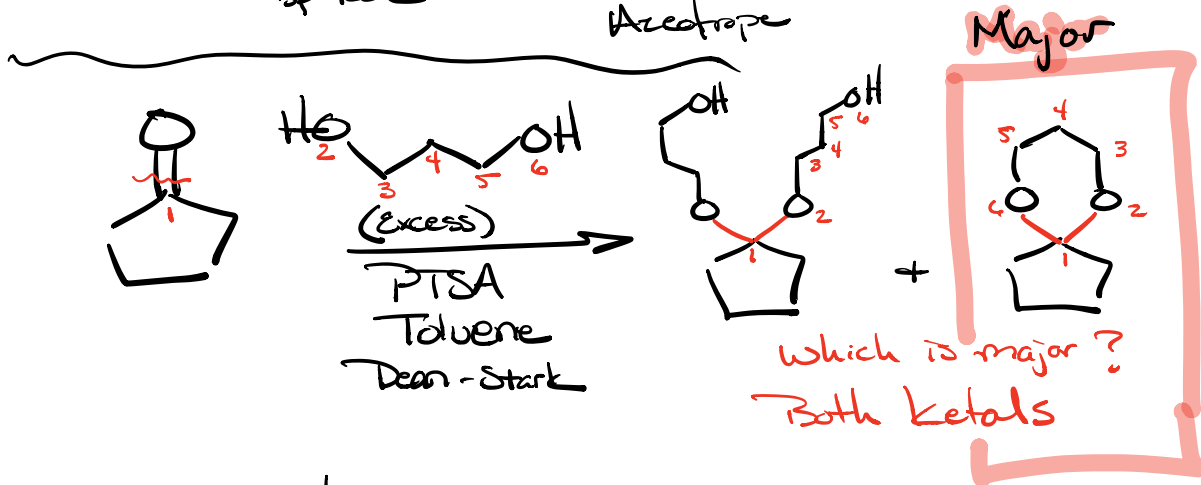
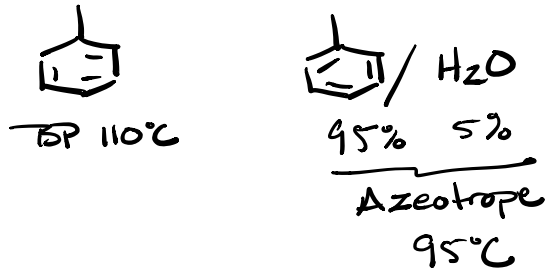
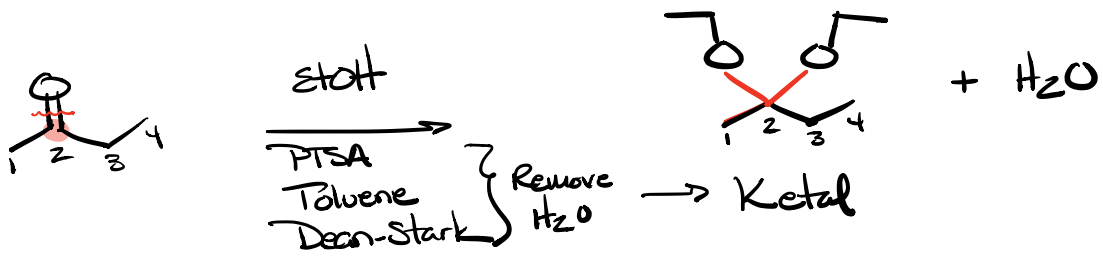


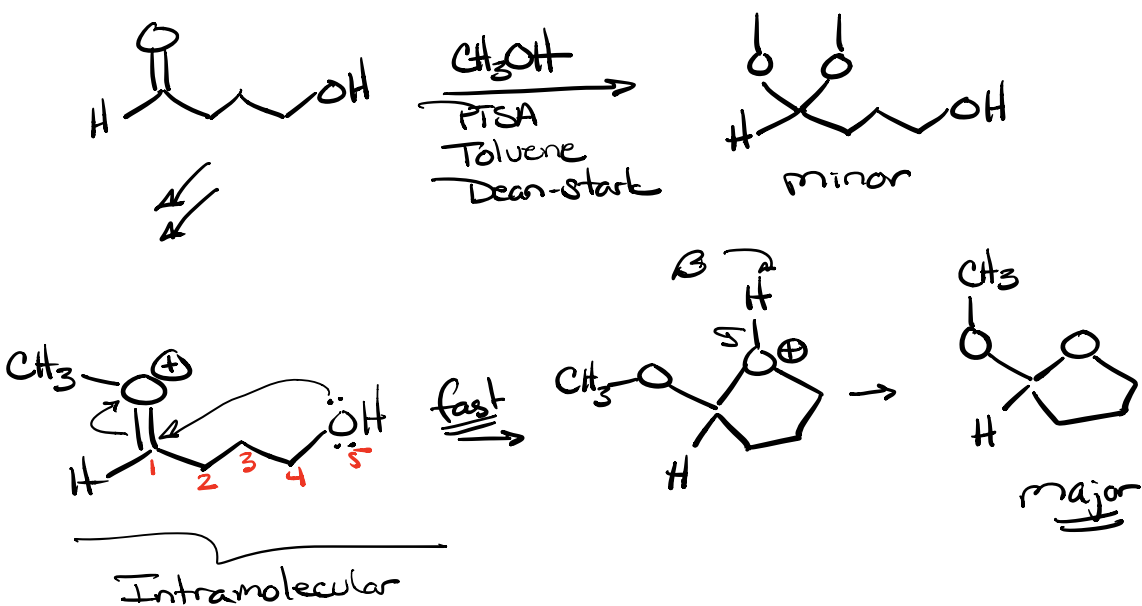
⑥ Assisted leaving



⑦ deprotonation

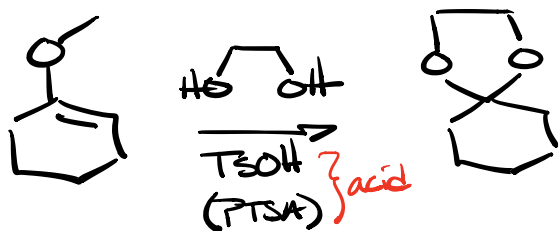






Internal 5 & 6 member rings form fast and major products when possible (bond angles $\sim 109.5^\circ$)

- 4 & 3 member rings less likely due to ring strain.
- 7 & 8 & up are less likely as bond angle too floppy and higher energy.

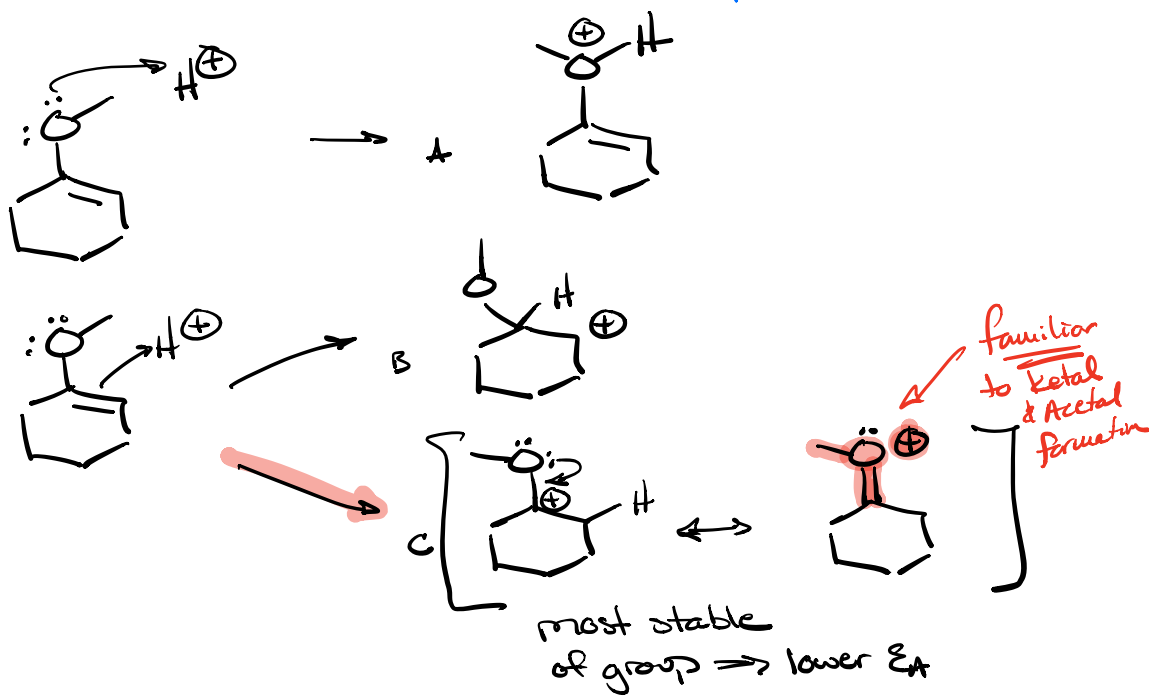


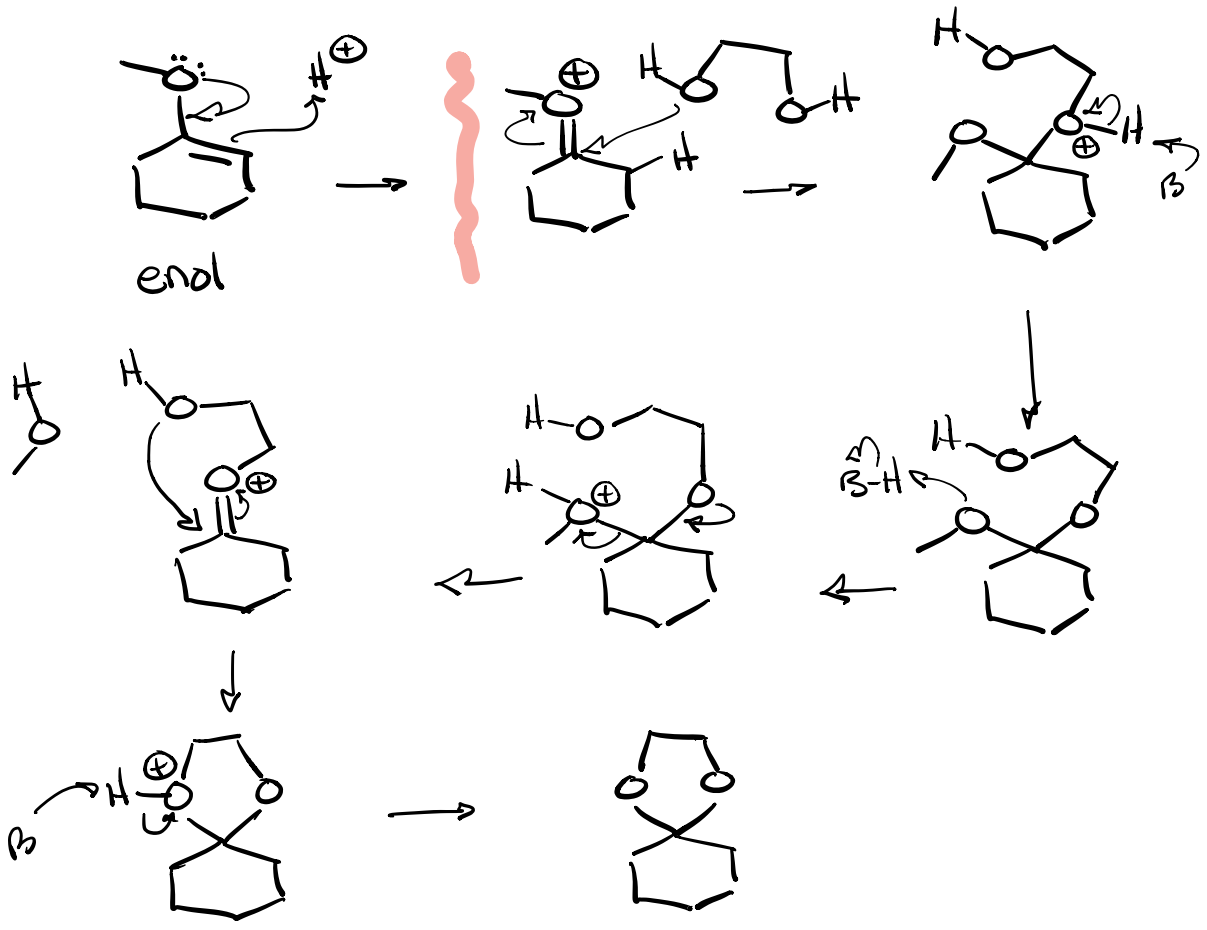
Give a reasonable mechanism for the reaction.

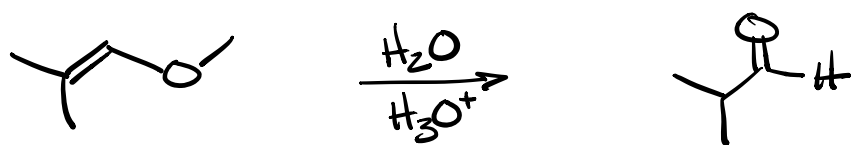
⇒ Consider the chapter ⇒ Acetal/ketal Chapter
 ⇒ Acetal/ketal Mechanism

⇒ Acid Catalysed ⇒ look for place to protonate

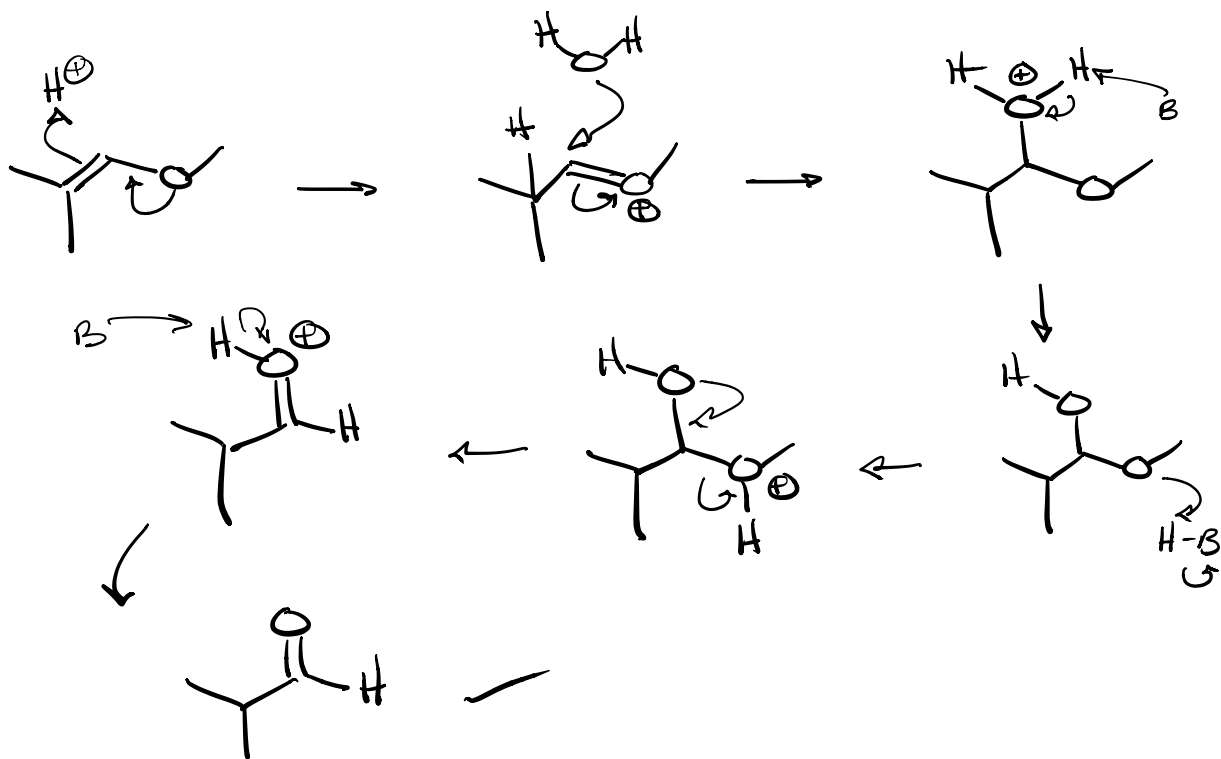
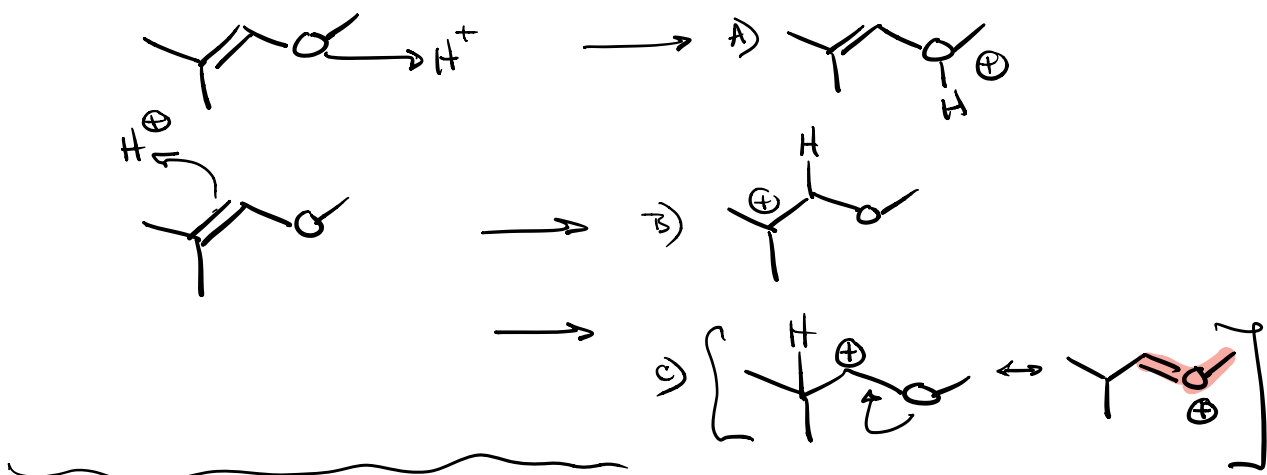
⇒ Base Catalysed ⇒ look for place to deprotonate

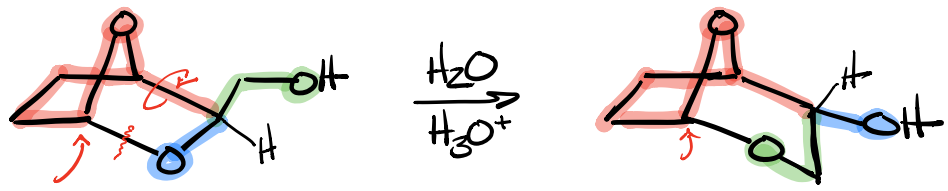






Give the mechanism





Propose a mechanism

- ① Are all the carbons the same? Anything gained or lost?
- ② What Chapter / Mechanism?
- ③ Plan \Rightarrow map the problem
 - \Rightarrow Protonate blue oxygen
 - \Rightarrow break bond
 - \Rightarrow Rotate
 - \Rightarrow make new bond w/ green oxygen

