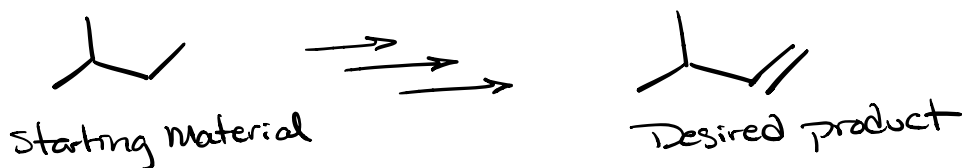


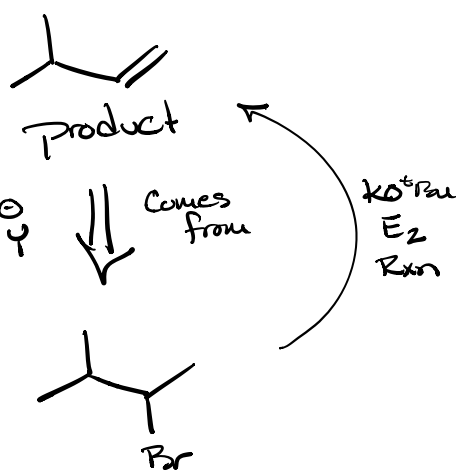
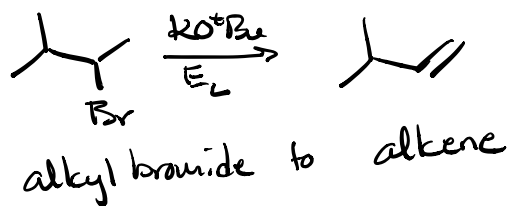
# Chapter 12 Synthesis



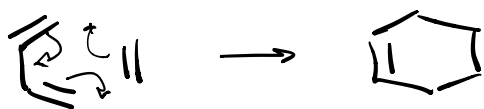
Retrosynthesis - working Backwards

"Comes from"  
 $\Rightarrow$

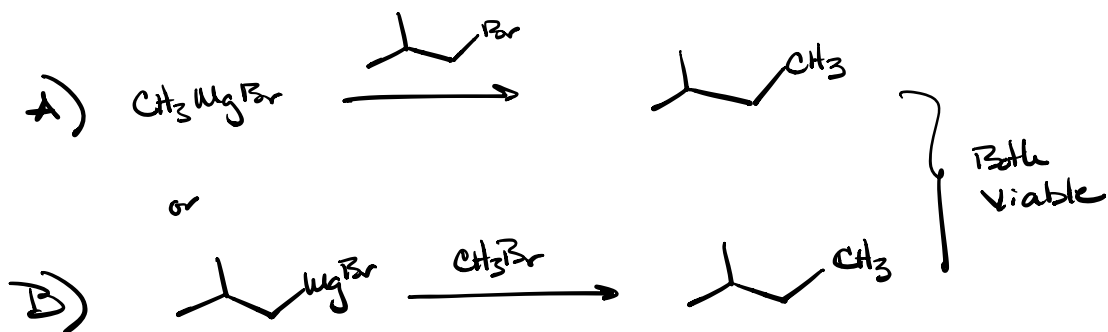
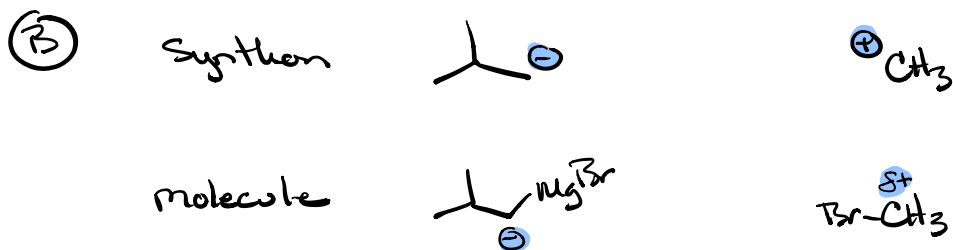
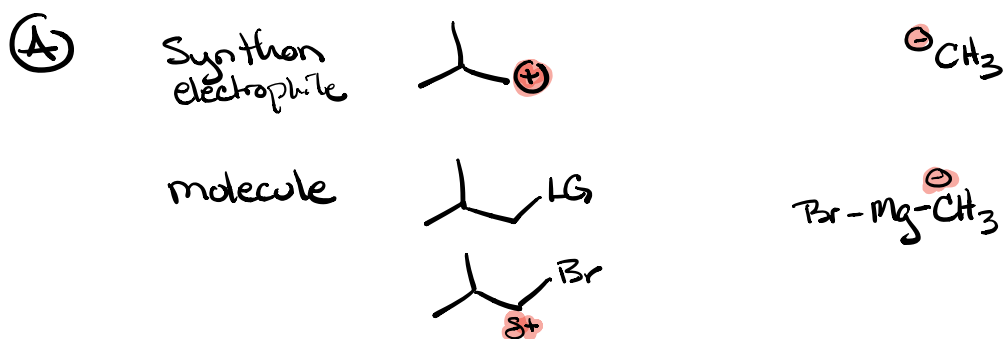
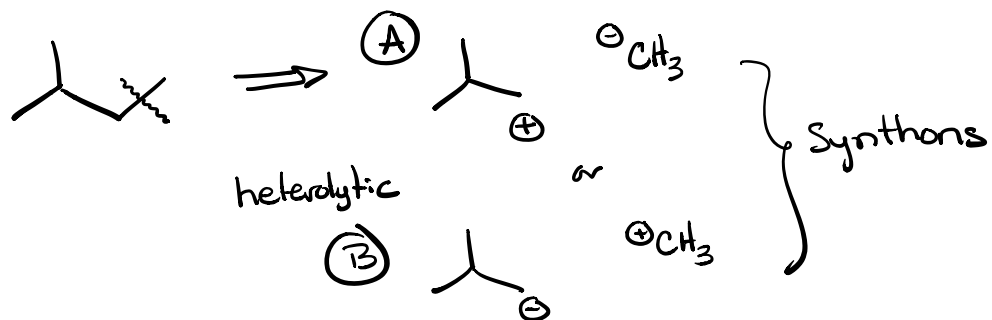
- Bond Disconnections  $X-Y \rightarrow X^{\oplus} + Y^{\ominus}$
- Functional Group Transformations



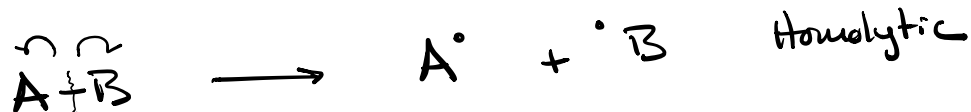
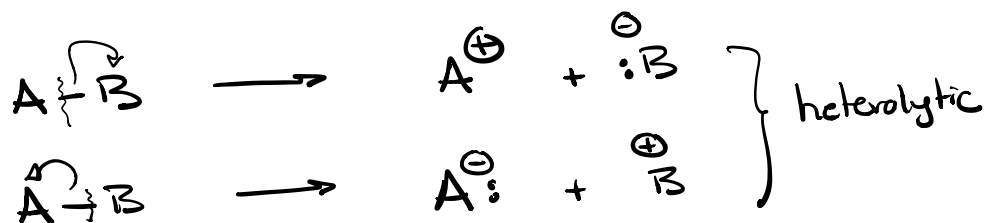
- Concerted transformations



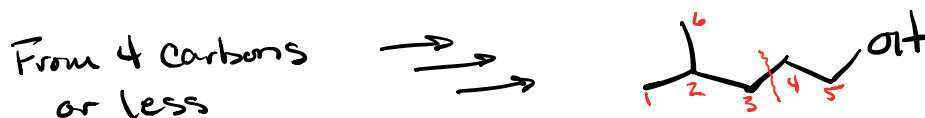
Synthon - A representation of a molecule electrophile or nucleophile that has desired properties



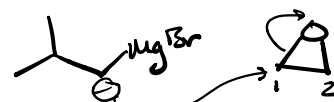
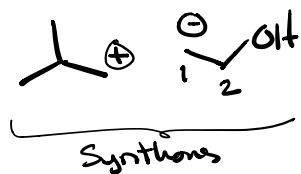
Two main disconnections

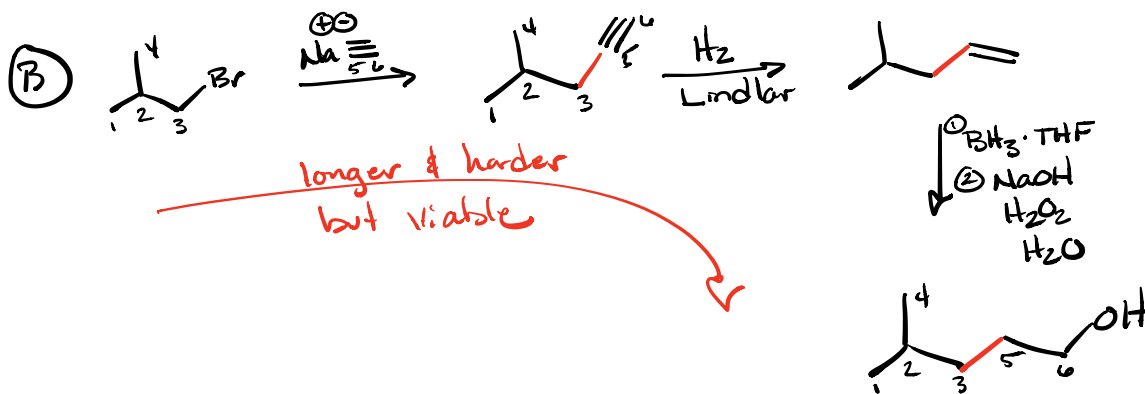
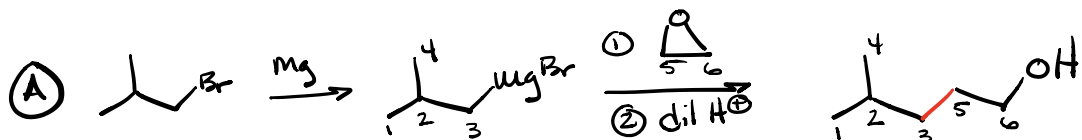


We desire to make this alcohol from simpler starting materials of 4 carbons or less



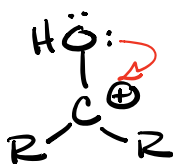
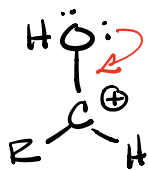
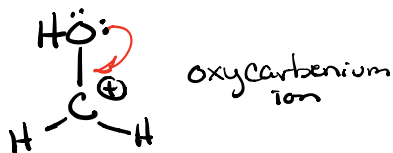
+ or  $\delta^+$   
- or  $\delta^-$



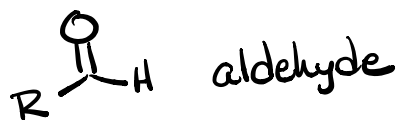


Retrosynthesis depends on being able to see the pattern in a synthon & find the molecular equivalent

Synthon



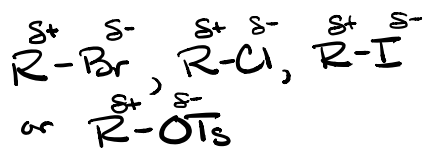
molecule



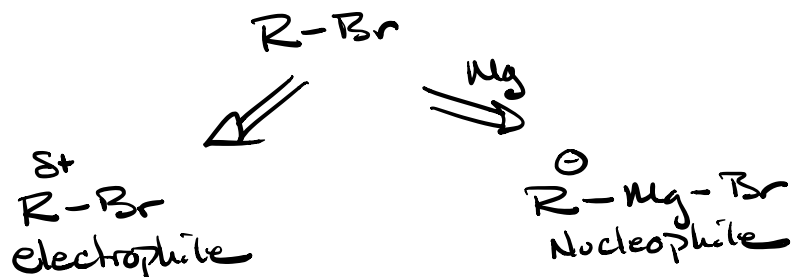
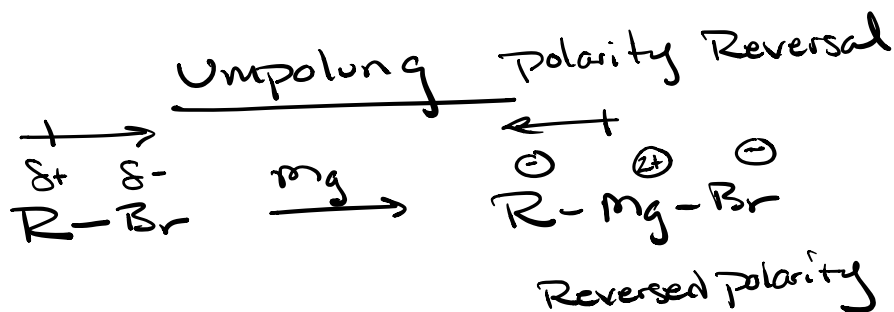
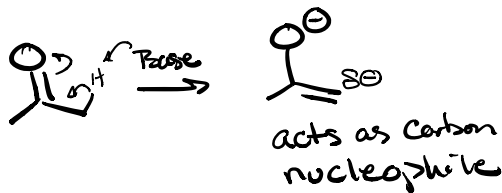
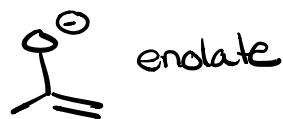
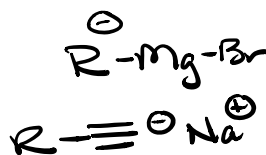
## Synthesis

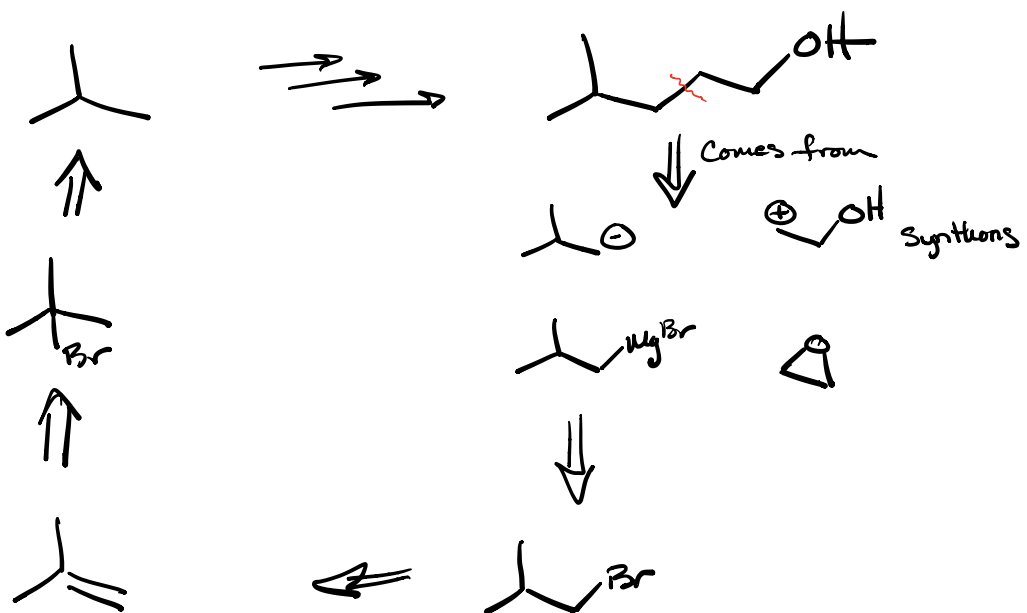
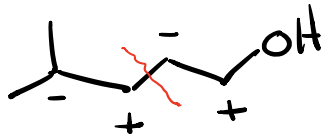
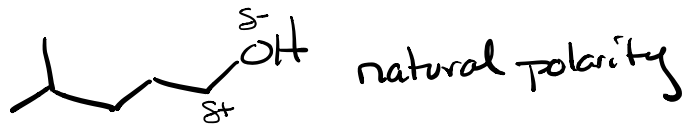


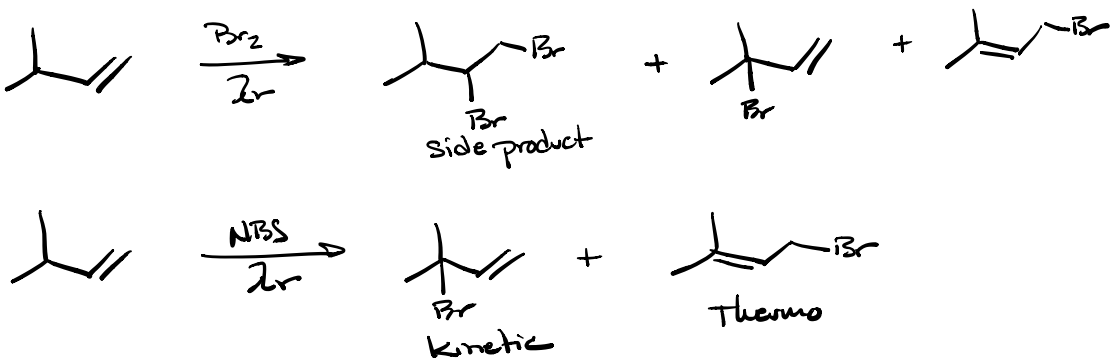
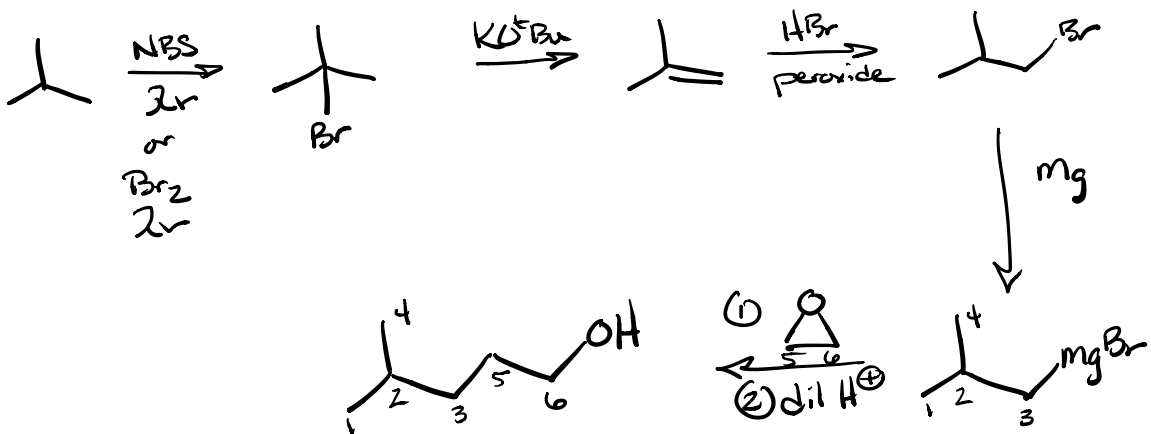
## molecule



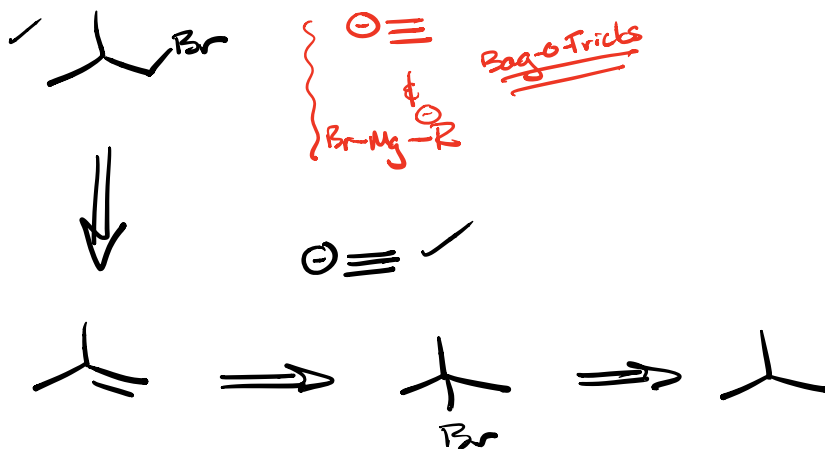
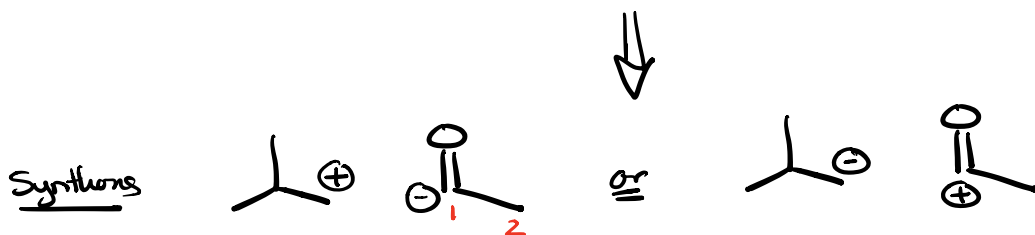
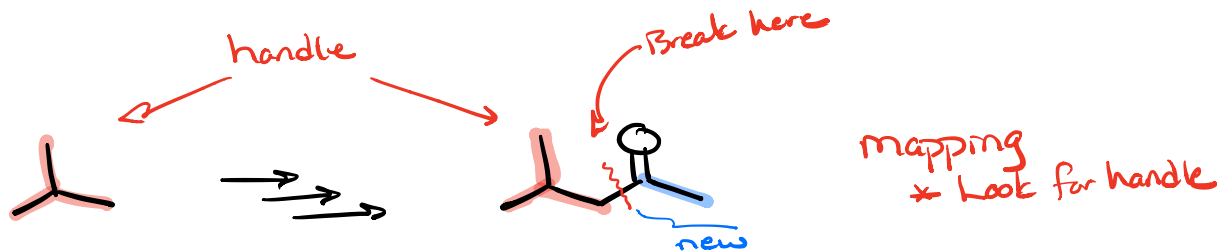
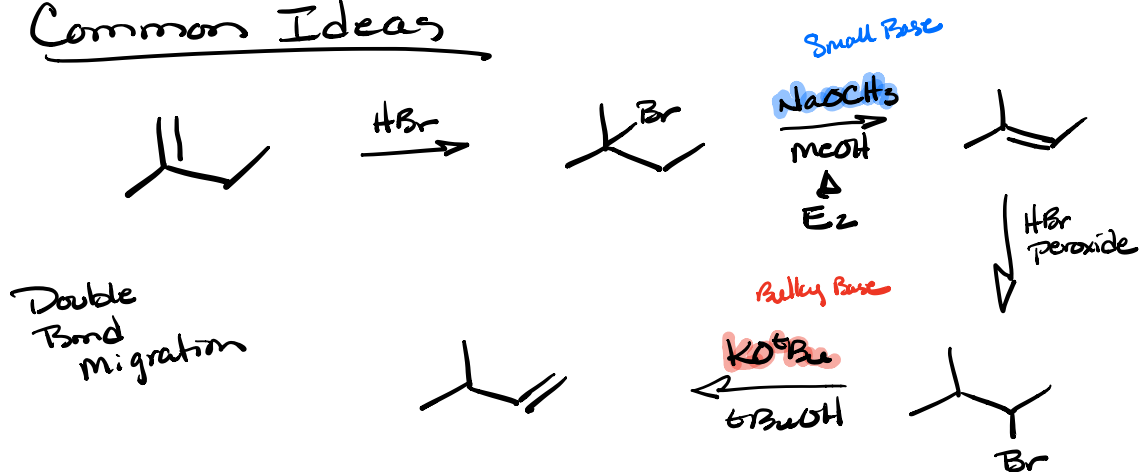
Super important



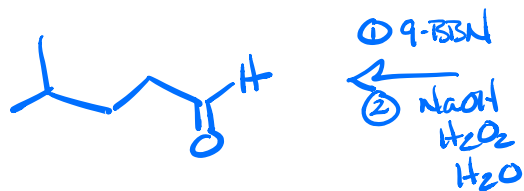
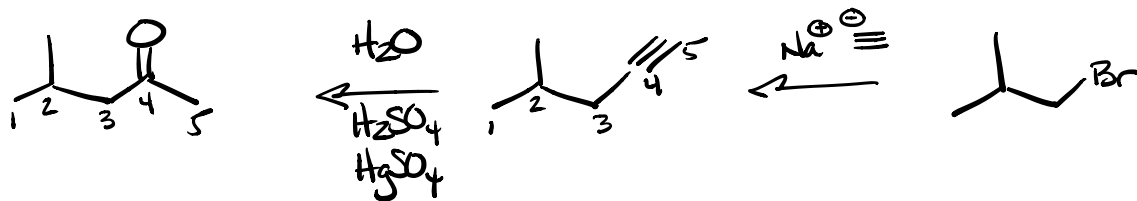




# Common Ideas





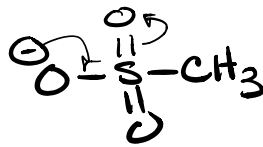
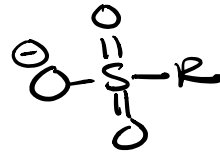




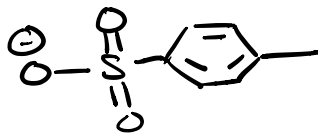
↓  
 Better LG

- Cl<sup>-</sup>
- Br<sup>-</sup>
- I<sup>-</sup>
- OMs
- OTs
- OTf

Tosylates



A Good Leaving group = weak Base



Super weak Base

