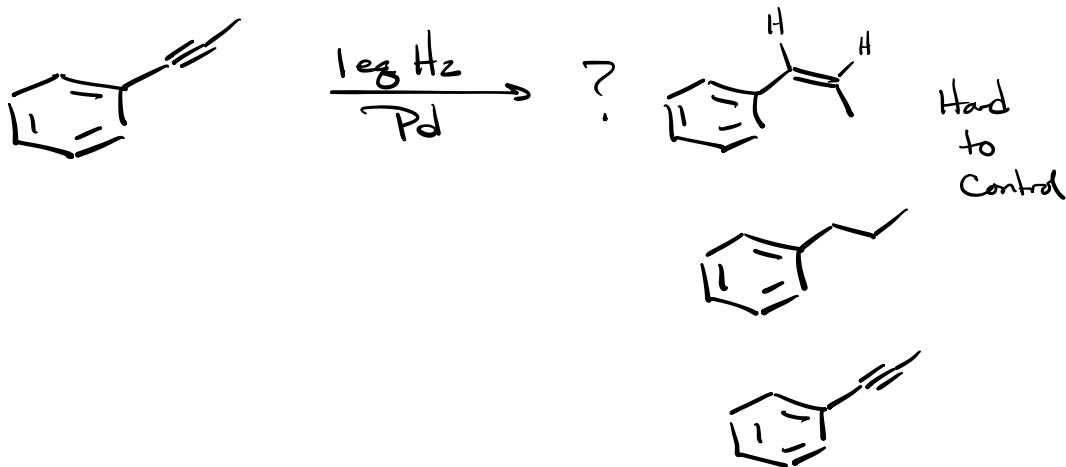
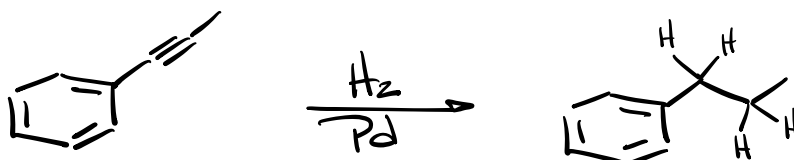
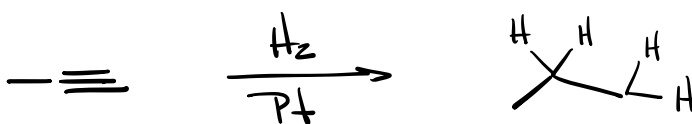
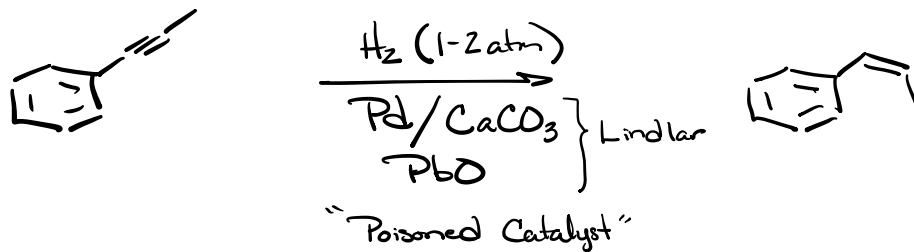


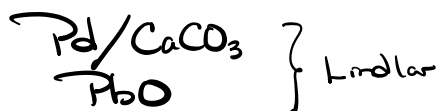
# Alkynes Cont.

## Catalytic Hydrogenation



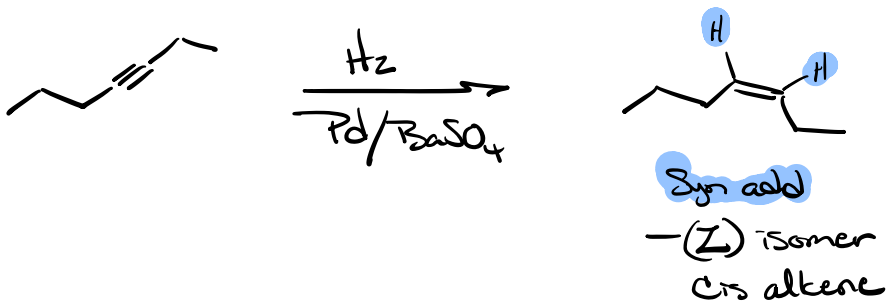


### Different Poisoned Catalysts



⋮

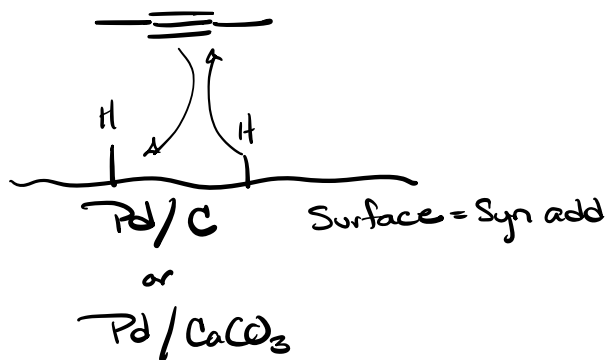
more most have either  $\text{CaCO}_3$  or  $\text{BaSO}_4$



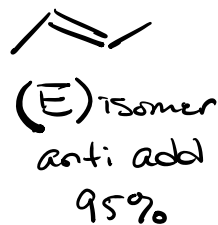
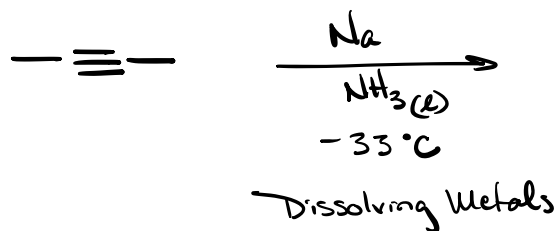
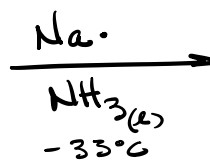
what about (E) isomer? How do we get the E isomer?  $\Rightarrow$  Anti add

Need different Mechanism

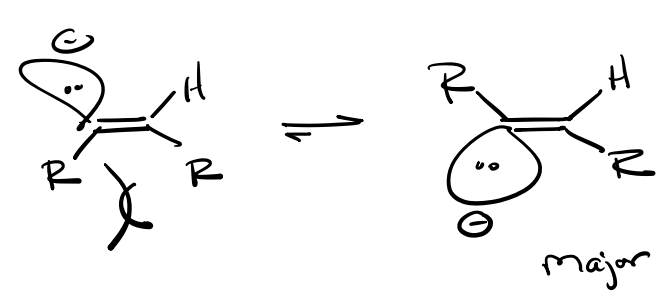
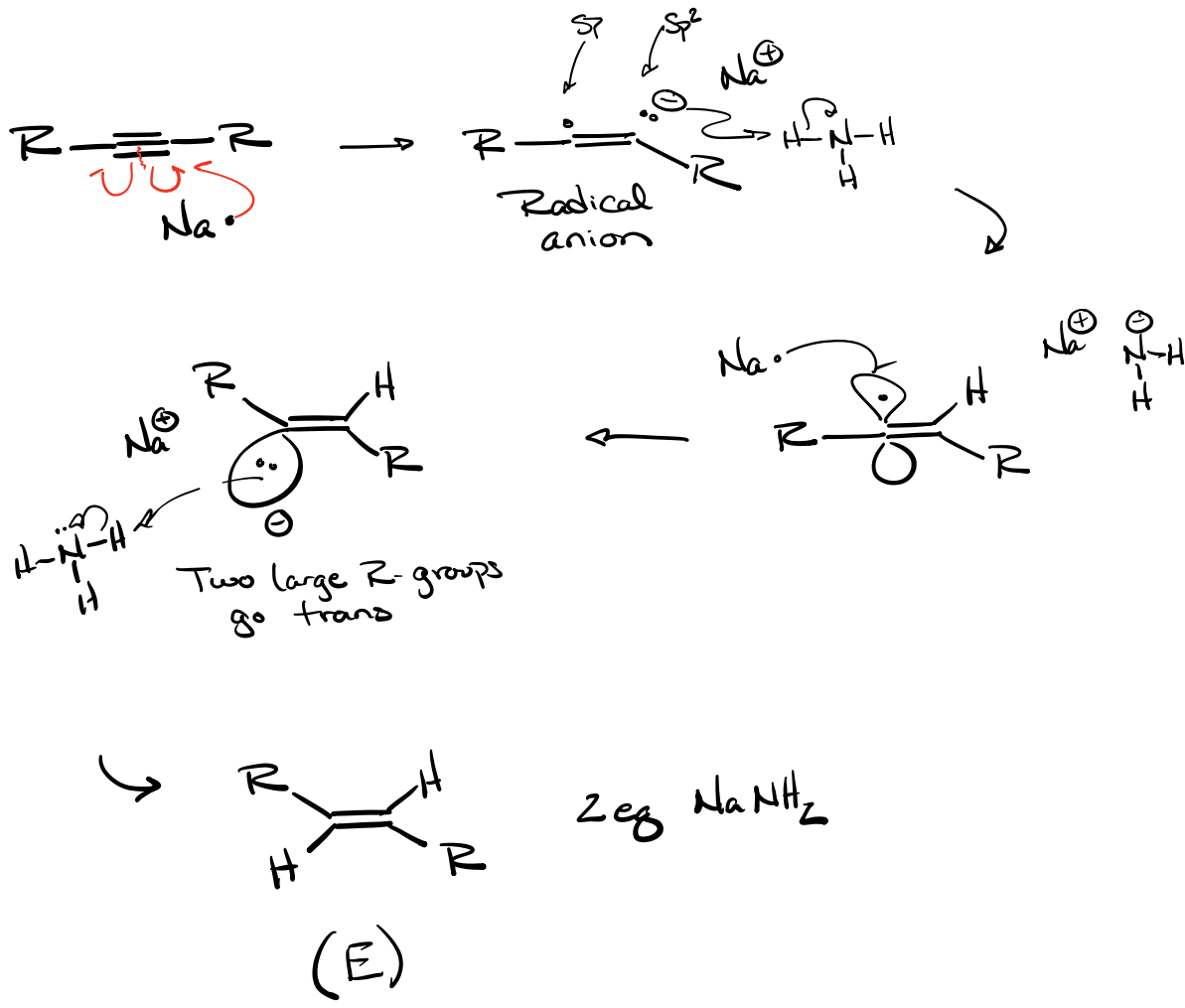
Standard solid phase Rxn

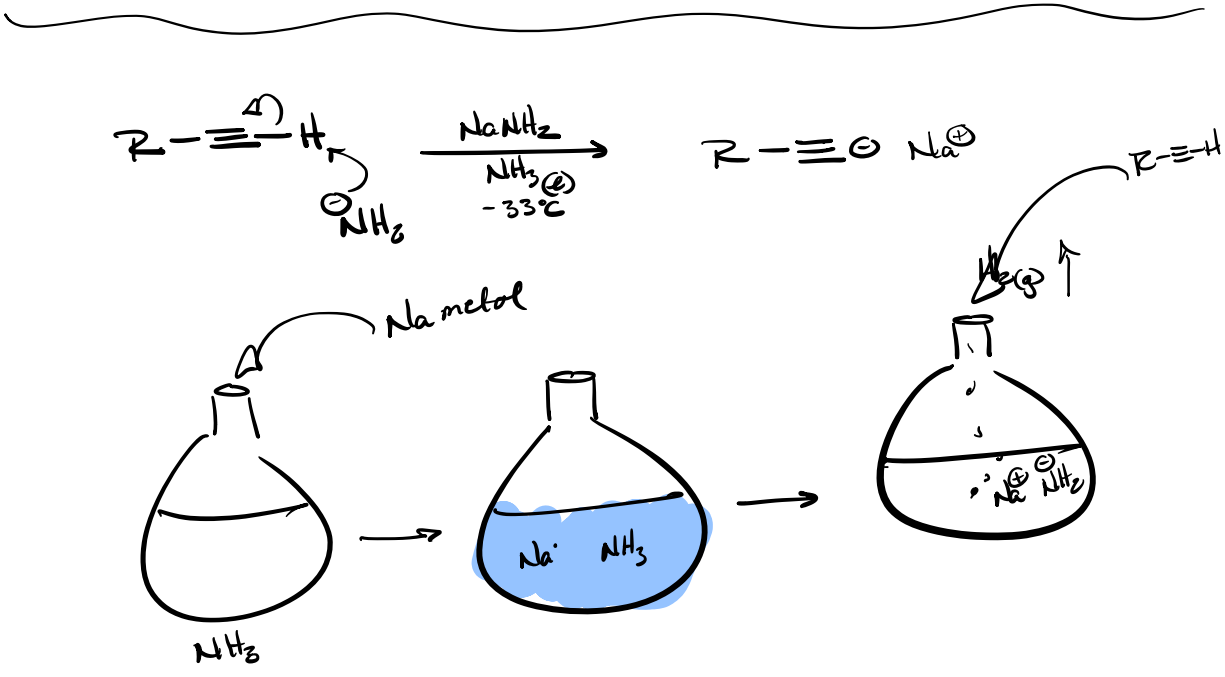
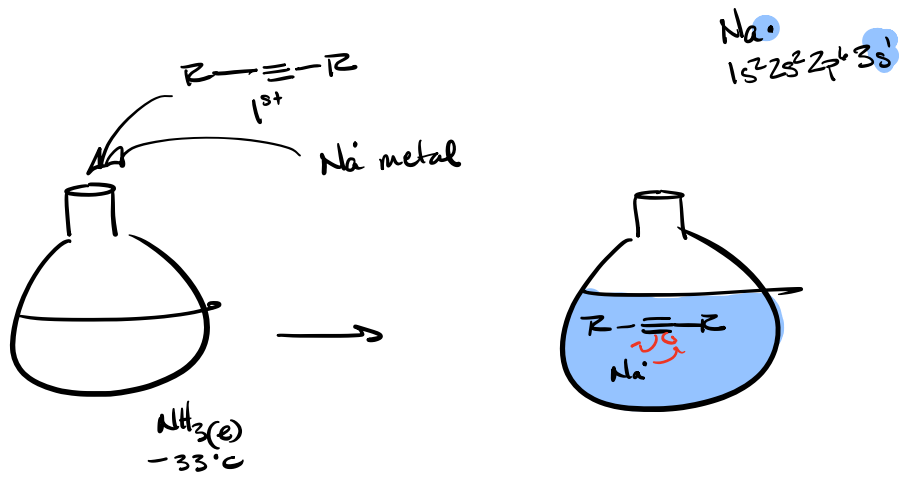


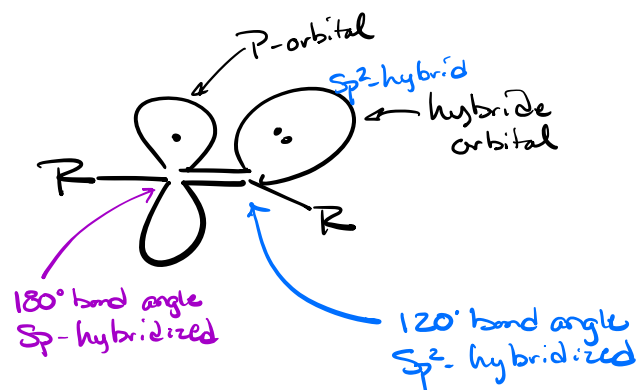
Free Radical Rxn



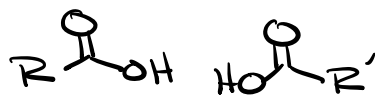
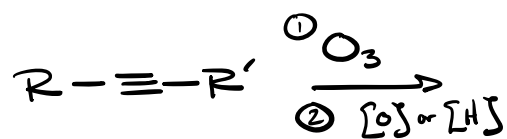
# General Free Radical Reduction





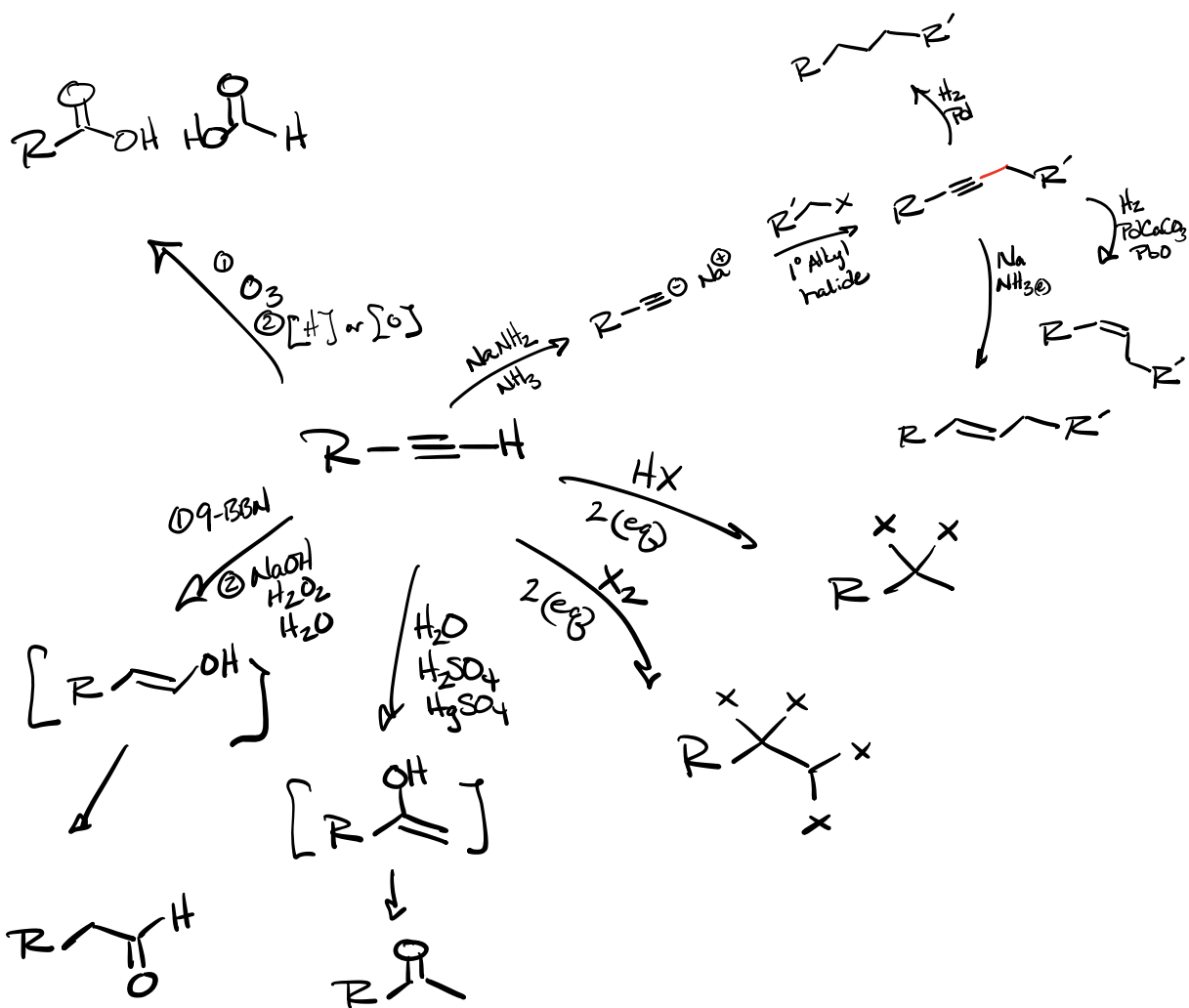


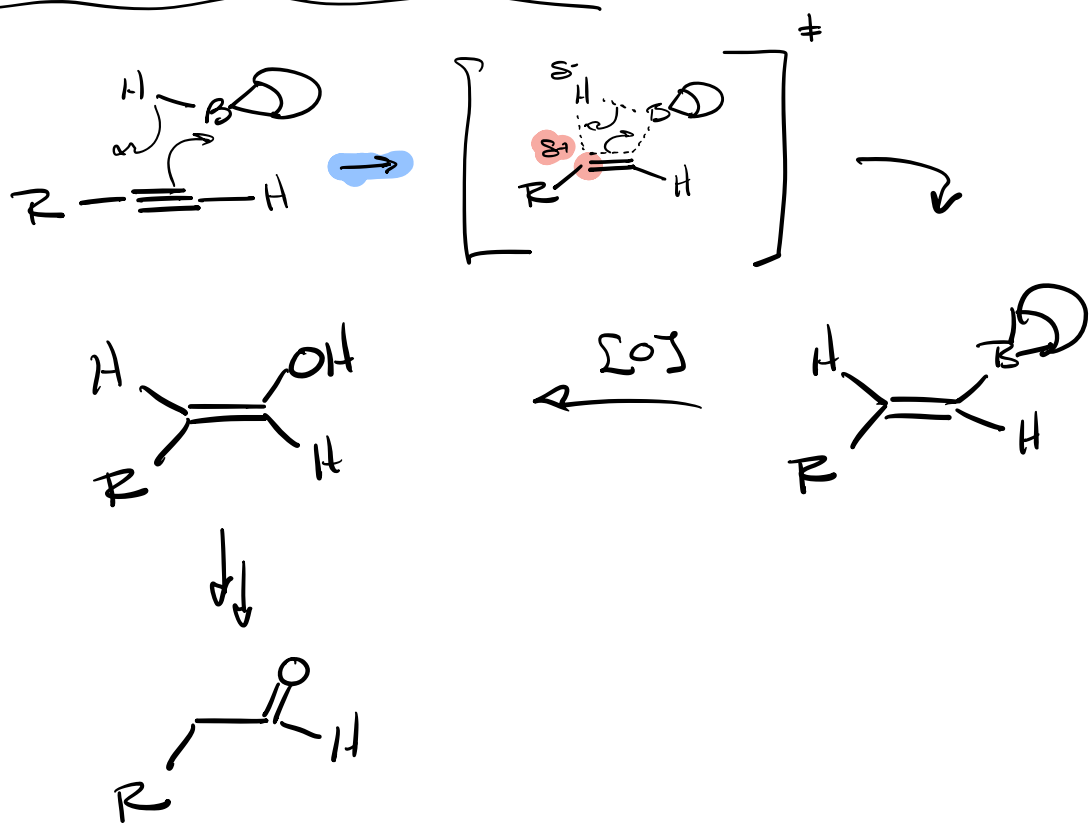
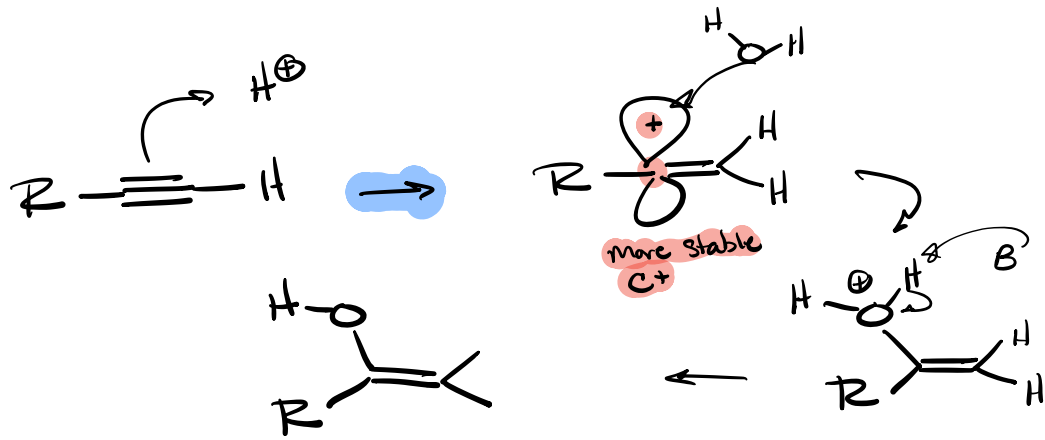
## Ozonolysis



Both oxidative & reductive give Carboxylic acids w/ alkynes

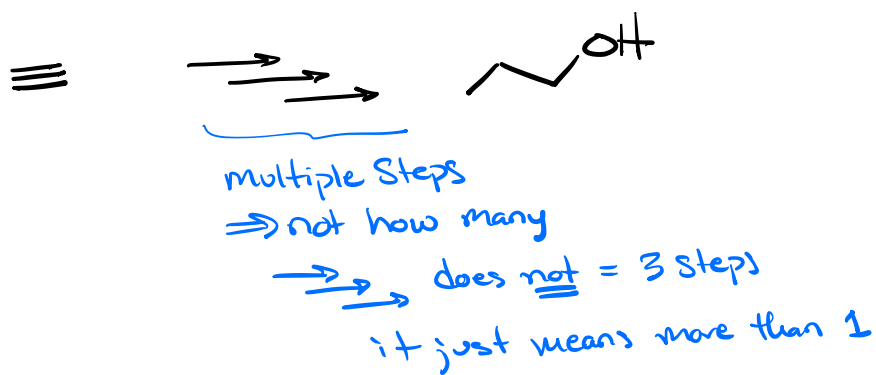
# Star Chart







# Synthesis w/ Alkenes & Alkynes



## Retrosynthetic analysis

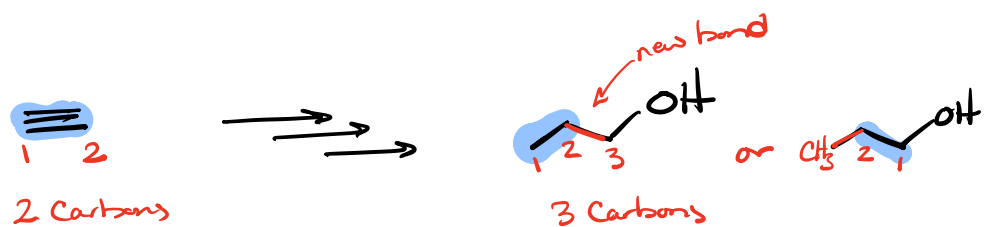
⇒ working Backwards

→ Reaction Arrow

⇌ Equilibrium Arrow

 electron flow  $2e^-$

 electron flow  $1e^-$



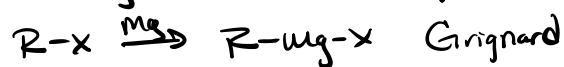
① Map problem

- Add Carbon
- Add OH group

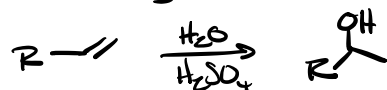
\* not only look at what has changed, but also locate existing carbons in the target

② Brain Storm Reactions

- How many Rxns add C?

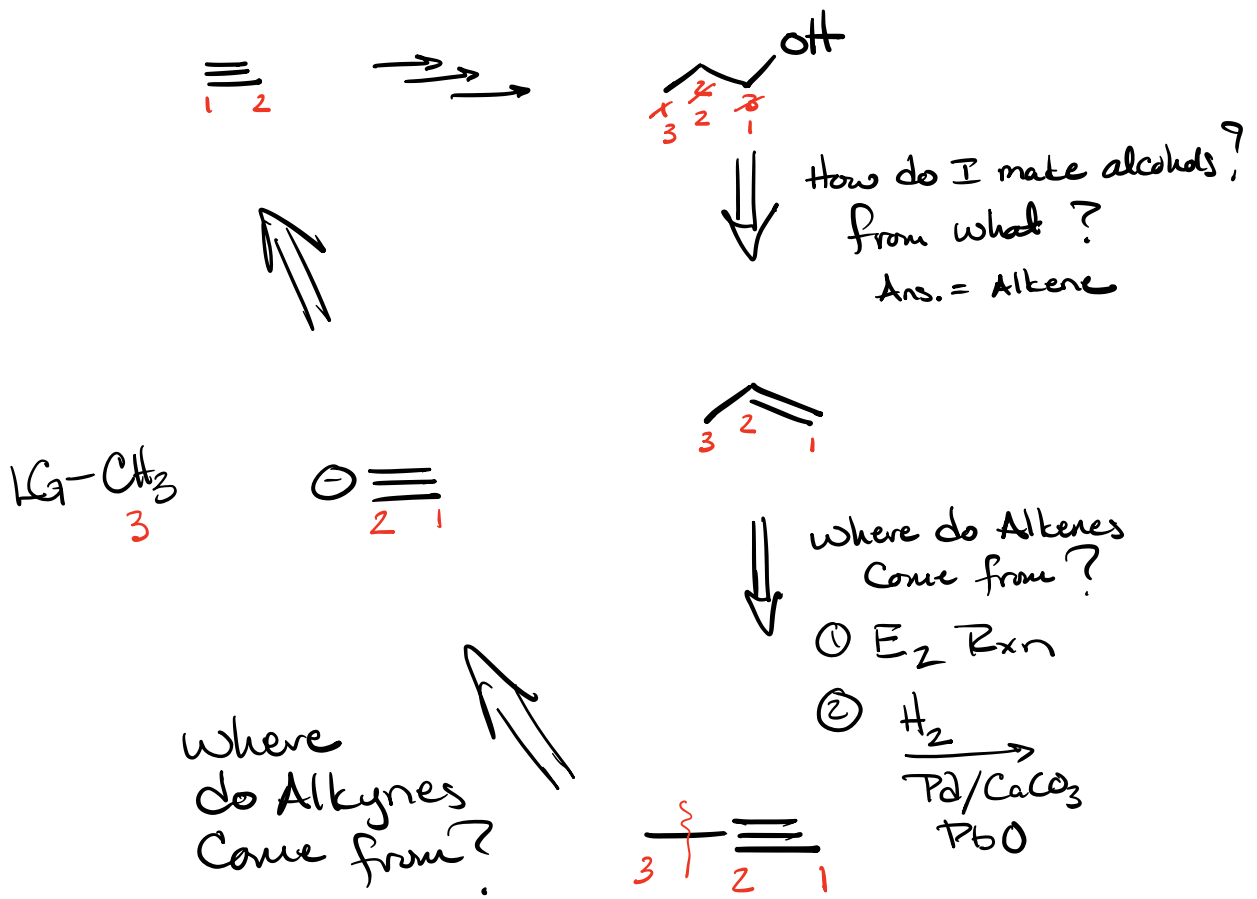


- How many Rxns add OH?



③ Plan Retrosynthesis

w/ Brainstormed Rxns in mind



④ write in forwards direction

