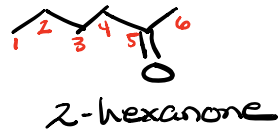
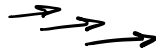
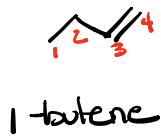
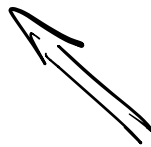
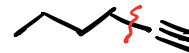
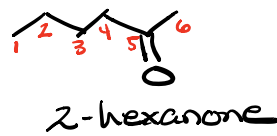
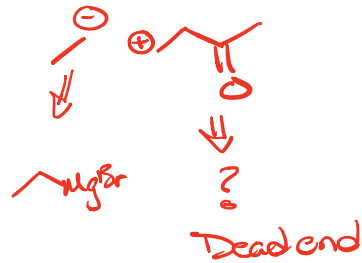
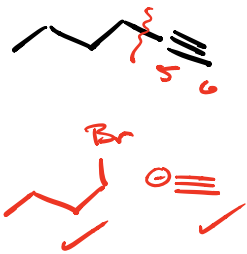
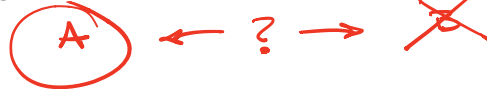
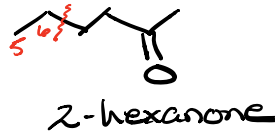
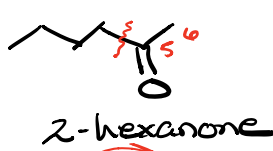


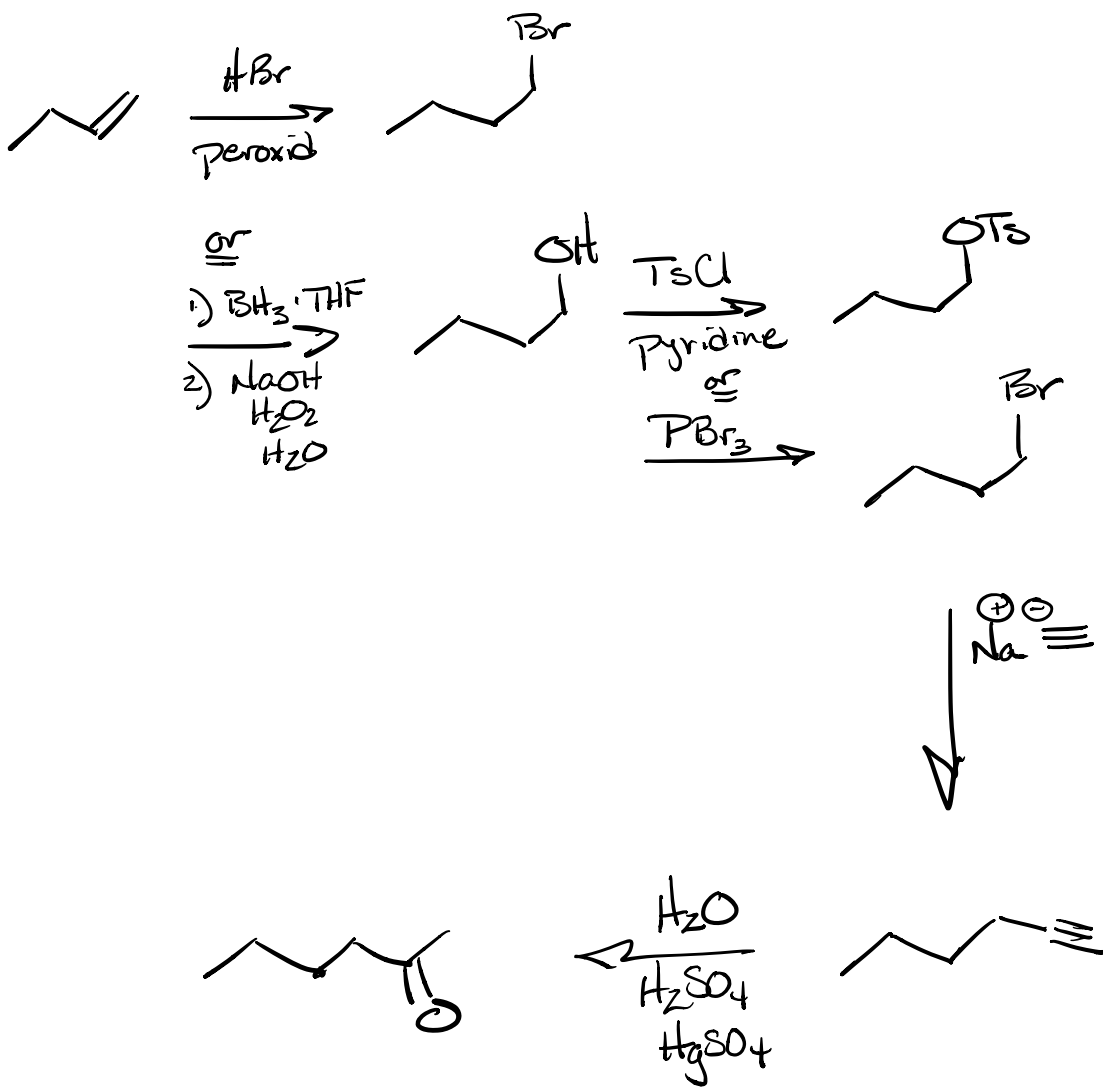
#6



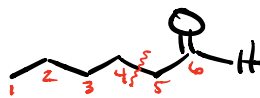
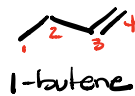
1<sup>st</sup> # Carbons  
"Mapping"  
⇒ Look for  
a handle

options 2-Additional Carbons

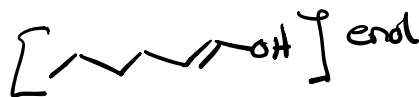
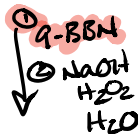
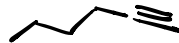
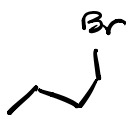
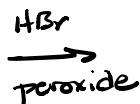
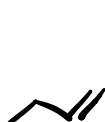
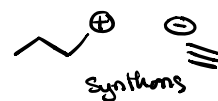


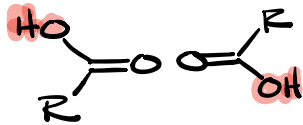
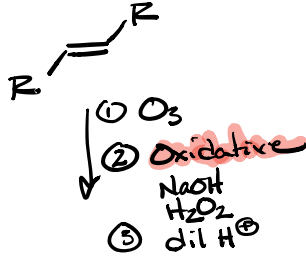
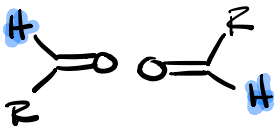
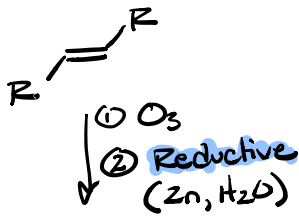
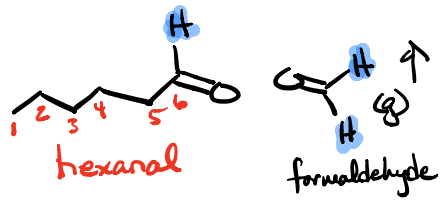
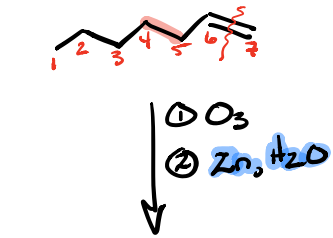
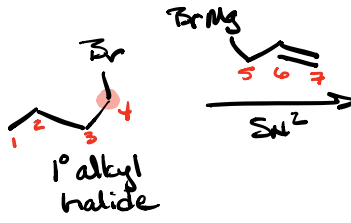
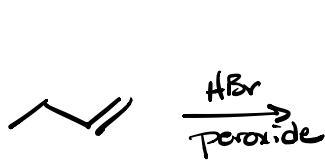


#7)

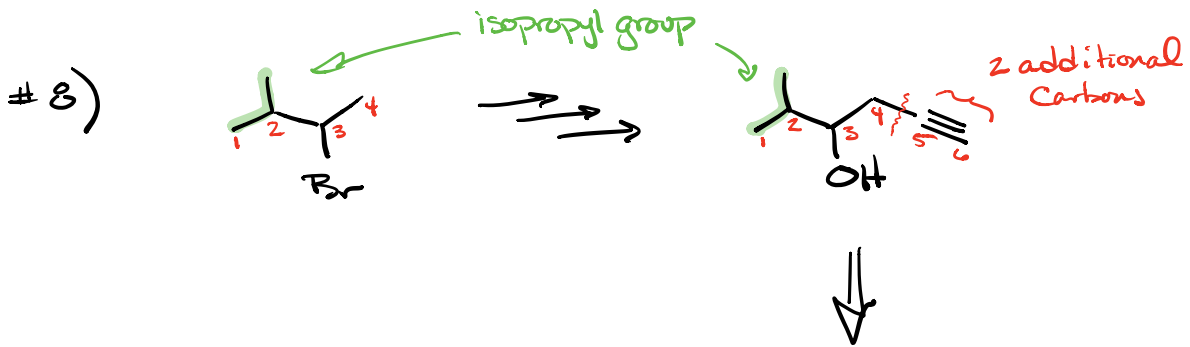


hexanal

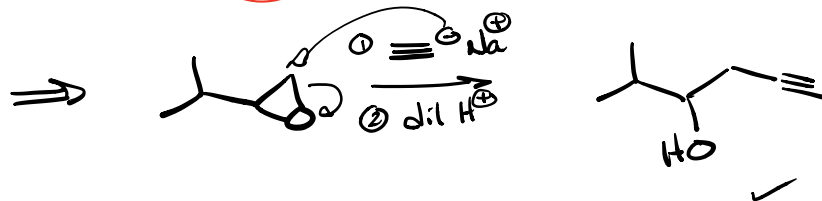
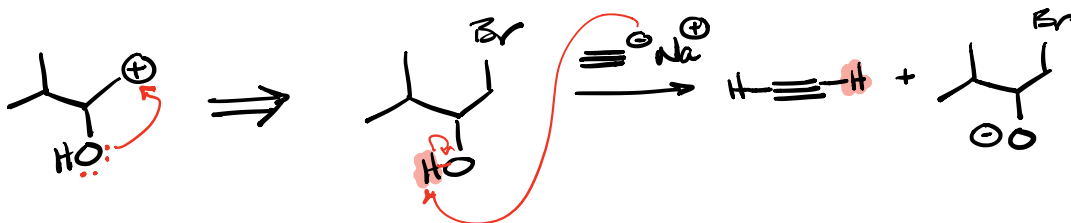
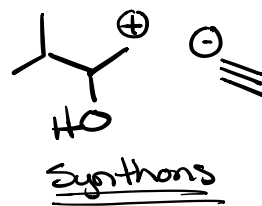




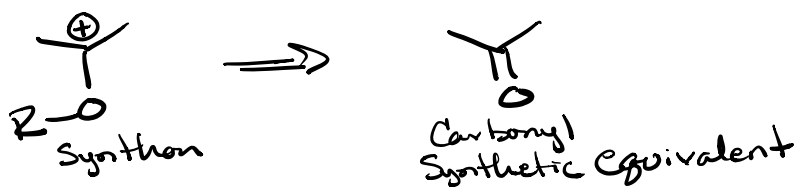
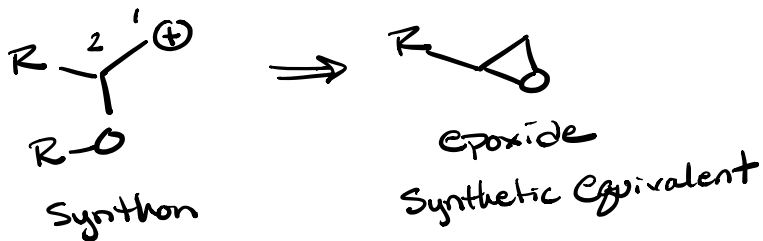
\* Illustrates throwing away a carbon to synthesize a molecule

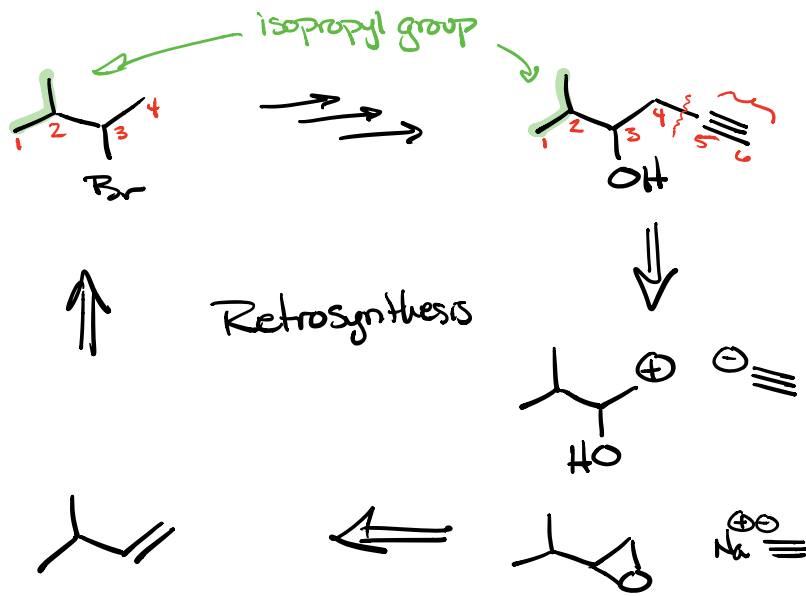


Possible Synthetic Equivalents

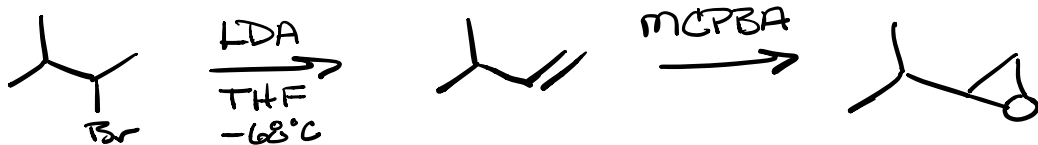


Pattern Recognition

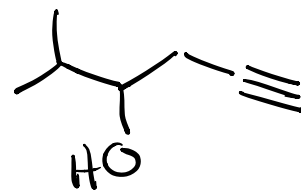
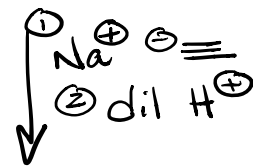




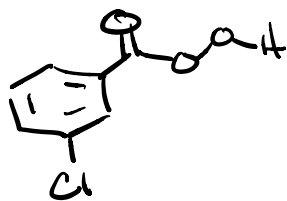
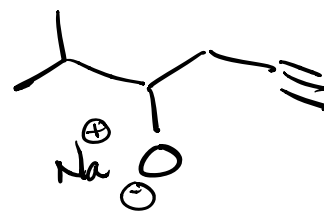
Forward



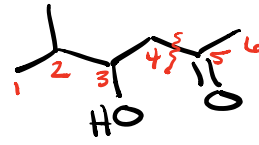
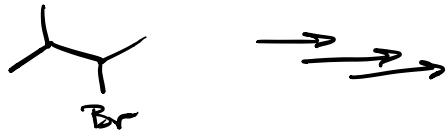
- Rt
- 0 °C ← Ice bath
- 33 °C ← NH<sub>3</sub>(l)
- 68 °C ← Dry Ice/Acetone



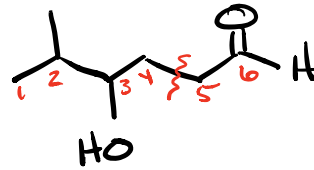
w/o dil H<sup>+</sup>



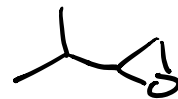
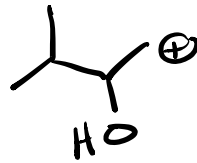
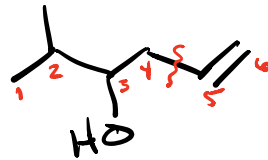
m-Chloroperoxybenzoic acid  
 mCPBA or MCPBA



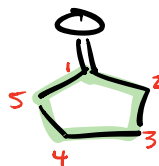
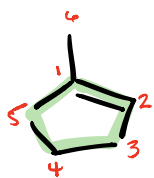
or



or



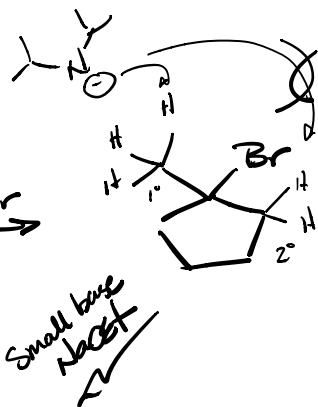
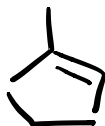
ii)



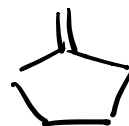
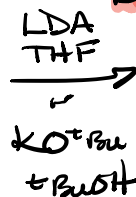
Functional Group Transformation (FGT)



Forward



Bulky Base Required



Kinetic

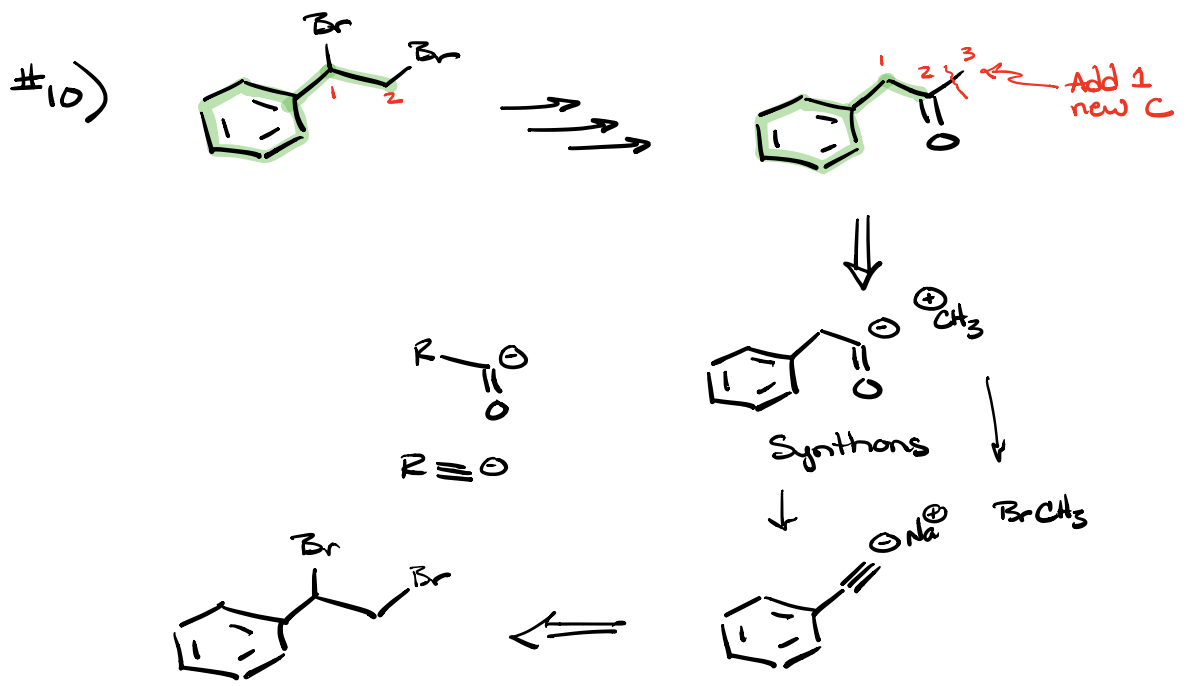


Thermodynamic

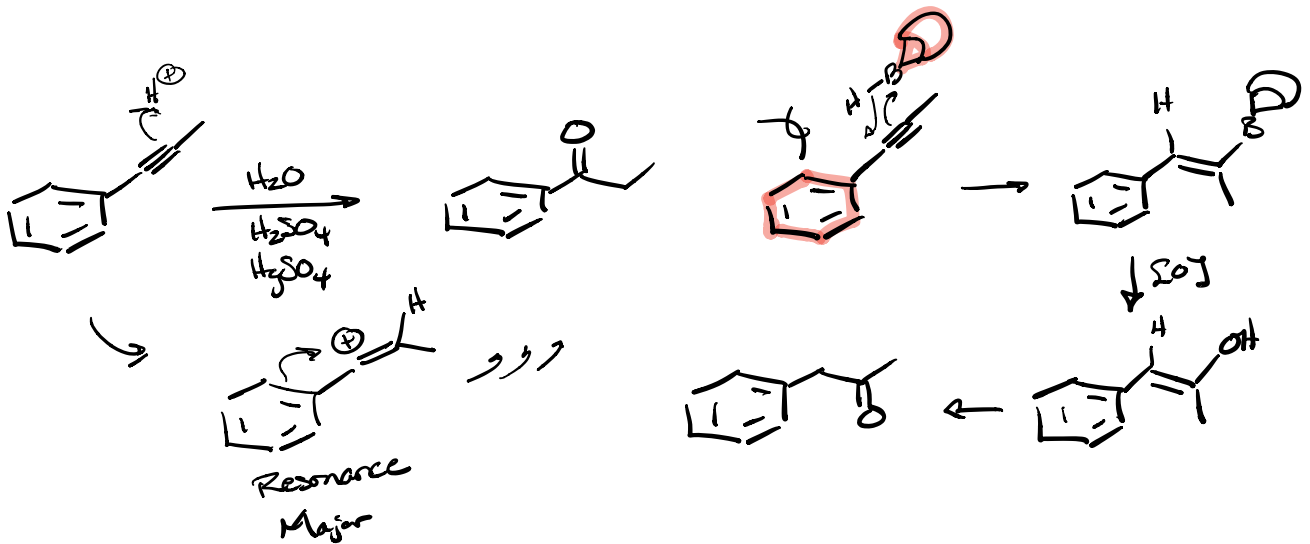
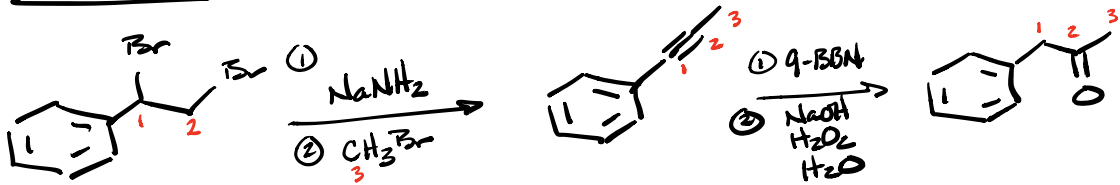
① O<sub>3</sub>  
② Oxidative  
or  
Reductive

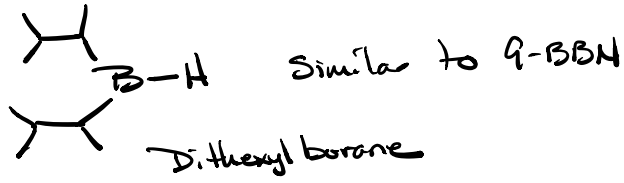




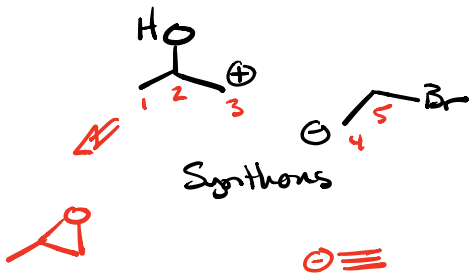
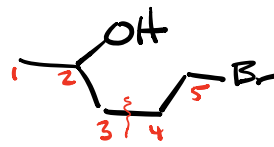
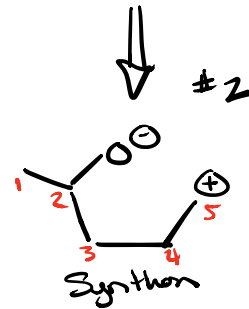
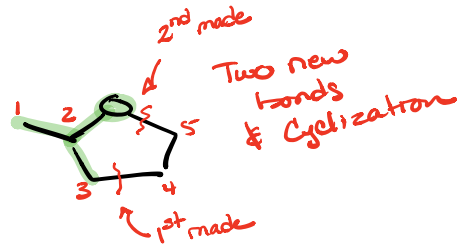
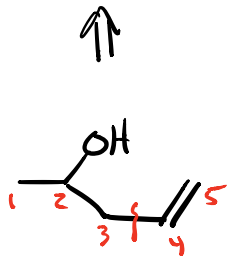
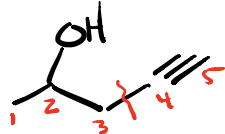
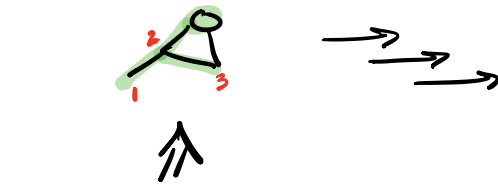


Forward

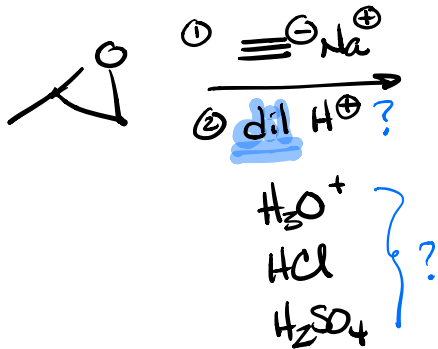




#16)

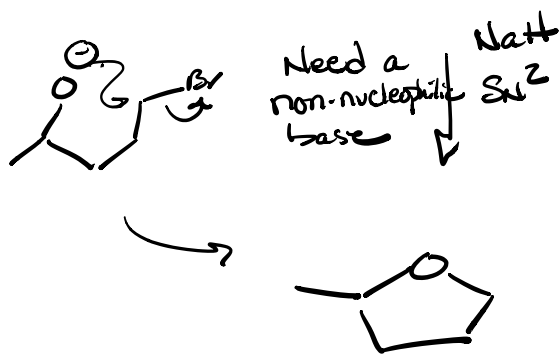
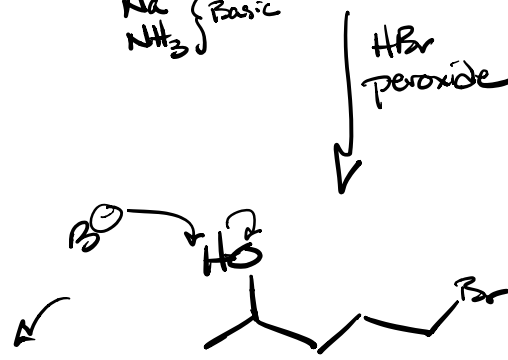
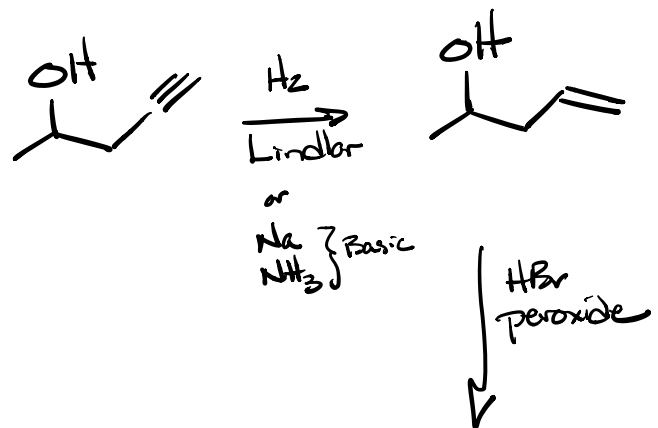
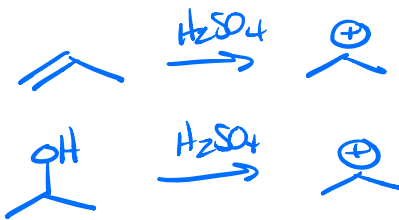


Forward



$\text{dil } H^+ = 1 \text{ or } 2 \text{ M HCl}$   
 For protonation  
 weak mild conditions

$\text{H}_3\text{O}^+$  or  $\text{HCl}$  or  $\text{H}_2\text{SO}_4$   
 often w/ conc.  
 Strong acid



Non-nucleophilic bases

\* NaH

