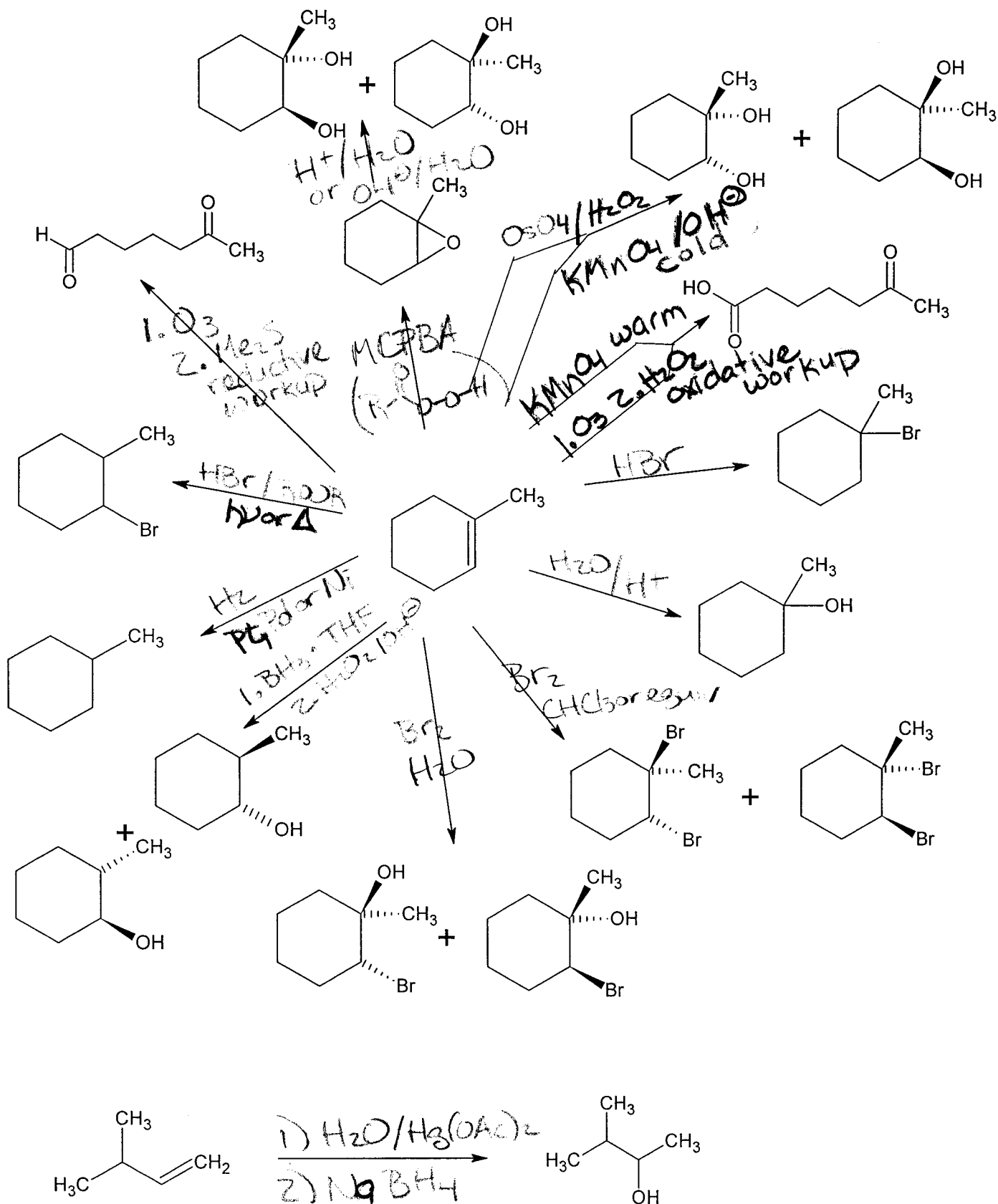
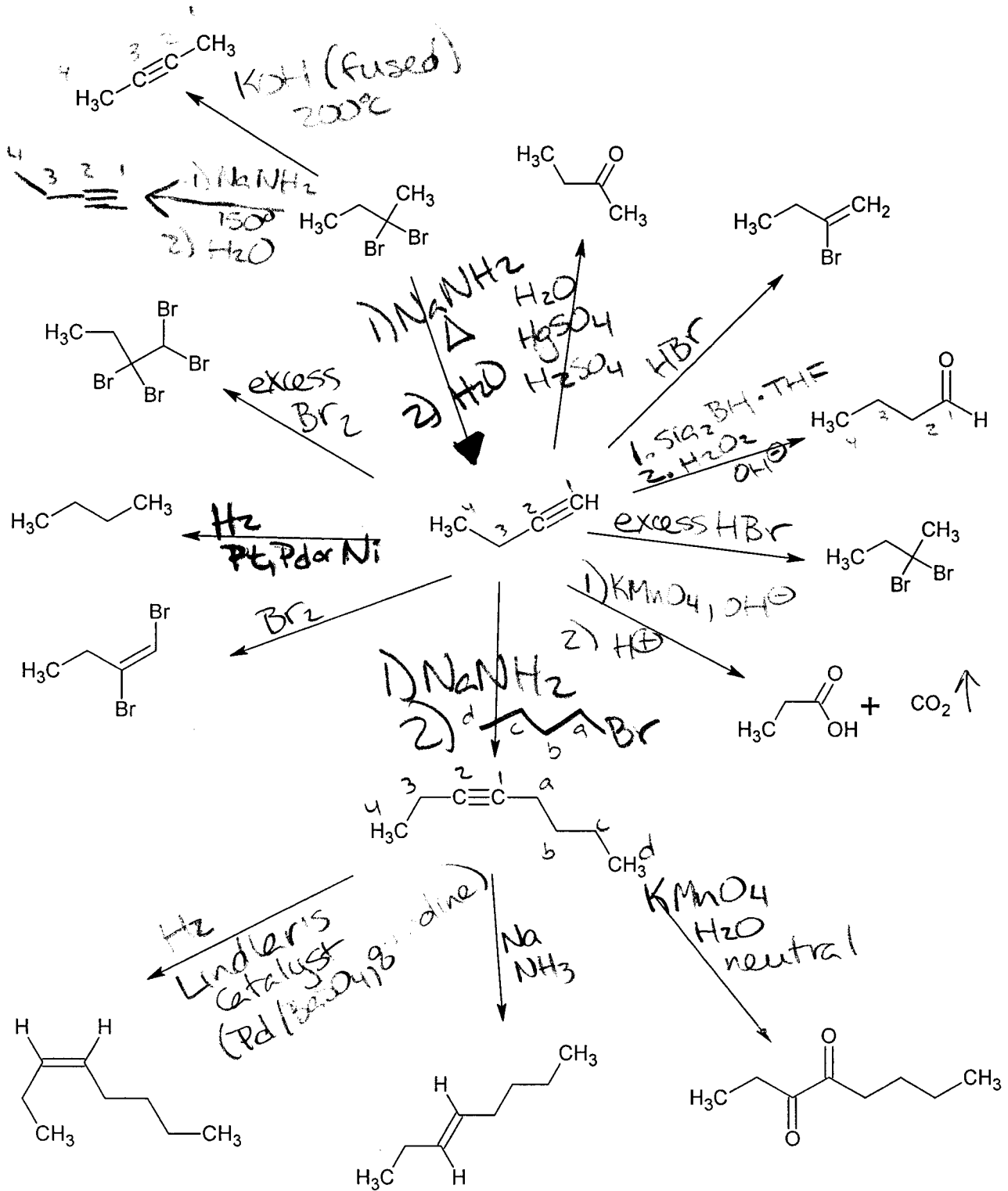


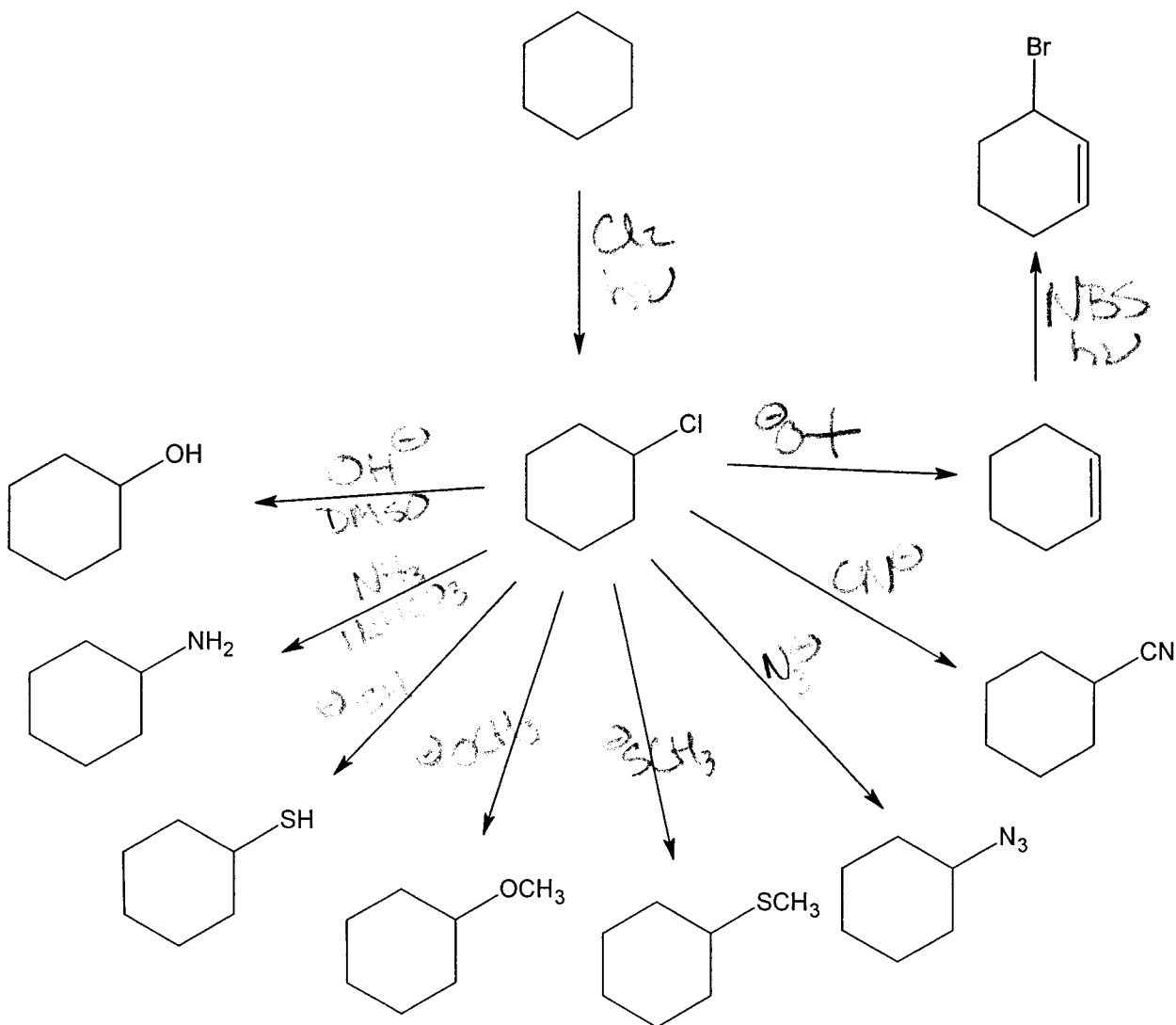
# Alkene Reaction Map



# Alkyne Reaction Map



# Alkyl Halide Synthesis & Reactions



## Substitution vs Elimination in a Nutshell

Class of R-X	Good Nu HS <sup>-</sup> or I <sup>-</sup>	Poor Nu H <sub>2</sub> O or ROH	Lean base HO <sup>-</sup> or RO <sup>-</sup>	Bulky base t-butoxide
Me-X	S <sub>N</sub> <sup>2</sup>	S <sub>N</sub> <sup>2</sup> -slow	S <sub>N</sub> <sup>2</sup>	S <sub>N</sub> <sup>2</sup>
1° R-X	S <sub>N</sub> <sup>2</sup>	S <sub>N</sub> <sup>2</sup> -slow	S <sub>N</sub> <sup>2</sup> /E2	E2
2° R-X	S <sub>N</sub> <sup>2</sup>	S <sub>N</sub> <sup>1</sup> /E1	E2	E2
3° R-X	S <sub>N</sub> <sup>1</sup> /E1 (Δ)	S <sub>N</sub> <sup>1</sup> /E1 (Δ)	E2	E2

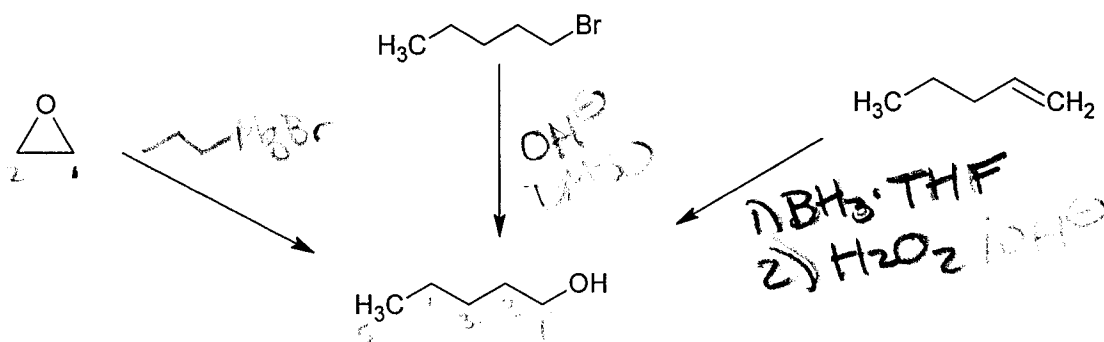
↑  
structure  
of R-X

E<sup>+</sup>

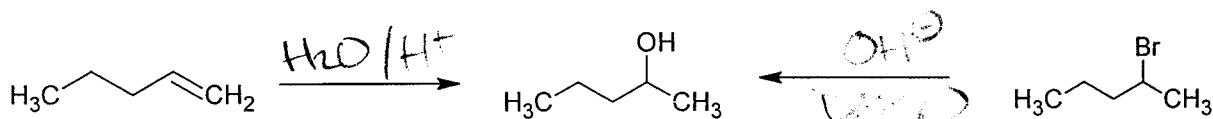
structure & charge  
of Nu: or Base<sup>⊖</sup>

# Alcohol Syntheses

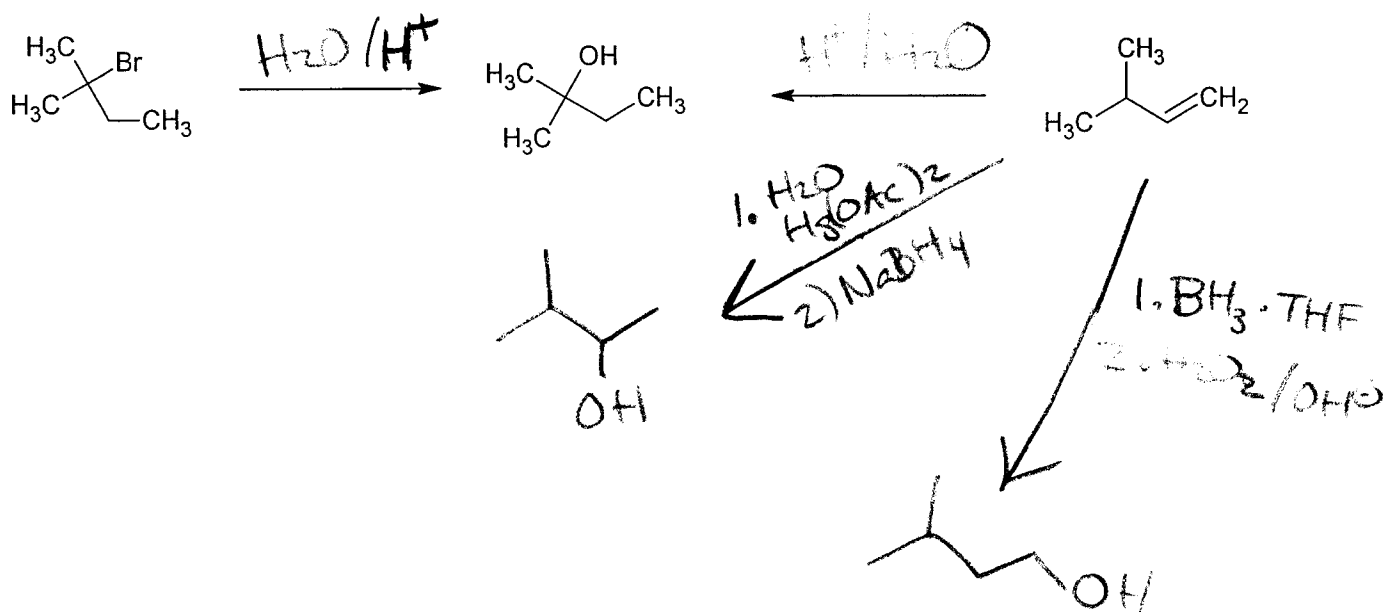
1° ROH



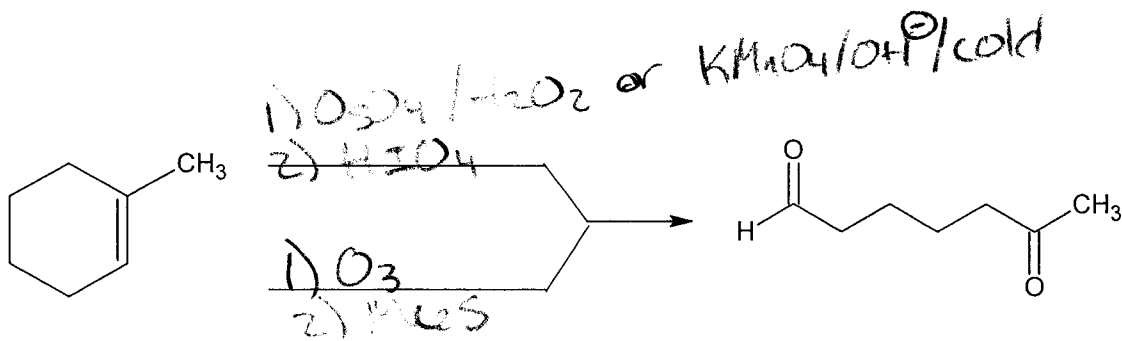
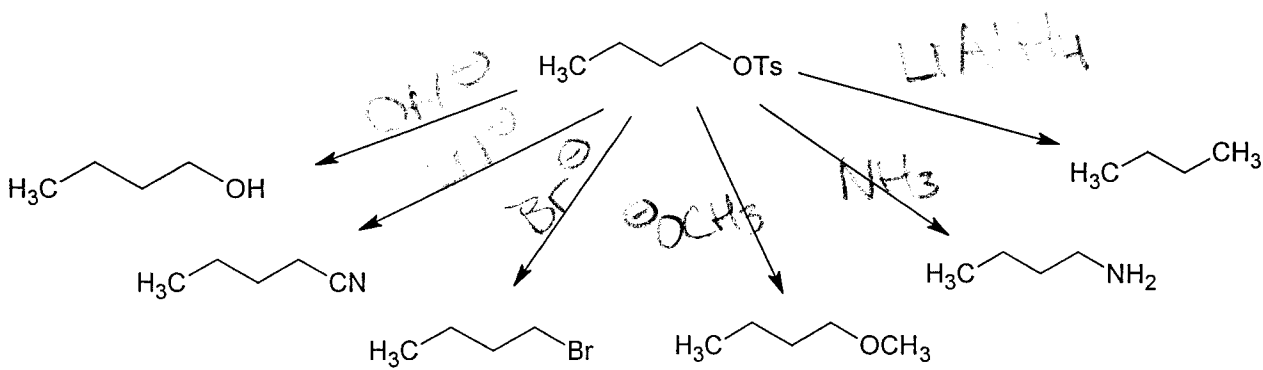
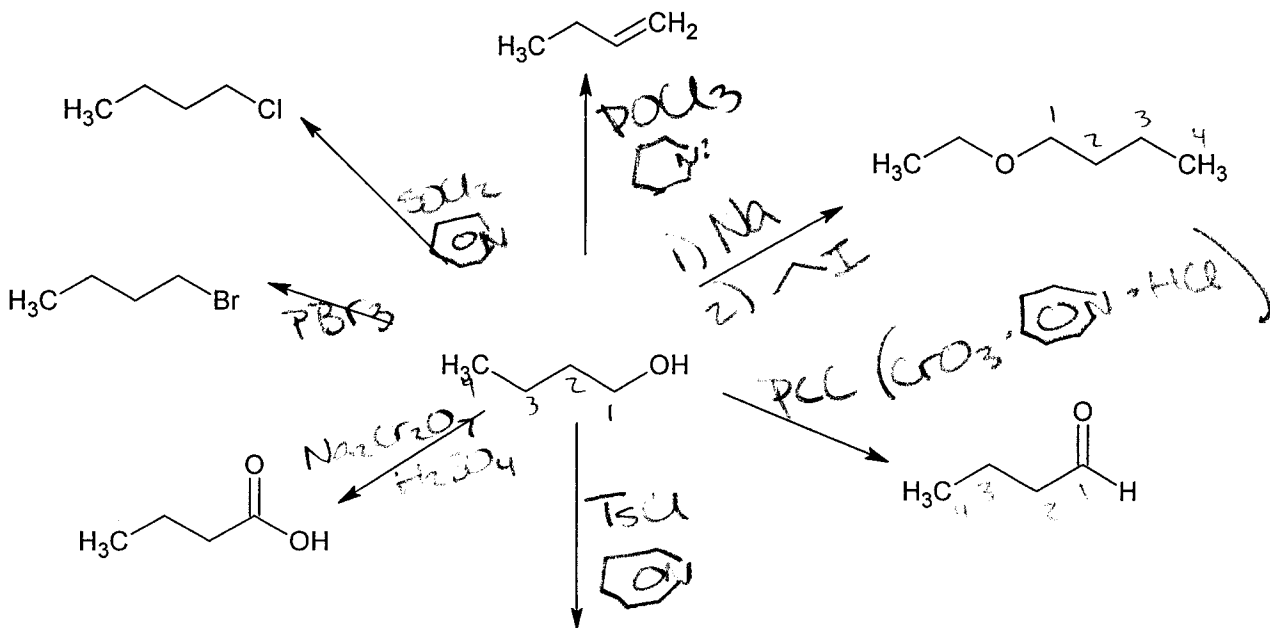
2° ROH



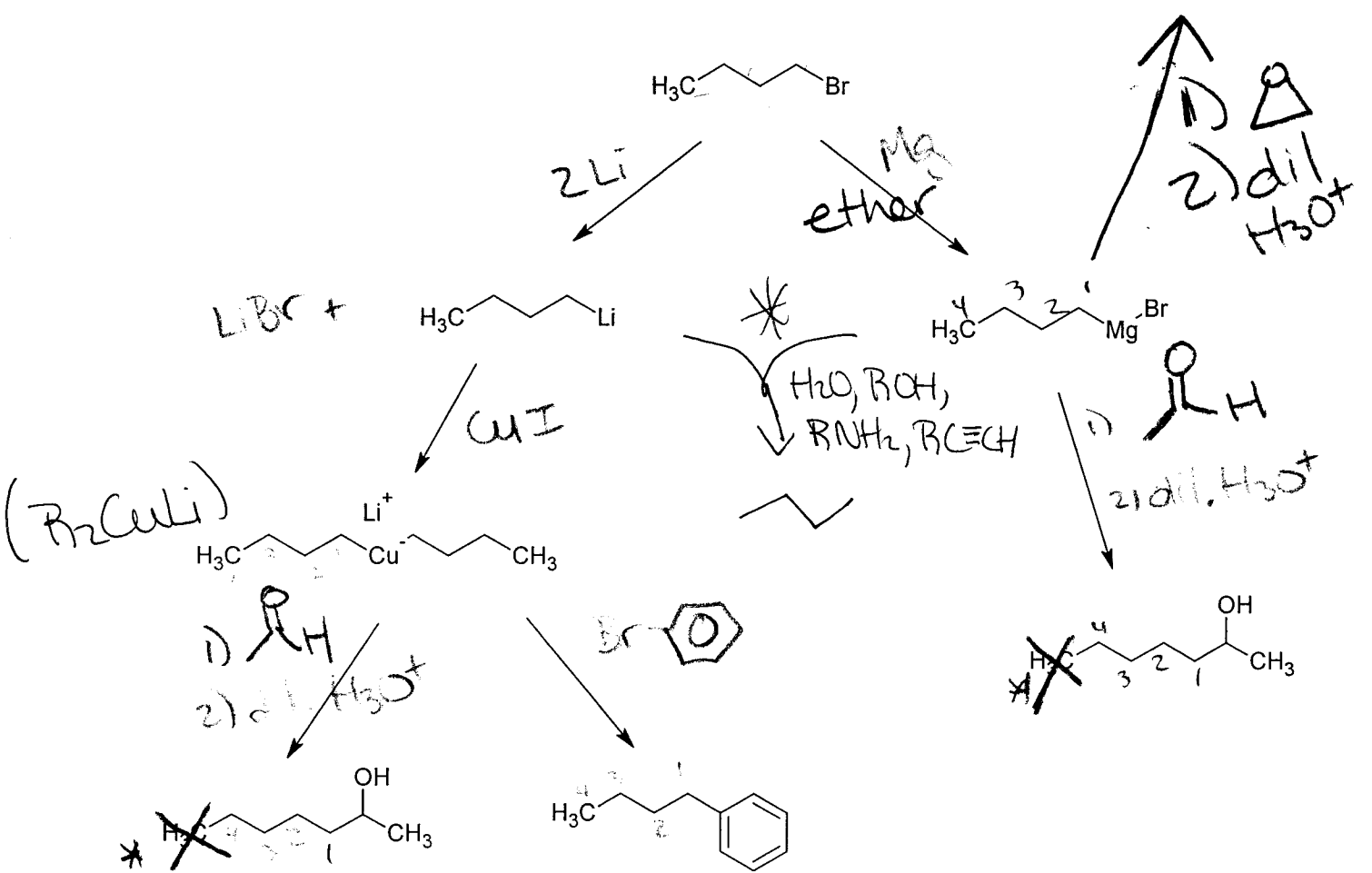
3° ROH



Alcohol Reactions



Organometallic Syntheses & Reactions



\* error on C-chain

\* organometallic cpds are strong Nu's & strong bases  
 react like  $R^-$  will grab H's that we don't usually consider acidic  
 everything is relative