

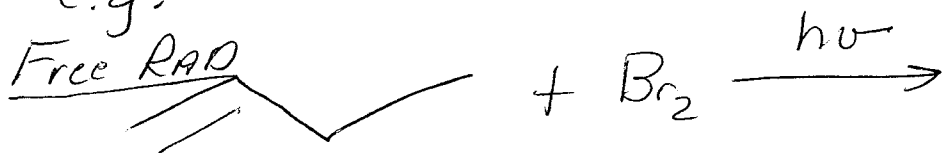
Good Synthesis Strategy

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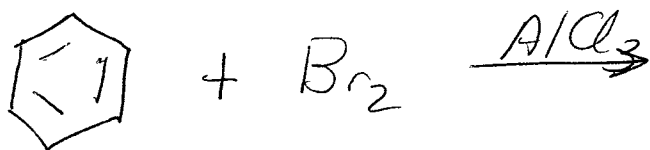
① Take inventory of starting materials
Do you have the carbon fragments needed to make TARGET MOLECULE?

② Decide how you will make C-C bonds
Which rxn is best.

③ After making C-C bond(s), if you have no functionality, think about halogenation.
e.g.

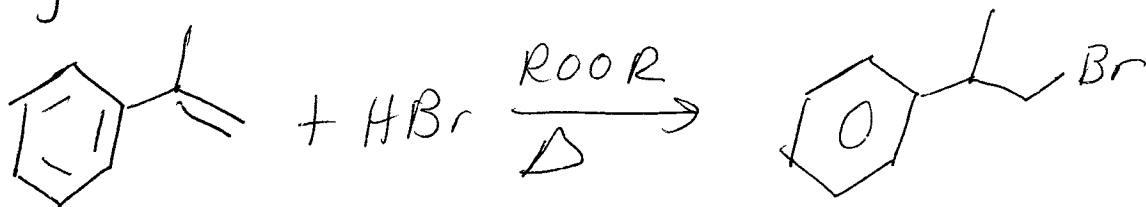


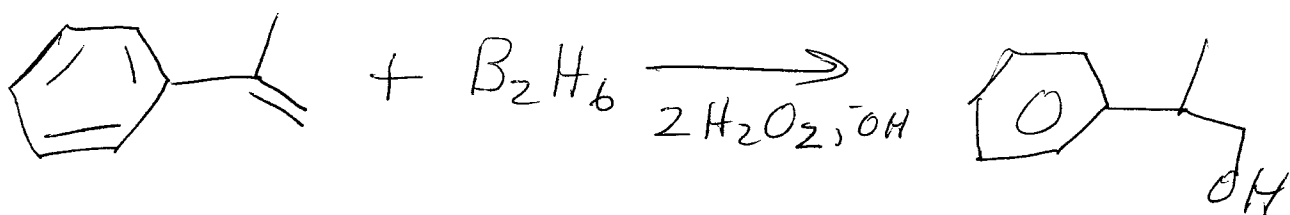
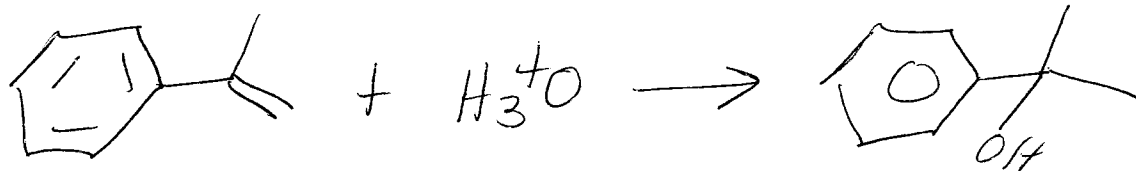
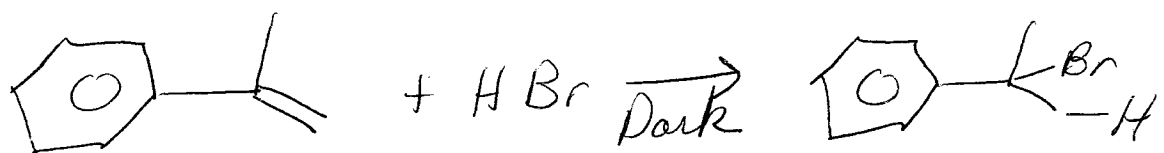
EAS



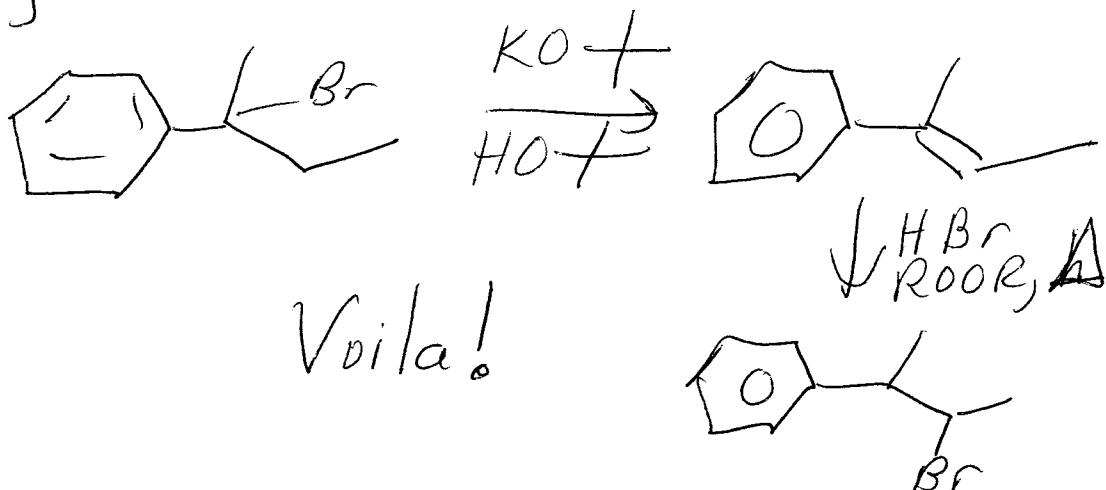
④ If you have a double bond, consider Addition Reactions - They are great because you have regio control

e.g.



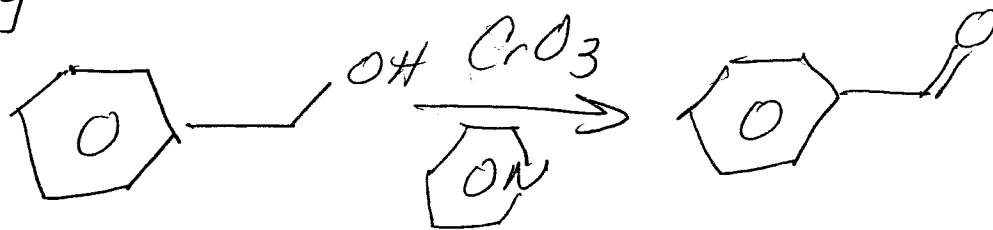


5. If you needed to do ③ above and your functional group is in the wrong place, do not despair consider eliminating and readding.
e.g.



6. If you have an OH and it is in wrong oxidizing state, Do not despair - just oxidize it or reduce it!!!

e.g.



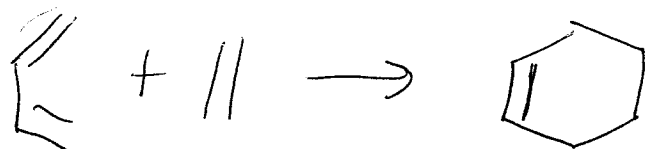
A 600R Rxn 1/54

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C-C Bonding Rxns

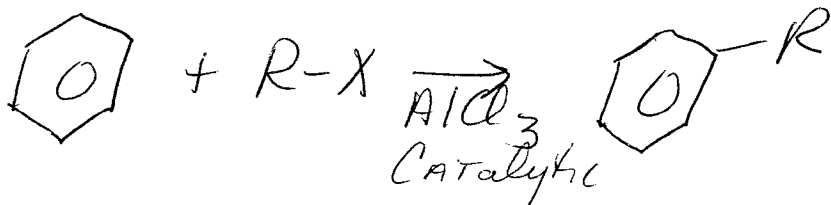
Diels Alder

The need for a six membered ring, suggests the use of a Diels-Alder



Friedel Crafts

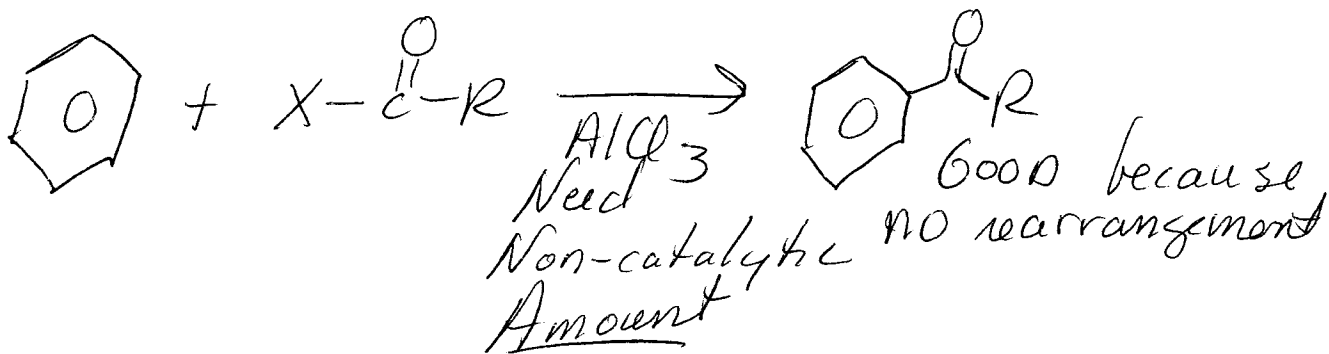
The need to make a bond at an aromatic suggests the use of the Friedel-Crafts Alkylation



N.B. Problems accompanied by rearrangement
CAN'T Do Diels-Alder on deactivated

Acylation

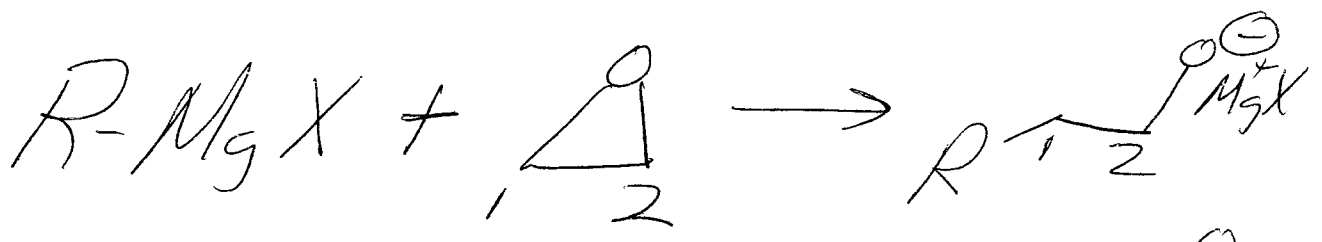
Polyalkylation ^{ring}



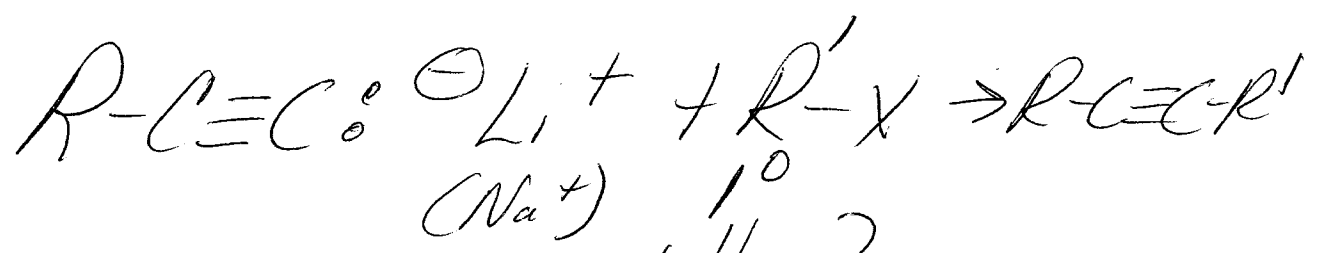
Good because NO rearrangement

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Epoxide opening w Grignard OR Organo Lithium



Conjugate base of alkyne + R-X
alkylhalide

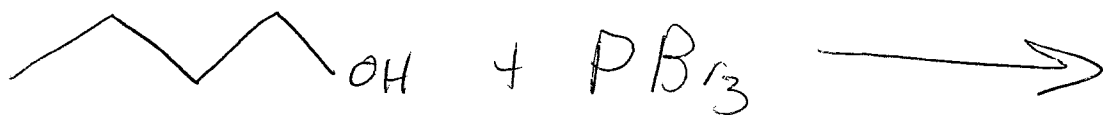
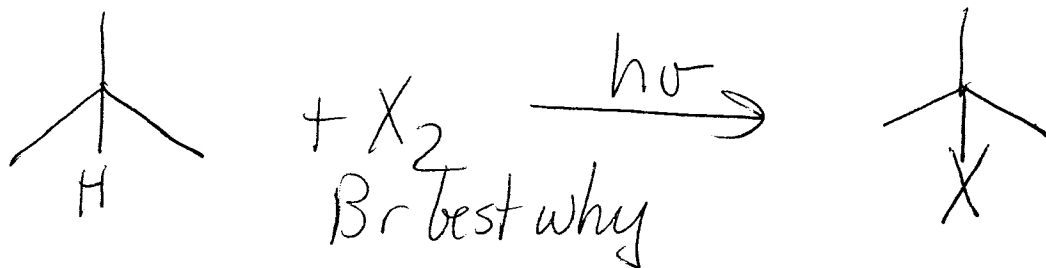
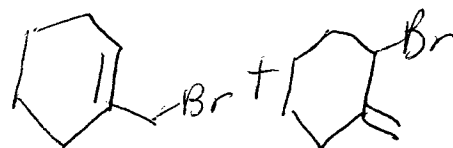
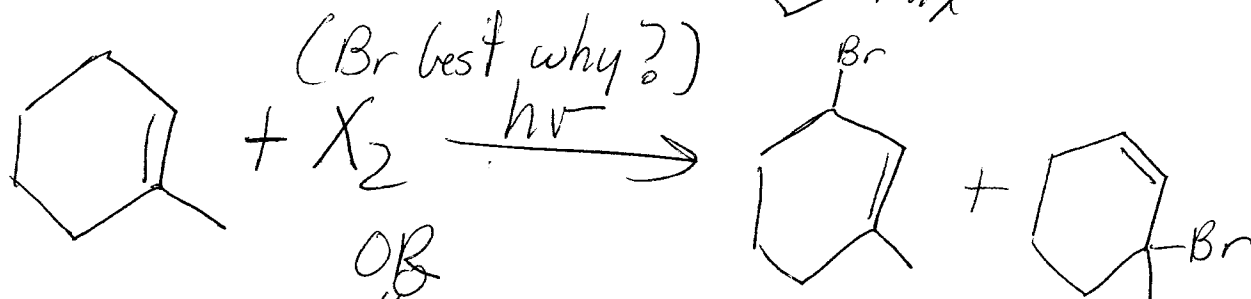
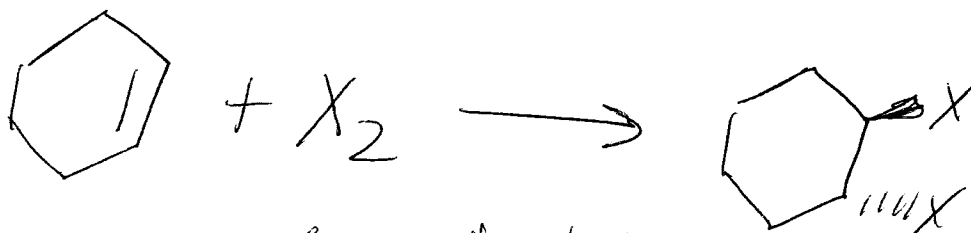
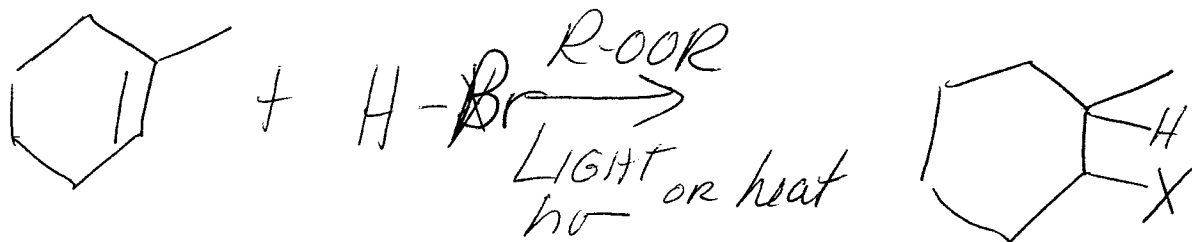
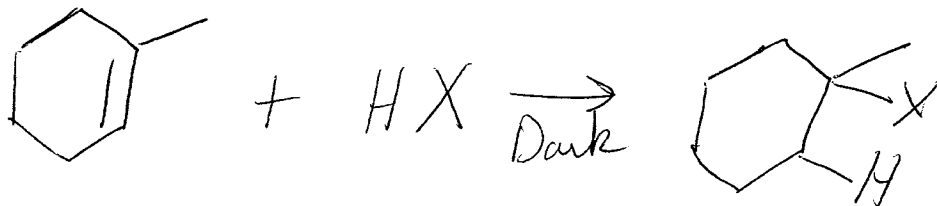


Why?

RXNS INVOLVING HALOGEN Go over
these carefully

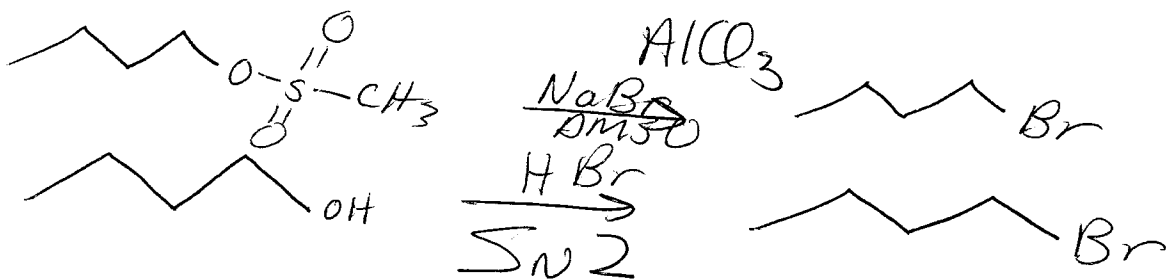
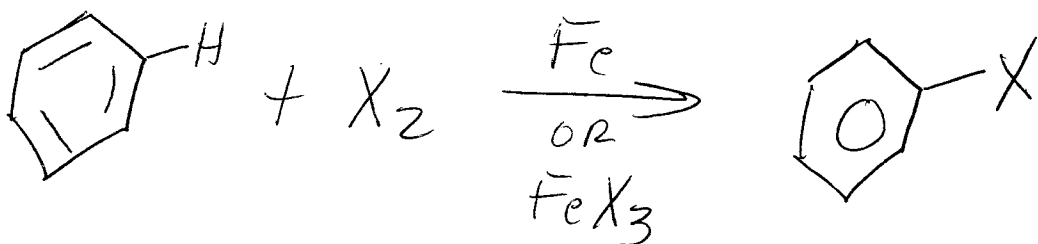
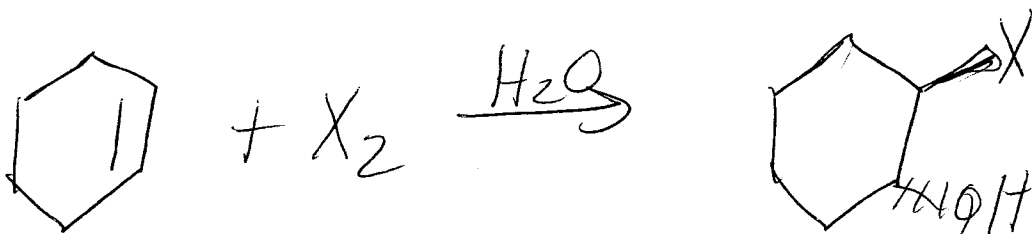
X Continued

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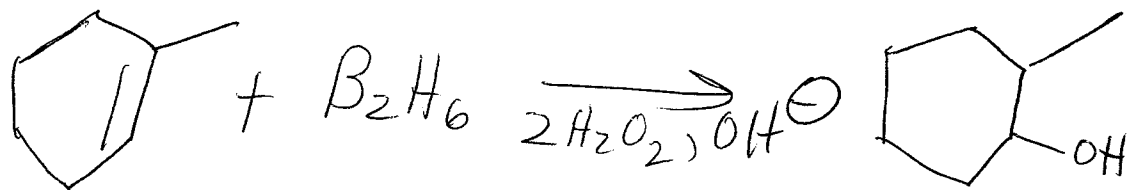
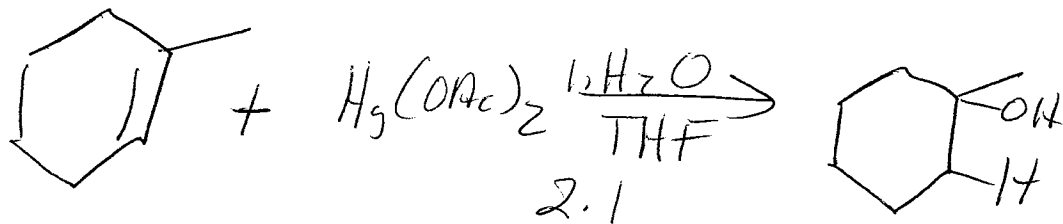
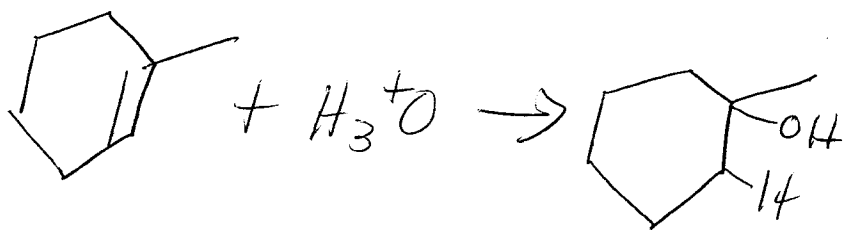


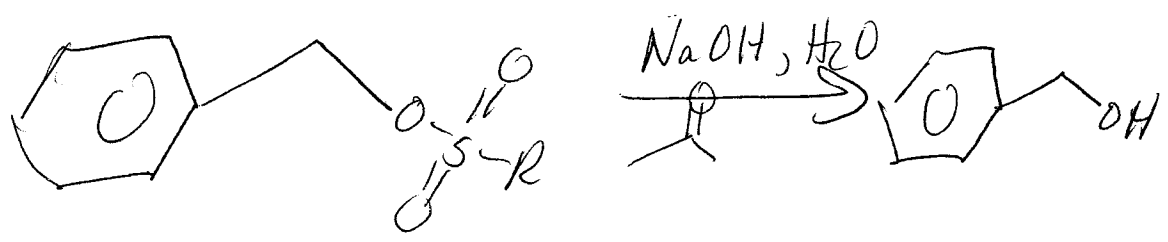
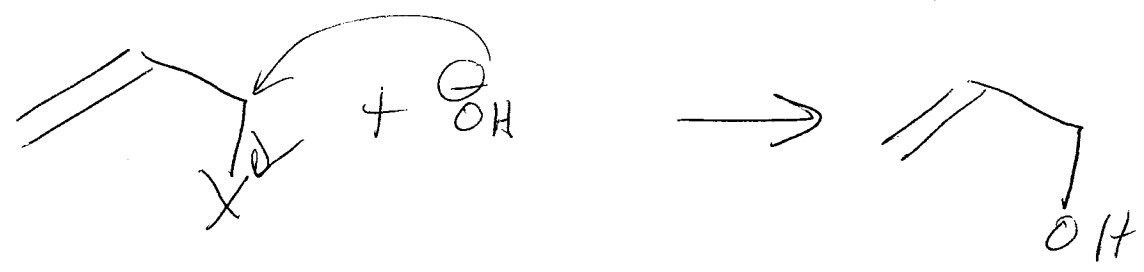
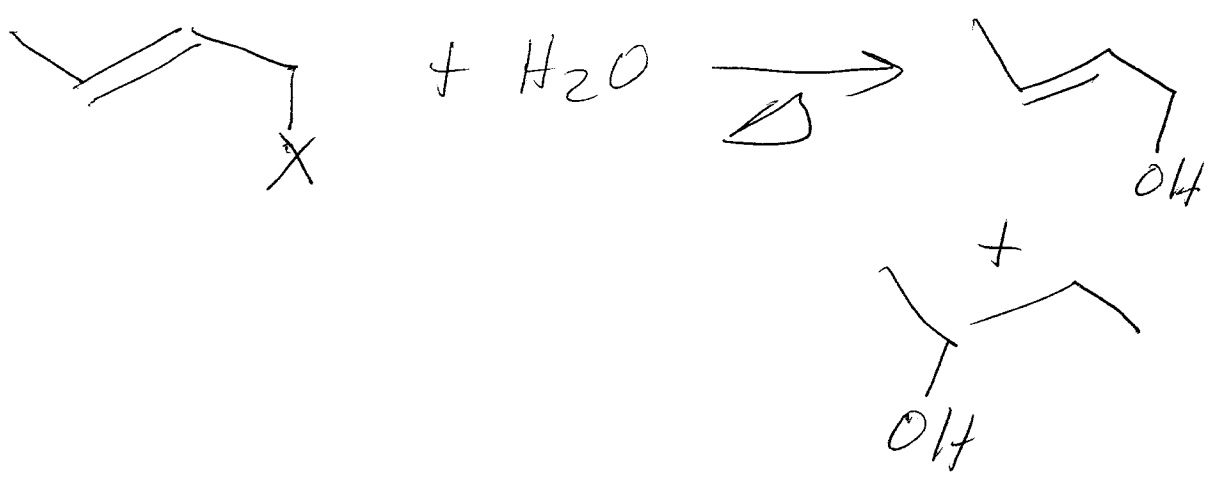
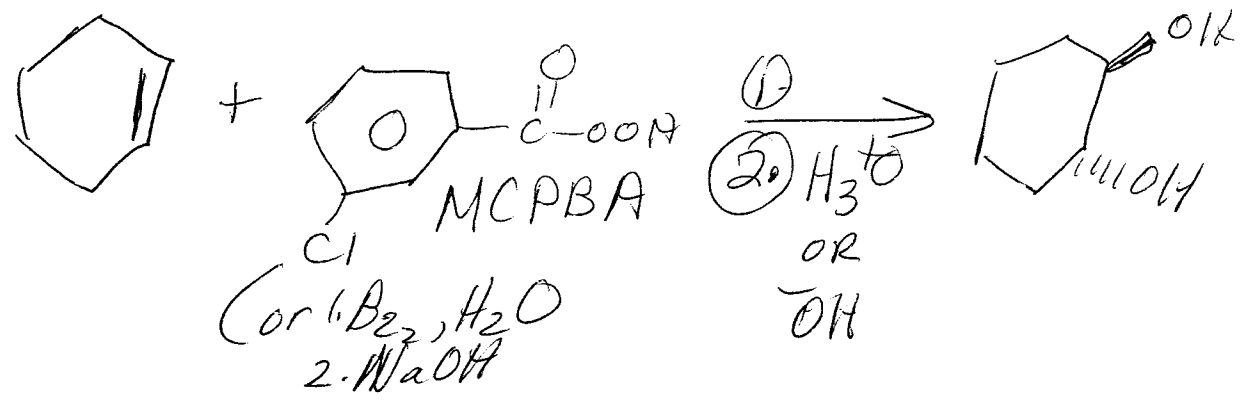
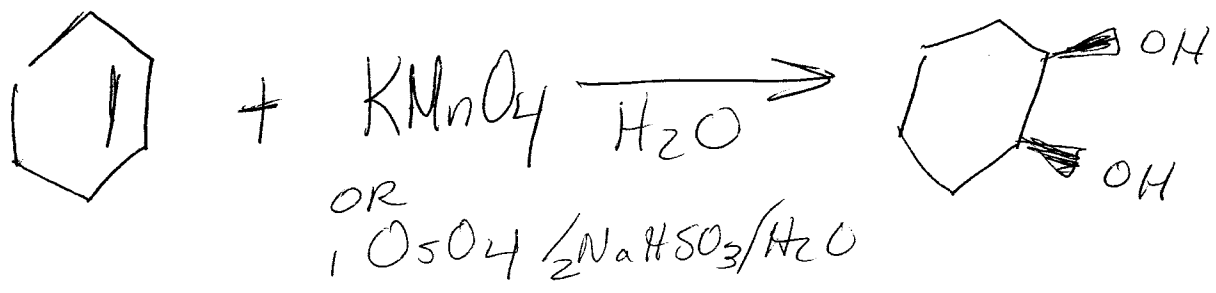


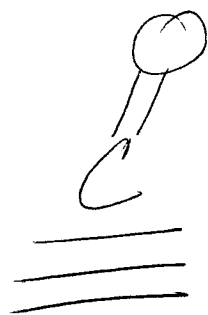
(7)



Reactions Resulting (Synthesizing) Alcohols

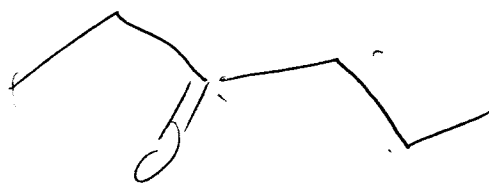
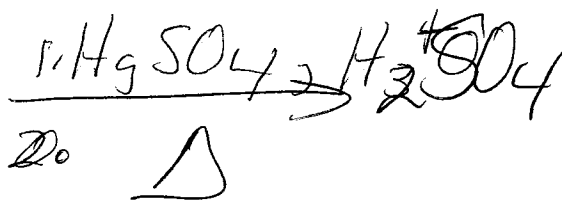
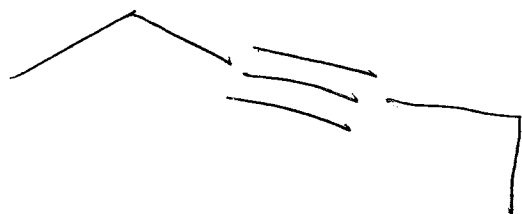






How to make

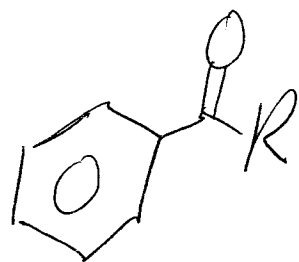
①

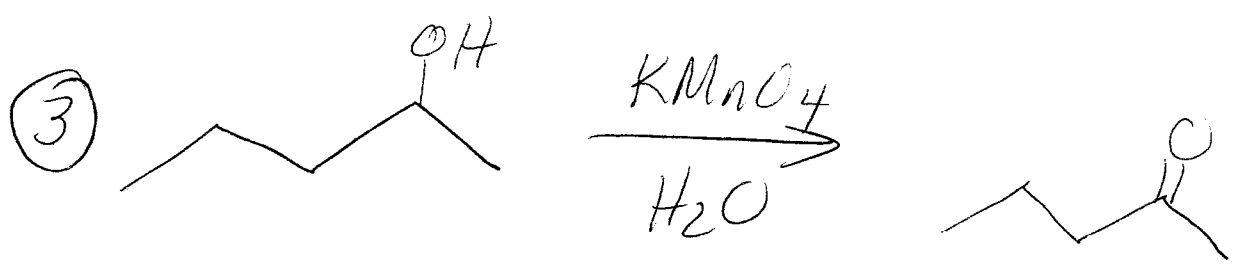


② FC Acylation



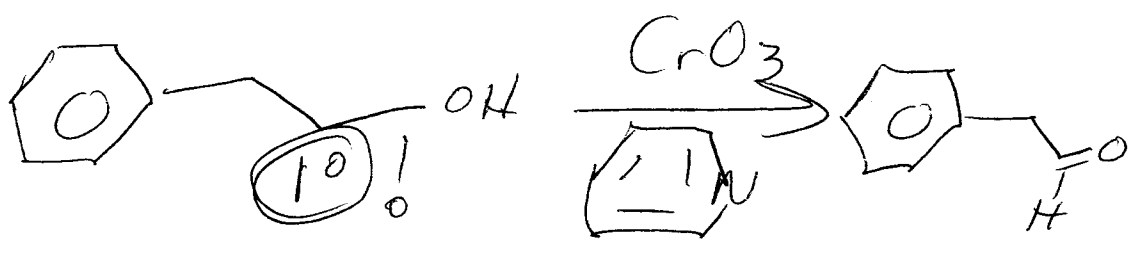
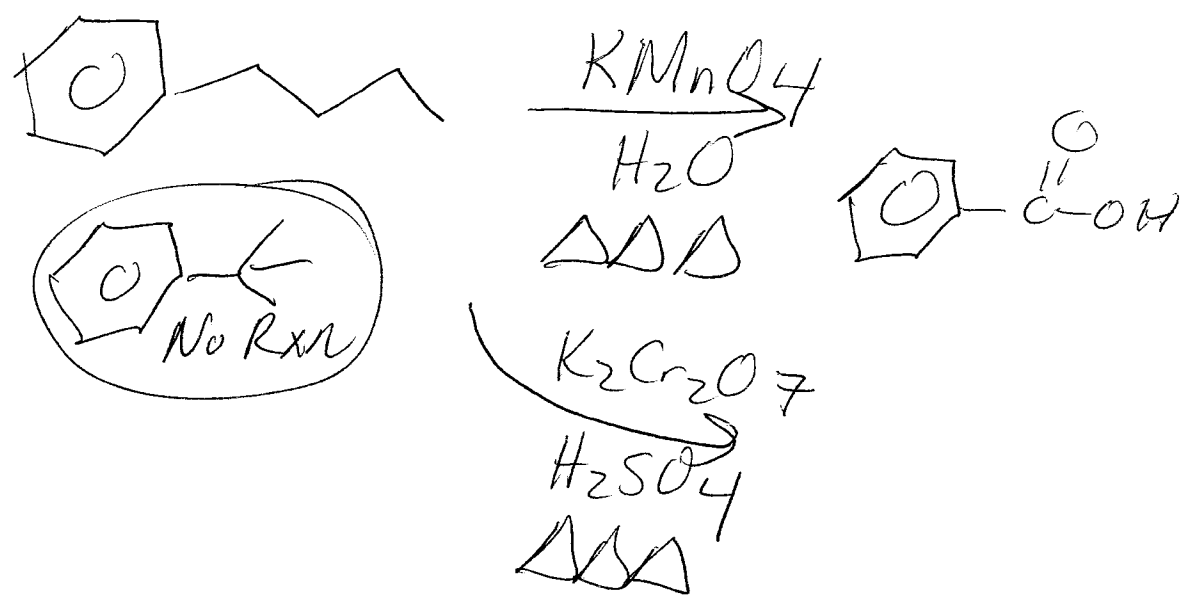
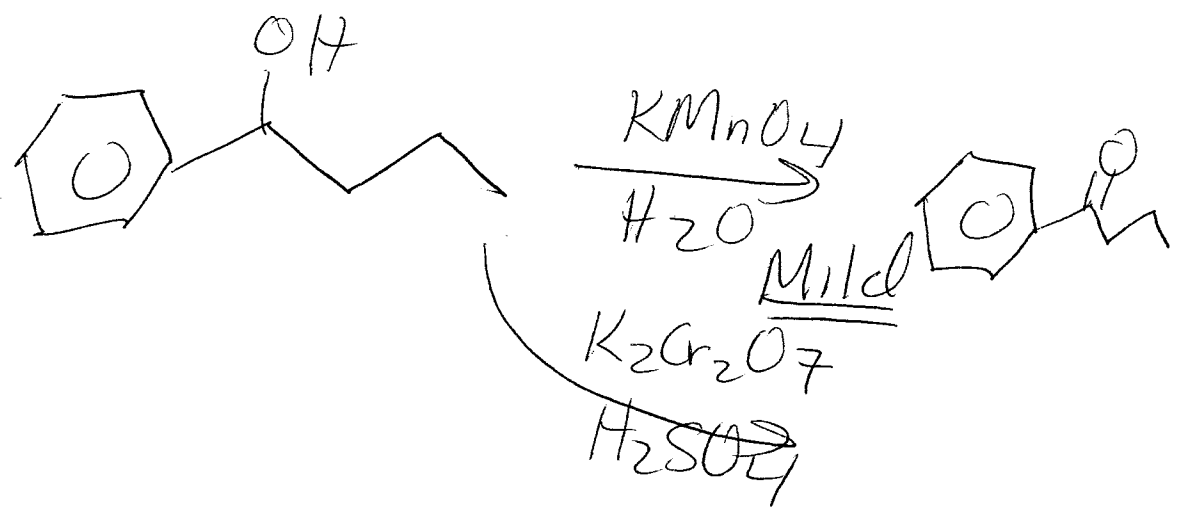
$\xrightarrow[\text{More than Catalytic}]{\text{AlCl}_3}$



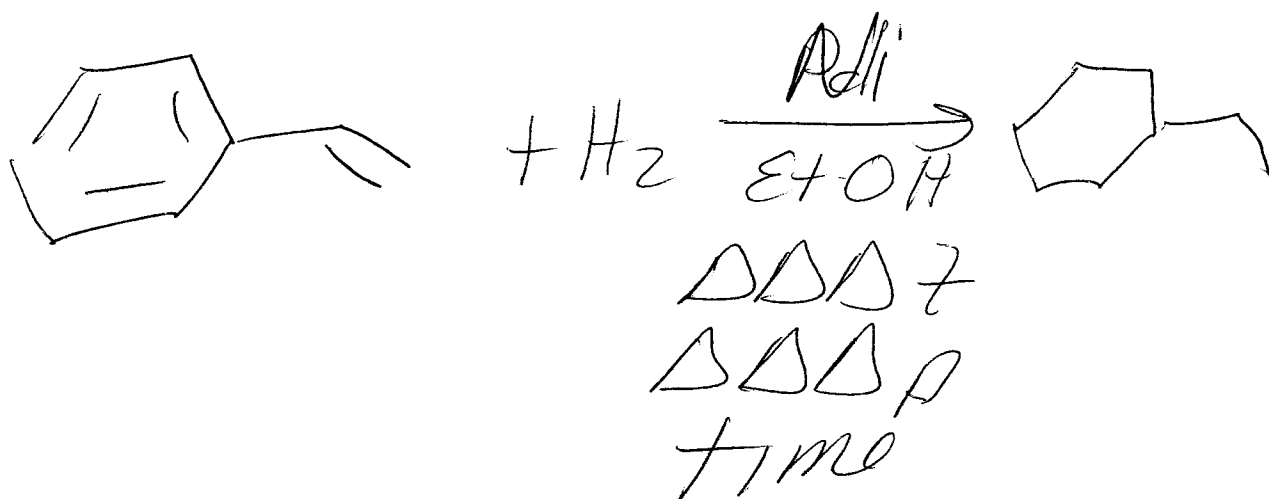
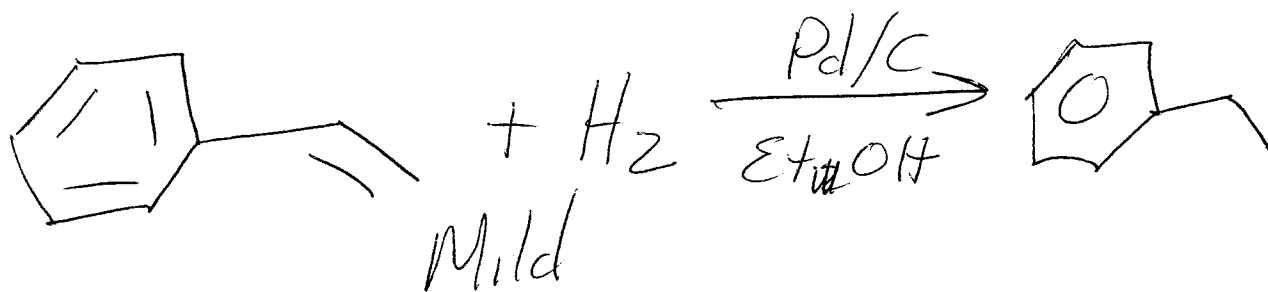


tertiary alcohol
no rxn

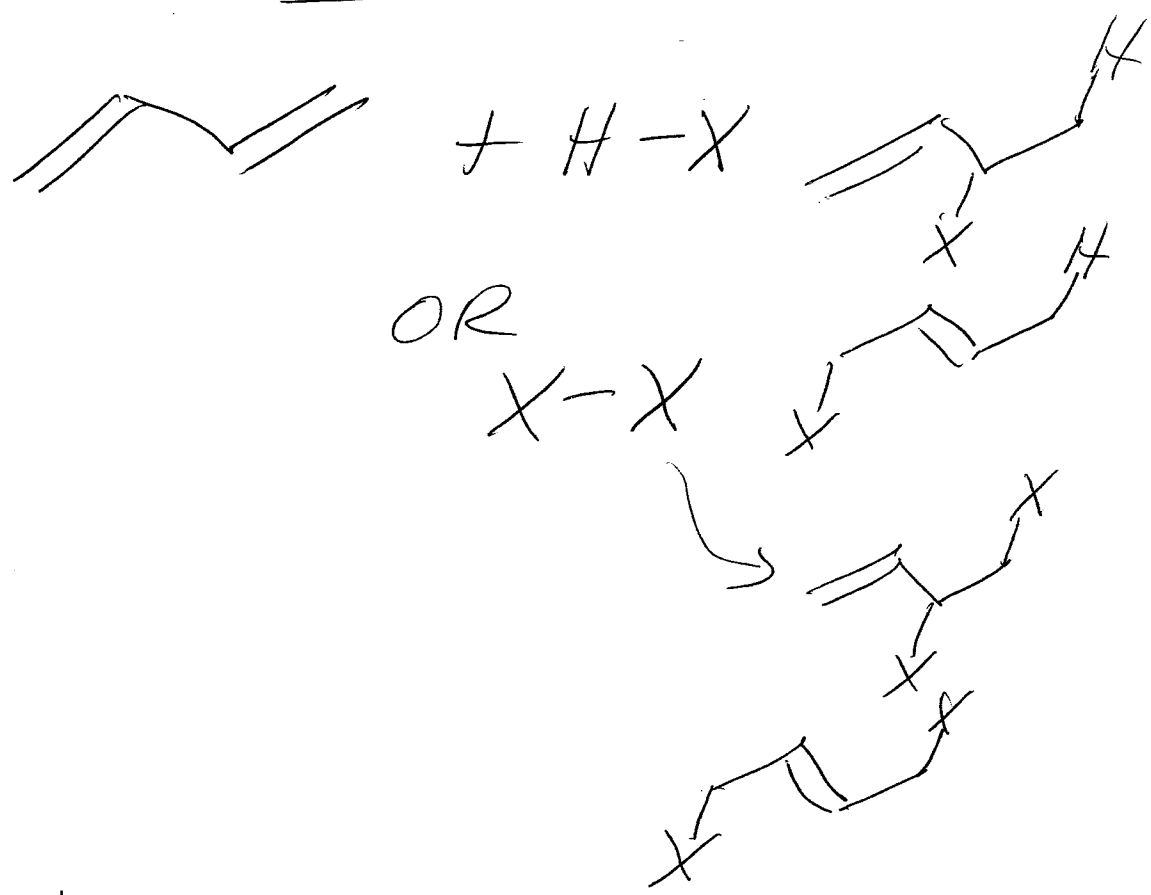
OR
 $\xrightarrow[\text{H}_2\text{SO}_4]{\text{K}_2\text{Cr}_2\text{O}_7}$



Miscellaneous



More X



Why is this imp?