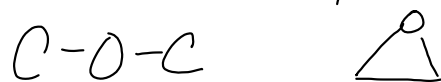
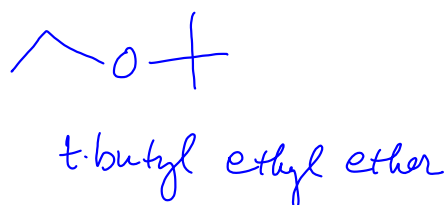
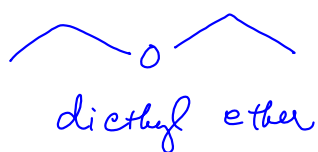
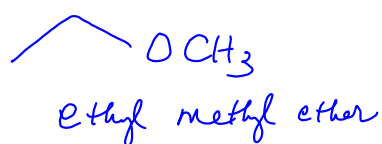


Chpt 18

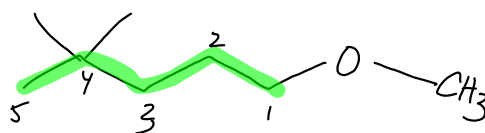
Ethers + Epoxides

Naming ethers

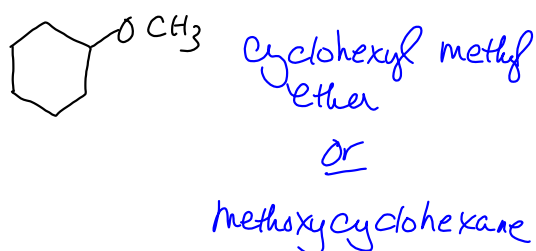
name groups on each side of oxygen, followed by the word "ether"



If can't name a group

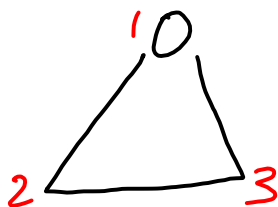


1-methoxy-4,4-dimethyl pentane

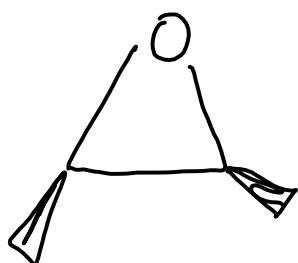


Naming epoxides

IUPAC

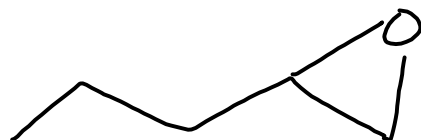


Oxirane



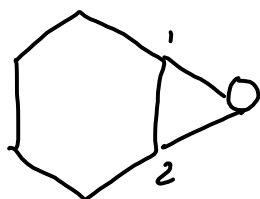
cis-2,3-dimethyl
oxirane

cis-2,3-epoxybutane



2-propyloxirane

1,2-epoxypentane



Can't use oxirane
(need other system)

Called an epoxy

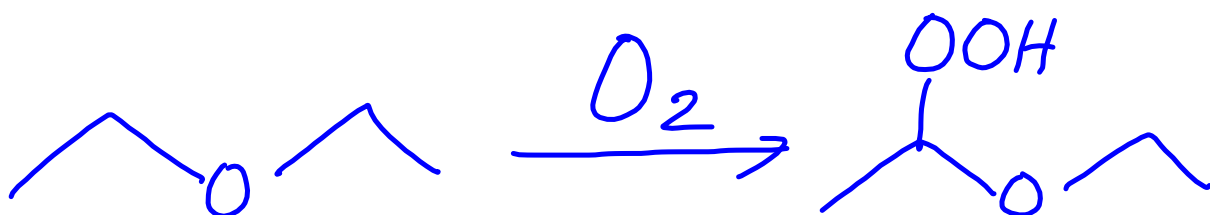
1,2-epoxycyclohexane

Ethers -

fairly unreactive

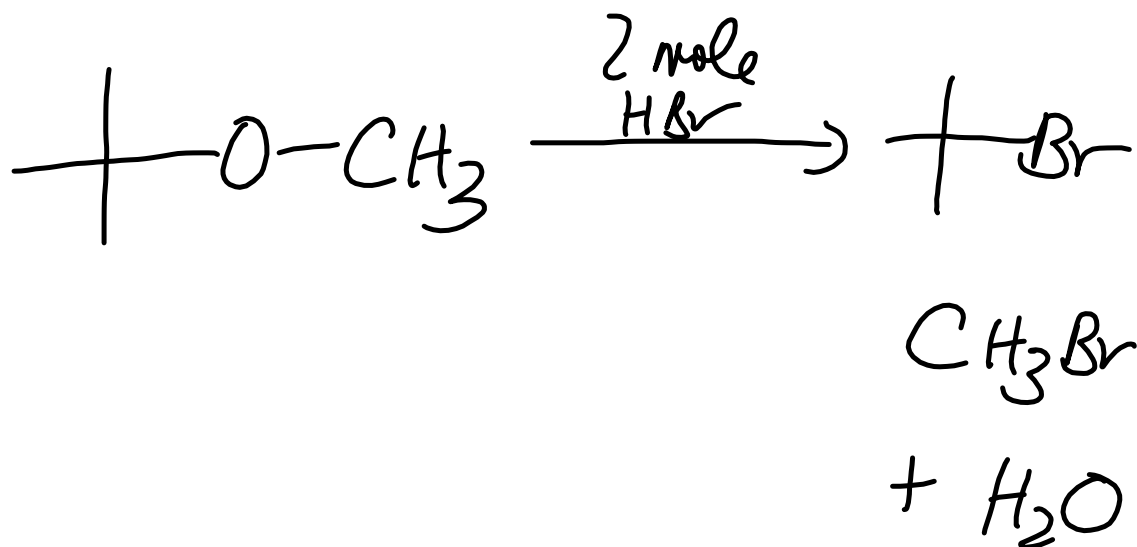
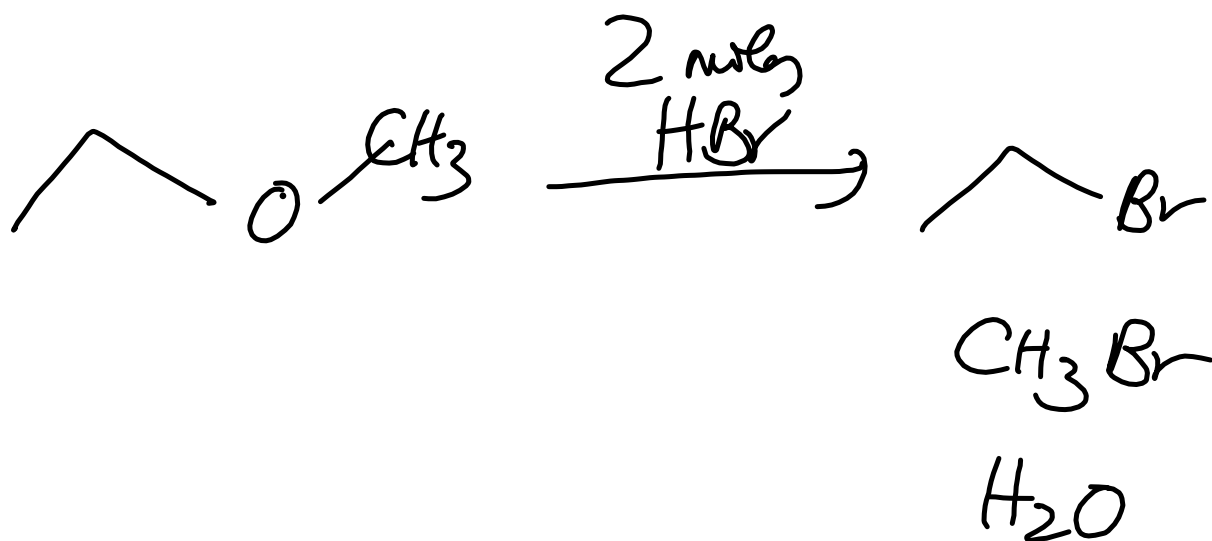
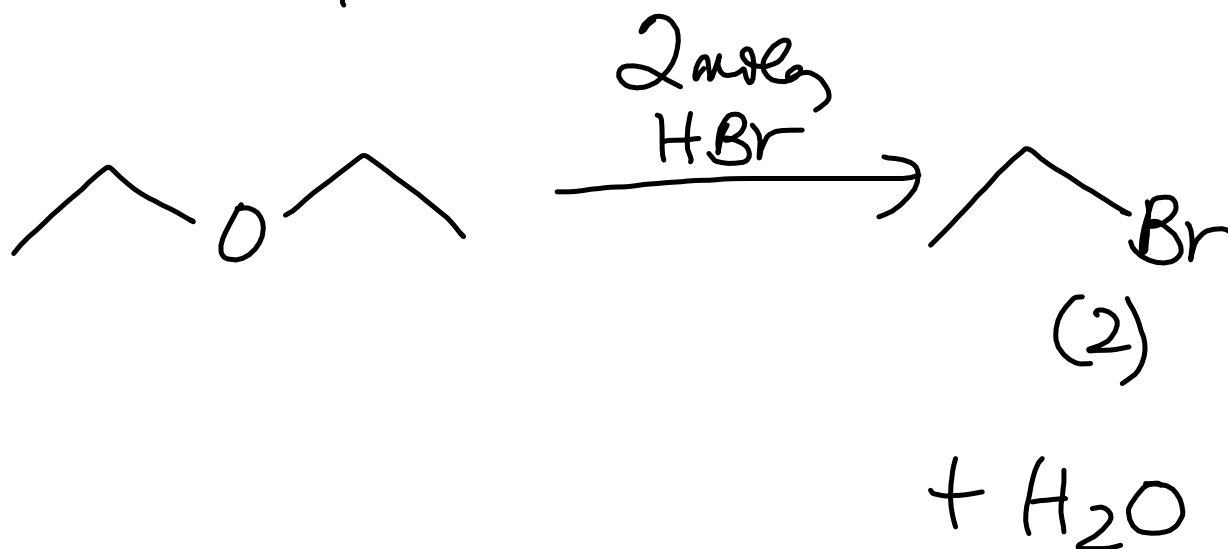
do 2 rxns:

- w/ strong acid HX
- w/ O₂ in air



unstable
solid
detonates
on impact

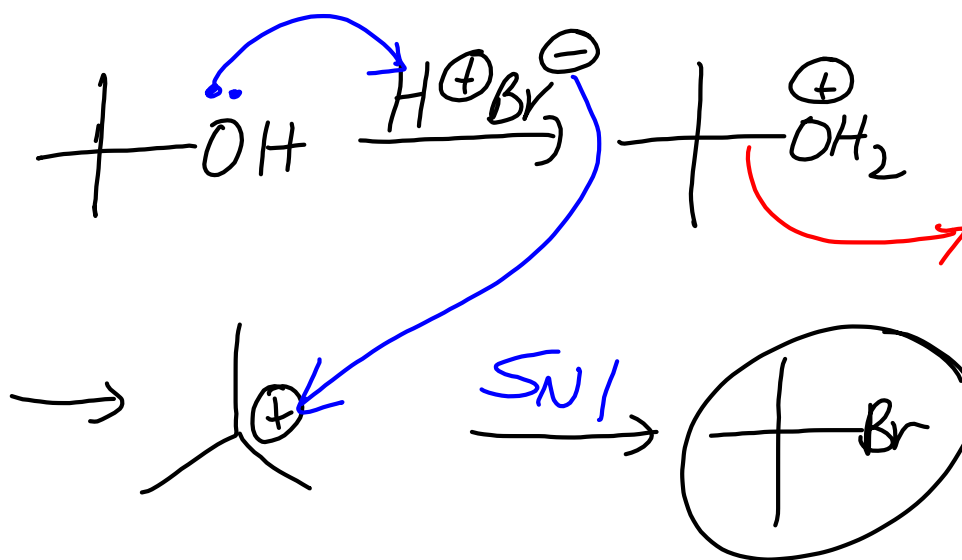
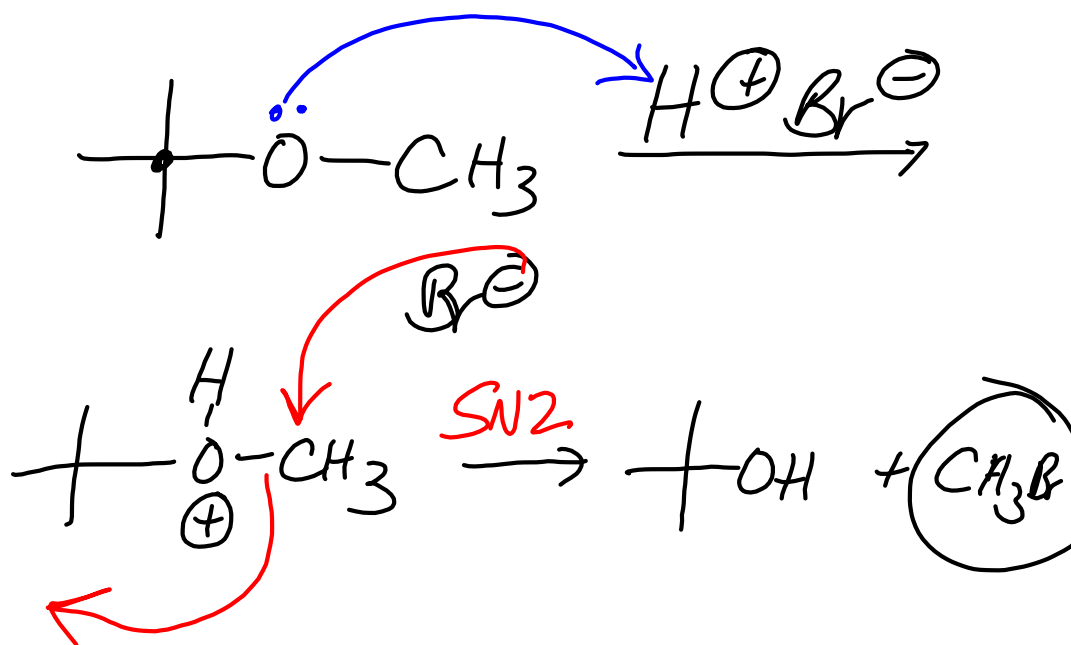
Rxn w/ 2 moles HX



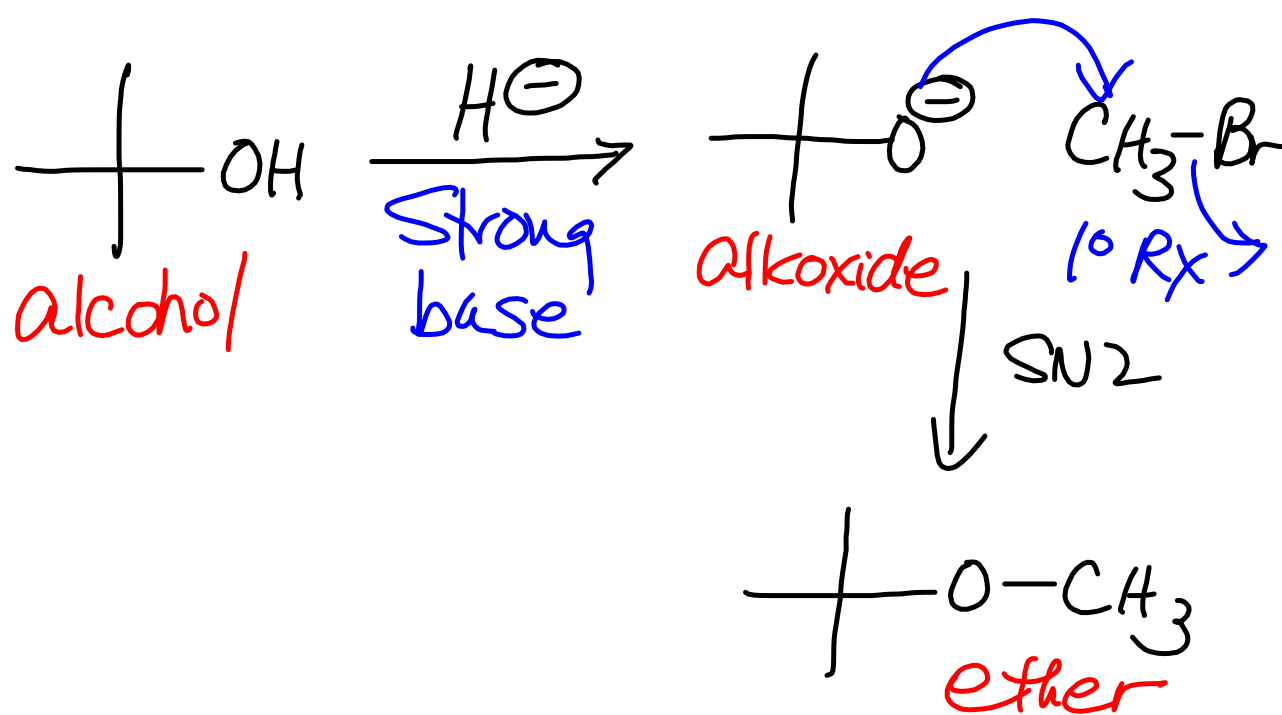
Mech hinges on type of carbon next to oxygen

if C is 1° mech is SN2

if C is 3° mech is SN1

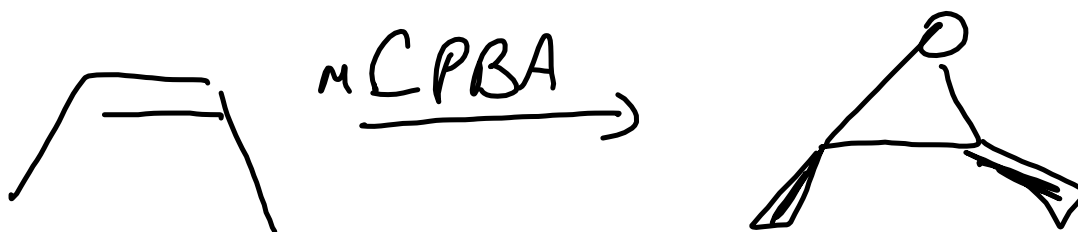
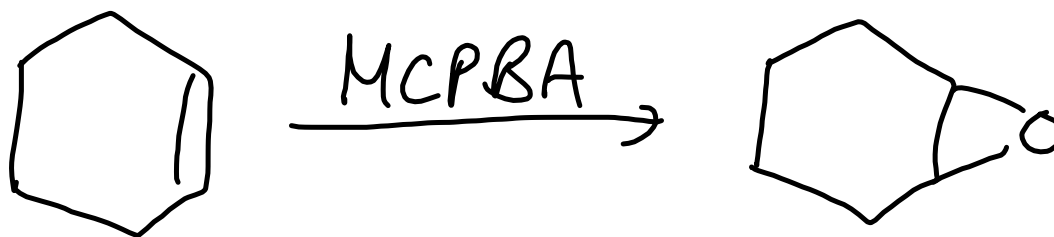


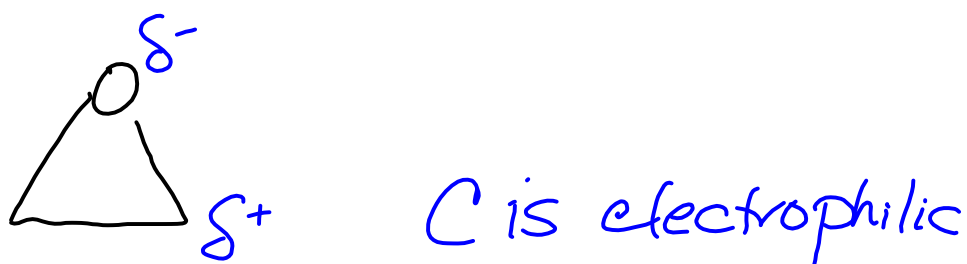
How ethers are formed:
2 Steps from ROH



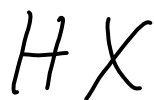
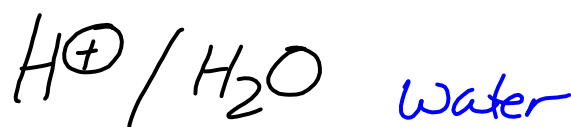
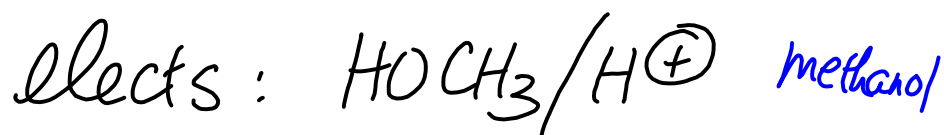
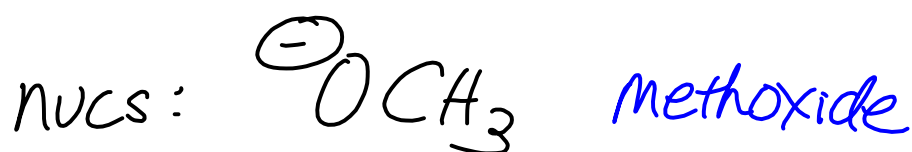
Formation of epoxides

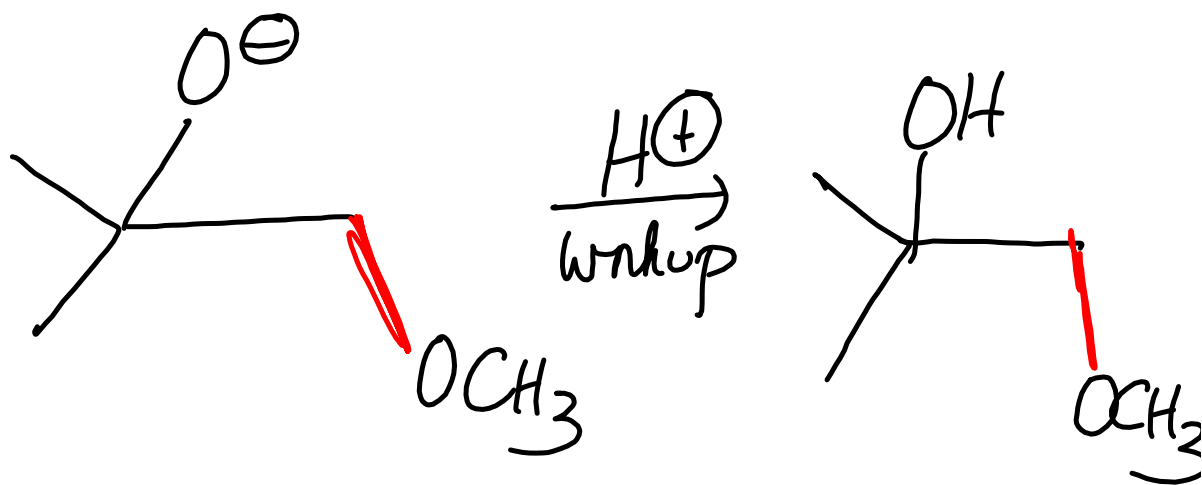
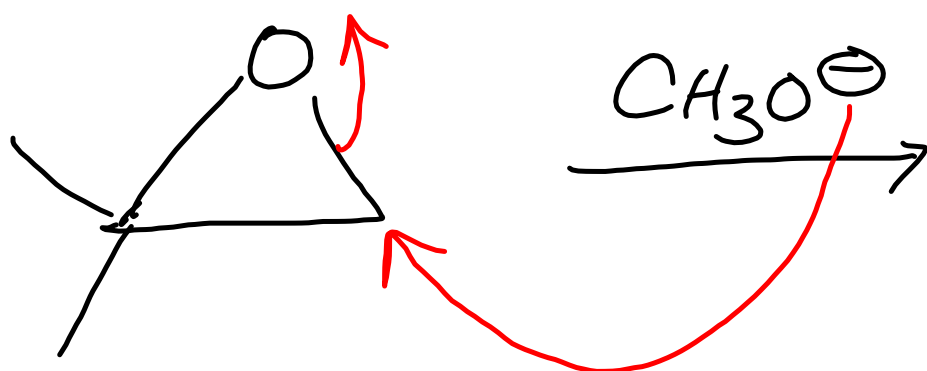
↳ MCPBA

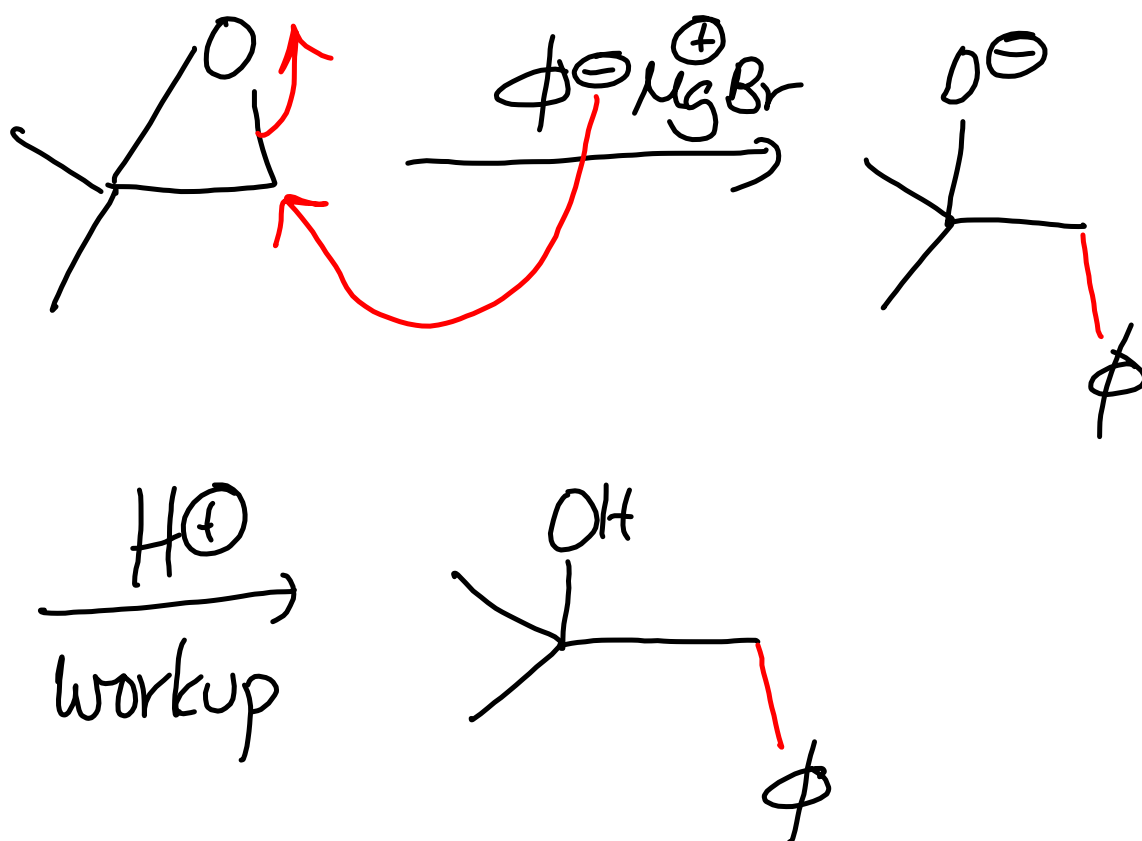


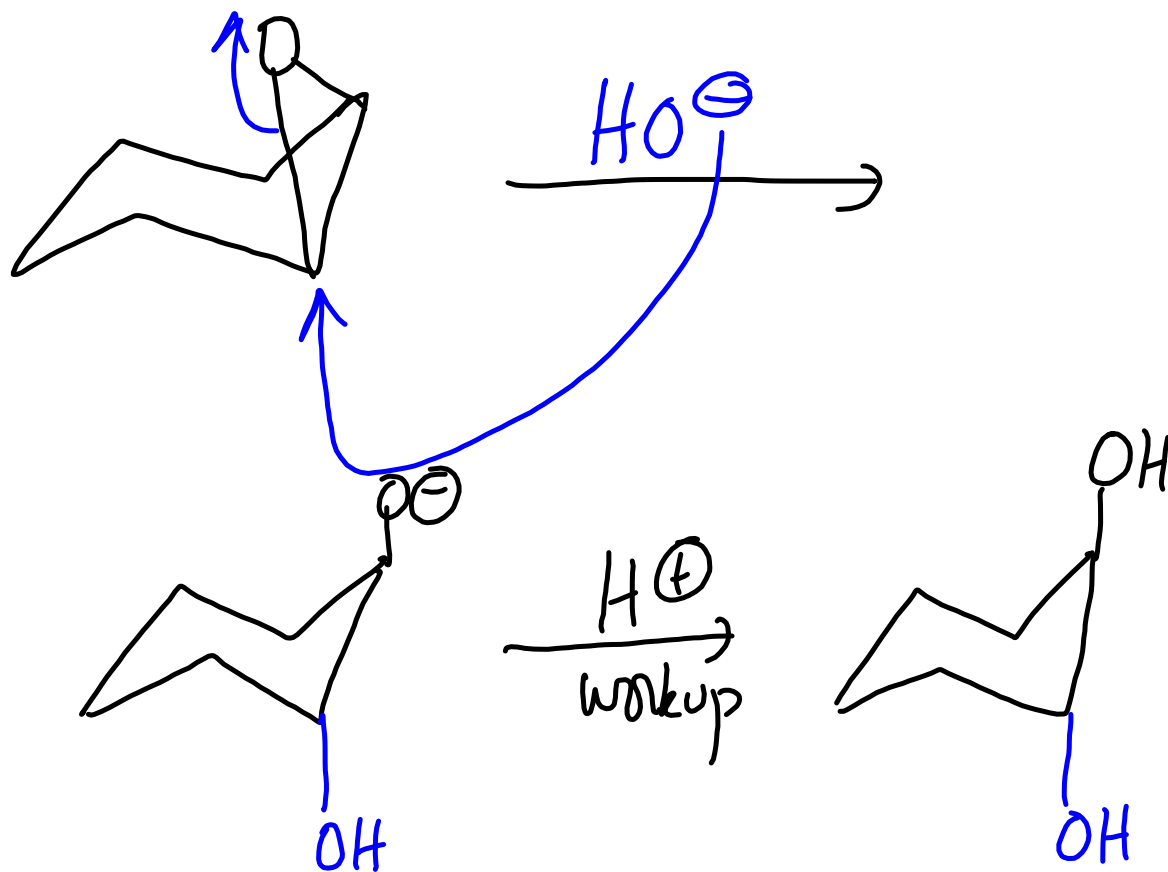


React w/ both nucs + elects









trans

Rxns of oxiranes w/ electrophilic reagents

