

- ① ADDITION of HOCl/HOBr
- ② OXYMERCURATION
- ③ HYDROBORATION
- ④ OXIDATION

QUIZ LAST = 3
HIGH = 33
MEAN = 19

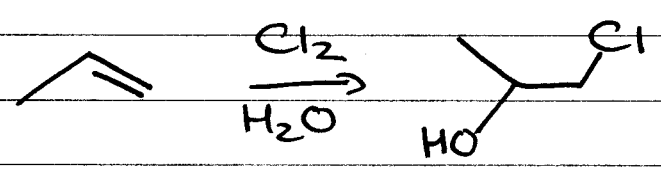
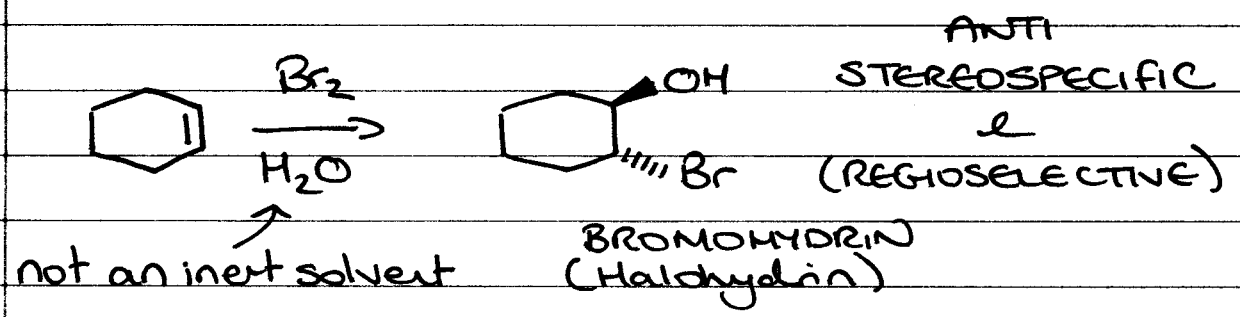
- mechanism worksheets

READ rest of Ch6

(3rd) 6.9-6.11, 6.13, 6.17-6.42

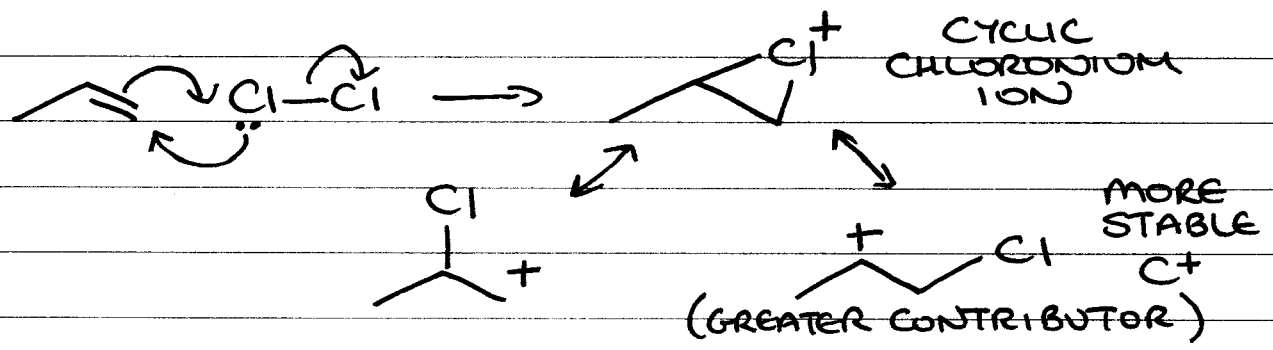
(4th) 6.7-6.9, 6.12, 6.16-6.40

① ADDITION of HOCl/HOBr



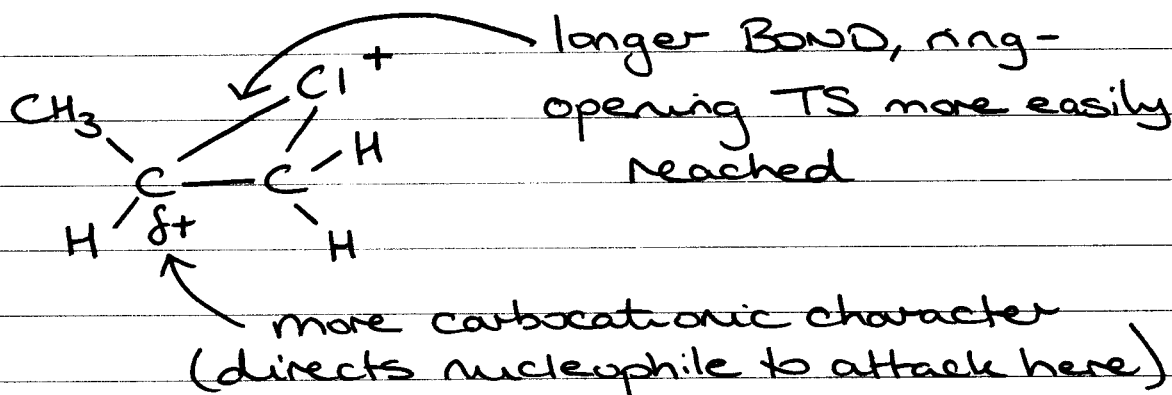
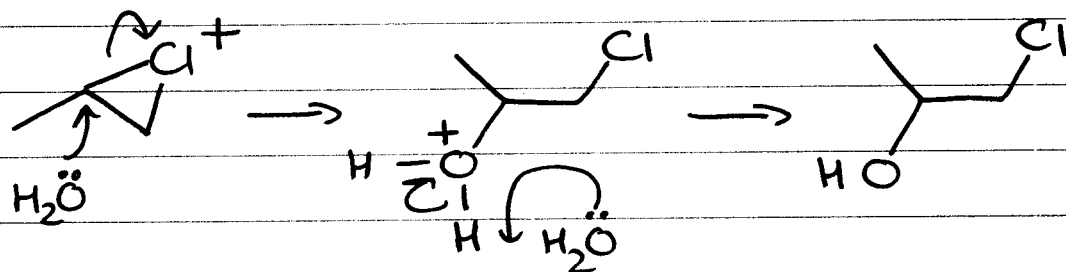
-OH adds to more SUBSTITUTED C atom

mechanism

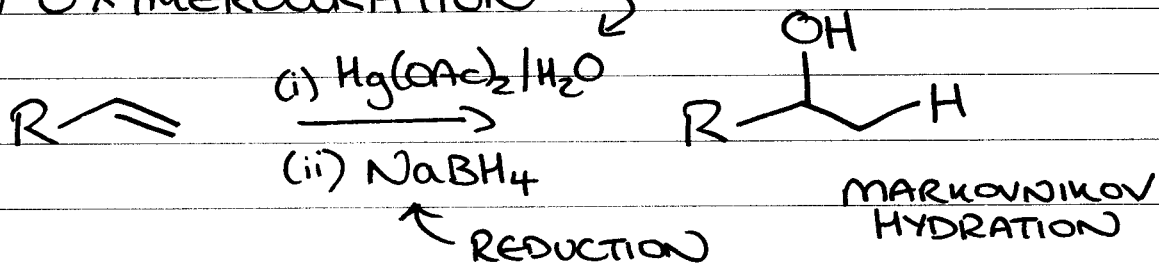


2

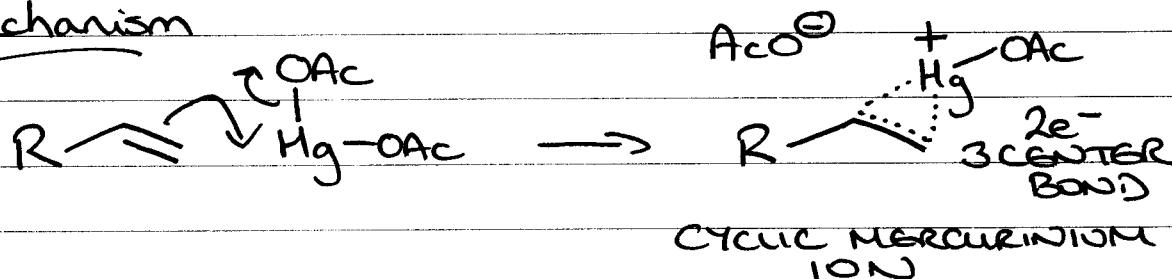
OPENS VIA MORE STABLE C⁺



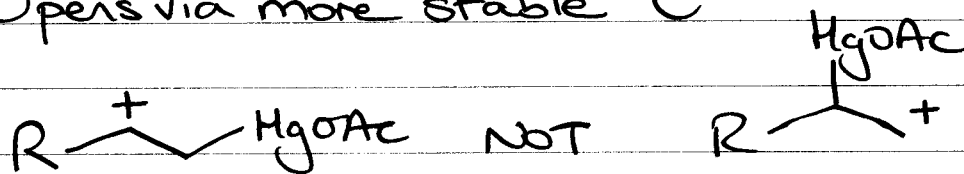
2 OXYMERCURATION



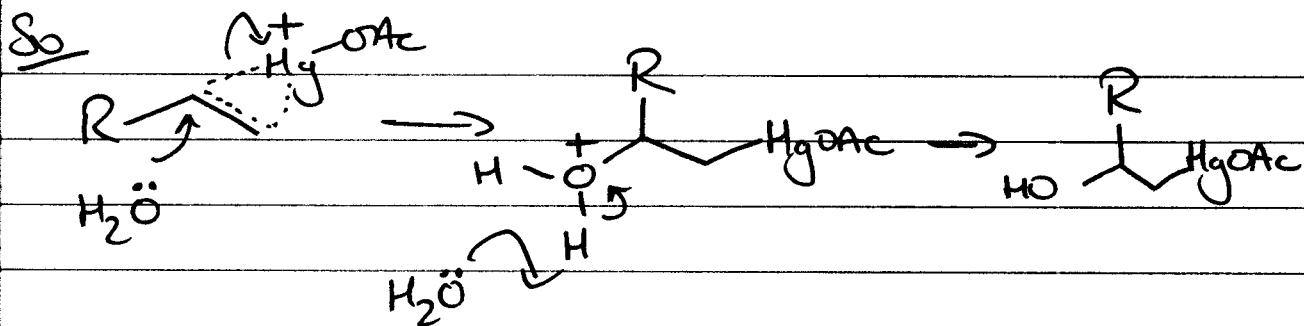
mechanism



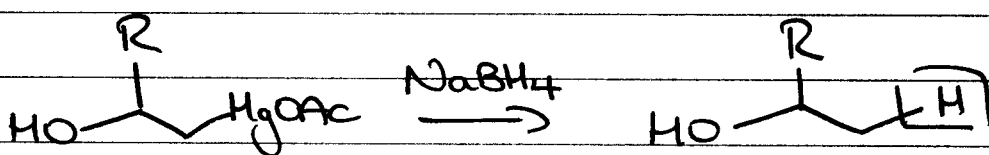
Opens via more stable C⁺



3



organomercury compd reduced w/NaBH₄

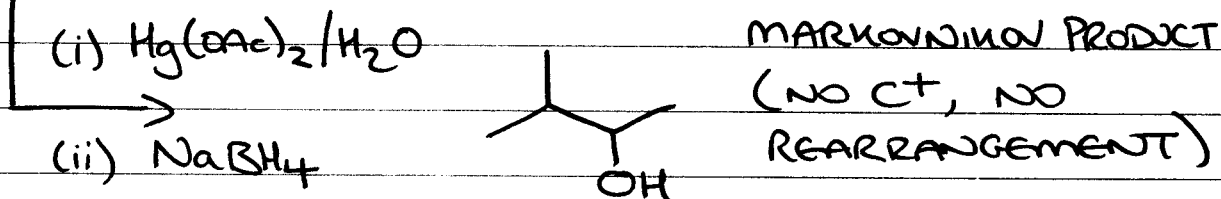
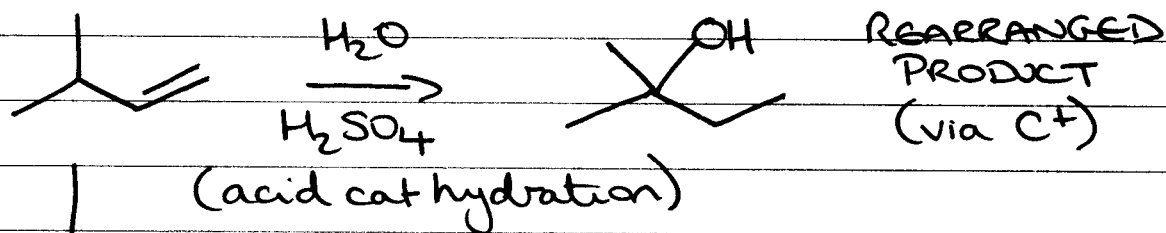


replaces HgOAc for H

(Don't need to know mechanism for this)

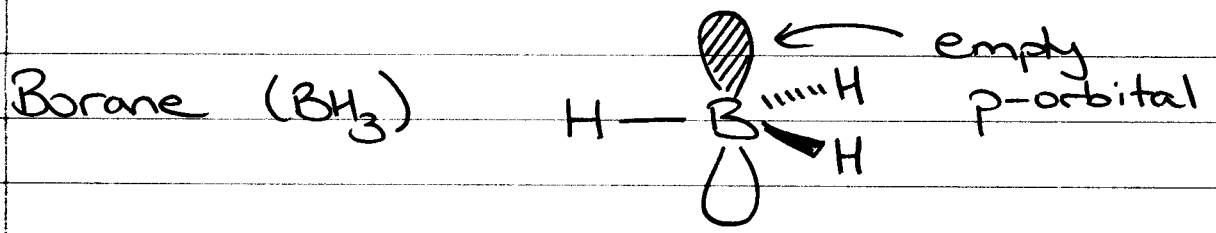
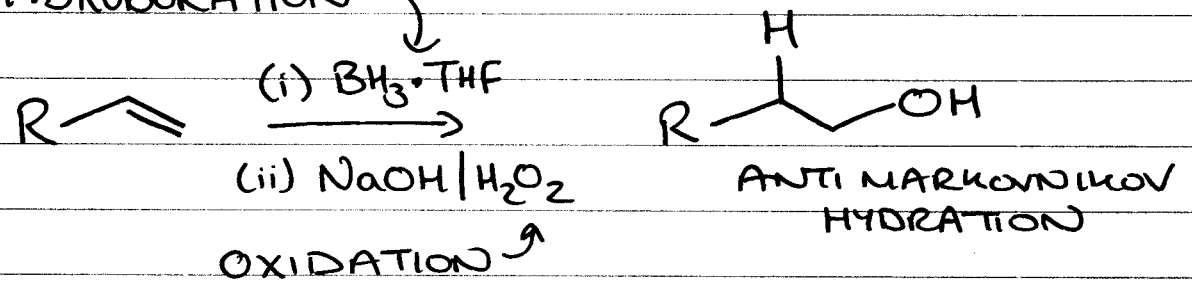
WHY IS THIS USEFUL?

consider:

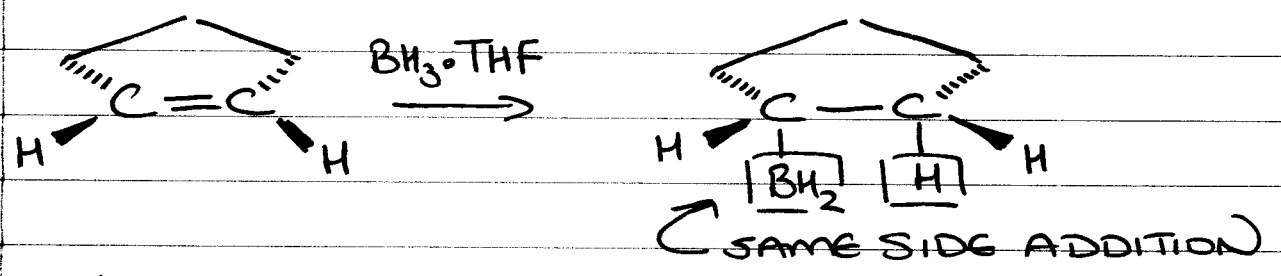
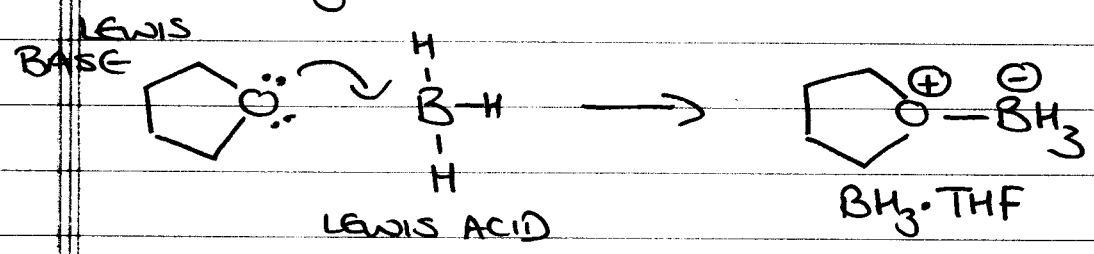


REGIOSELECTIVE, w/ANTISTEREOSPECIFICITY
(similar to addition of HOCl/HOBr)

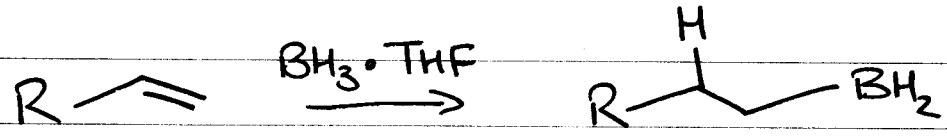
③ HYDROBORATION



(actually exists as B₂H₆ - structure?)

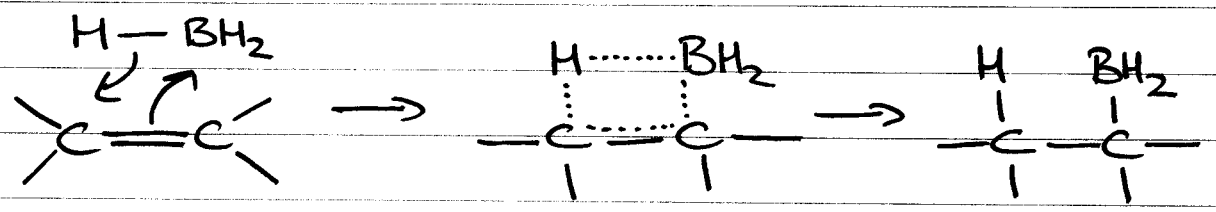


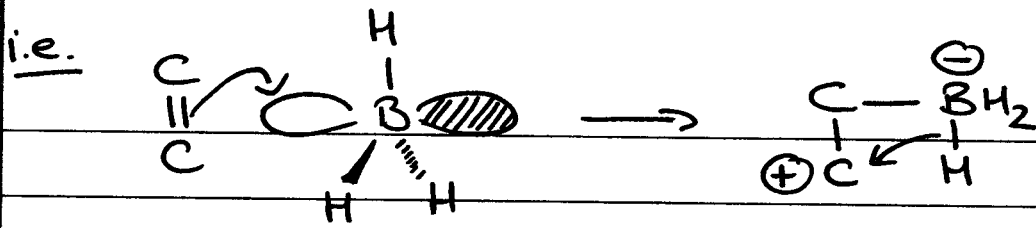
SYN STEREOSPECIFIC



BORON ADDS TO LESS SUBSTITUTED C ATOM

Mechanism

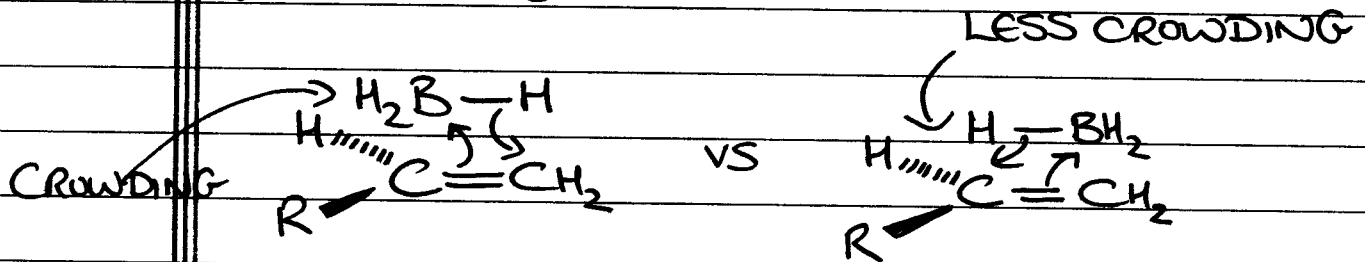




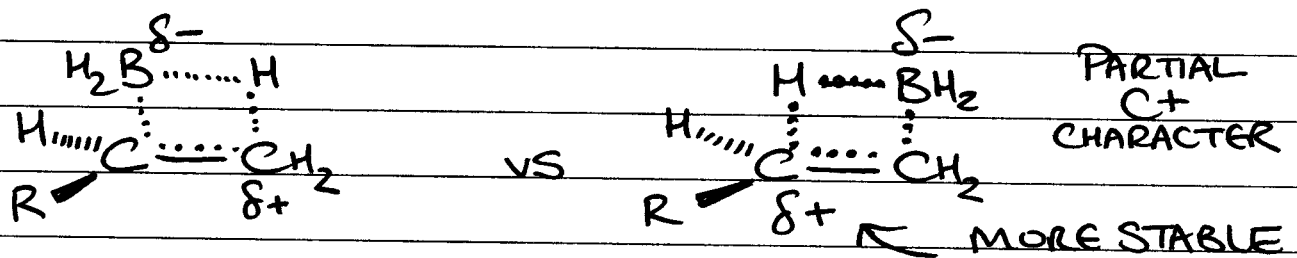
- NO REARRANGEMENTS

Why REGIOSELECTIVE?

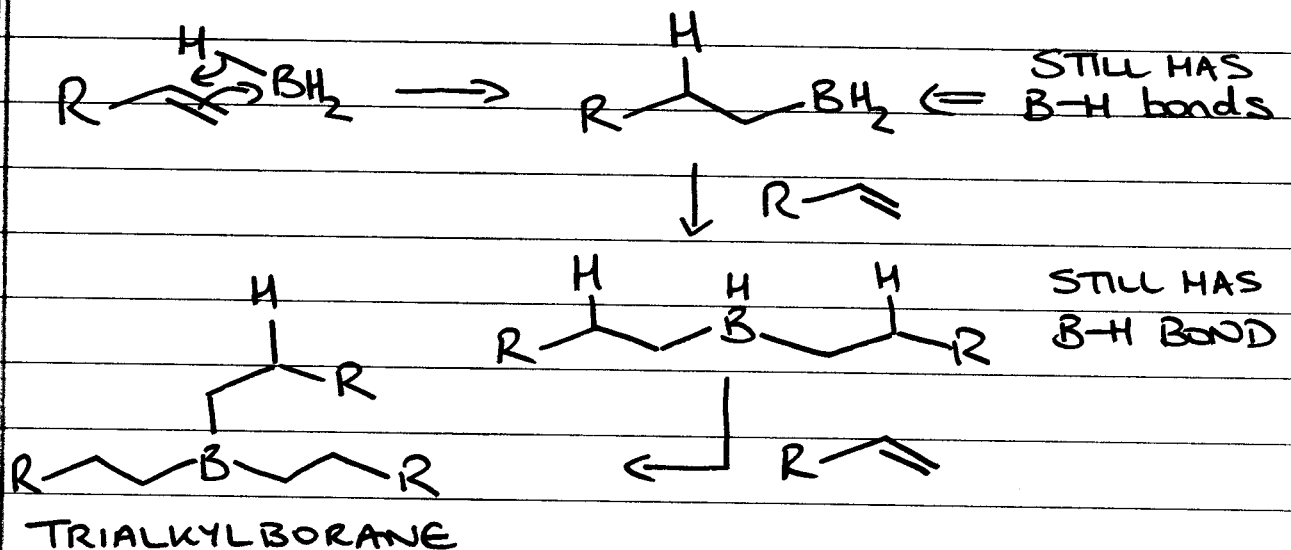
(i) STERIC



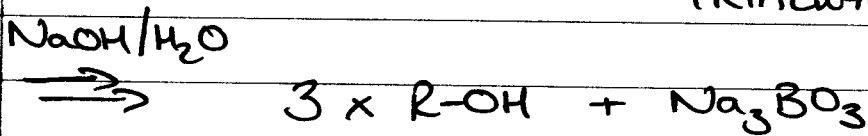
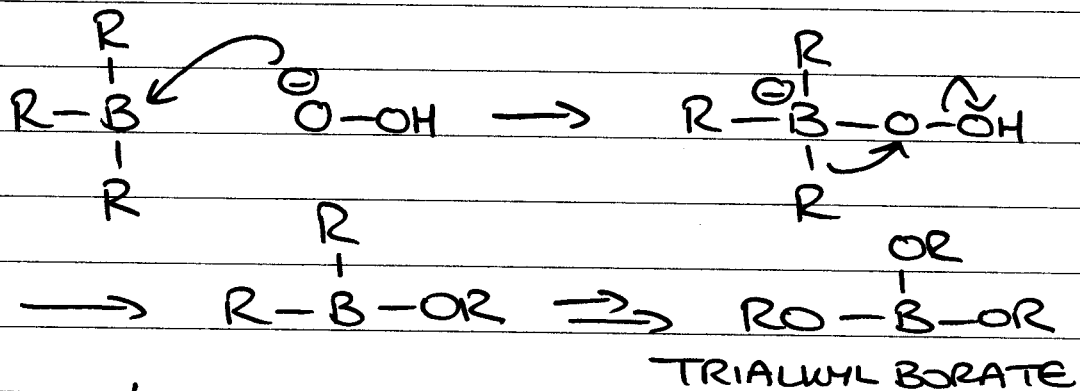
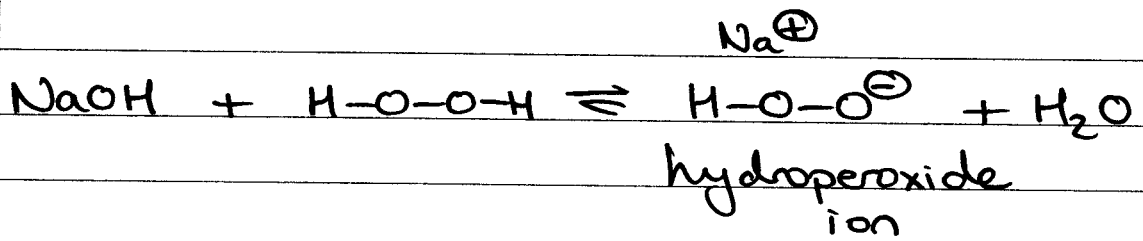
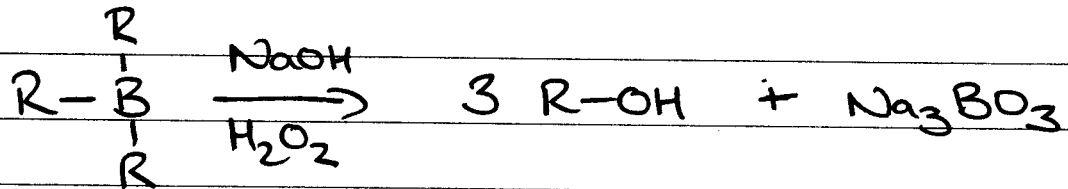
(ii) ELECTRONICS



FULL MECHANISM:

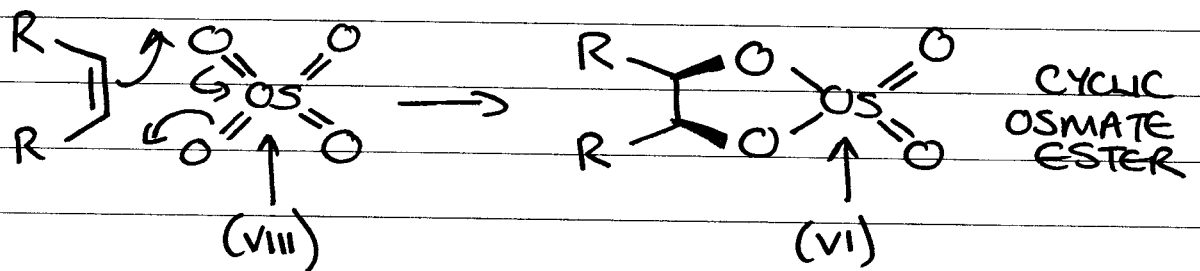
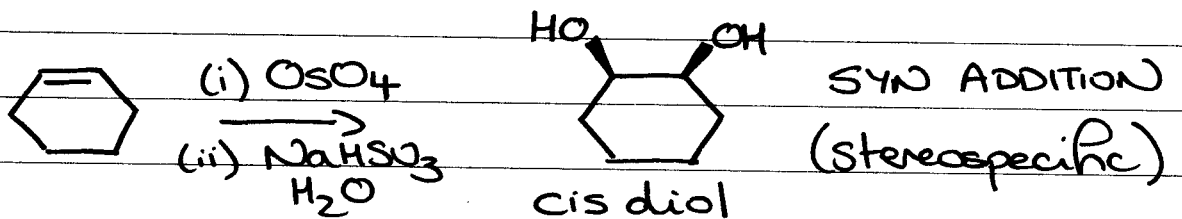


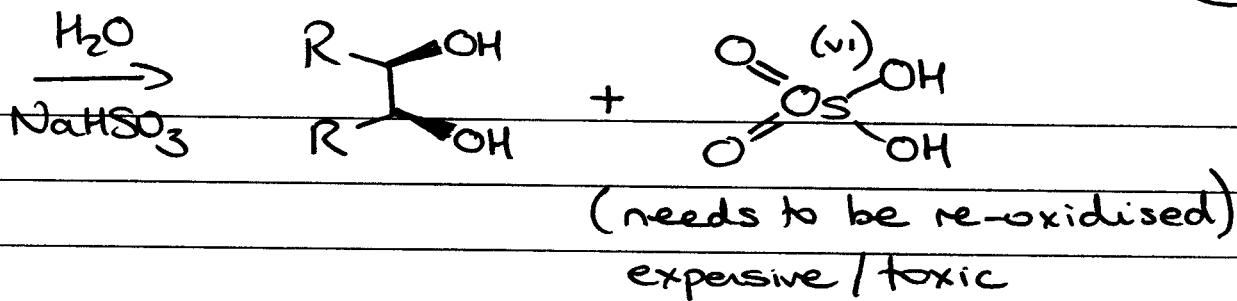
SECOND STEP



④ OXIDATION

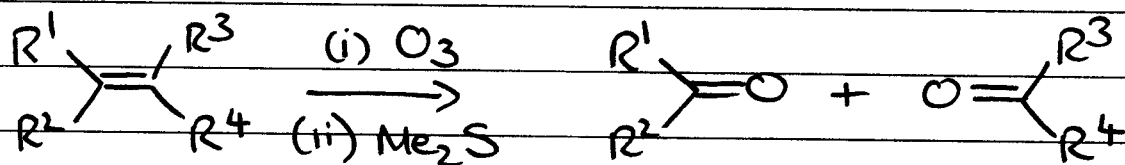
(i) OsO₄ osmium tetroxide



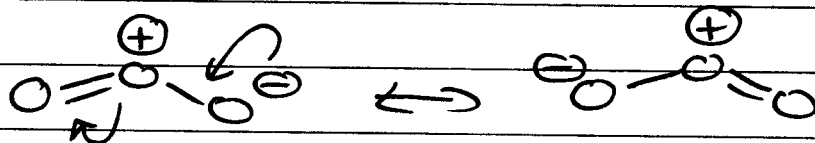


OS REDUCED (VIII \rightarrow VI), ALKENE OXIDISED

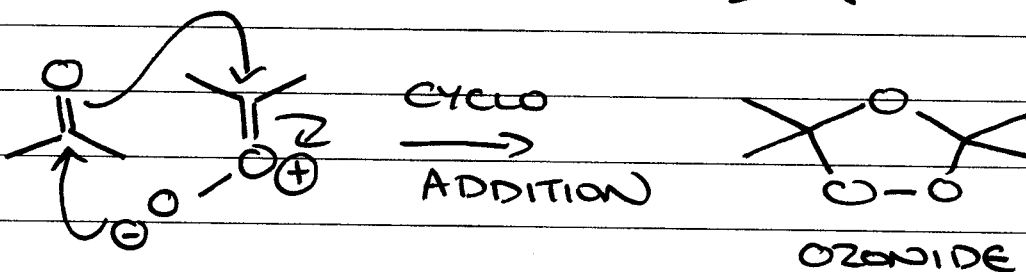
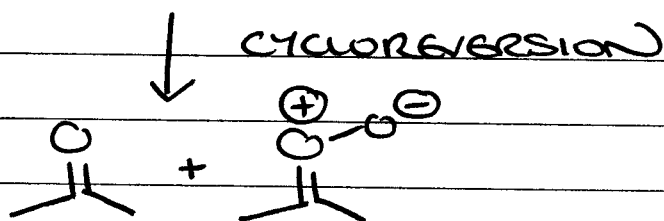
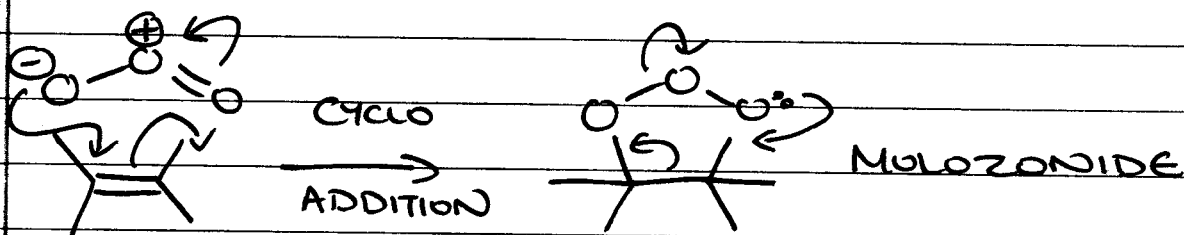
(ii) OZONOLYSIS

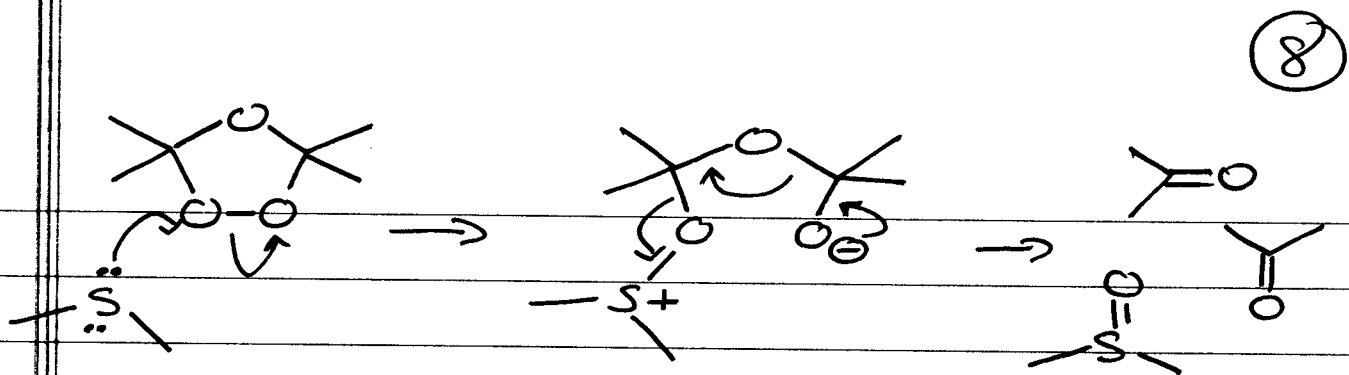


OZONE



mechanism





next up... reduction