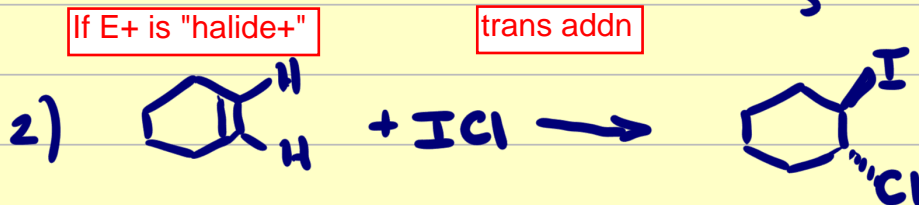
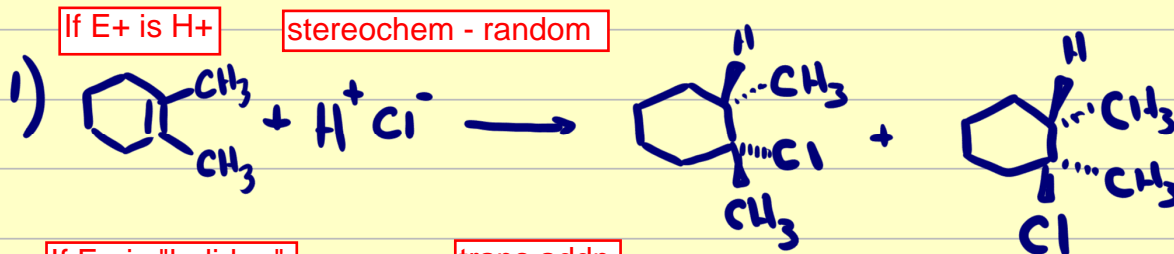


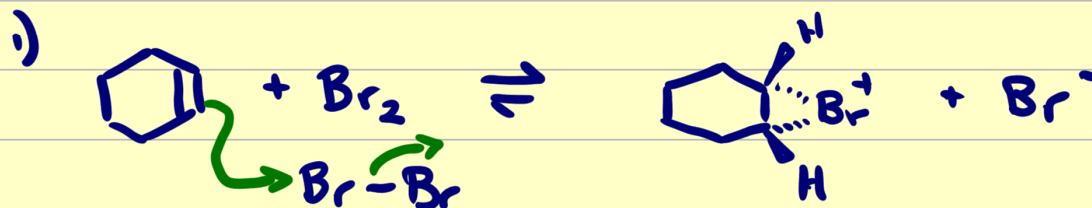
Quick review - stereochemistry of electrophilic addition reactions



INTERVENTION OF SOLVENT.

- TRADITIONAL SOLVENTS CCl_4 , CH_2Cl_2
 - GOOD SOLVENTS, NOT AT ALL NUCLEOPHILIC - DON'T INTERFERE

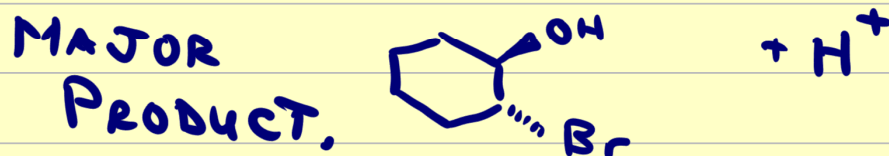
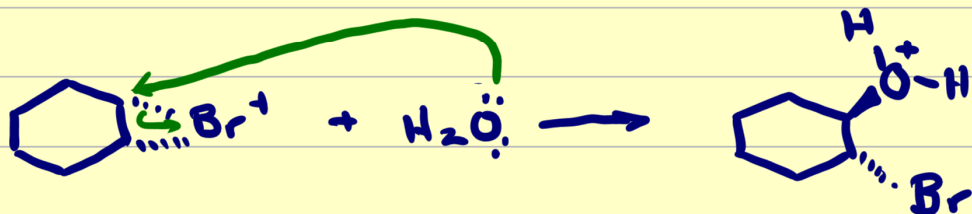
- WHAT IF SOLVENT IS NUCLEOPHILIC?
i.e. H_2O (OR CH_3OH).



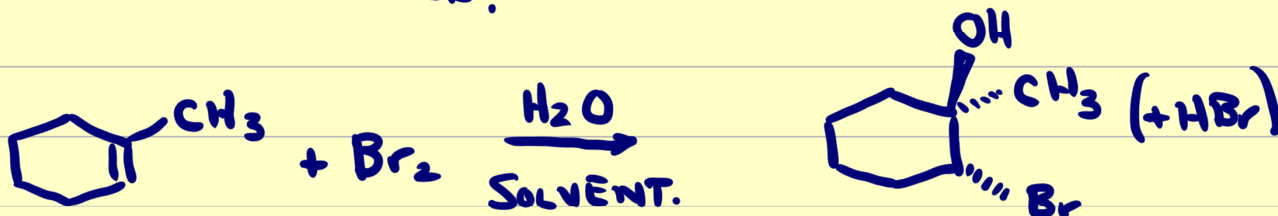
- 2) 2 NUCLEOPHILES PRESENT
- Br^-
 - H_2O .

CONSIDERATIONS

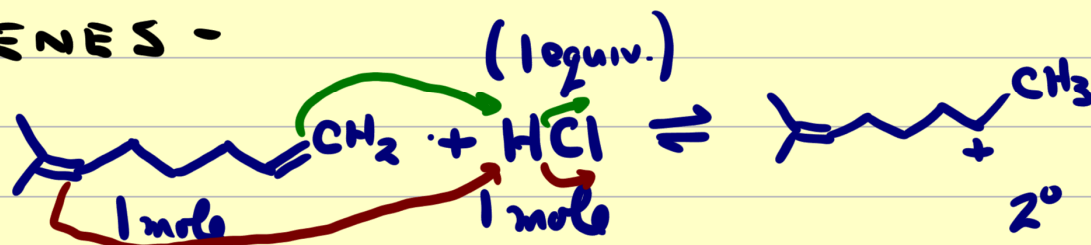
- i) REACTIVITY OF X^- $Br^- > H_2O$
- ii) CONCENTRATION OF X^- $[H_2O]/[Br^-] > 500$
- iii) REACTIVITY OF CATION - VERY HIGH, LOOKING FOR ANYTHING. - H_2O

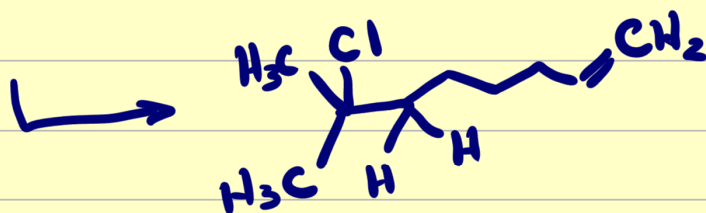
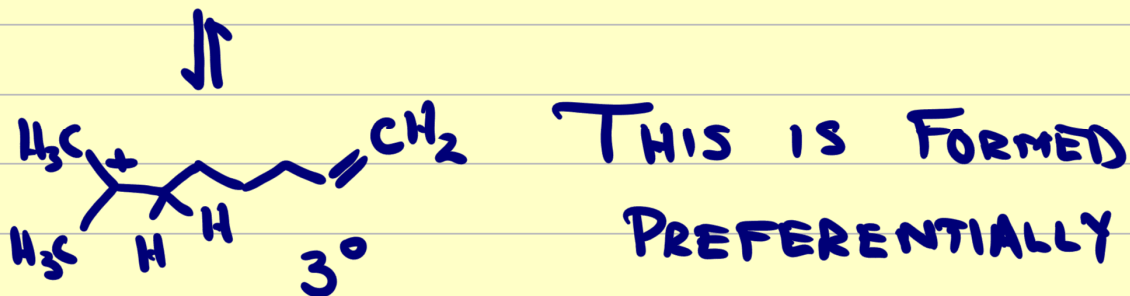


NOTE: MARKOVNIKOV'S RULE DOES STILL HOLD.

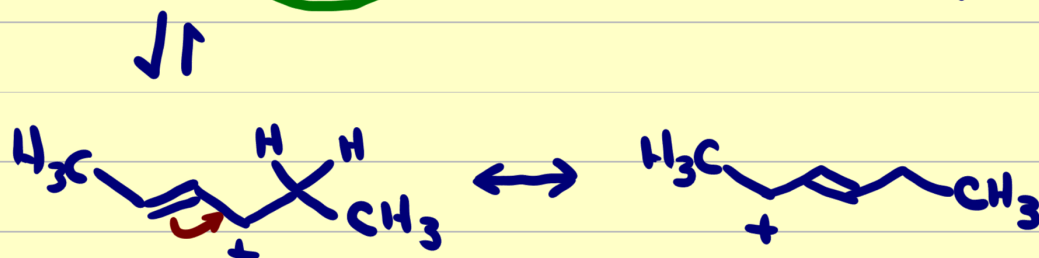
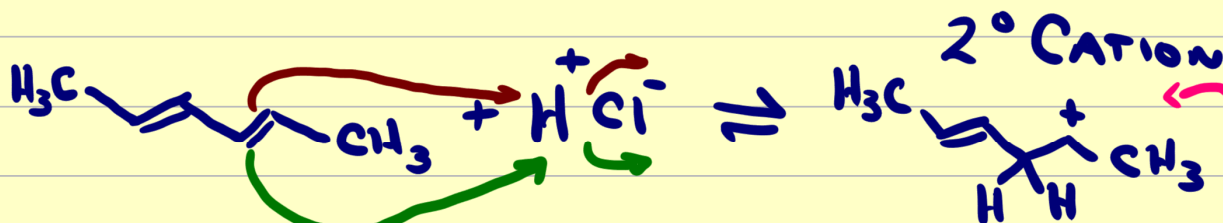


DIENES -

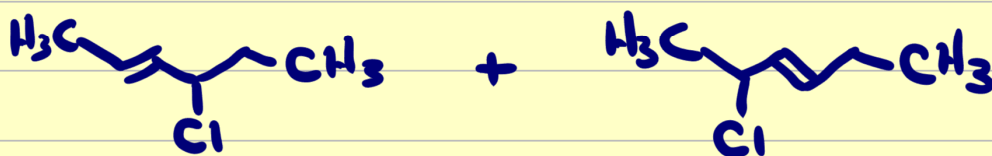




CONJUGATED DIENES,



2° + ALLYLIC - FAR MORE STABLE THAN
 - ONLY ONE FORMED
 Cl^- - BUT IT HAS 2 ATTACK SITES



- AT LEAST 2 ADDITION PRODUCTS

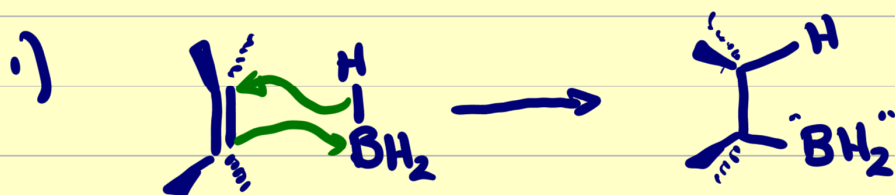
OTHER RXNS OF ALKENES.

1) HYDROBORATION

"BH₃" - BORANE (EXISTS AS B₂H₆)

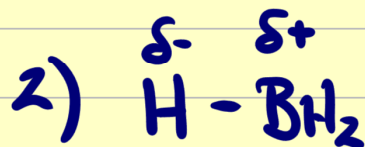
- ADDS ACROSS ALKENE C=C BONDS
SOMEWHAT LIKE H-Br

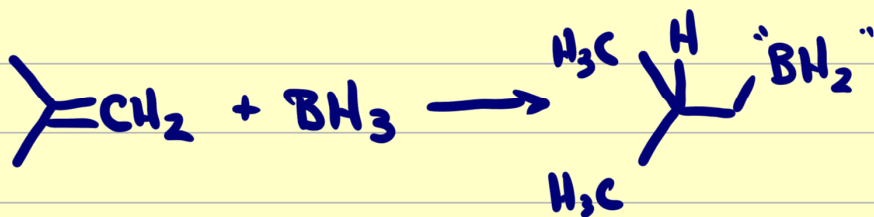
- SOME DIFFERENCES.



CIS ADDITION.

BECAUSE ALL BOND MAKING + BREAKING
IS CONCERTED





H GOES TO MORE SUBST. SIDE

∴ CALLED ANTI-MARKOVNIKOV ADDN.