

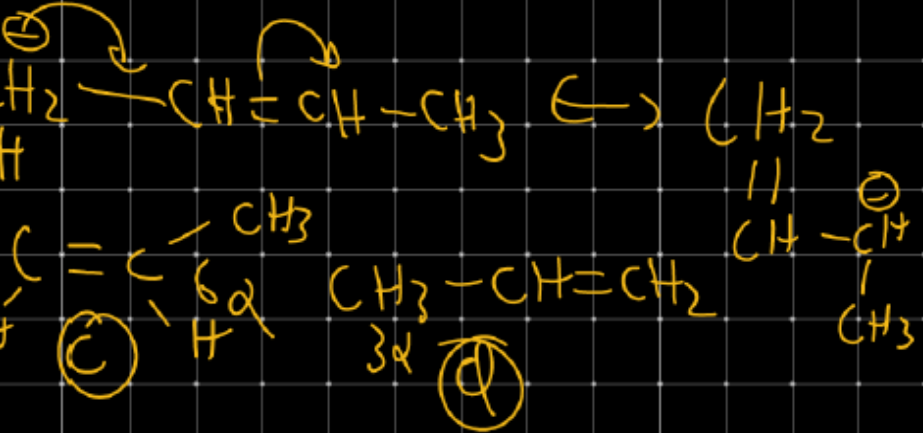
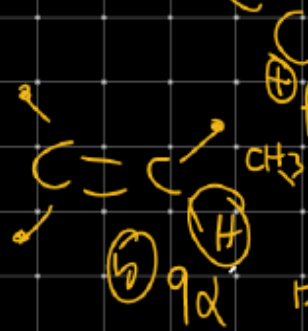
# Hyperconjugation

Partial ionic character

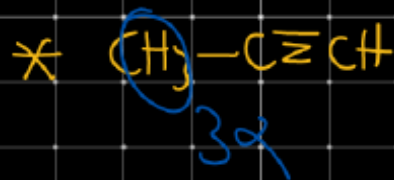
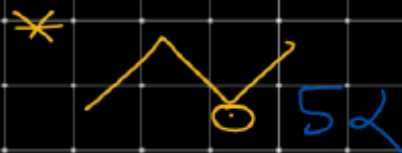
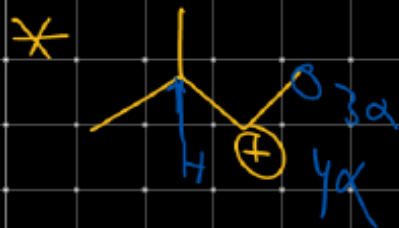
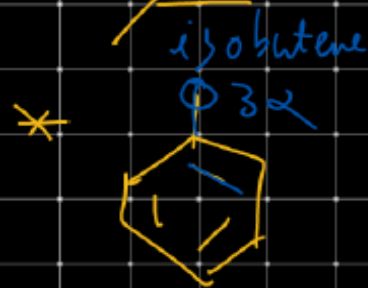
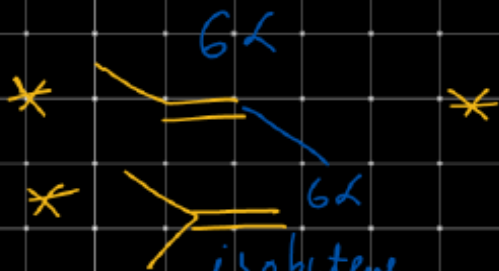
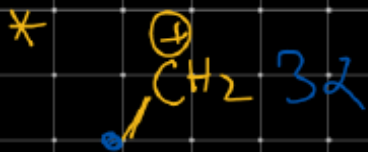
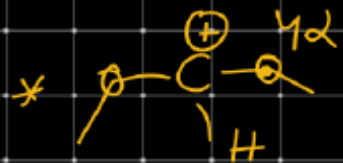
Stability of Alkene  $\propto$  No of  $\alpha$  H



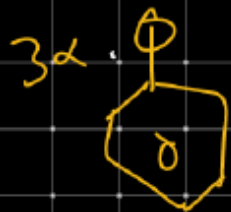
$a > b > c > d$



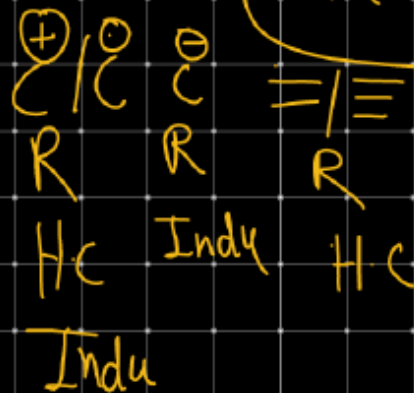
No of  $\alpha$  H



## Resonance

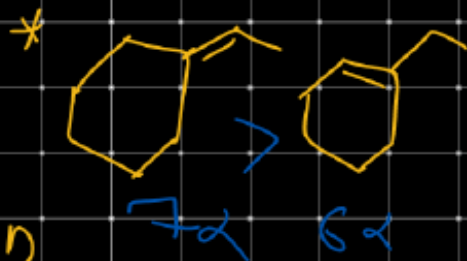
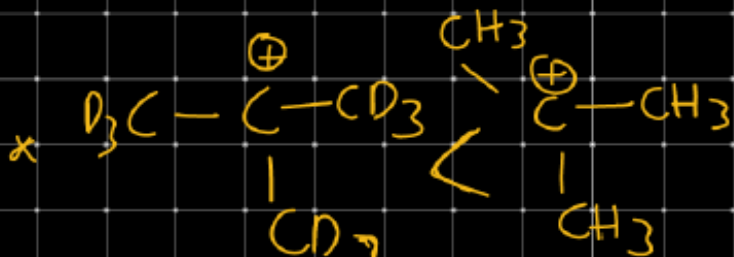
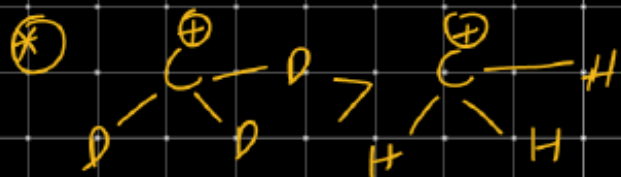


## Baker-Nathan Effect



Ring  $\delta^-$  density order  $d > c > b > a$   
acc to +I

Experimentally  $\Rightarrow a > b > c > d$



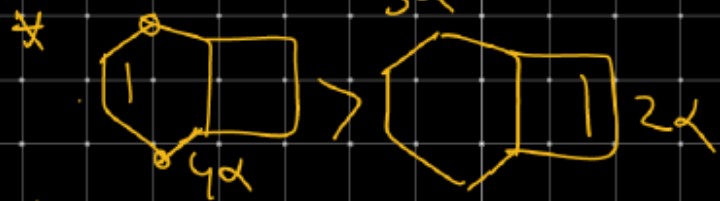
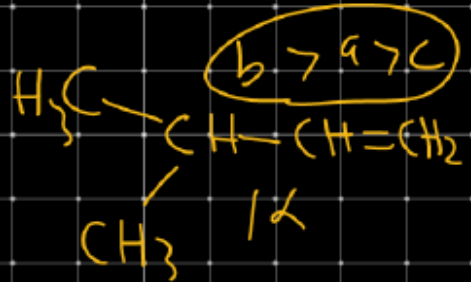
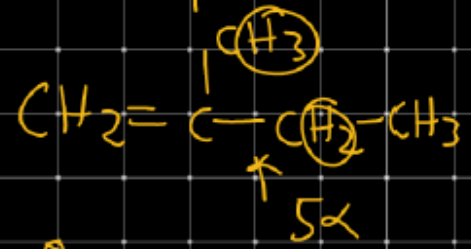
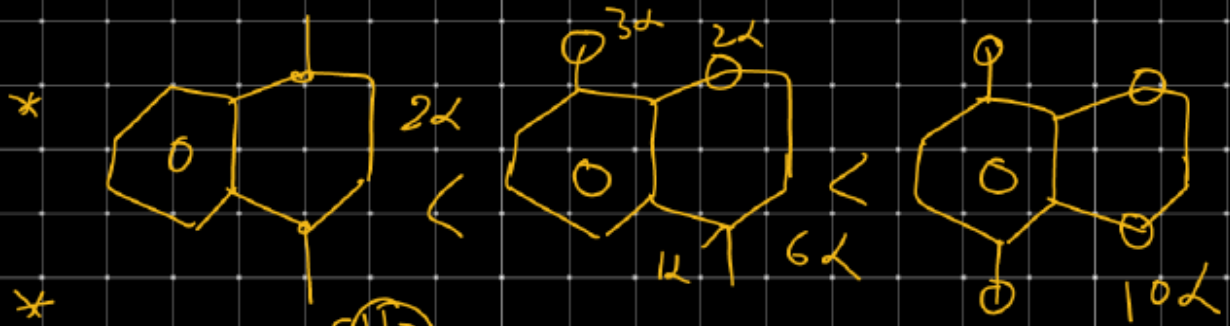
(\*)



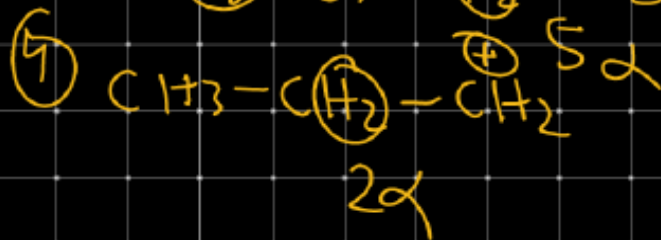
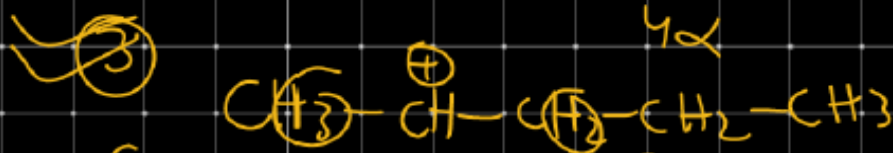
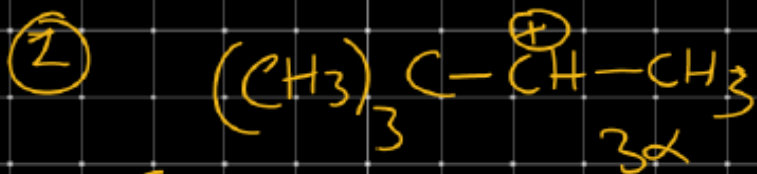
strong  
D bond

H-C more C-H > C-D

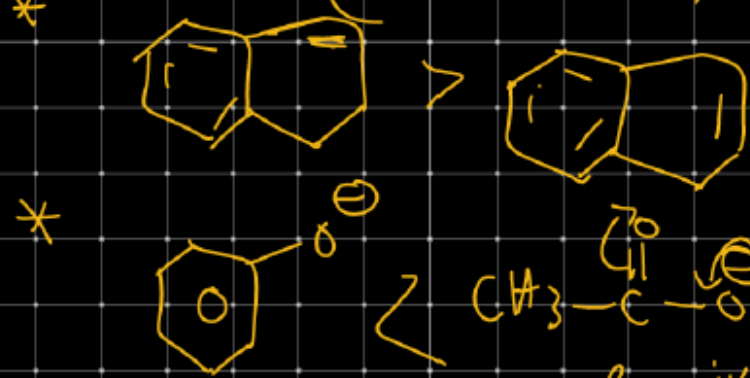
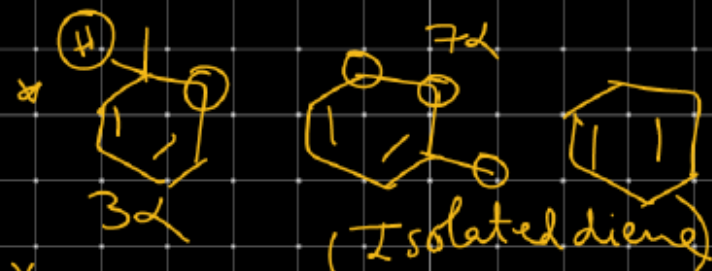
(a7b  
7c)



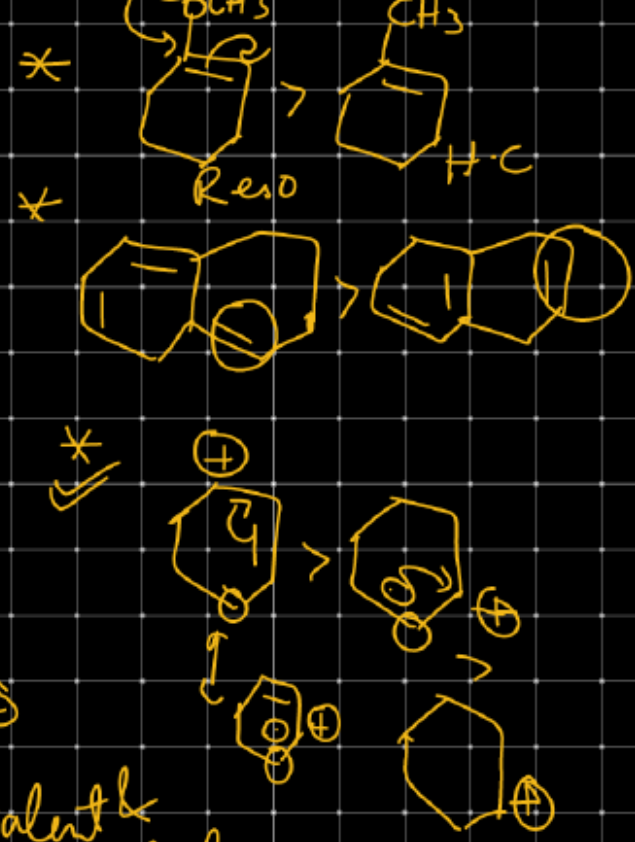
# Most stable carbocation

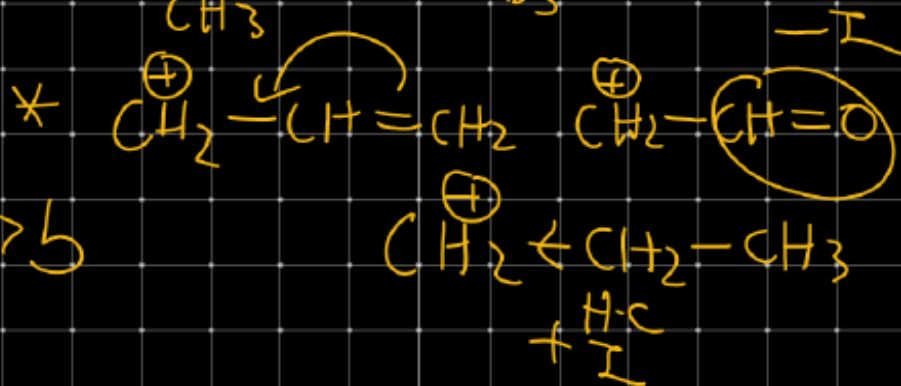
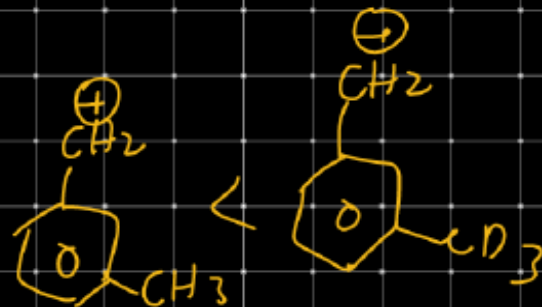
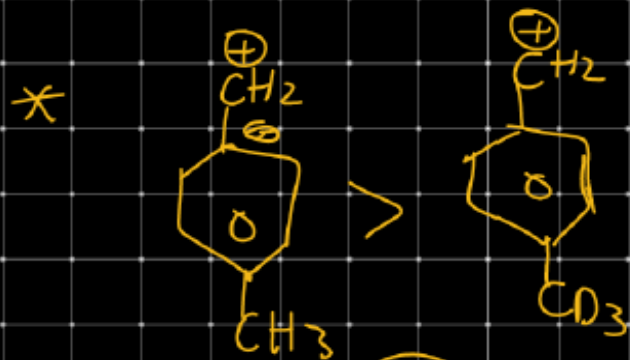


# Compare stability



equivalent & high R.F. Stable R.S





a > c > b