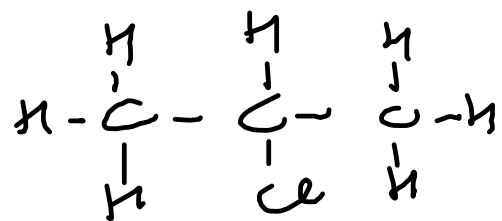


Chap 6 ALKYL HALIDES

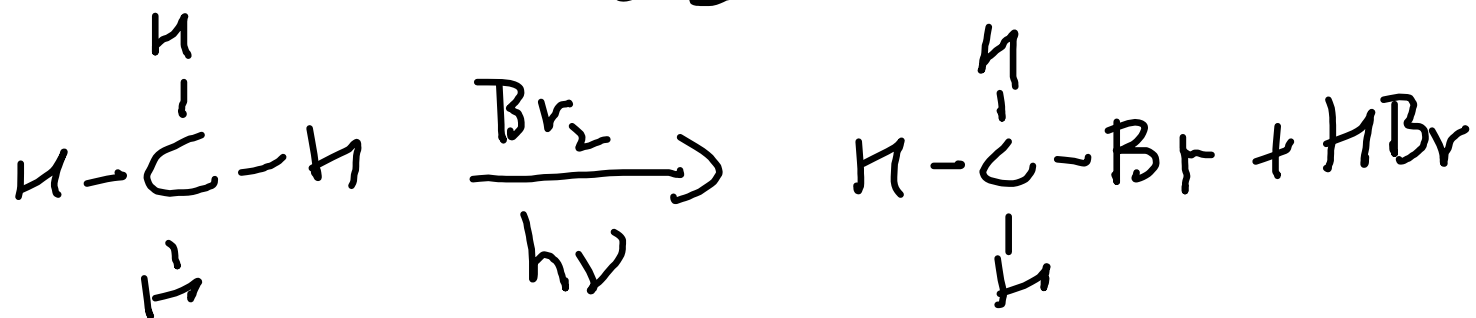
nomenclature



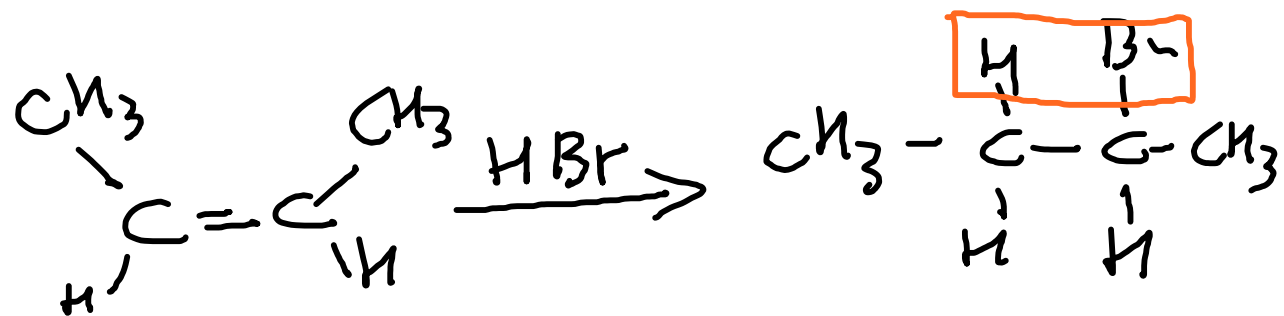
2-chloropropane
isopropyl chloride

PREPARATION

1) FREE RADICAL HALOGENATION

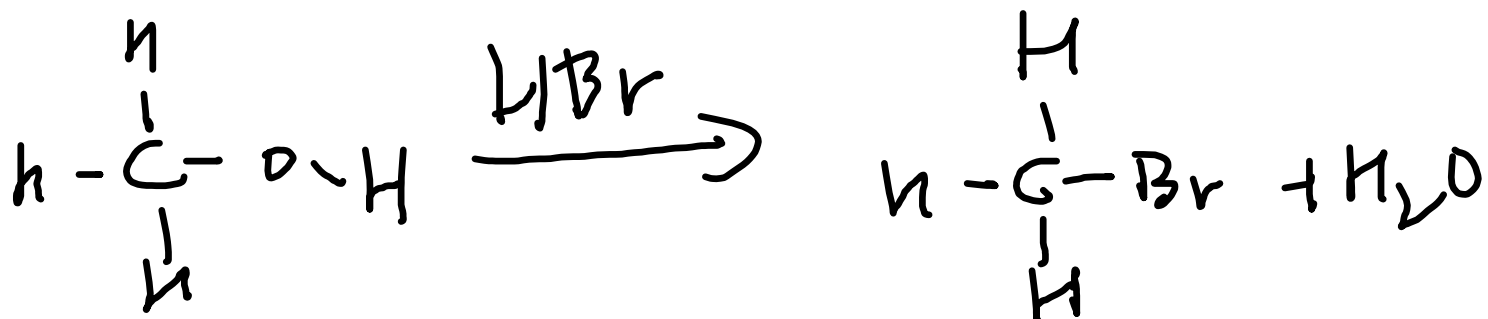


2) HYDROHALOGENATION OF ALKENES
H F, Cl, Br or I

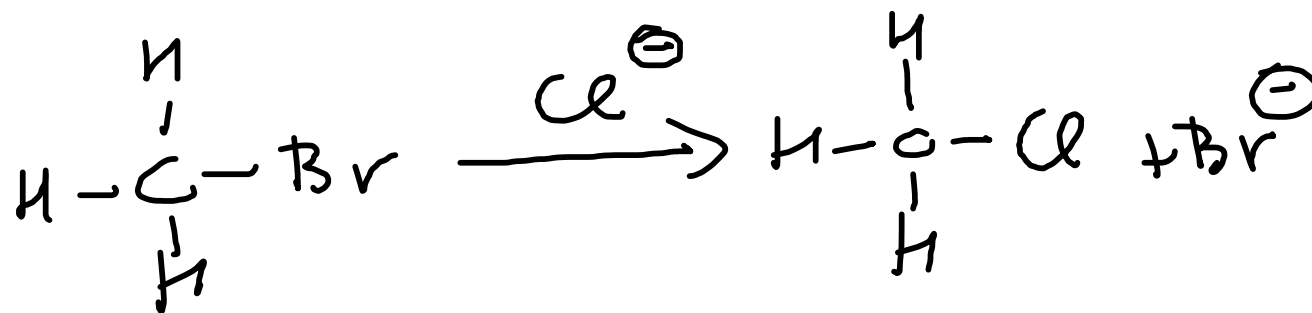


ADDITION
REACTION

3) FROM ALCOHOLS



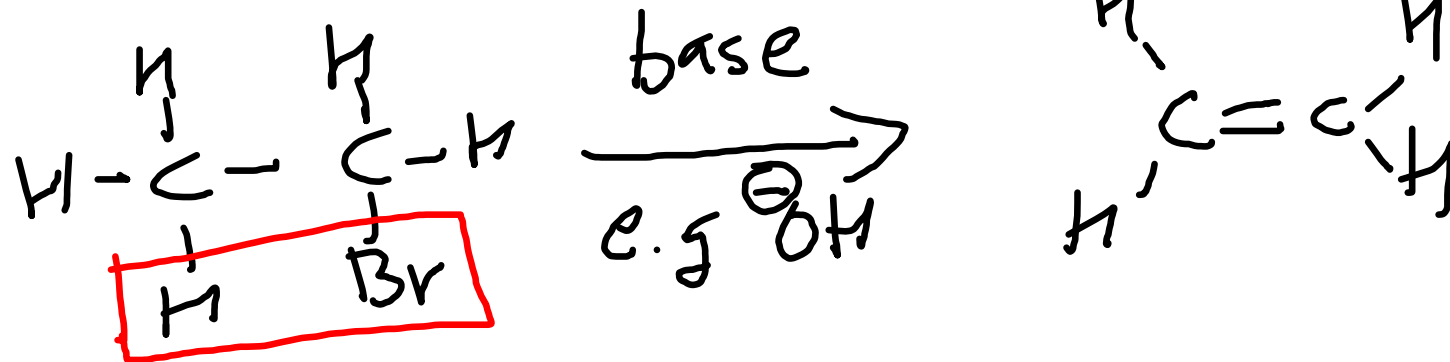
n) FROM ANOTHER ALKYL
HALIDE



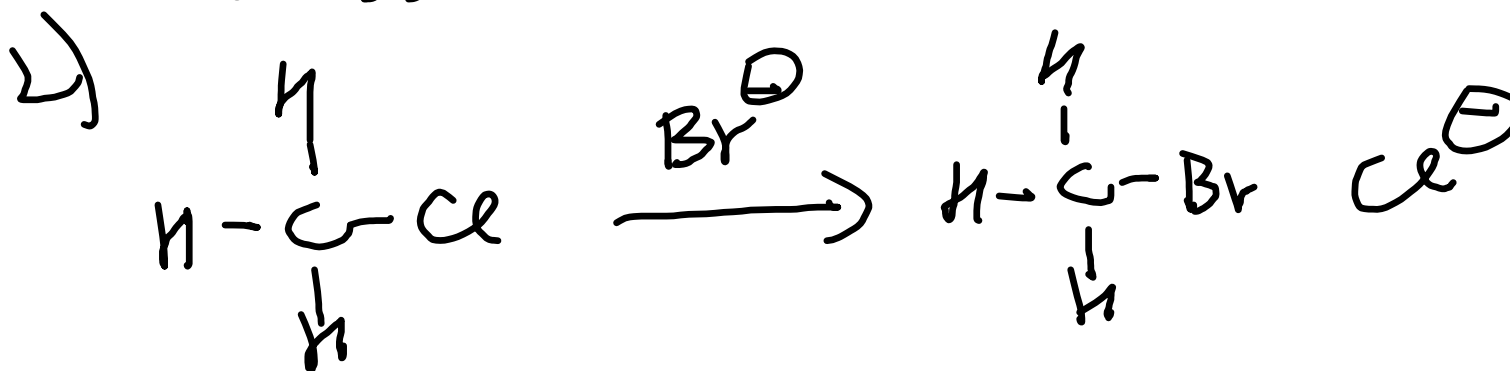
SUBSTITUTION
REACTION

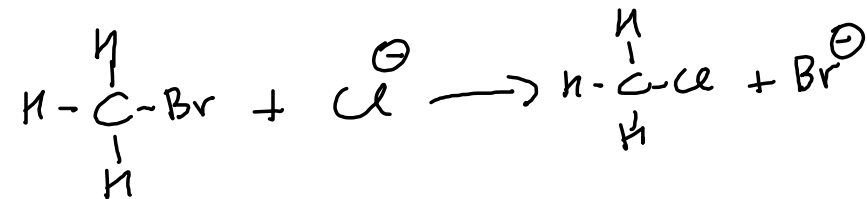
REACTIONS

1) ELIMINATION



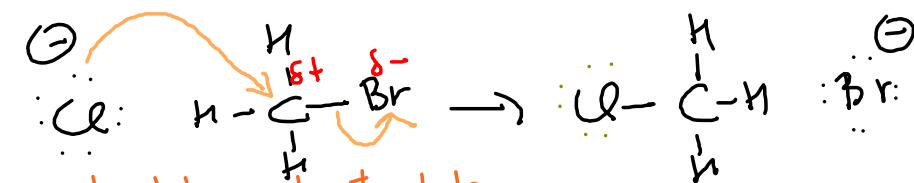
SUBSTITUTION





$$\text{RATE} = k [\text{CH}_3\text{Br}] [\text{Cl}^{\ominus}]$$

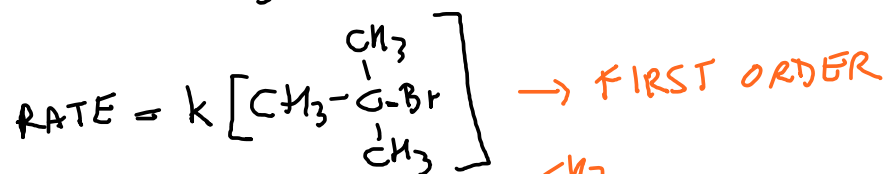
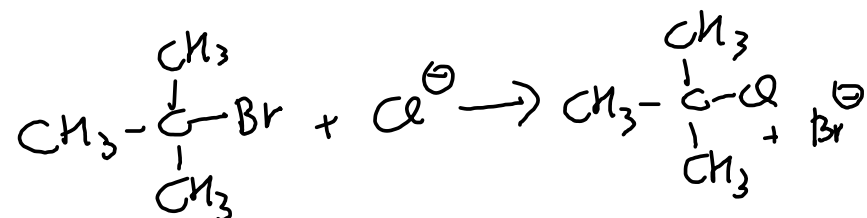
→ BOTH CH_3Br and Cl^{\ominus}
ARE IN THE RATE
LIMITING STEP



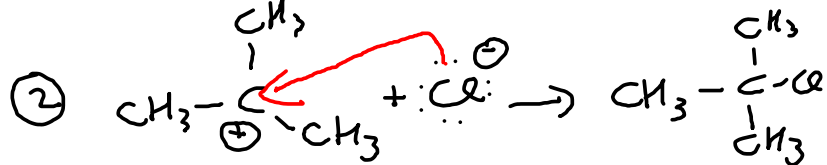
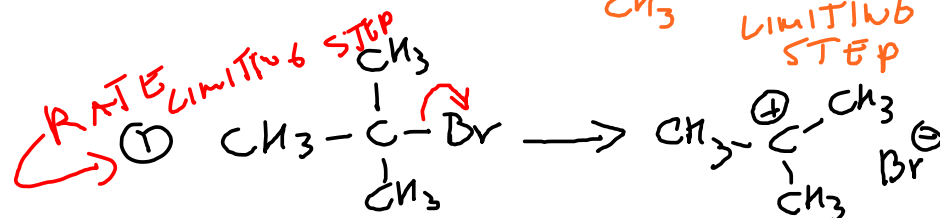
nucleophile seeks $\oplus \delta$ electrophile seeks $\ominus \delta$

Nucleophilic substitution reaction

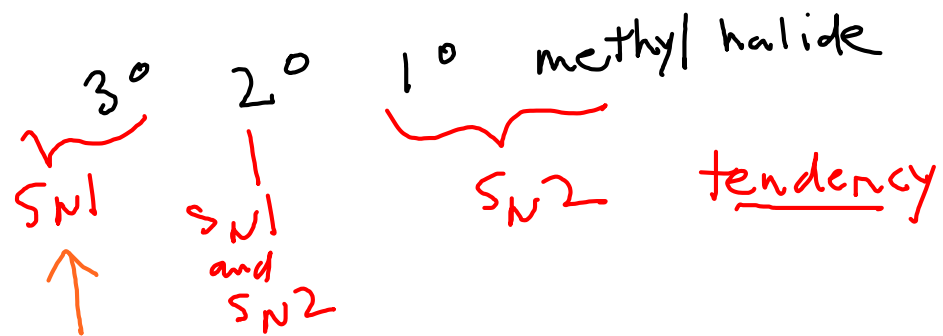
$\text{S}_{\text{N}}2$ second order



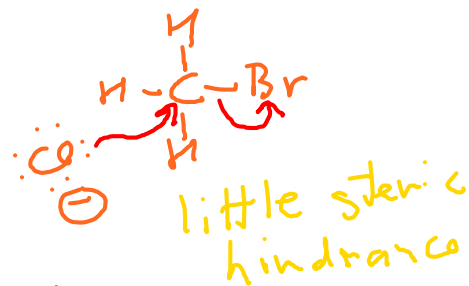
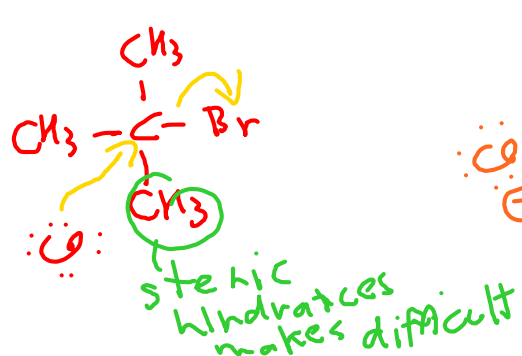
→ ONLY $\text{CH}_3-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-\text{Br}$ IN RATE LIMITING STEP

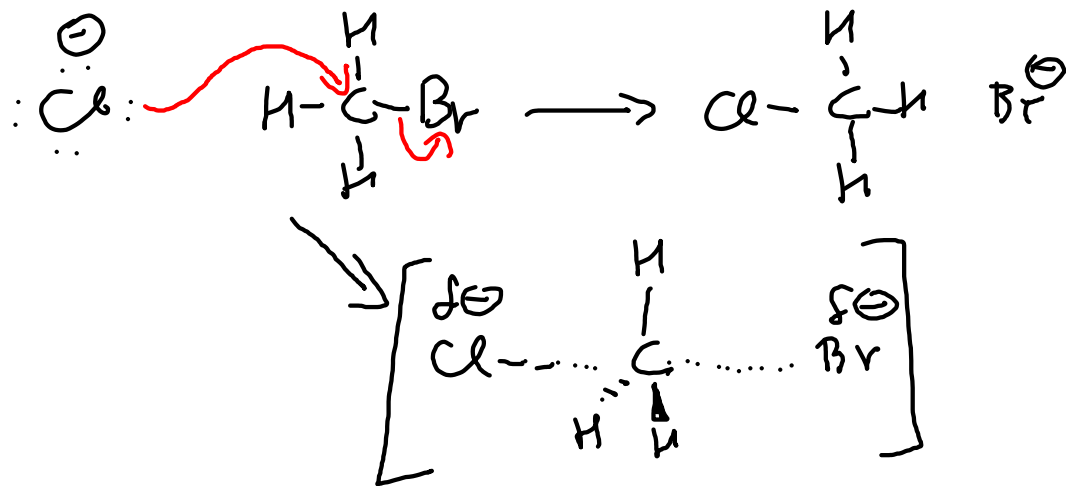


$\text{S}_{\text{N}}1$ - First order



3°
 carbocation
 more stable





Walden inversion

