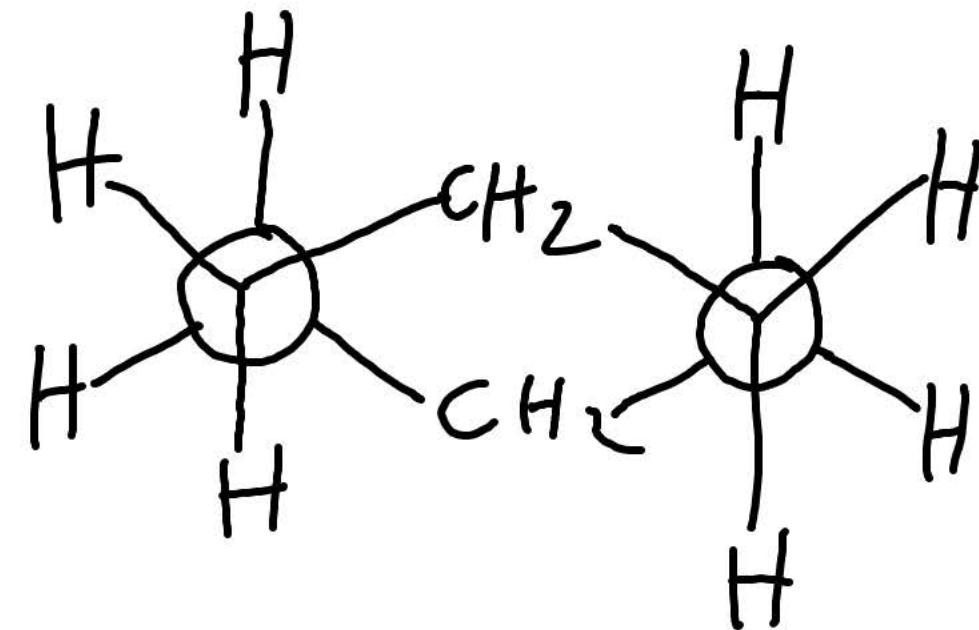
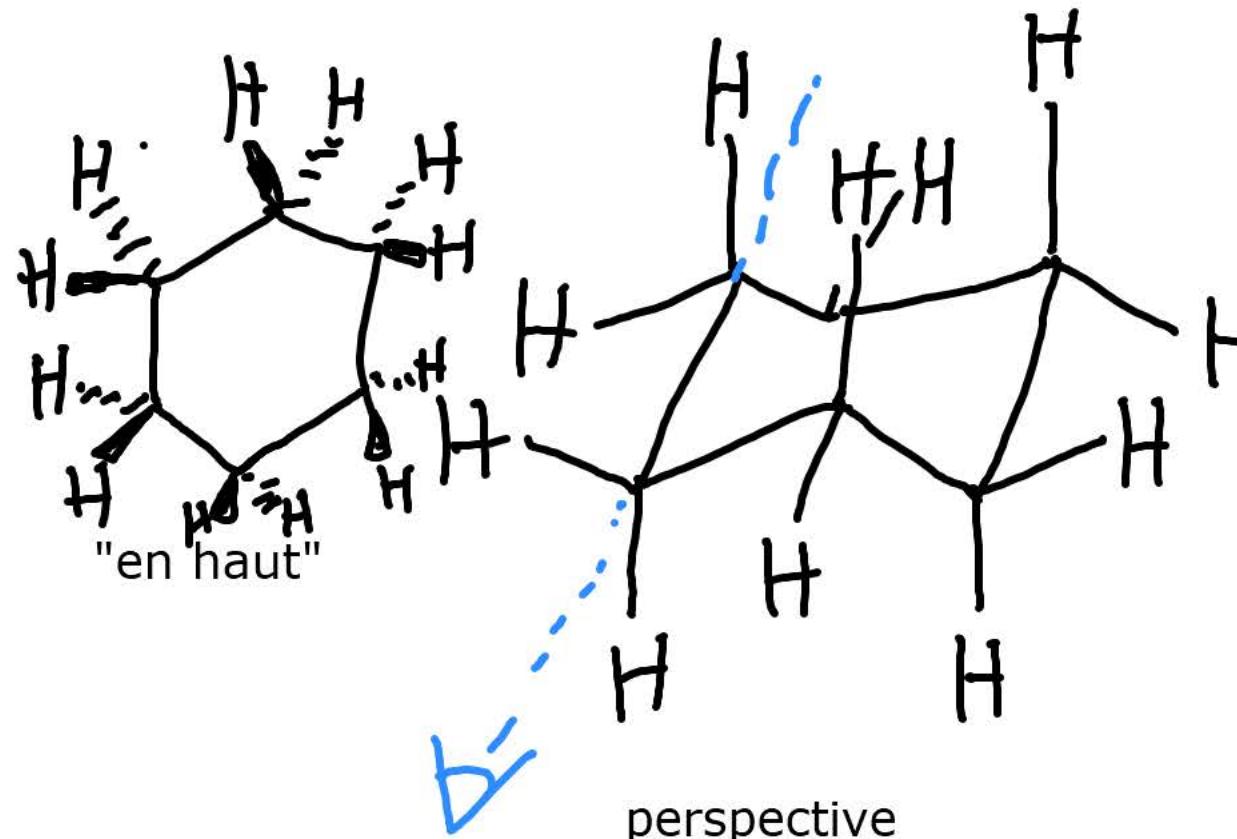
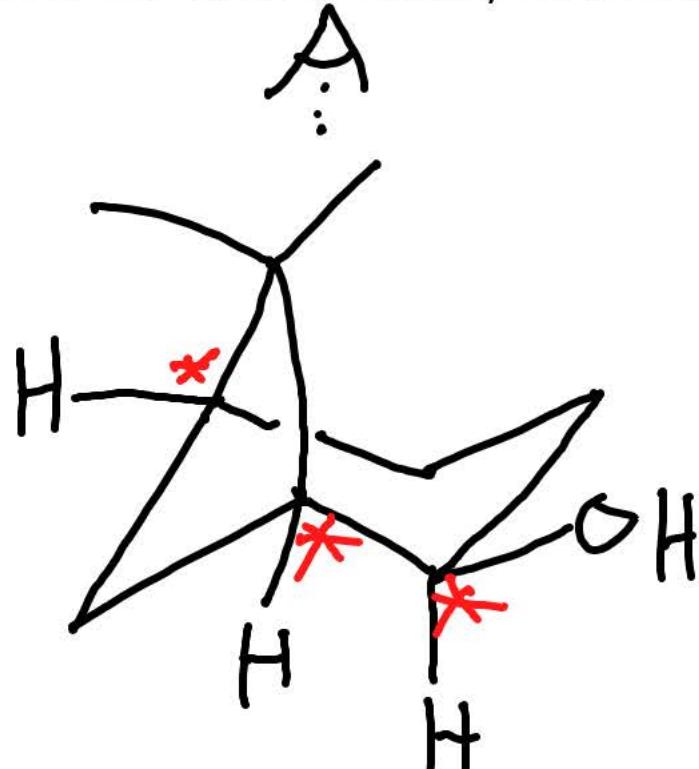


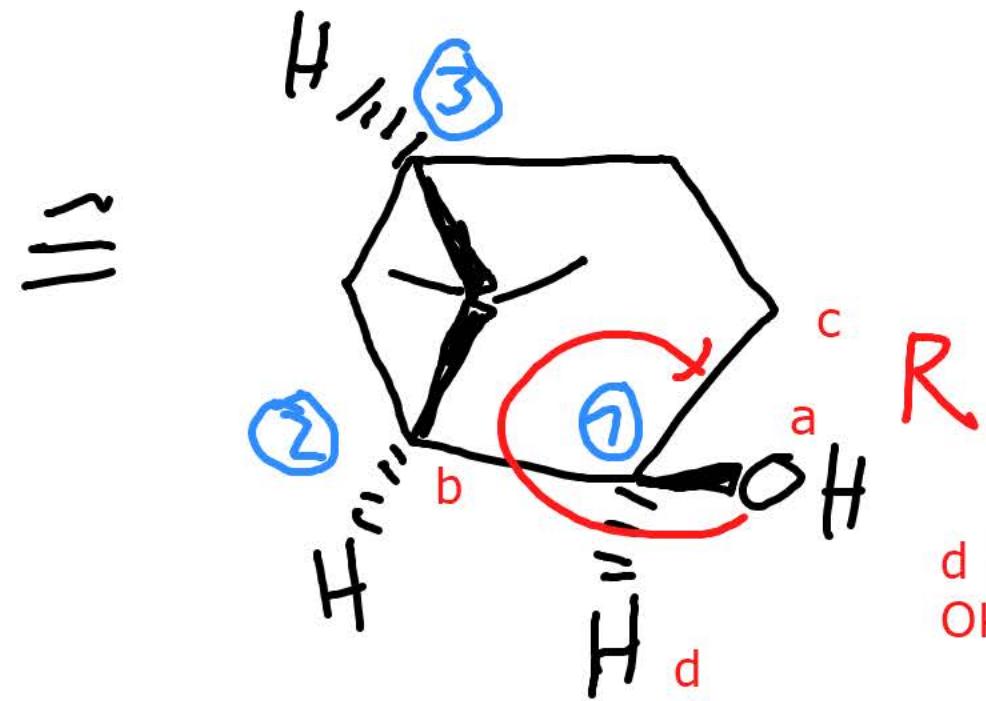
stéréocentre sur les molécules cycliques



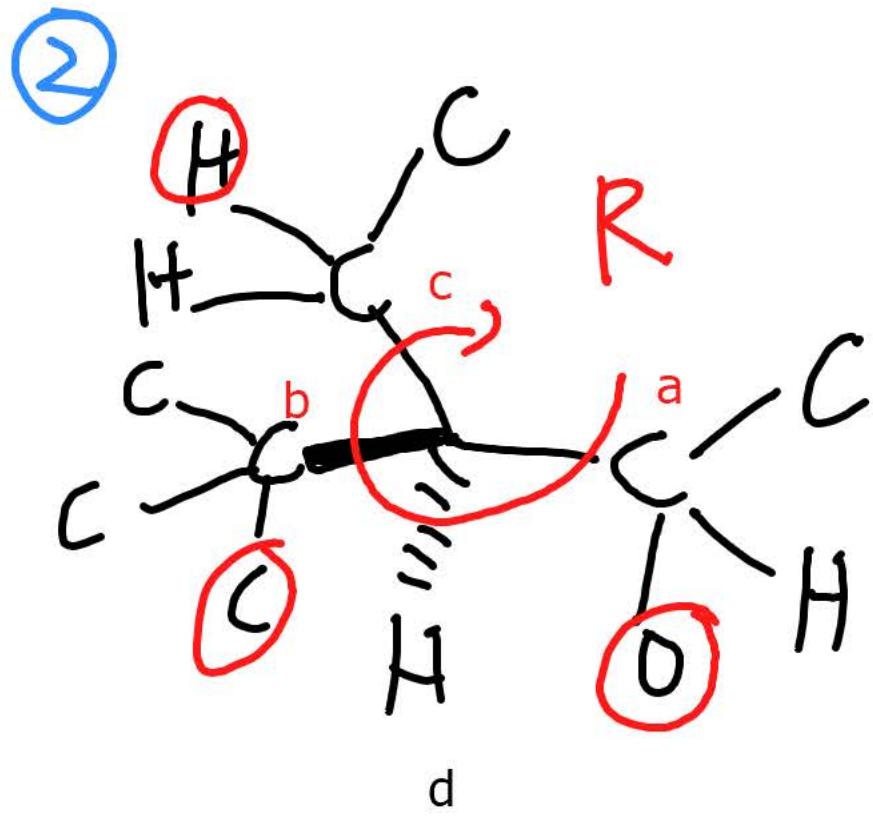
identifier les stéréocentre, et déterminer la configuration absolute (R ou S)



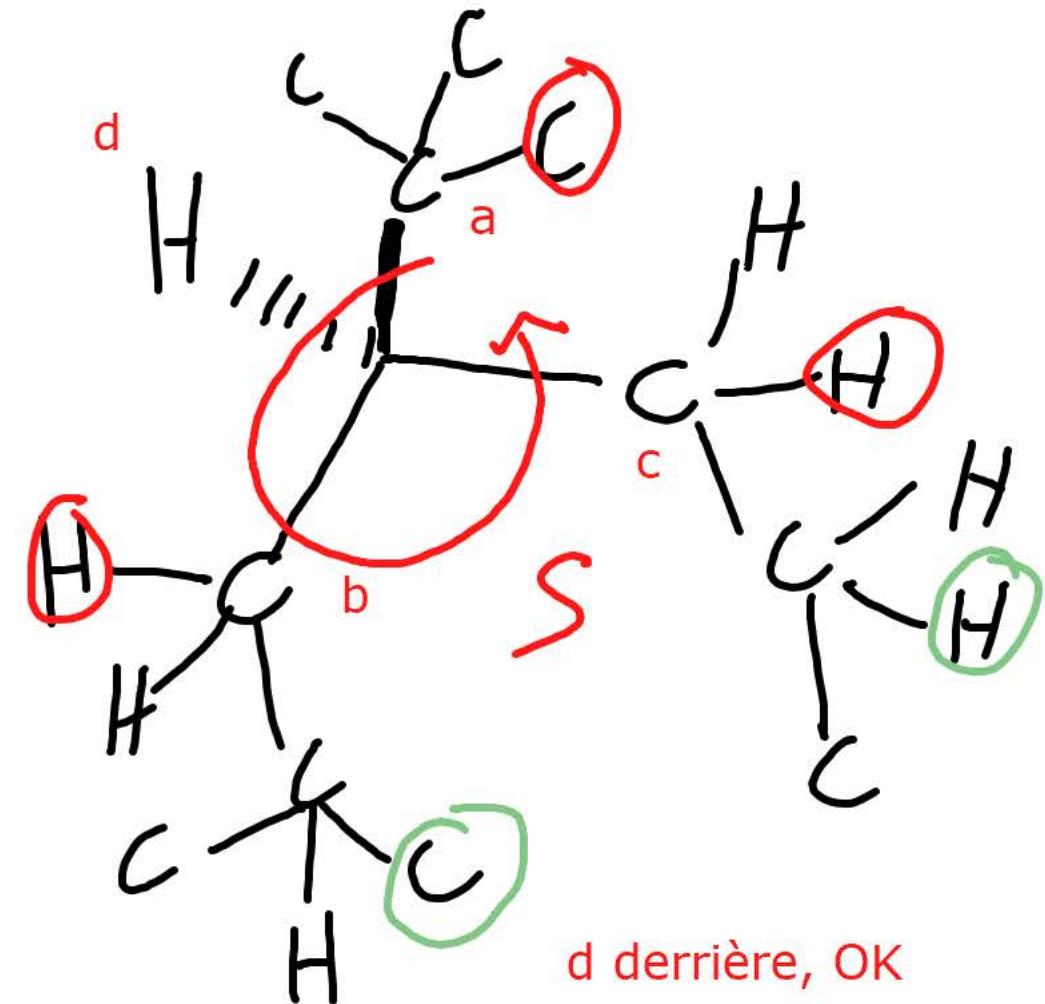
3 stéréocentre



d est derrière  
OK

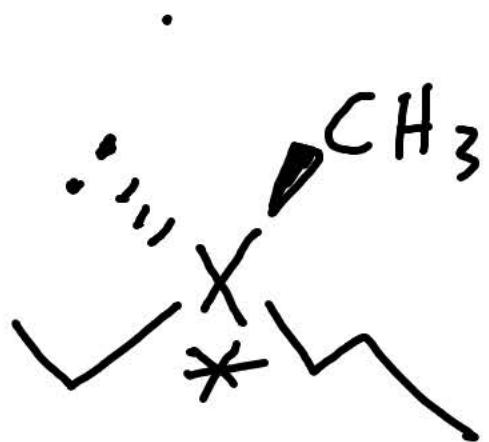


d est derrière: OK

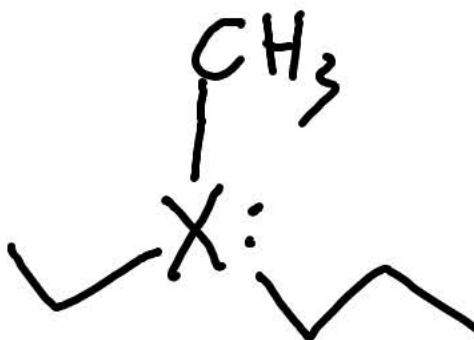


d derrière, OK

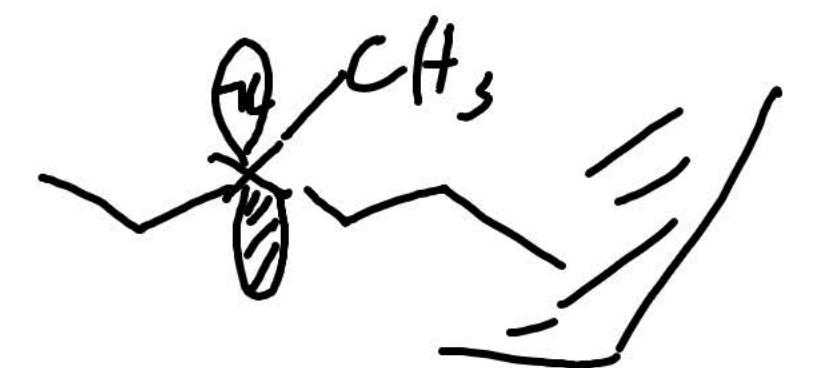
cas particulier des hétéroatomes avec paires d'électrons



$\text{sp}^3$ , chiral  
favorisé selon vsepr



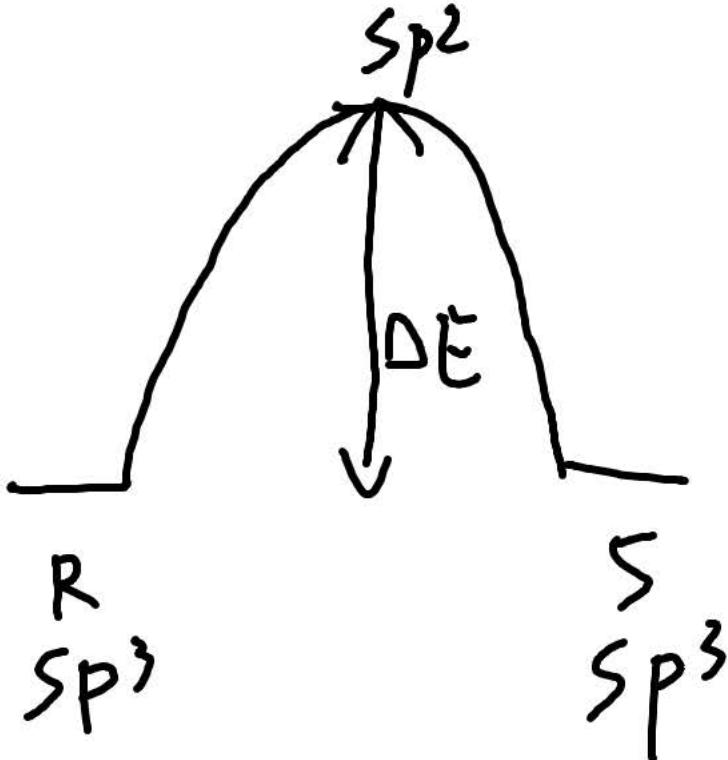
$\text{sp}^2$ , non chiral



plan de symétrie

$\text{X} = \text{P}$ , alpha non égal à 0

$\text{X} = \text{N}$ , alpha = 0 (pas de chiralité! à 25 °C)



pour P:  $\Delta E = 25 \text{ kcal/mol}$

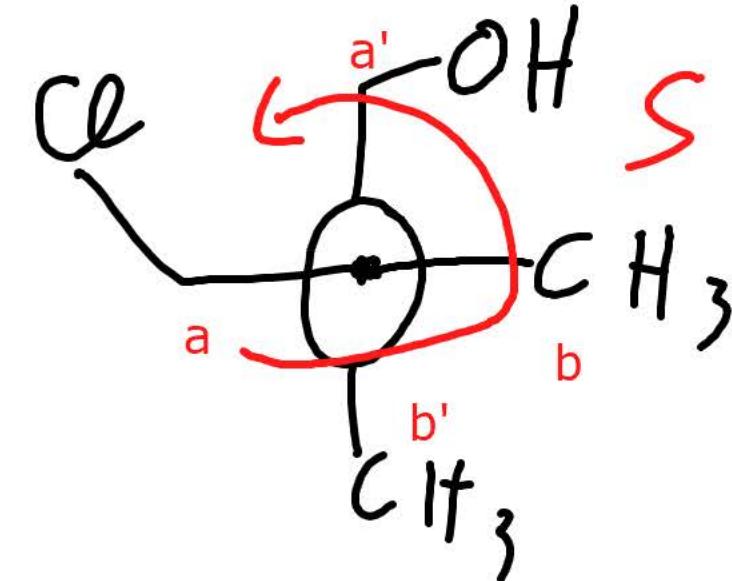
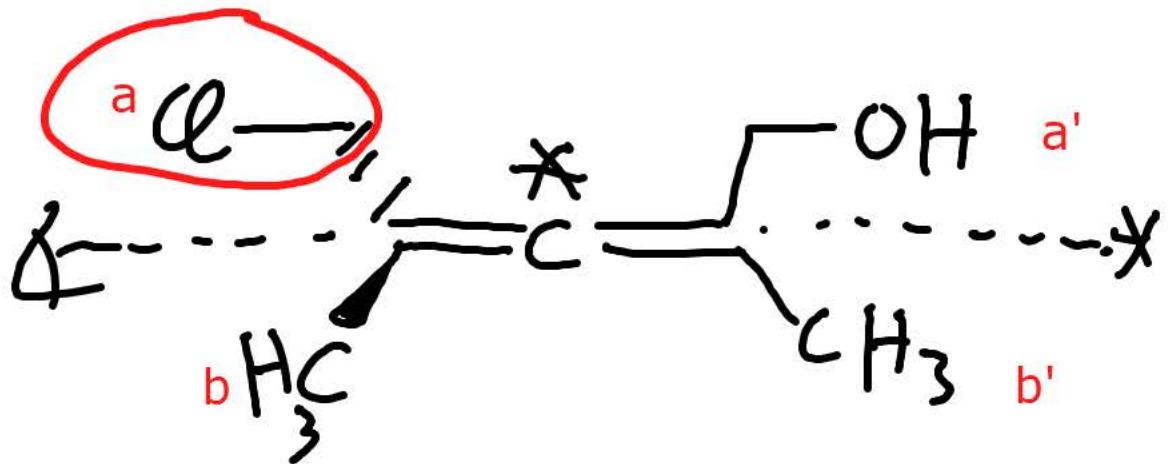
( $> 21 \text{ kcal/mol}$ )

Pour N:  $\Delta E = 10 \text{ kcal/mol}$

( $< 21 \text{ kcal/mol}$ )

pour la 2ème période: pas de stéréocentre sur les hétéroatomes avec un paire d'électron

pour la 3ème période: il y a un stéréocentre!  
à température ambiante

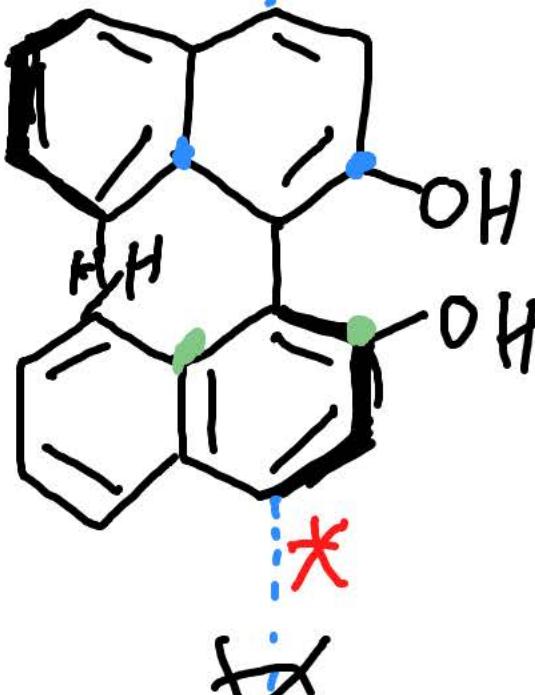


1 1) on regarde depuis le plus grand le long de l'axe

axe S

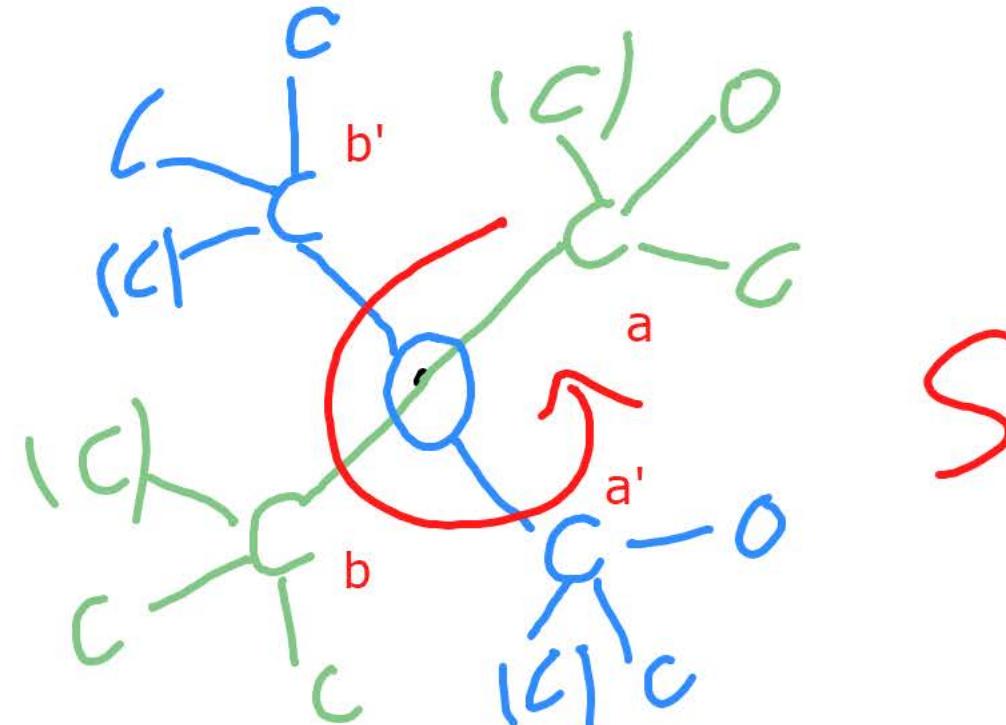
2) on tourne dans le sens:  
grand devant, petit devant,  
grand derrière

axe de chiralité le long d'une liaison simple qui ne peut pas tourner

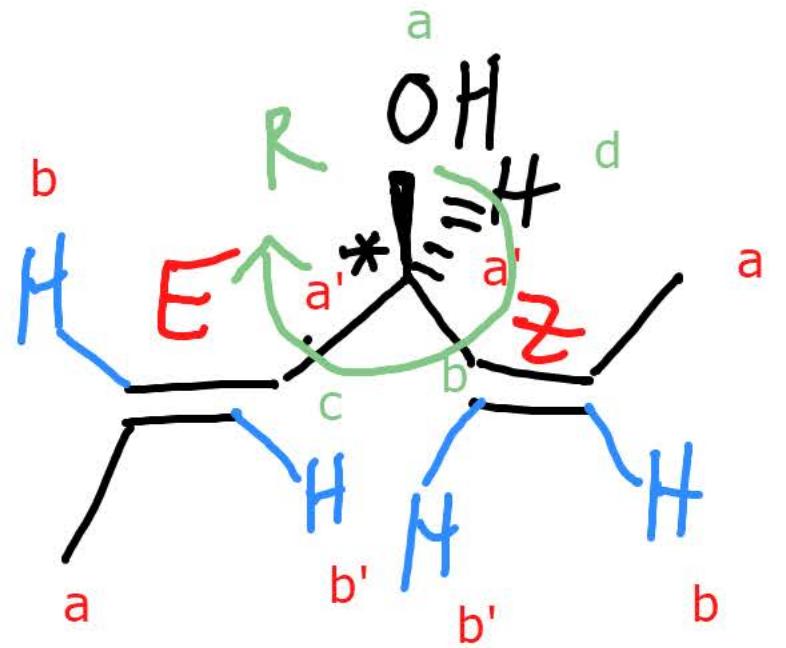


Binol

axe de rotation

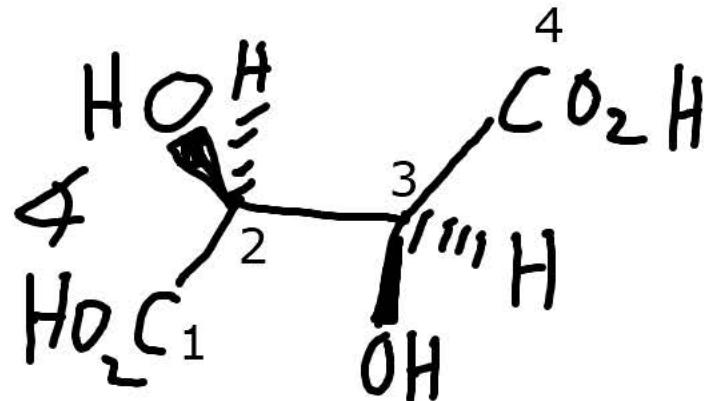


S



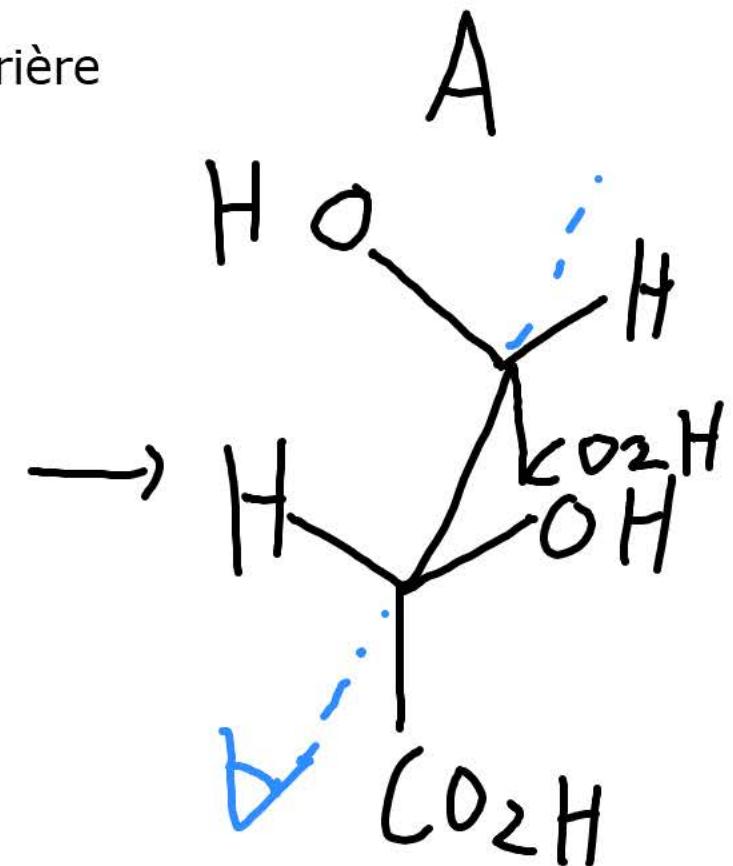
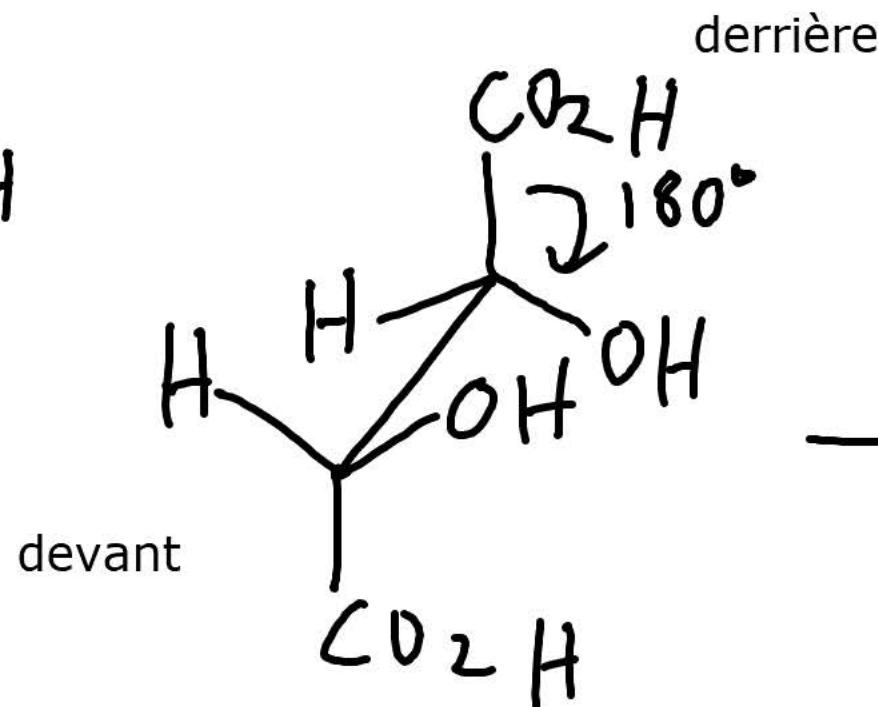
règle: Z à la priorité E

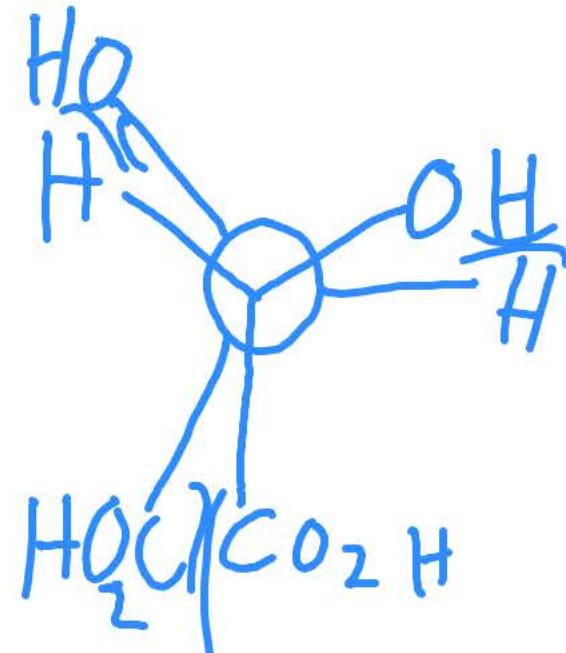
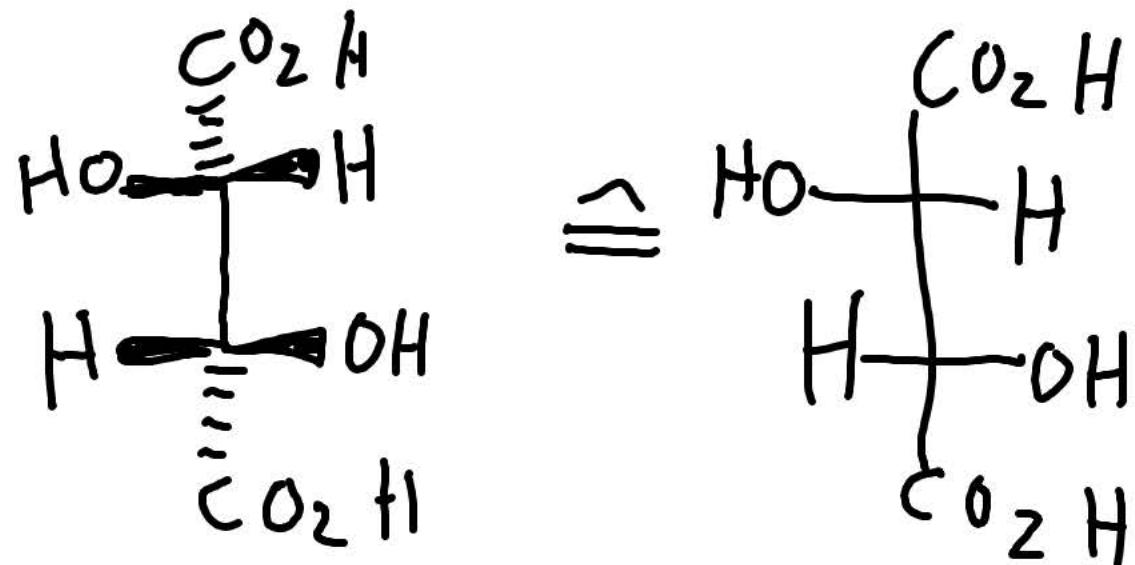
acid tartrique



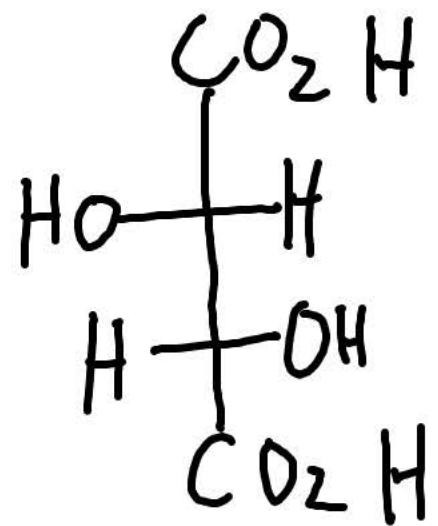
(-)-(2S,3S)

$$\text{alphaD} = -12^\circ$$

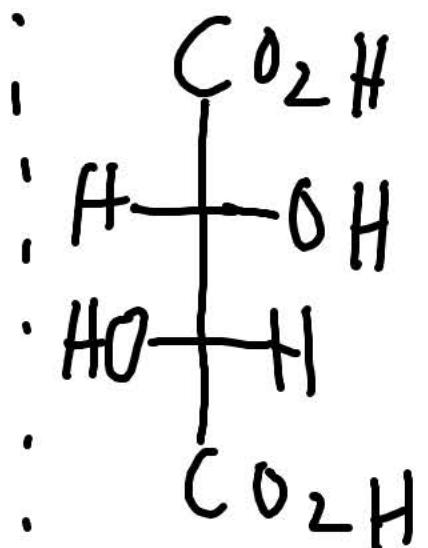




situation pas favorable, Fischer ne correspond pas une conformation favorisée de la molécule!

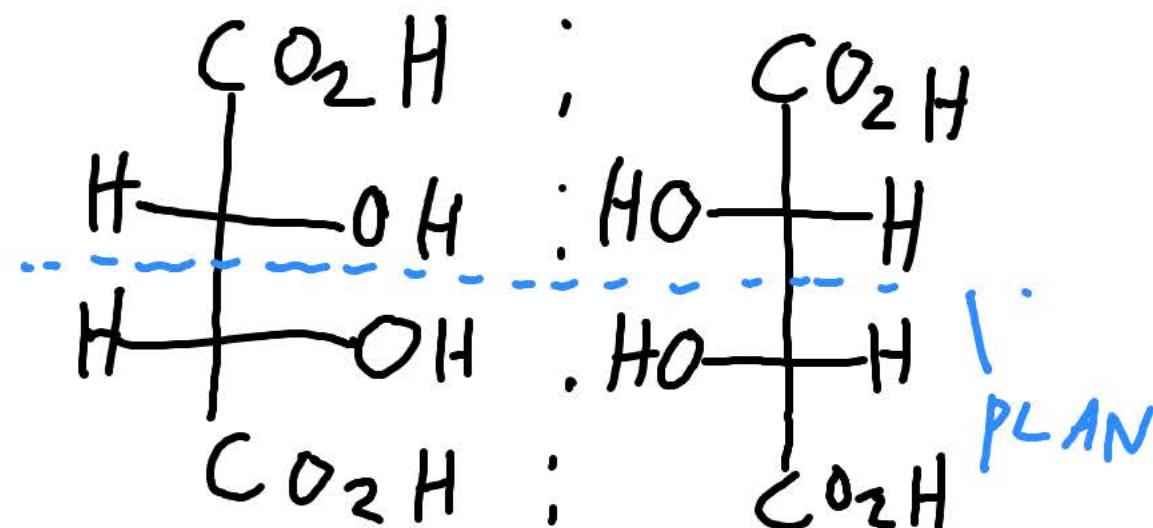


(-)-(2S,3S)



(+)-(2R,3R)

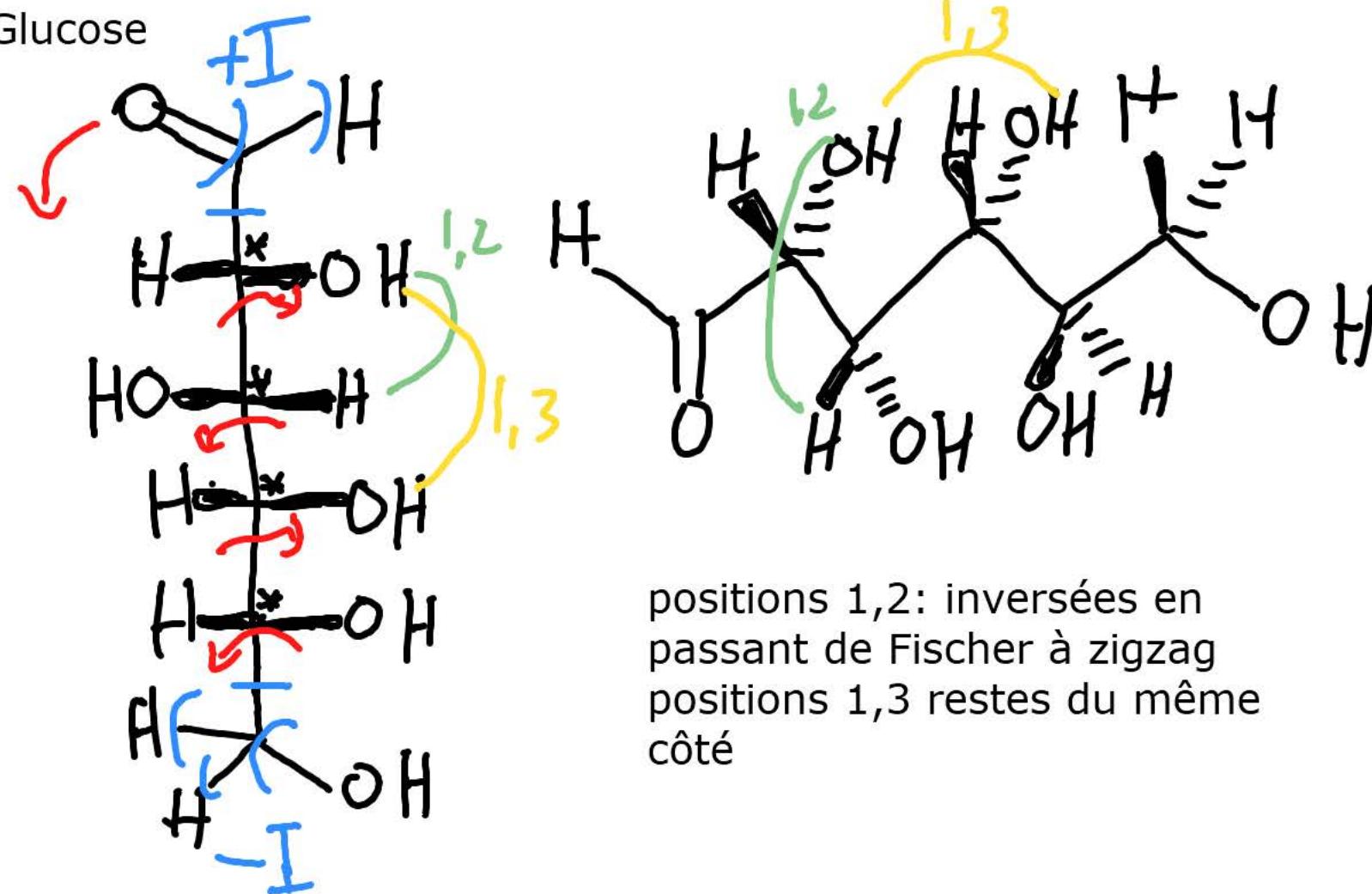
la molécule contient un plan de symétrie interne et est non chirale!



moléculles identiques!  
 $(2S,3R)$                      $(2R,3S)$

alphaD = 0

Glucose



positions 1,2: inversées en  
passant de Fischer à zigzag  
positions 1,3 restes du même  
côté