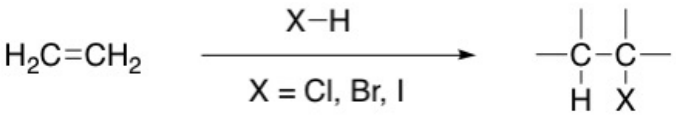
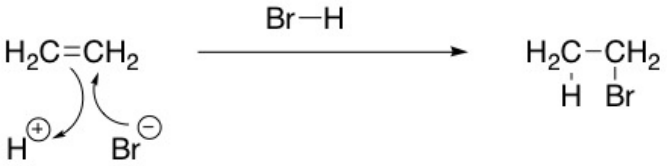
Addition Reactions

Hydrogen Halide (H-X)

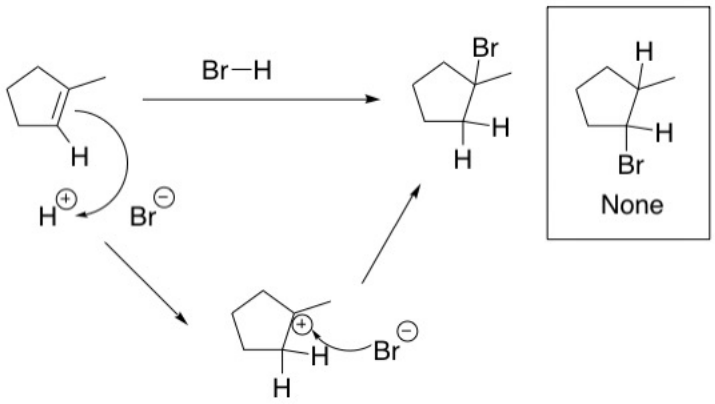


Reaction generally leads to syn/cis addition

Example 1: Ethylene



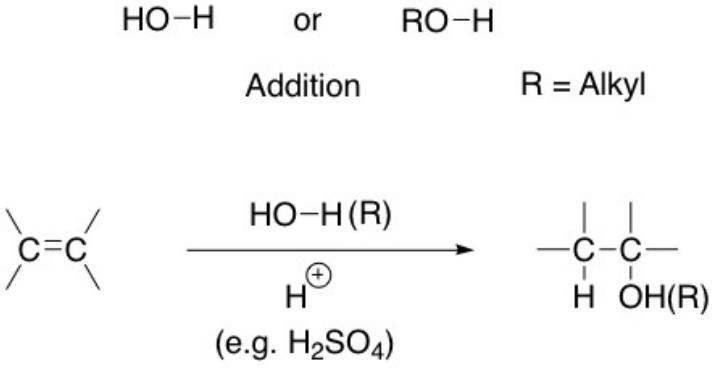
Example 2: 1-Methylcyclopent-1-ene



-Markovnikov addition

RECALL: Carbocation stability 3º > 2º > 1º > CH_3^+

Hydration and ether formation

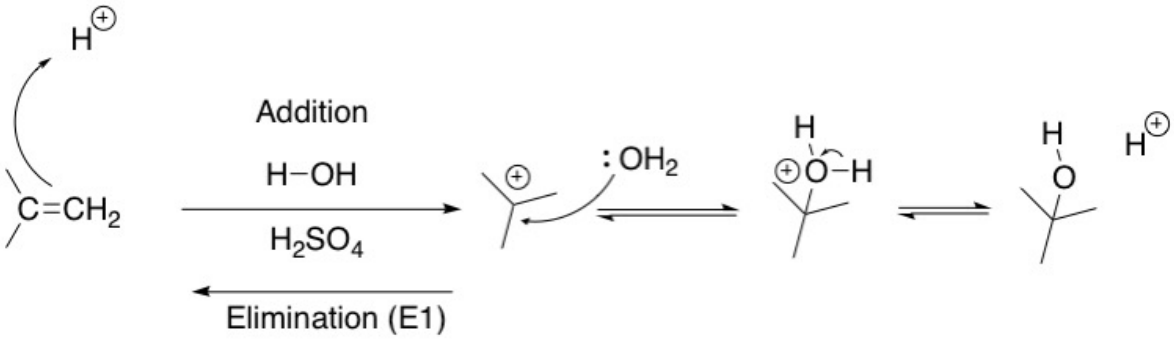


Not Stereospecific

Examples

Hydration (Water Addition)

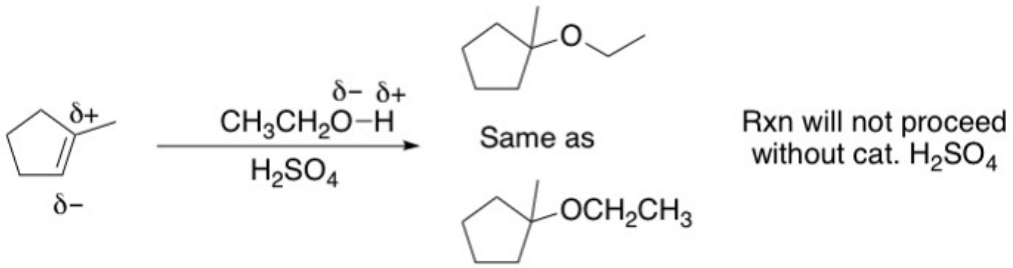
Ex #1)



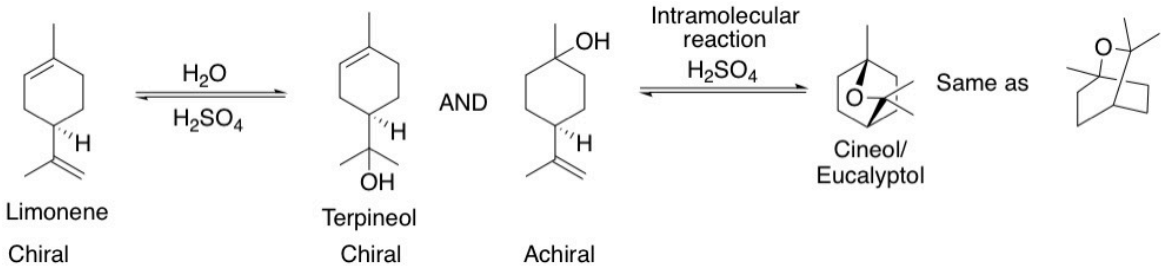
H_2SO_4 (H^+) is a catalyst, meaning that it is not transformed or used up in the reaction but is present to lower the activation energy.

Ether formation

Ex #1)



Ex #2)


H
H_2O
H_2SO_4
H
OH
AND
OH
H
Intramolecular
reaction
H_2SO_4
O
Same as
O
Limonene
Chiral
Terpineol
Chiral
Achiral
Cineol/
Eucalyptol