

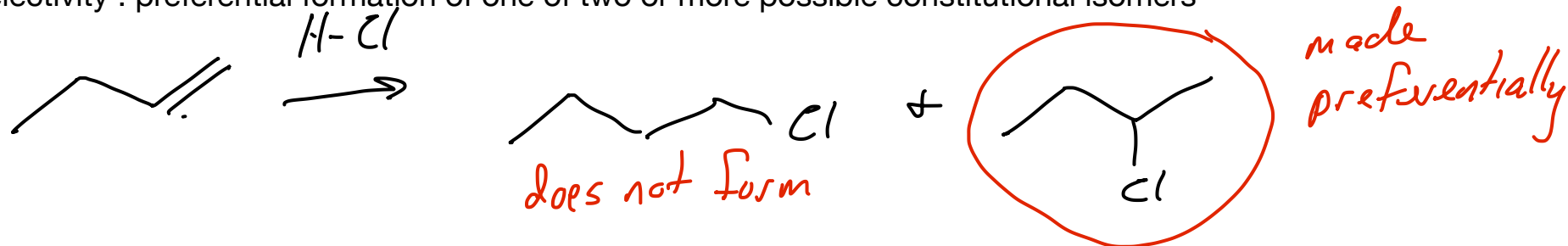
Today

Sections 6.12 and 6.13
Regioselectivity, stereoselectivity, and
stereospecificity

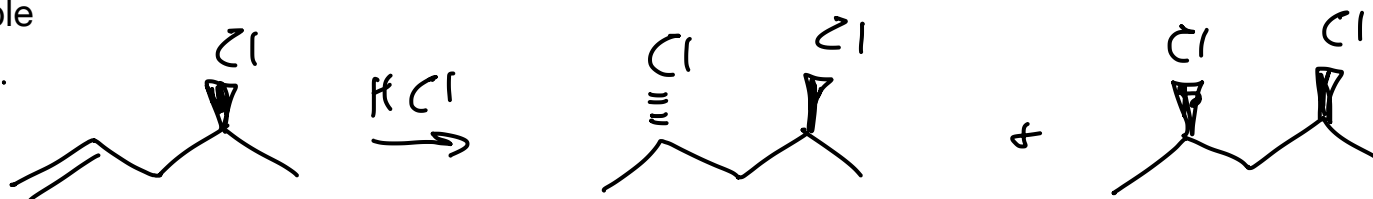
Next Class

Sections 6.12 and 6.13
Regioselectivity, stereoselectivity, and
stereospecificity

Regioselectivity: preferential formation of one of two or more possible constitutional isomers

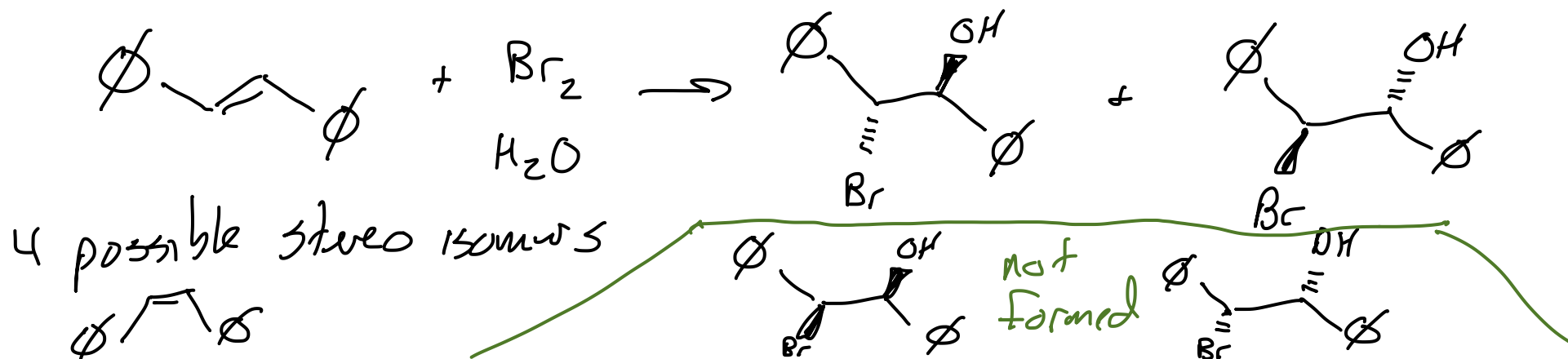


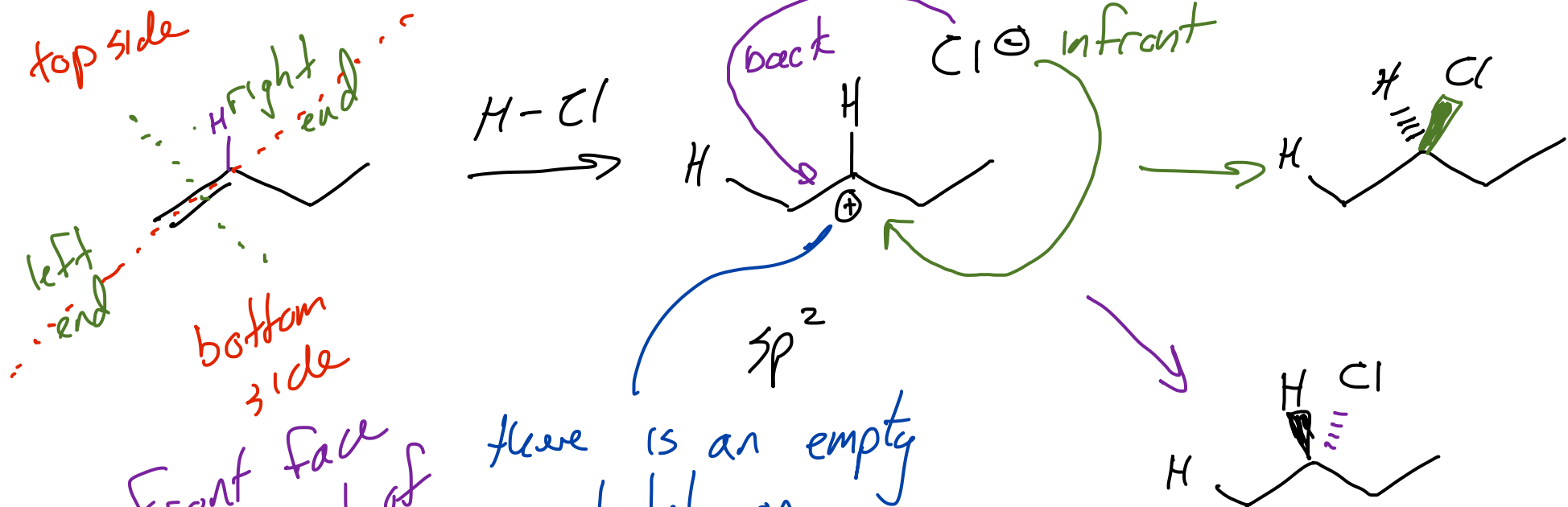
Stereoselectivity: the preferential formation of one stereoisomer over another when multiple stereoisomers are possible



if we make more of one of these diastereomers then the rxn is stereoselective

Stereospecificity: a reaction that produces different sets of stereoisomeric products from different stereoisomeric reactants





front face is in front of the screen
back face is behind the screen

there is an empty p orbital on this C⁺ which is perpendicular to the plane of the screen

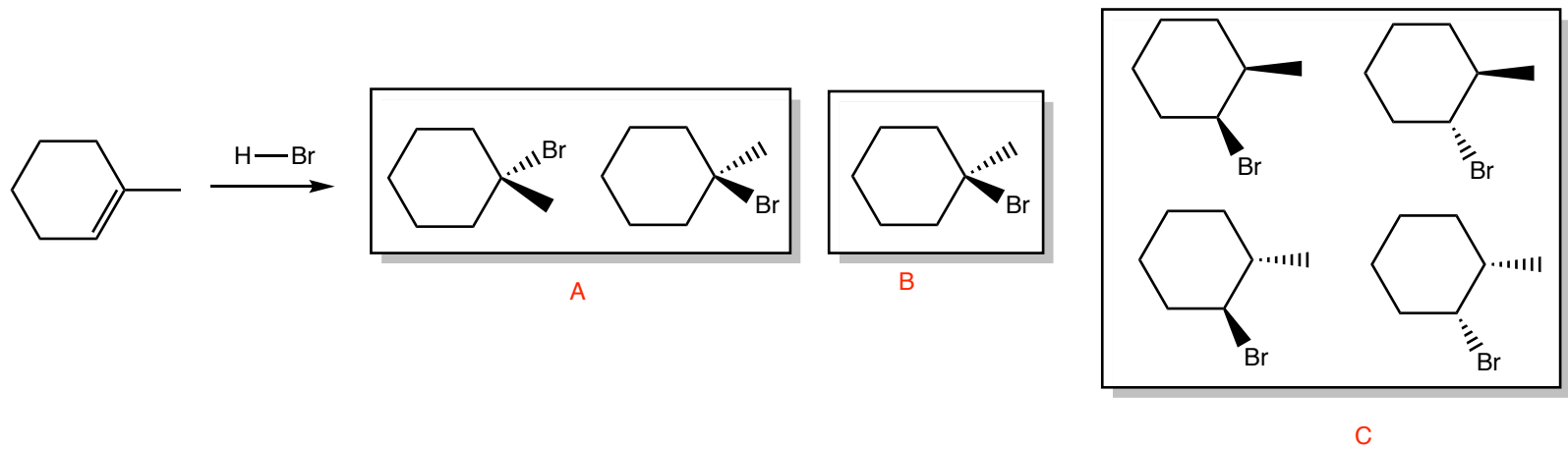
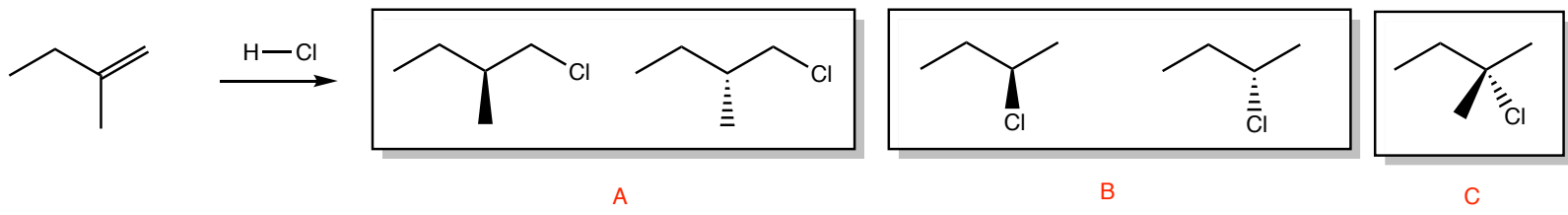
C⁺'s generated by H⁺ addition are planar and allow for both...

syn additions - E + Nu add to the same face of the db

anti addition - E + Nu add to opposite faces

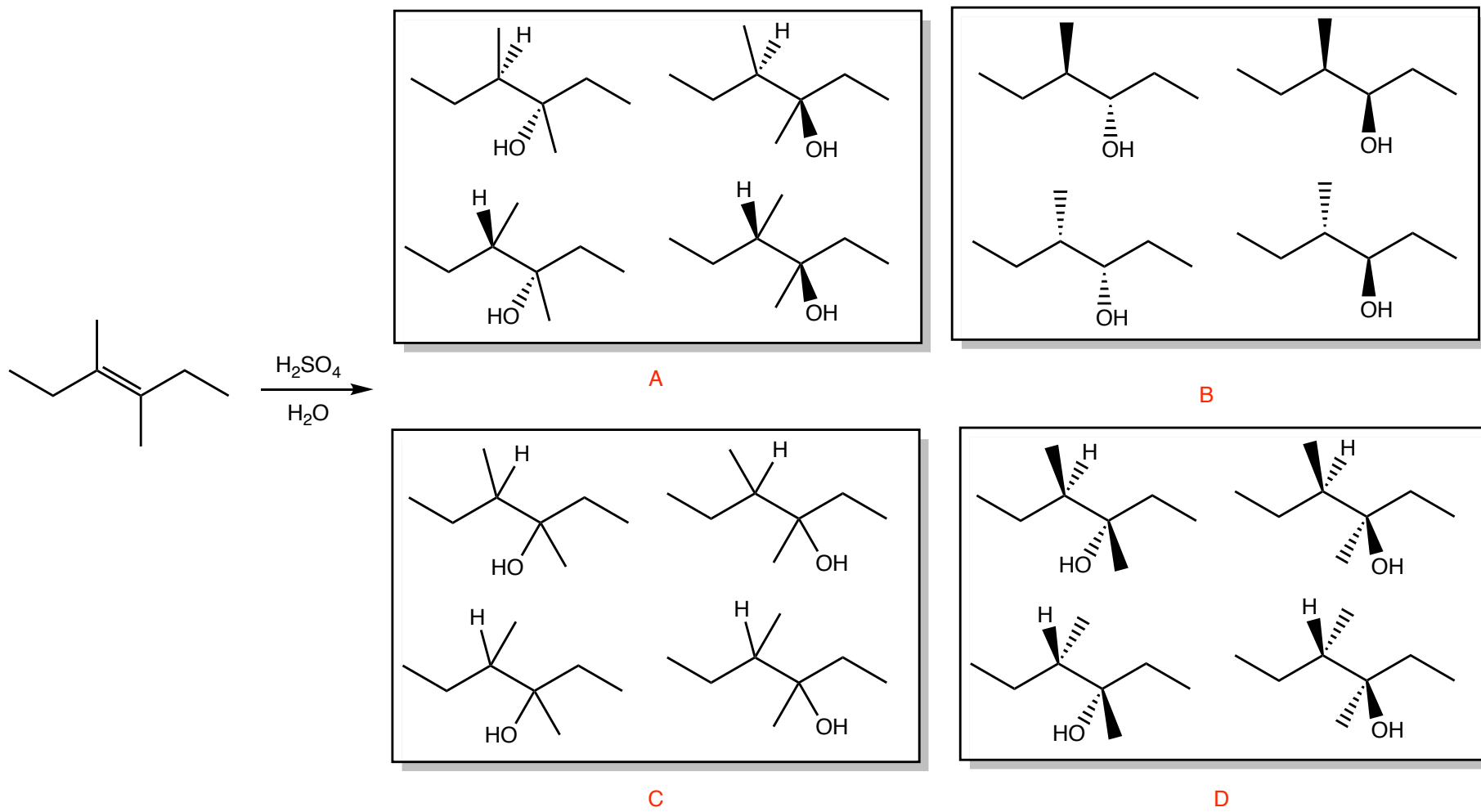
Reactions (predict major products)

Section



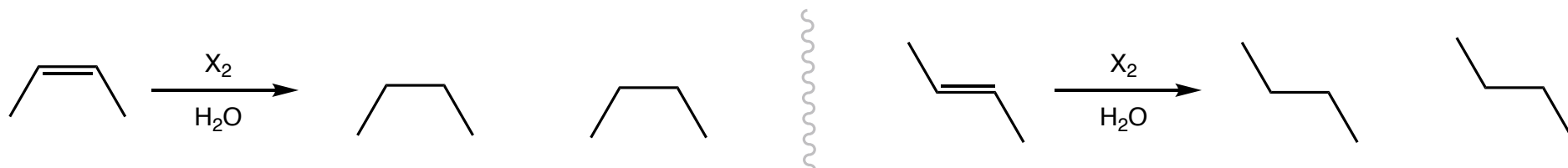
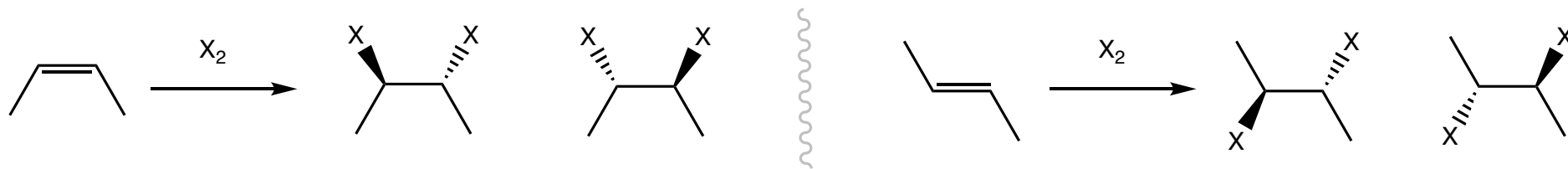
Reactions (predict major products)

Section



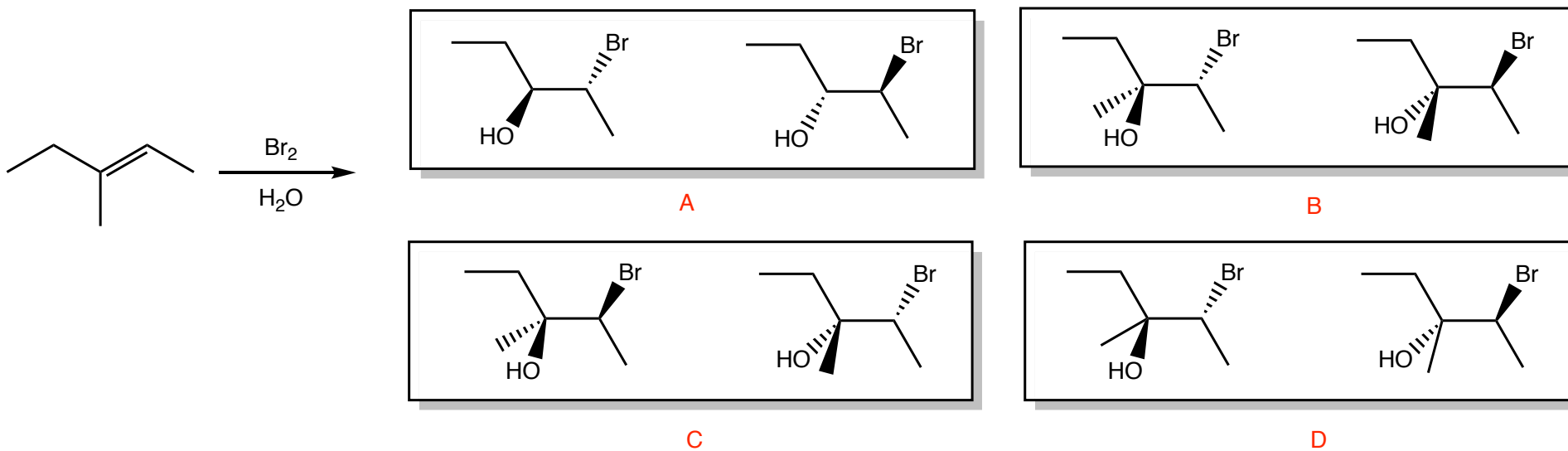
Addition of bromine and chlorine occur by an anti addition

Section 6.13



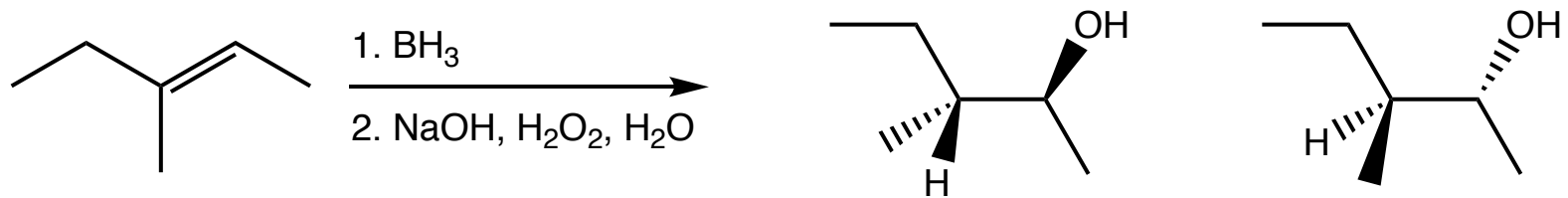
Reactions (predict major products)

Section



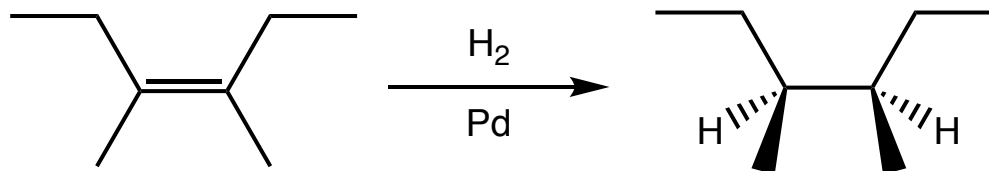
Hydroboration-oxidation occurs by a syn addition

Section 6.13

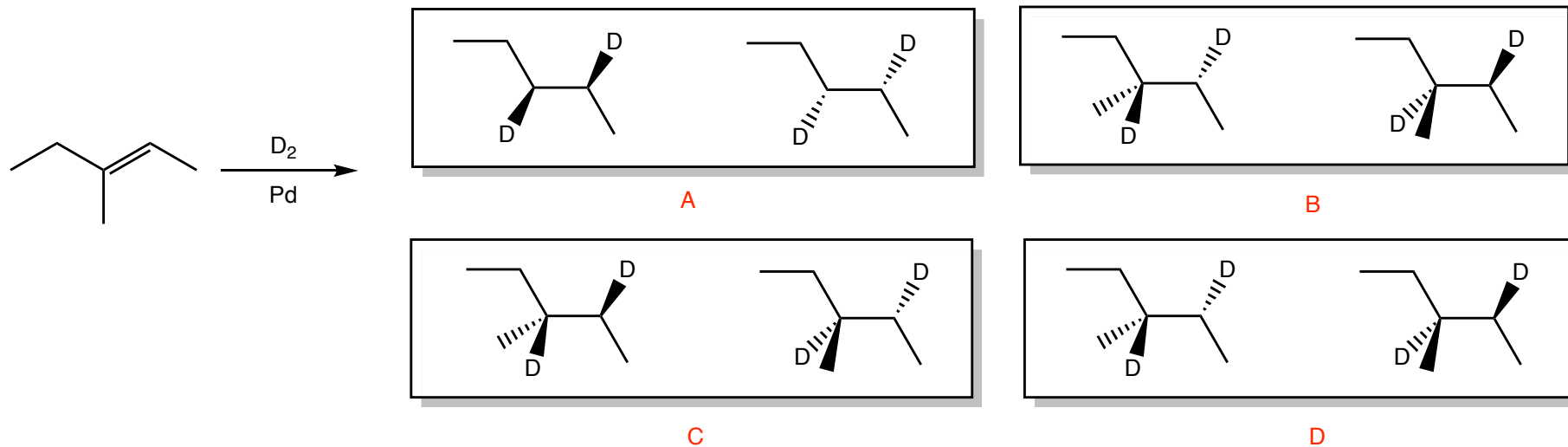
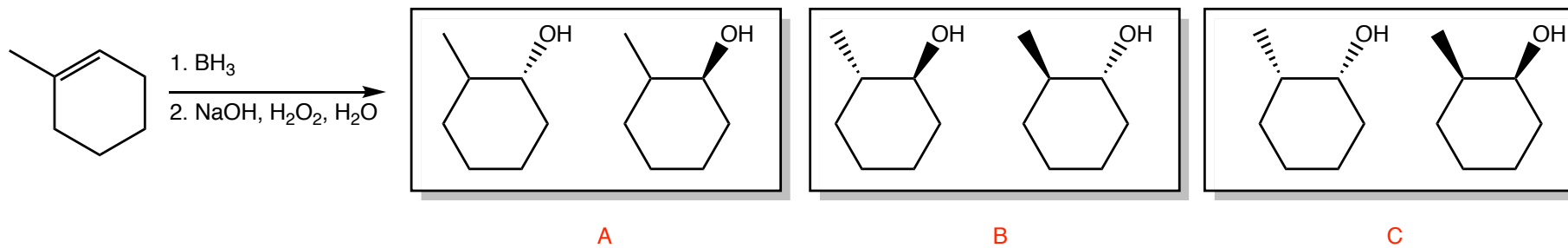


Pd catalyzed addition of H₂ occurs via syn addition

Section 6.13

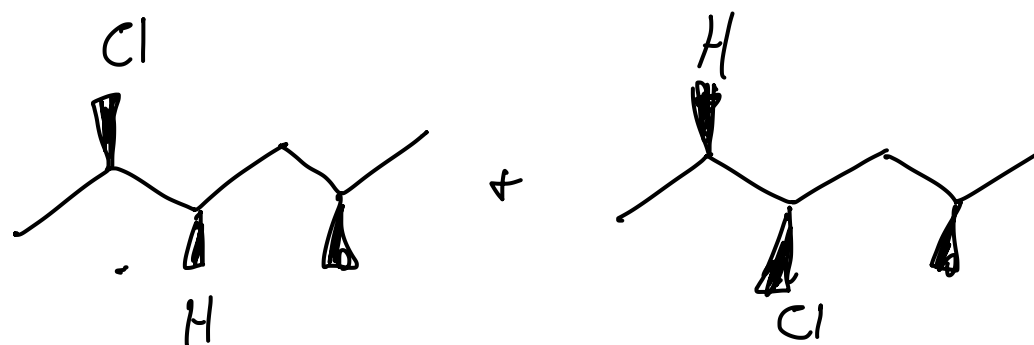
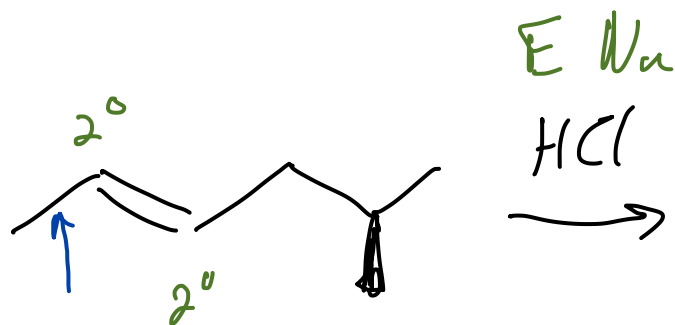
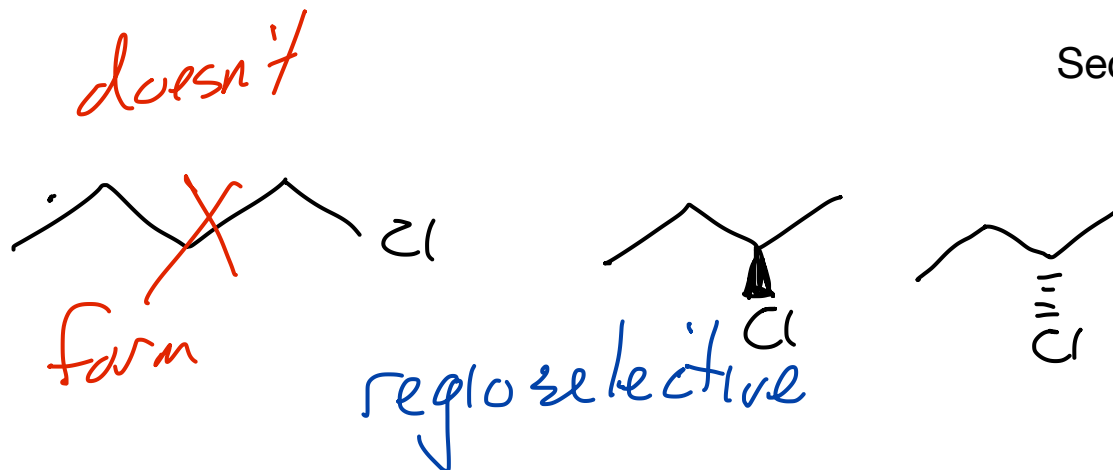
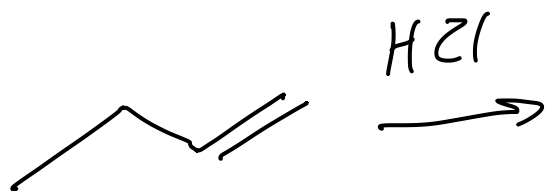


Reactions (predict major products)



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Section



not regioselective
50/50

