



Organic Chemistry

Arrow-Pushing Explained!

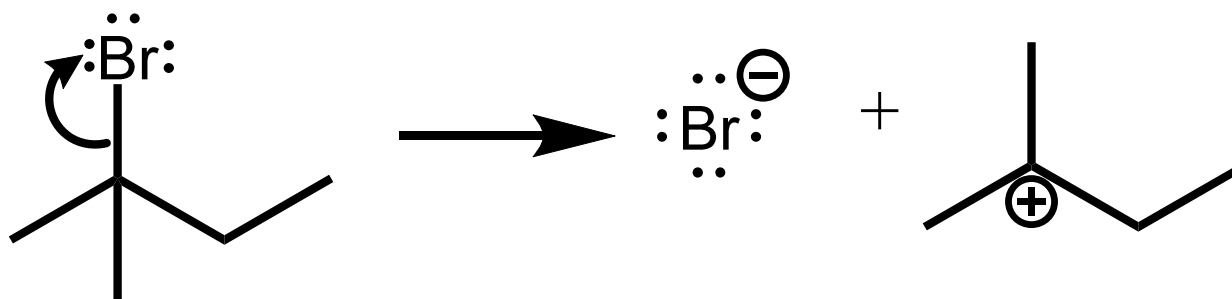
Resources at ProtonGuru.com (links in the description)

- Free textbook, problems, tutorial videos for ALL organic topics
- Free Organic MCAT and PCAT courses
- Test Prep scholarships (MCAT, etc.)

MCAT is © AAMC which is not affiliated with and does not sponsor or endorse this material. PCAT® is a registered trademark of Pearson Education, Inc., which is not affiliated with nor endorses this material.

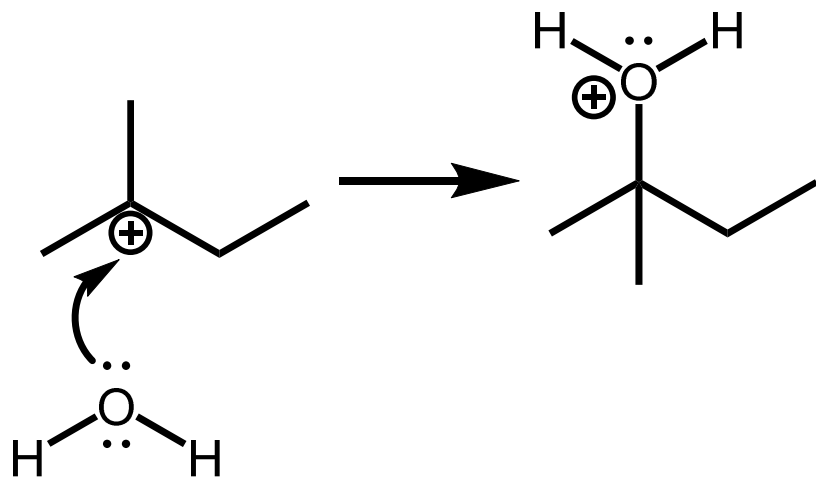
Elementary Steps of Reaction Mechanisms

Which elementary step occurs in the reaction step shown?



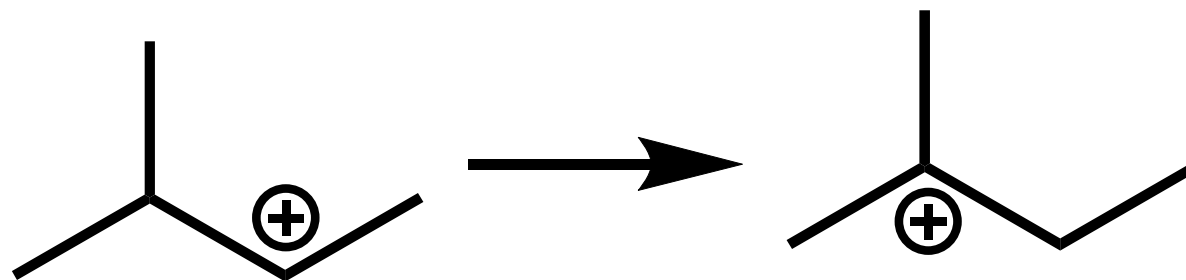
Elementary Steps of Reaction Mechanisms

Which elementary step occurs in the reaction step shown?



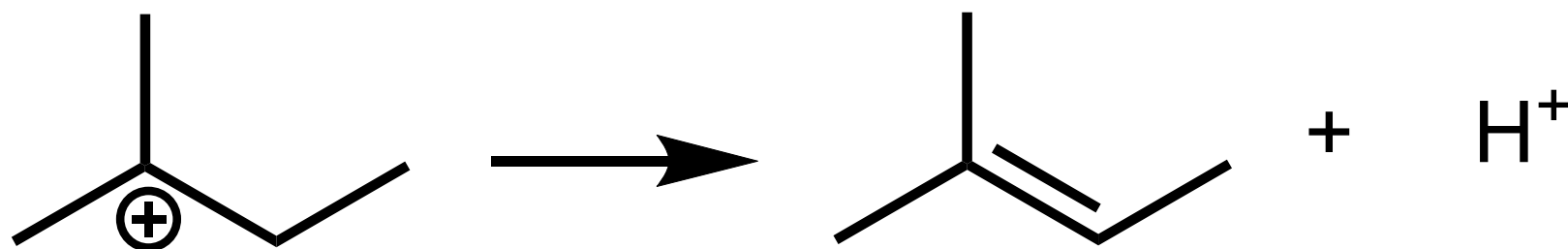
Elementary Steps of Reaction Mechanisms

Which elementary step occurs in the reaction step shown?



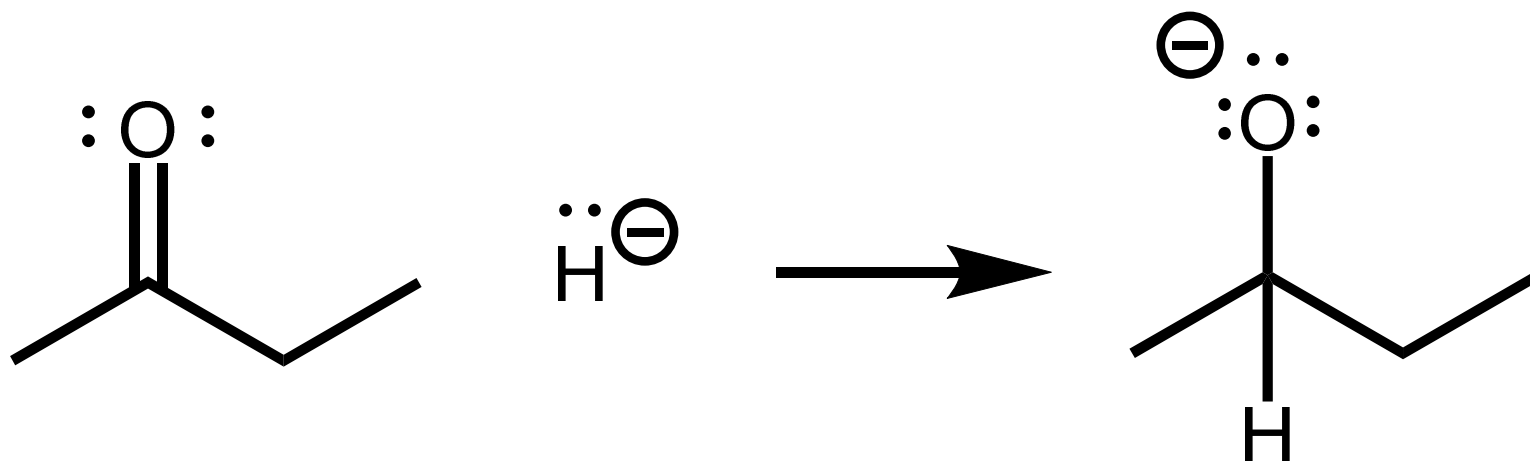
Elementary Steps of Reaction Mechanisms

Which elementary step occurs in the reaction step shown?



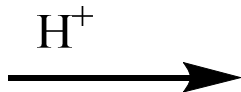
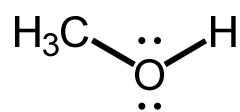
Elementary Steps of Reaction Mechanisms

Which elementary step occurs in the reaction step shown?



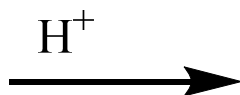
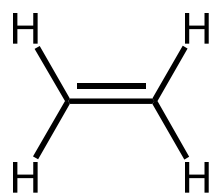
Elementary Steps of Reaction Mechanisms

Provide the product resulting from coordination of a proton to the oxygen atom of methanol (CH_3OH). Show curved arrows to demonstrate how electrons must flow to accomplish this reaction.



Elementary Steps of Reaction Mechanisms

Provide the product resulting from electrophilic addition of a proton to ethylene ($\text{H}_2\text{C}=\text{CH}_2$).



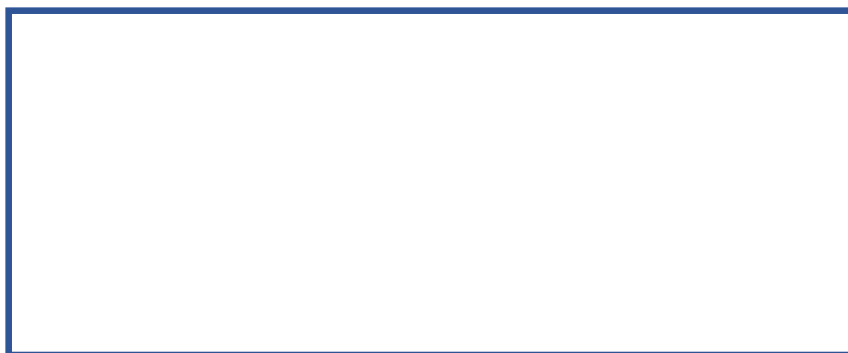
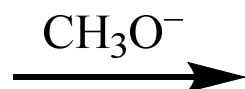
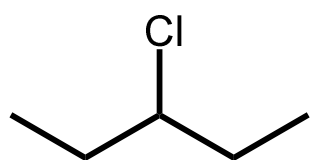
Elementary Steps of Reaction Mechanisms

Provide the product(s) resulting from electrophilic elimination of a proton from the cation shown below



Elementary Steps of Reaction Mechanisms

Provide the product(s) resulting from E2 reaction between the base and the alkyl halide shown below



Elementary Steps of Reaction Mechanisms

Provide the product resulting from S_N2 reaction between the nucleophile and the alkyl halide shown below

