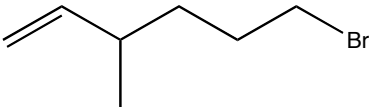
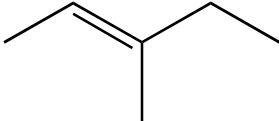
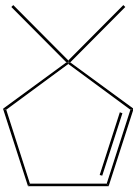
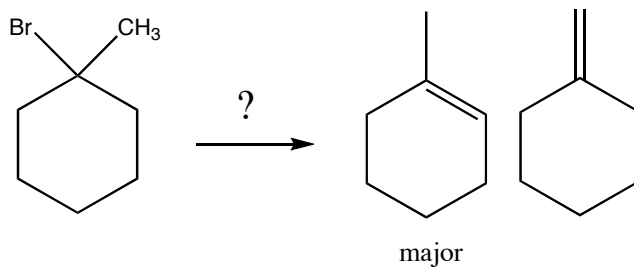
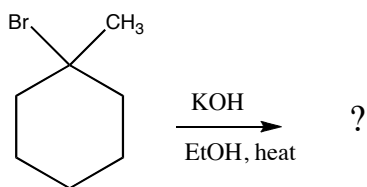
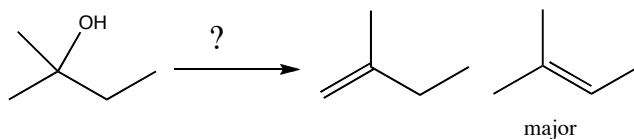
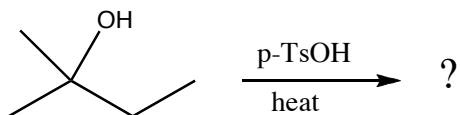
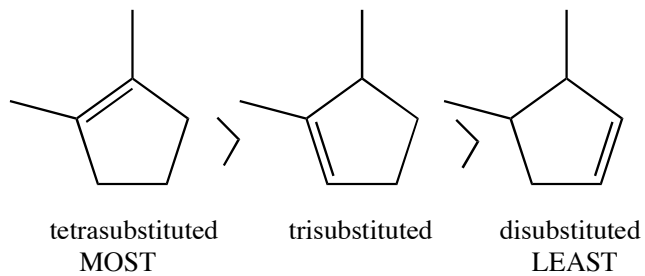
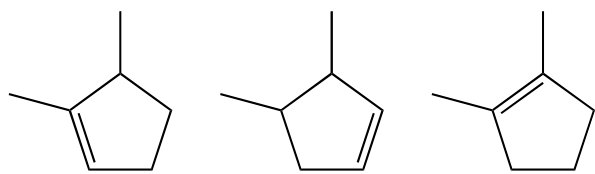


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|---|--|
| <p>IUPAC name for</p>  | <p>Draw the structure of 6-bromo-3-methyl-1-hexene</p> |
| <p>IUPAC name for</p>  | <p>Draw the structure of E-3-methyl-2-pentene</p> |
| <p>IUPAC name for</p>  | <p>Draw the structure of 3,3-dimethylcyclopentene</p> |
| <p>Order of priority according to Cahn-Ingold-Prelog rules: -OH, -NH₂, -Br</p> | <p>-Br > -OH > -NH₂</p> |
| <p>Order of priority according to Cahn-Ingold-Prelog rules: -CH₂CH₃, -CH₂Br, -CH₂CHBr₂</p> | <p>-CH₂Br > -CH₂CHBr₂ > -CH₂CH₃</p> |

Order of stability of the following alkenes:

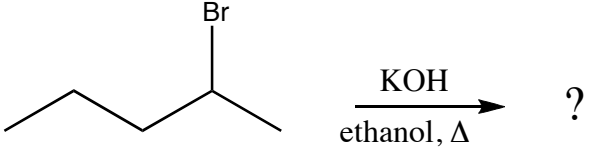
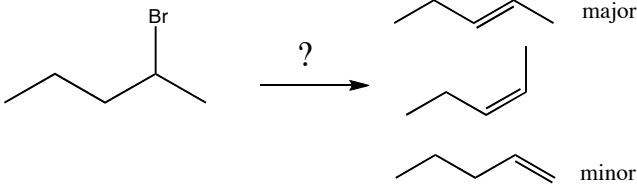
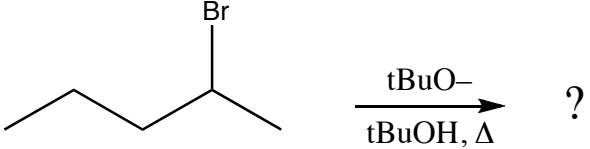
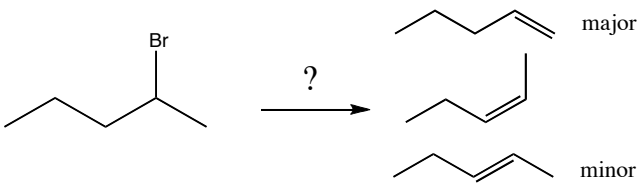


Rate Law for E2 reaction

Rate = $k [\text{RX}][\text{base}]$

Rate Law for E1 reaction

Rate = $k [\text{RX}]$

| | |
|---|---|
|  <p>Reaction of 2-bromobutane with KOH in ethanol and heat (Δ) to form an alkene.</p> |  <p>Reaction of 2-bromobutane with a base to form a mixture of 2-butene (major) and 1-butene (minor).</p> |
|  <p>Reaction of 2-bromobutane with $t\text{BuO}^-$ in $t\text{BuOH}$ and heat (Δ) to form an alkene.</p> |  <p>Reaction of 2-bromobutane with a base to form a mixture of 2-butene (major) and 1-butene (minor).</p> |
| <p>Examples of small bases that give Zaitsev elimination predominantly</p> | <p>HO^-, CH_3O^-, $\text{CH}_3\text{CH}_2\text{O}^-$, H_2N^- <i>Each with any counterion</i></p> |
| <p>Examples of large bases that give Hofmann elimination predominantly</p> | <p>$t\text{BuO}^-$, LDA, DBU, DBN</p> |
| <p>Conditions for dehydration of alcohols</p> | <p>H_2SO_4 or H_3PO_4, alcohol and heat</p> |

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| <p>Characteristics of an E2 reaction mechanism</p> | <p>A. good leaving group B. strong base C. bimolecular transition state D. single, concerted reaction E. polar protic solvent F. heat G. rate = $k[\text{base}][\text{RX}]$</p> |
| <p>Characteristics of an E1 reaction mechanism</p> | <p>A. good leaving group B. weak base C. unimolecular transition state D. multistep reaction E. Carbocation intermediate (rearrangement possible) F. polar protic solvent G. rate = $k[\text{RX}]$ H. heat</p> |
| <p>Conditions that favor E2 over SN2</p> | <p>A. E2 favored by polar protic solvent; SN2 by polar aprotic solvent B. E2 favored by bulky strong bases; SN2 by small strong nucleophiles C. E2 favored by heating; SN2 by not heating</p> |
| <p>Conditions that favor E1 over SN1</p> | <p>Generally, both are favored by the same conditions (weak nucleophile, 3° substrates, polar protic solvent). Heating favors E1 over SN1, however.</p> |
| <p>Zaitsev elimination vs Hofmann elimination</p> | <p>Elimination process in which the most stable alkene product is formed vs Elimination process in which the least stable alkene product is formed</p> |