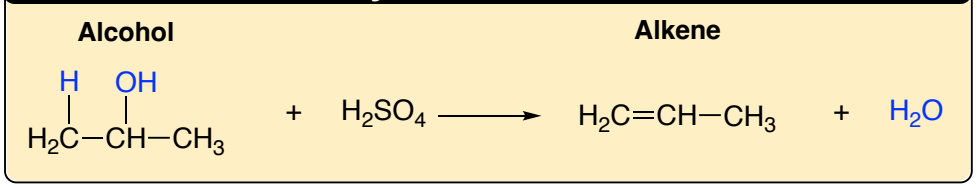
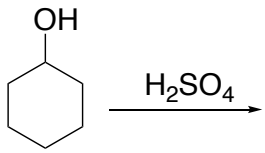
CONCEPT: ALCOHOL REACTIONS: DEHYDRATION REACTIONS

- Under this type of reaction _____ reacts with an alcohol to form an alkene through the loss water.
  - □ To form the double bond the alcohol carbon loses its _____ and its neighboring carbon loses an _____ atom.

Dehydration Reactions



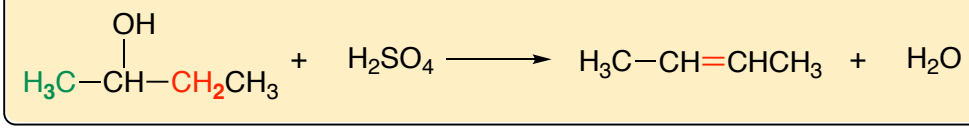
EXAMPLE: Determine the elimination product formed in the following reaction.



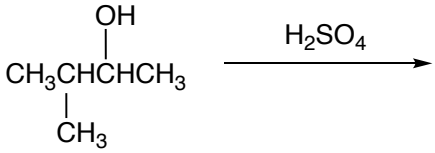
Zaitsev's Rule

- Loss of H_2O follows *Zaitsev's Rule*.
  - □ Used when the neighboring carbons have _____ numbers of Hs.
  - □ **Zaitsev's Rule:** _____ atom is lost from alcohol C, _____ atom is lost from neighboring C with _____ Hs.

Dehydration Reactions

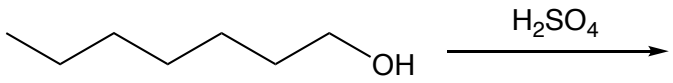


EXAMPLE: Determine the elimination product formed in the following reaction.



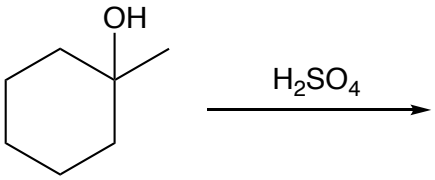
CONCEPT: ALCOHOL REACTIONS: DEHYDRATION REACTIONS

PRACTICE: Determine the name of the alkene product formed in the following dehydration reaction.



a) *cis*-1-heptene b) 2-heptene c) 1-heptene d) *trans*-1-heptene

PRACTICE: Determine the name of the alkene product formed in the following dehydration reaction.



a) 1-methylcyclohexene b) 4-methylcyclohexene c) 2-methylcyclohexene d) 3-methylcyclohexene