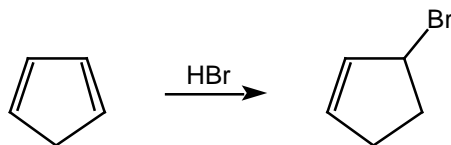
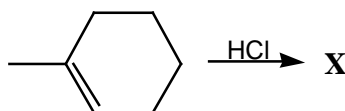


Problem Set #8  
CH241-2001F

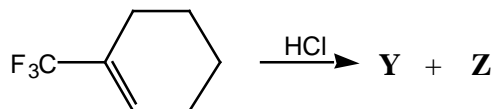
- [1] Suggest two different (but related) mechanisms for the following reaction, and a simple experiment to distinguish one from the other.



- [2] Addition of HCl to 1-methylcyclohexene produces a single product **X**.



- What is **X** and how is it formed?
- Would the reaction be endothermic or exothermic? By how much? (Use table on p 279 in text.)
- Carefully draw, and label, an energy diagram to describe this reaction.
- Give the structure of another alkene which will also lead to **X** as the sole product upon addition of HCl.
- The following reaction, however, might be expected to produce two products, **Y** and **Z**. What are they, and how might they be formed? (Hint: **Y** and **Z** can *each exist* as a pair of enantiomers.)



- [3] Propose reasonable mechanisms for the following reactions.

