

**CH0310, ORGANIC CHEMISTRY I**  
**Professor Dennis P. Curran**  
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Quiz 7, Take home, due midnight Friday, Feb. 27, 2009

Submit the quiz in pen, or Xerox/fax/scan your pencil copy

Hand in before/after class  
Drop off at 1101 CSC (before 5 pm)  
Fax to 412-624-9861 (till midnight)  
Email to lynne@pitt.edu (till midnight, pdf file only)

**S<sub>N</sub>1 Substitution Reactions, E1 Elimination Reactions, and Carbocations**

To prepare:

- read Chapter 7.1-7.6
- review lecture notes for February 20, 23 and 25
- Do problems 22-30 and 34-36, 40, 42 in Chapter 7

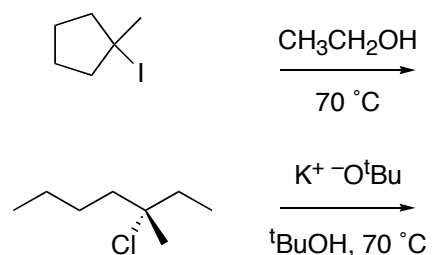
You need to be able to predict the products of typical S<sub>N</sub>1 reactions and E1 reactions. You need to be able to write step-by-step mechanisms for these reactions that included properly written arrows to show electron flow (see class notes and reactions on pp 253-254). You need to understand the structure and stability of carbocations.

NAME

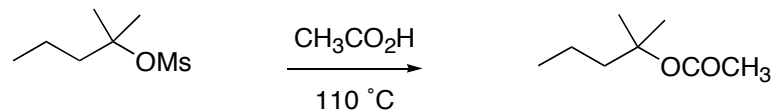
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**S<sub>N</sub>1 Substitution Reactions, E1 Elimination Reactions, and Carbocations**

- 1) Show all the products of the following reactions. Be careful to decide first whether you expect *substitution* or *elimination* (4 points)



- 2) Write a step-by-step mechanism for the following reaction. Clearly show the reactants and products of each step. Use arrows to track electron flow. (4 points)



- 3) Rank the following carbocations in order in increasing stability (that is, most stable last). (2 points)

