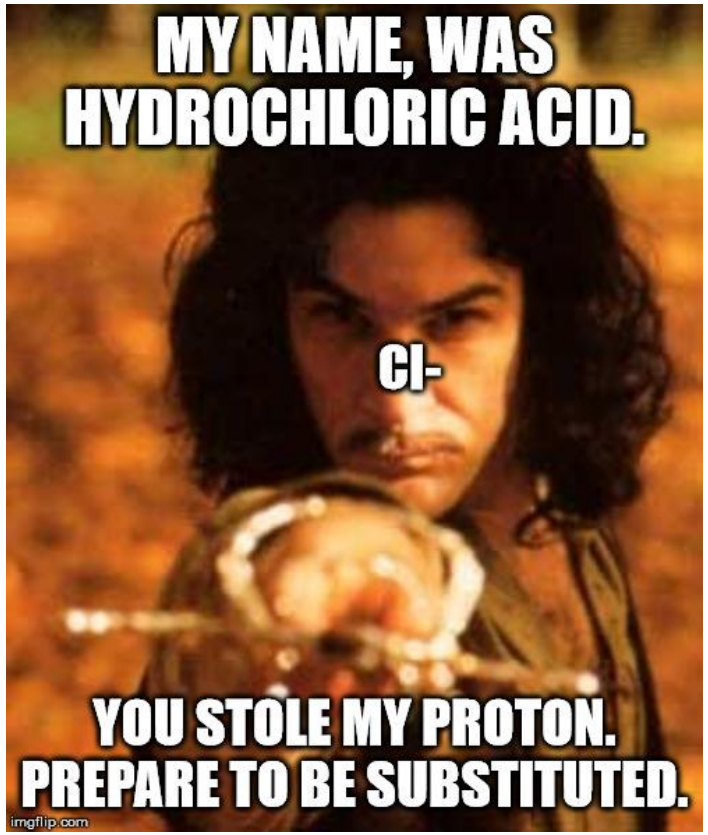
Nov 18- 22 Practice Problems

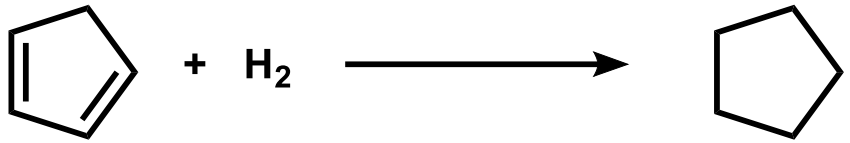


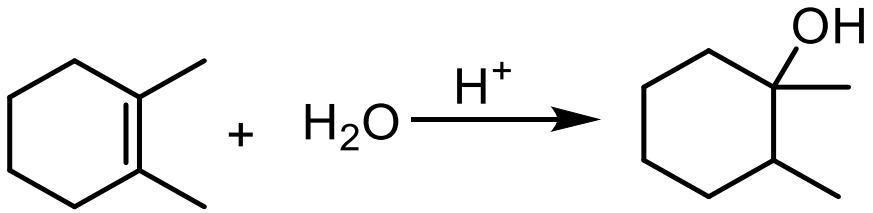
Quiz 8 this week – on last week's content

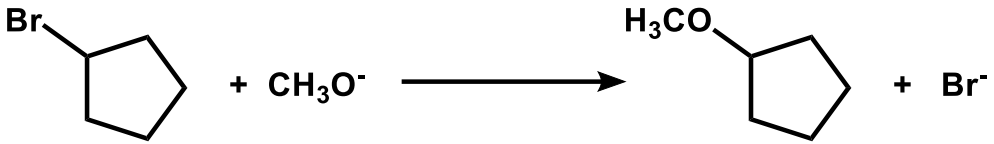
Graded Review end of this week as usual

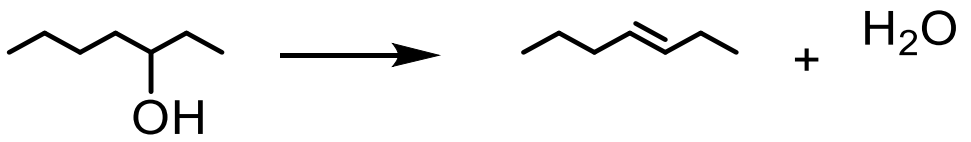
Office hours **Tuesday 5:30 pm to 6:30 pm in 104 Pulp and Paper Building**

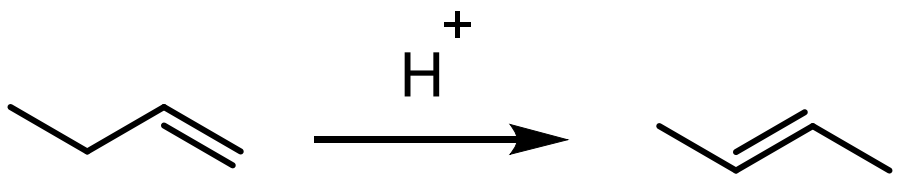
Q1. Classify the following reactions

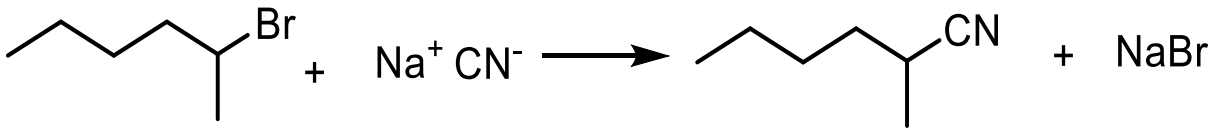












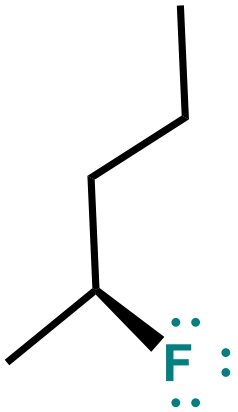
Q2. Electrophiles and nucleophiles

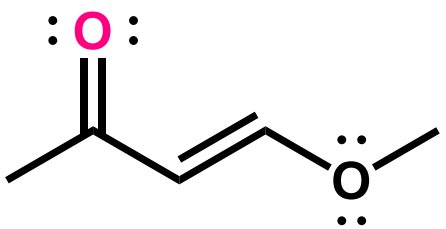
a) What is the definition of an electrophile? Provide one example.

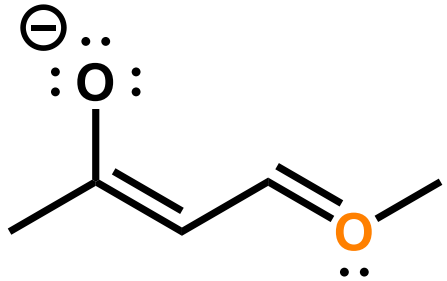
b) Rank the following nucleophiles from weakest nucleophile (# 4 starting on the left) to strongest nucleophile (ending on the right at # 1). Provide an explanation for the ranking.

Nucleophiles	Rank	Explanation
Cl^-, F^-, Br^-, I^-	4 3 2 1	
CH_3^-, OH^-, NH_2^-, F^-	4 3 2 1	

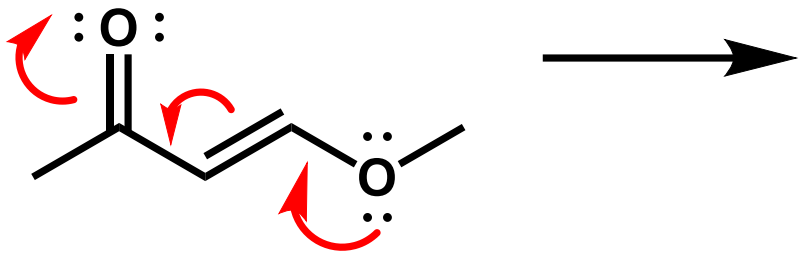
Q3. Determine the formal charge on the colored atoms. Show your work.

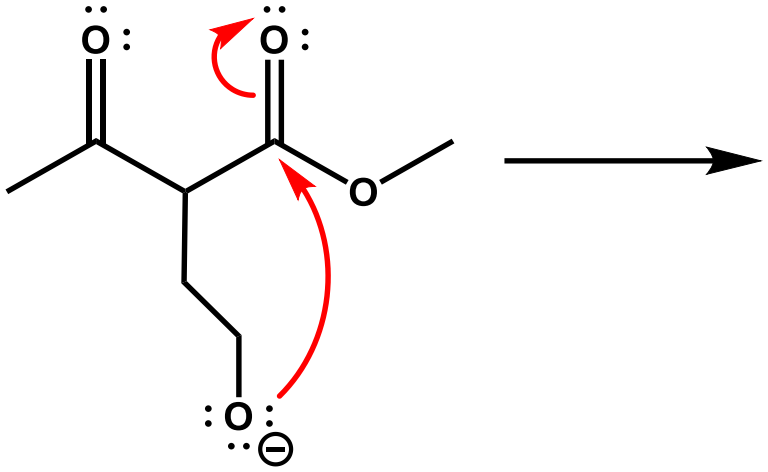






Q4: Show the product of the following arrow pushing





Q5: Show all steps of the mechanism of the reaction between 2-bromopropane and sodium iodide as an SN1 reaction. Include all transition states and intermediates. Add the lone pairs involved in the reaction.

Q6. Use reaction energy diagrams to compare exothermic and endothermic E1 reactions. Be sure to include all the labels.

Q7. Show the movement of the electrons with arrows and then draw the products of heterolytic cleavage

Q8. Predict the products. Draw as skeletal diagrams.