Discussion Worksheet #7

Reagents, Mechanisms, Products

Skill 2: Propose mechanisms for a mixture of reactions

* Given starting materials and products, first determine the type of reaction (so far, this could be acid/base, radical halogenation, or electrophilic addition)
* Identify Lewis acids/Lewis bases (Nucleophiles and electrophiles)
* Apply the general mechanisms you have learned to the particular problem.

Problem 1: Propose mechanisms for these reactions.



Problem 2. Propose a mechanism to explain why this reaction does not undergo radical halogenation or do a Cl2 addition.



Problem 3: Why do these reactions not work as written to produce the given product?



Skill 2: Predict the products for a mixture of reactions

* First, consider the starting material and reagents to determine the type of reaction (radical halogenation, electrophilic addition, etc.)
* Based on the mechanism, determine regiochemistry if necessary.
* Based on the mechanism, determine if a rearrangement occurs.
* Based on the mechanism, determine stereochemistry if necessary.

Problem 4. Predict the major product of these reactions. Include all stereochemistry.



Problem 5. Predict the major product of these reactions. Include all stereochemistry.



Skill 3: Provide reagents for a mixture of reactions

* First, consider the starting material and products to determine the type of reaction (radical halogenation, electrophilic addition, etc.)
* Consider whether or not there is a stereochemical requirement.
* Consider whether or not a rearrangement happened.

Problem 6. Provide the reagents necessary for the following transformations.

