1. (2 points) Which of the following is the first step in the general mechanism for electrophilic aromatic substitution reactions?

![Mechanism Diagram]

2. (2 points) Give the product of the following reaction:

![Reaction Diagram]
3. (1 point) Which reaction is not an example of electrophilic aromatic substitution?
   a. 
   
   b. 
   
   c. 
   
   d. 

BONUS: (1 point) What is the name of the reaction of which problem 2 is an example?