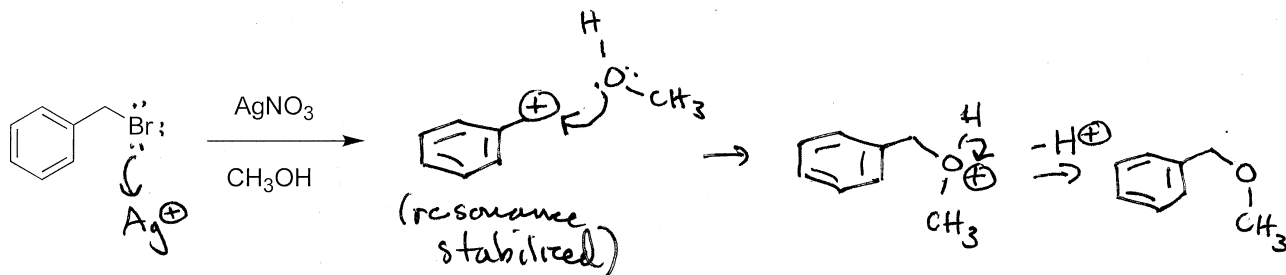
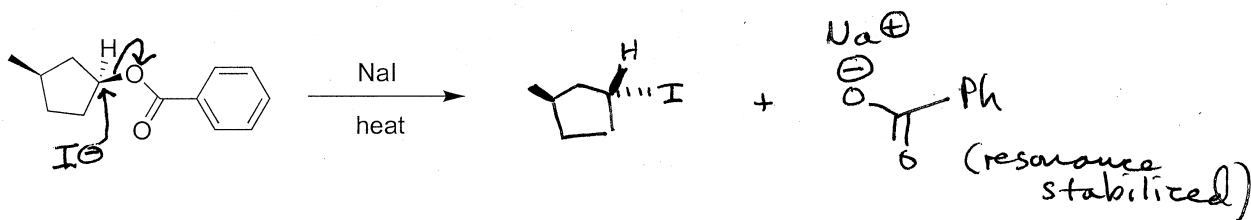


1. (6 pts each) **Indicate the products and show the mechanism** of the following reactions, using "curved arrow formalism" as we've used in class. Show the **molecular geometry and stereochemistry** of any structures clearly. You need to show ALL intermediates.



2. (6 pts each) For the following reactions, indicate **ALL** product(s) formed, including those which are enantiomers. Consider **ONLY substitution** reactions (not eliminations). "No Substitution Reaction" IS a possibility: for those which you label "No Substitution Reaction," state the reason why no reaction occurs. For every example where there IS a reaction, label the reaction as either S_N1 or S_N2 . A detailed mechanism is not necessary.

