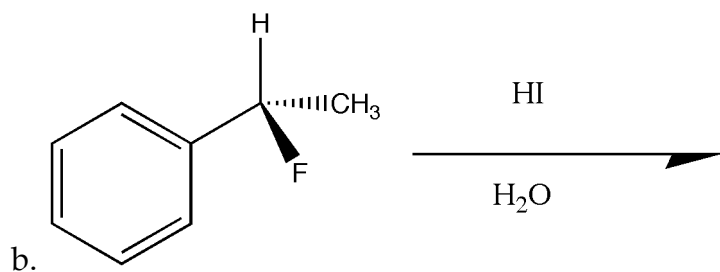
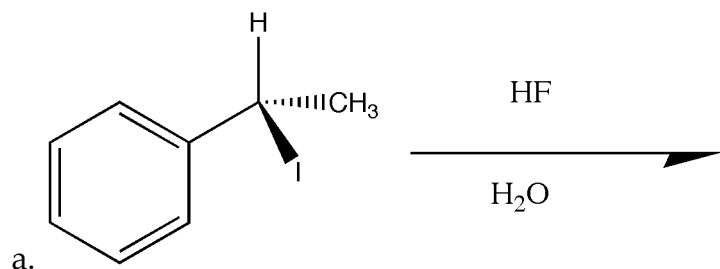


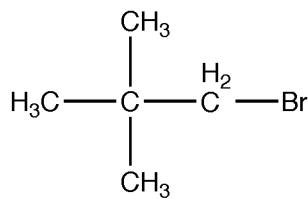
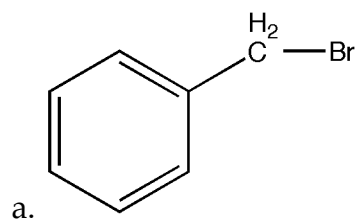
Exercise 4: Substitution reactions

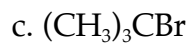
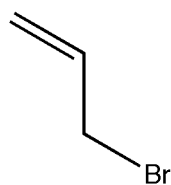
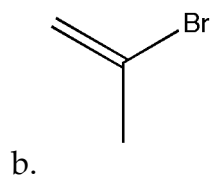
1. Predict the major product(s) for the following S_N2 mechanism reactions. Pay attention to stereochemistry!



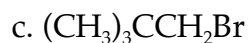
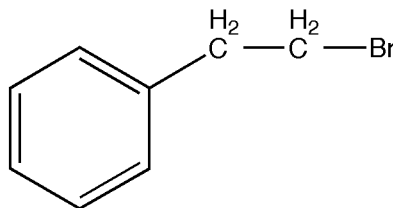
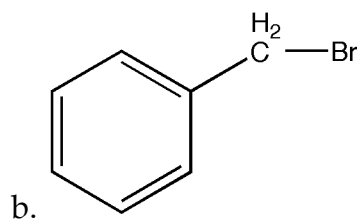
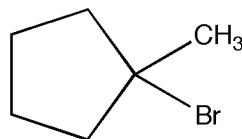
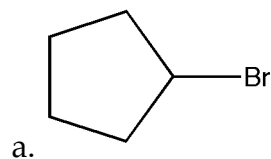
c. What characteristic of the larger molecule in either case might **prevent** these reactions from occurring, anyway?

2. Which compound of the following pairs would be the first to precipitate AgBr from an $AgNO_3$ solution? Hint: this will be an S_N1 mechanism!





3. Which of the following pairs of compounds would result in the most rapid precipitation of NaBr from an NaI/acetone solution? Hint: what kind of reaction mechanism are these, anyway?



d. Is **acetone** a protic solvent? So which type of nucleophilic substitution are these?

e. NaBr is a sodium salt! Why would you expect NaBr to **precipitate** (i.e., not dissolve) in this solvent?