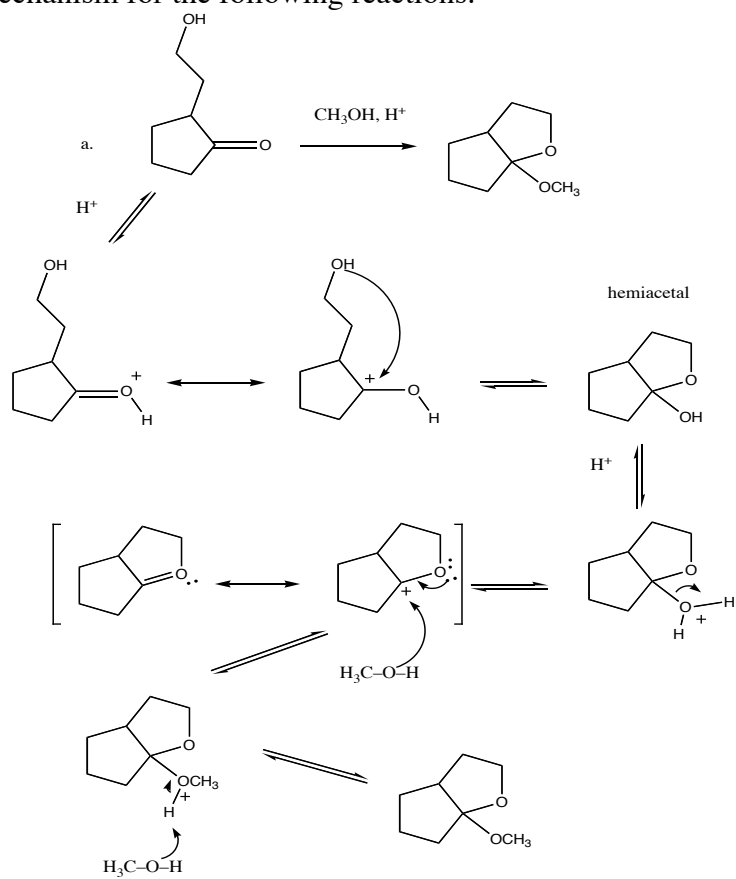
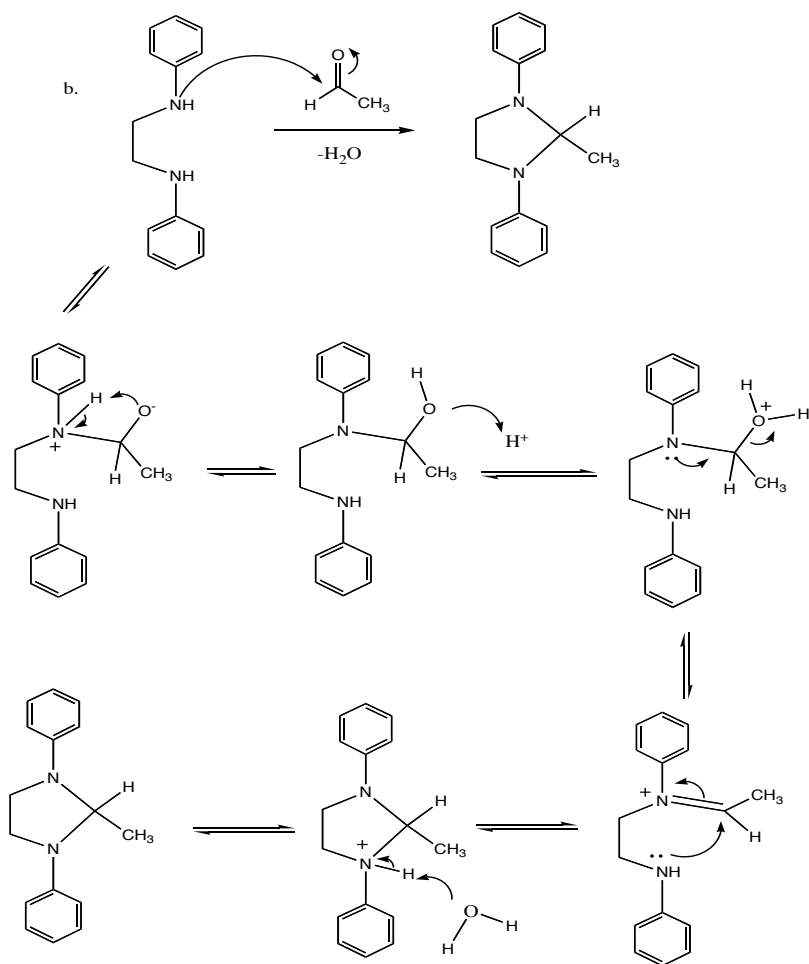


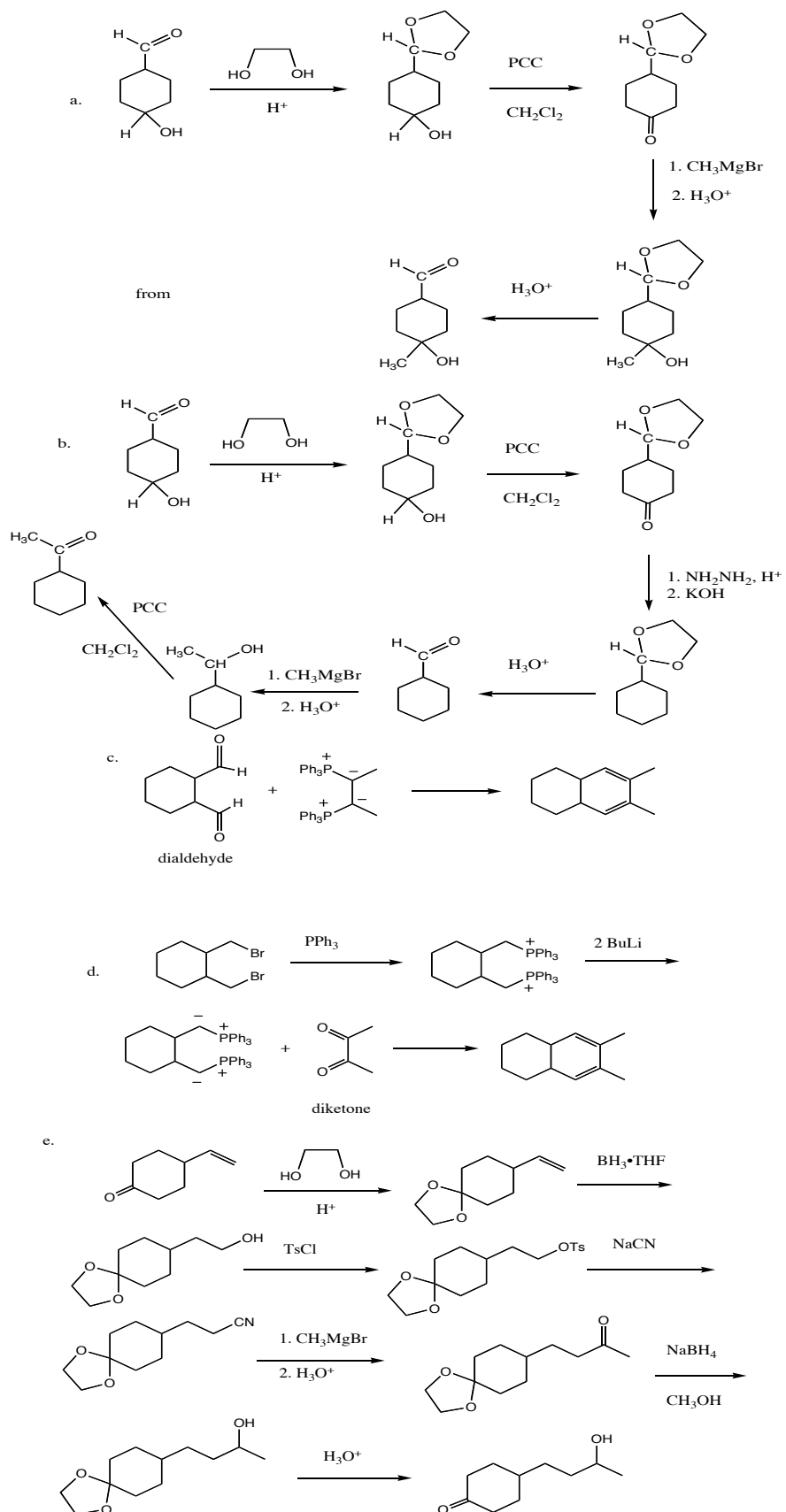
Additional Problems for Practice:

1. Show a mechanism for the following reactions:

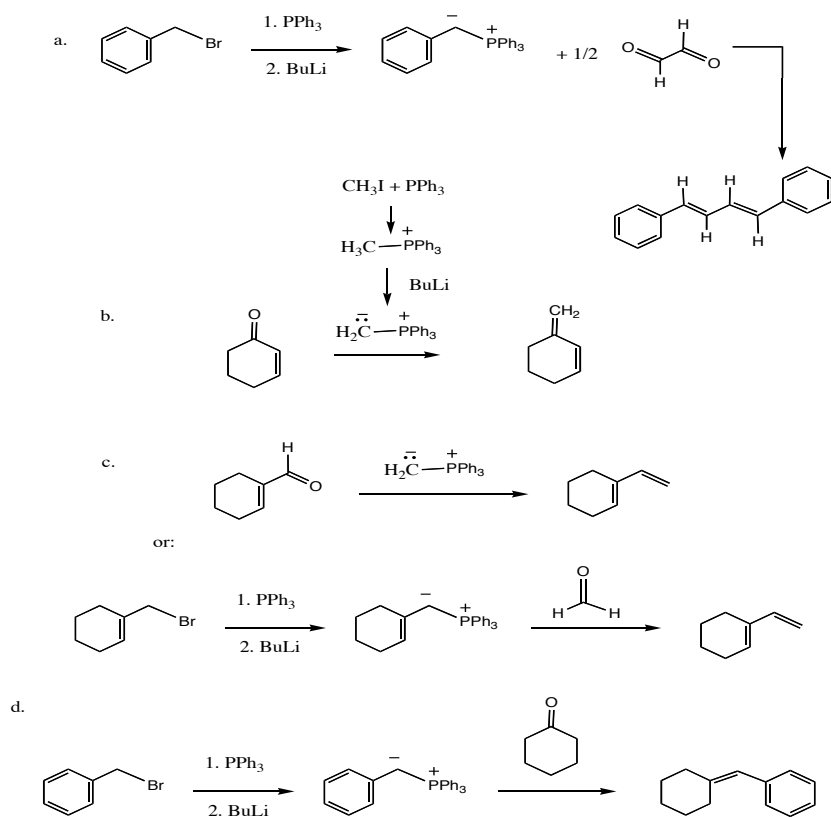




2. Propose efficient syntheses of each of the following molecules, beginning with the indicated starting materials:



3. Show how the Wittig reaction might be used to prepare these alkenes. Identify the alkyl halides and carbonyl components that would be used.



4. Why does glucose react with the Tollens reagent while glucose  $\alpha$ -methyl glycoside does not? Draw a mechanism for the transformation of glucose into its  $\alpha$ -methyl glycoside in acidic methanol.

