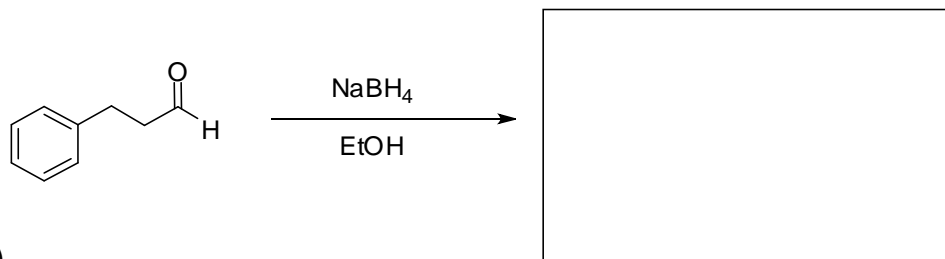


Recitation Questions

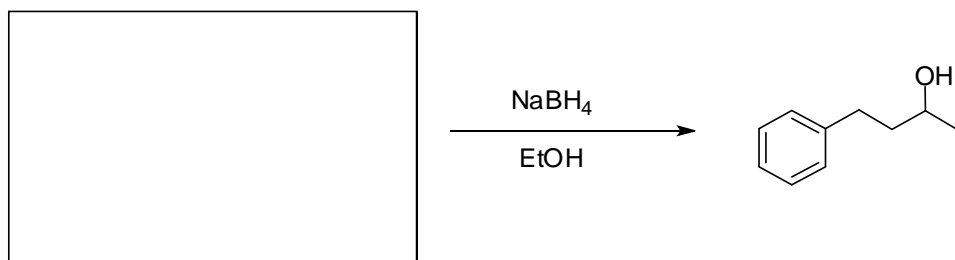
March 2, 2012

1. Provide the products or starting materials of the following reactions.

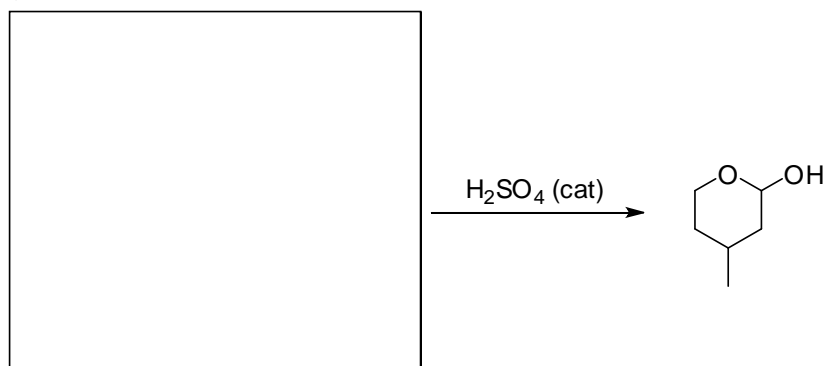
a)



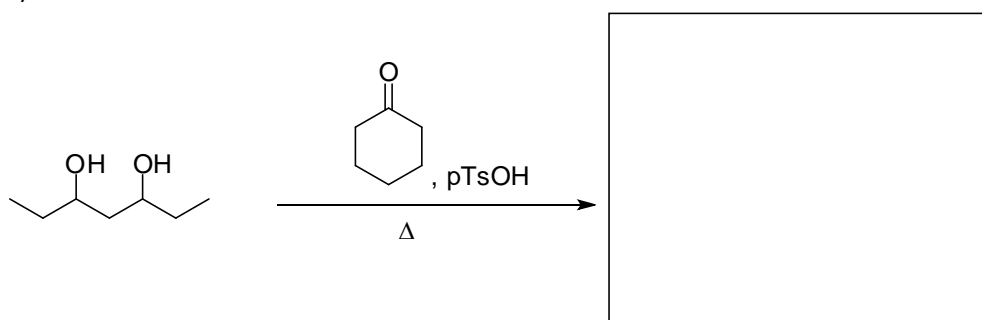
b)



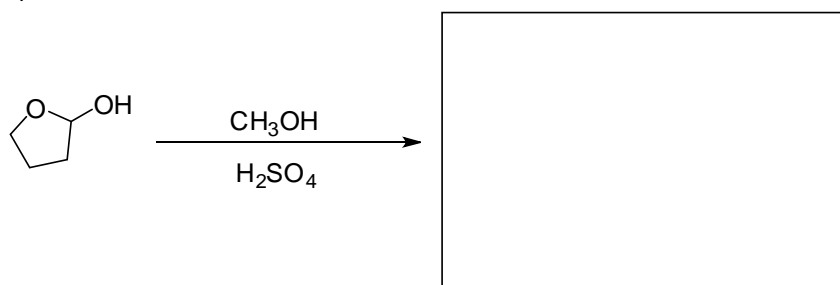
c)



d)

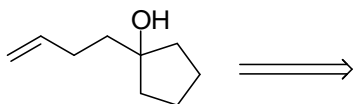


e)

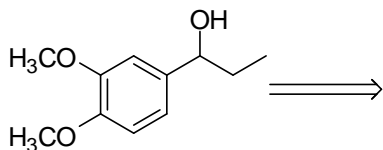


2. Show all the possible Grignard reaction combinations that can be used to synthesize the following materials; include the alkyl halide that could be used to make the Grignard reagent.

a)

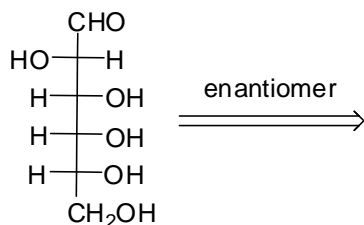


b)



3. Complete the questions about the monosaccharide drawn below.

a) Is the altrose monosaccharide drawn below a D or L sugar?



altrose

b) Draw an enantiomer of the altrose isomer in the space above.

4. The tetrahydropyranyl (THP) ether group can be used to react with alcohols and protect them, and in particular their acidic proton, from strong bases. Draw the mechanism of the THP reaction with the primary alcohol shown below.

*Hint: the first step is reaction of the pTsOH acid with the THP molecule. Try to determine the most nucleophilic carbon on the THP structure.*

