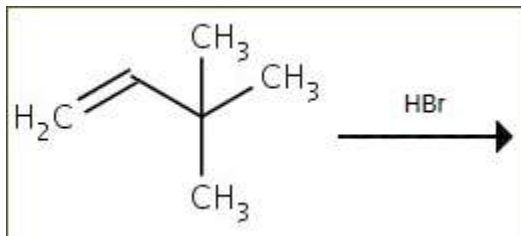
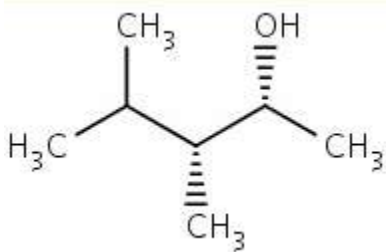


ACE Organic – Assignment 6

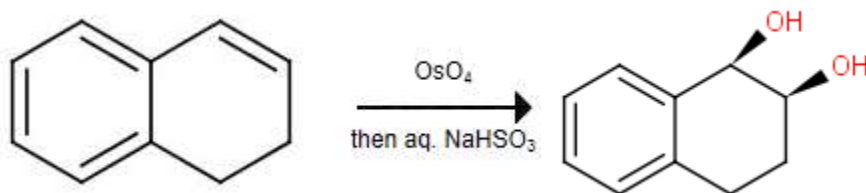
- (1) Give the major product obtained from the following reaction:



- (2) Draw the alkene you would use to make the alcohol shown.

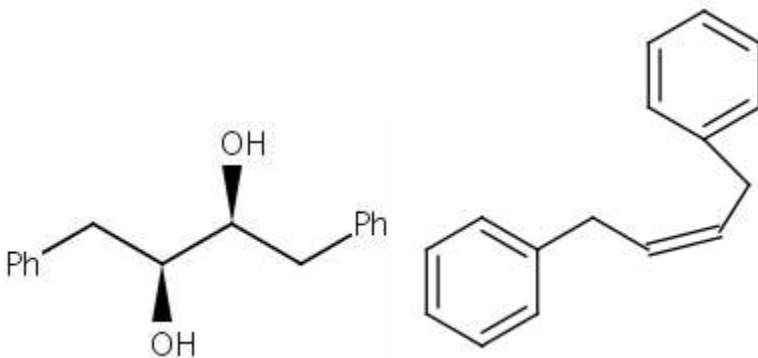


- (3) Draw the product of the reaction shown.



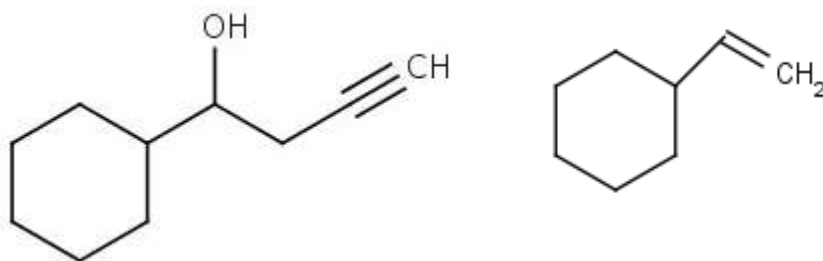
Comment: Right! Syn-dihydroxylation of the alkene occurs. The double bonds in the benzene ring remain untouched.

- (4) Draw the alkene that, upon reaction with a peracid and then NaOH, would give the 1,2-diol shown.

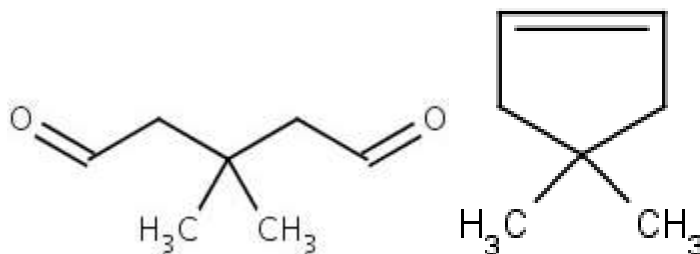


Comment: Good! This reaction sequence results in overall anti dihydroxylation, so the starting alkene must be cis to give the required diastereomer.

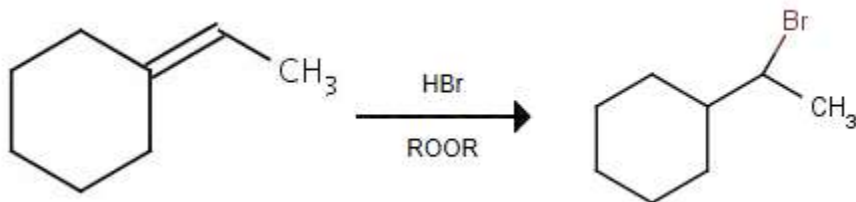
- (5) Draw an alkene that could be used to make the alkynyl alcohol shown. Hint: A C–C bond-forming reaction is one of the steps that will convert the alkene into the compound shown.



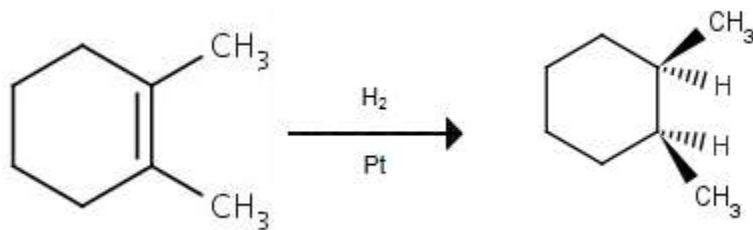
- (6) What alkene could be used to make this dialdehyde?



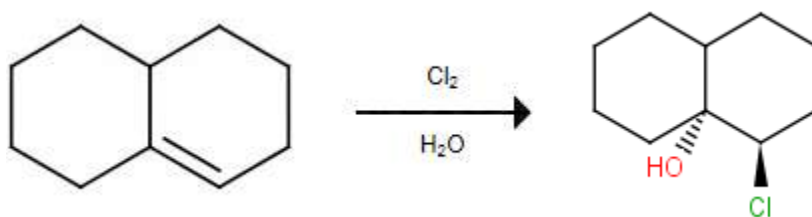
- (7) Predict the major product of the following reaction. Show the relative stereochemistry if the product has two or more stereocenters. If no reaction is expected, just draw the starting material.



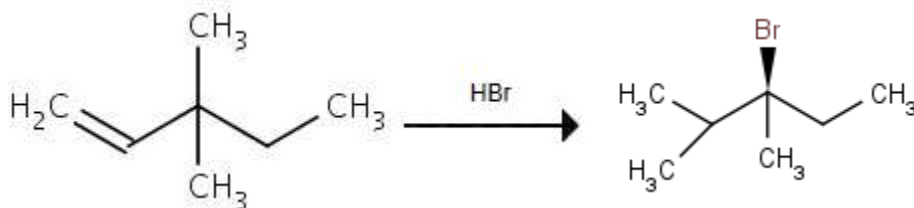
- (8) Predict the major product of the following reaction. Show the relative stereochemistry if the product has two or more stereocenters. If no reaction is expected, just draw the starting material.



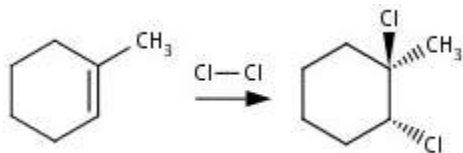
(9) Predict the major product of the following reaction. Show the relative stereochemistry if the product has two or more stereocenters. If no reaction is expected, just draw the starting material.



(10) Predict the major product of the following reaction. Show the relative stereochemistry if the product has two or more stereocenters. If no reaction is expected, just draw the starting material.



(11) Draw a mechanism for this reaction. All compounds involved in each stage of the mechanism must be enclosed in a box, and each box must be connected to the next one with a straight arrow. Use electron-flow (curved) arrows to show the movement of electrons in each step. Your mechanism should be consistent with the stereochemistry shown, but do not indicate the stereochemistry of any compounds in your mechanism.



NOT SURE ☹