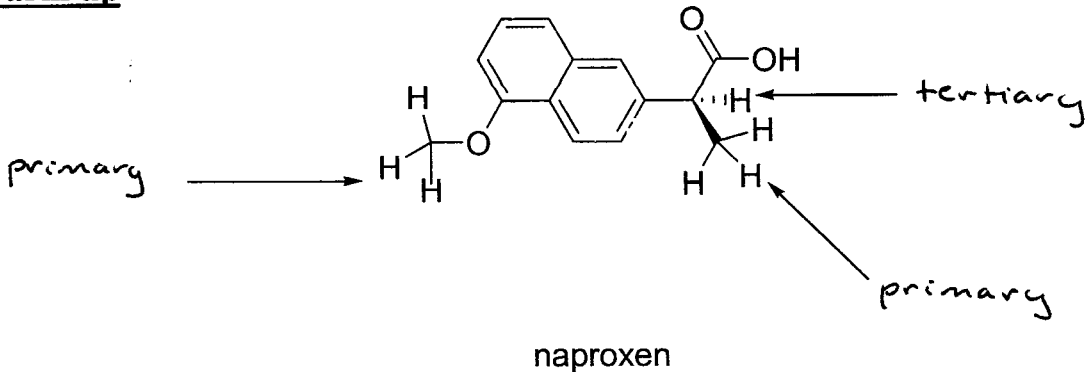


Chem 30A- Week 7

Warm up



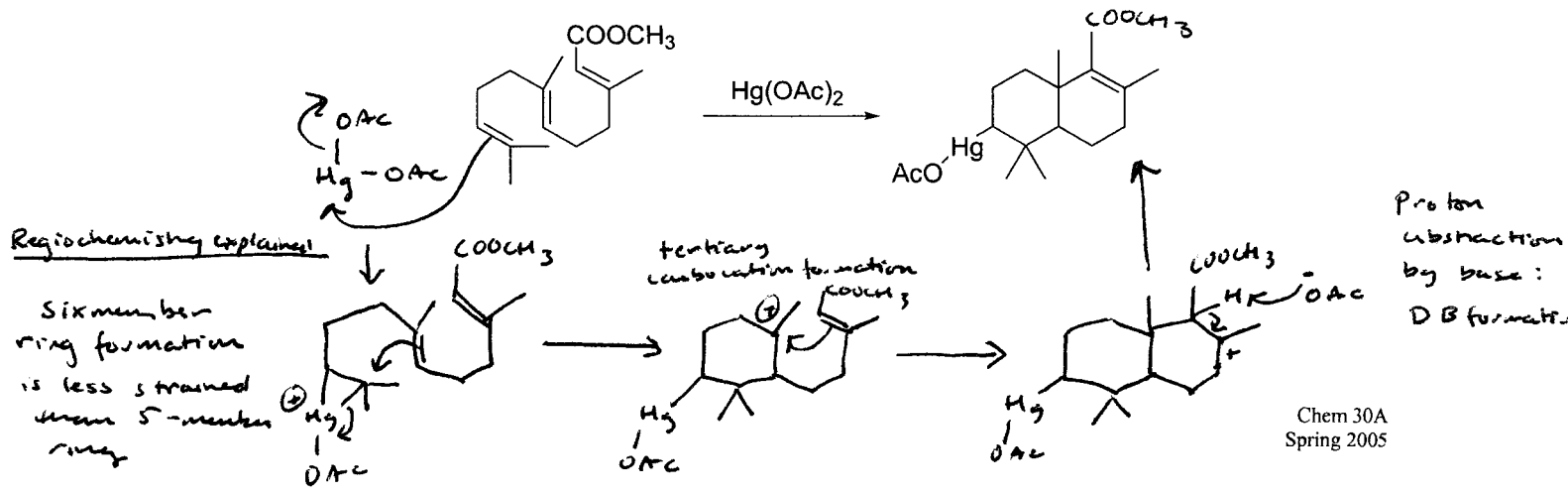
The common pain reliever Aleve is comprised of the sodium salt of naproxen.
 If the protons next to the arrow were removed, what type of carbocation would remain (i.e. is it a methyl, primary, secondary, or tertiary carbocation)?

What would the sodium salt form of naproxen look like?
 - remove most acidic proton

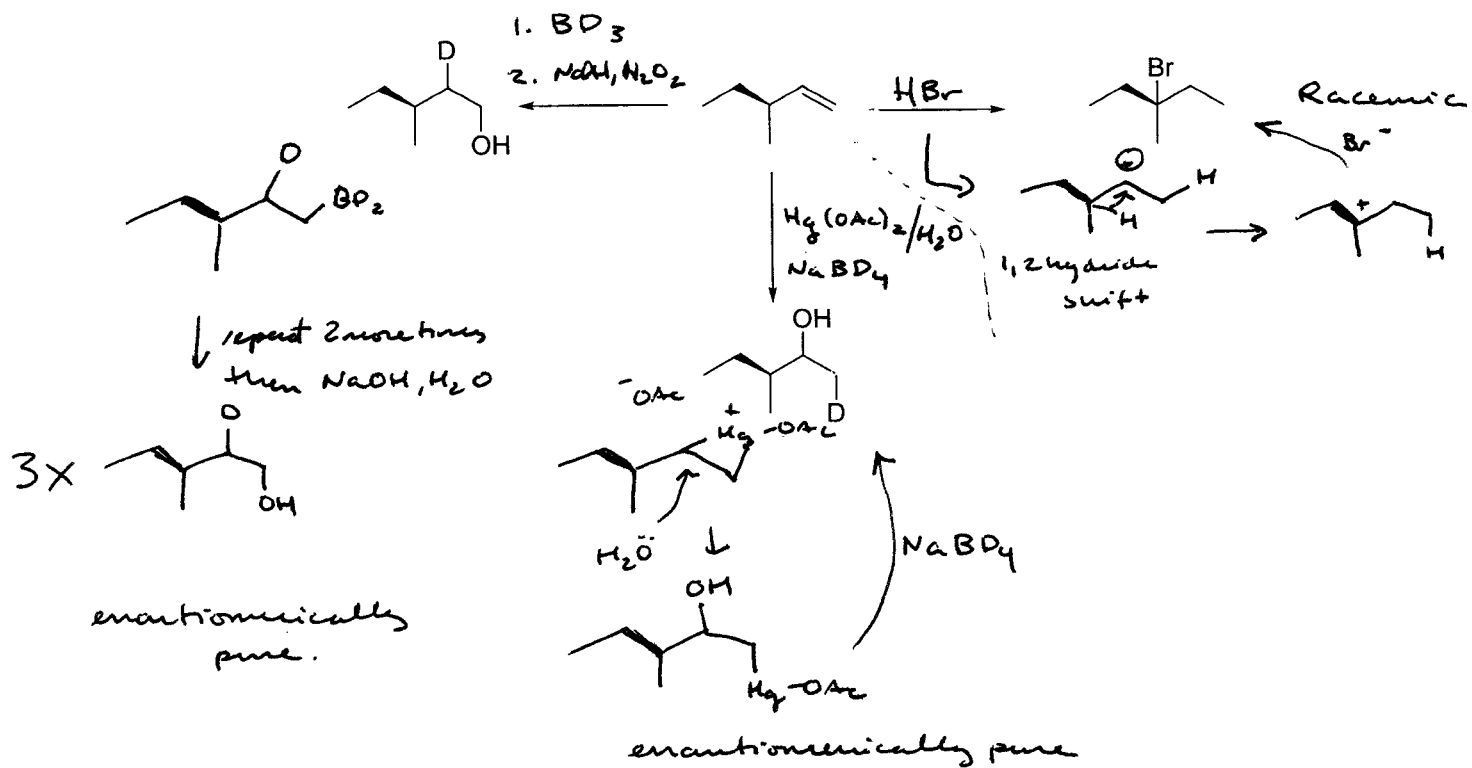


Group problems

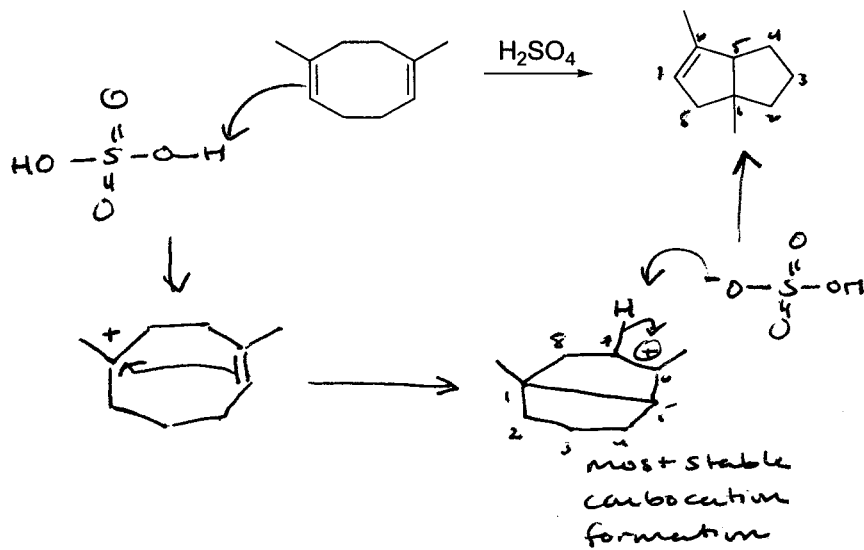
- How do you know the hydroboration mechanism is concerted?
 - it is regioselective with **NO REARRANGEMENTS**
 - means there is **NO carbocation intermediate**
 - Stereochemistry would show **BH₂ & H** are added from the same side.
- Provide the mechanism for the following reaction.



2. Fill in the reactants. Say whether or not the products are racemic.

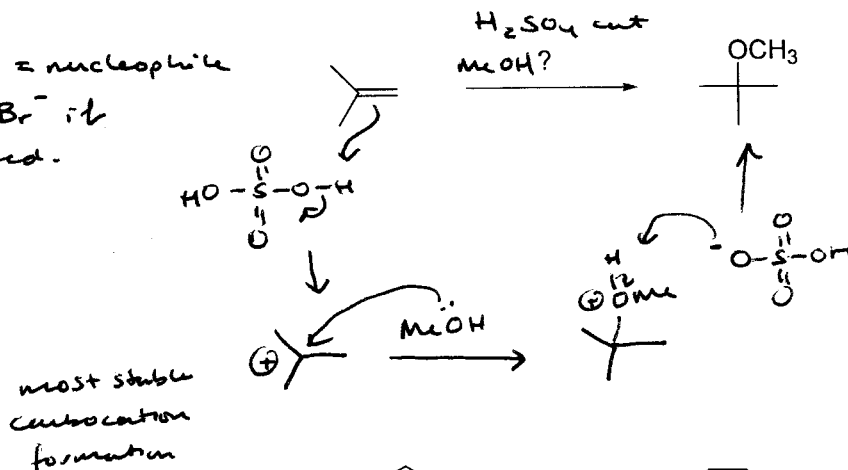


3. From an old Cantrill exam: Draw the mechanism

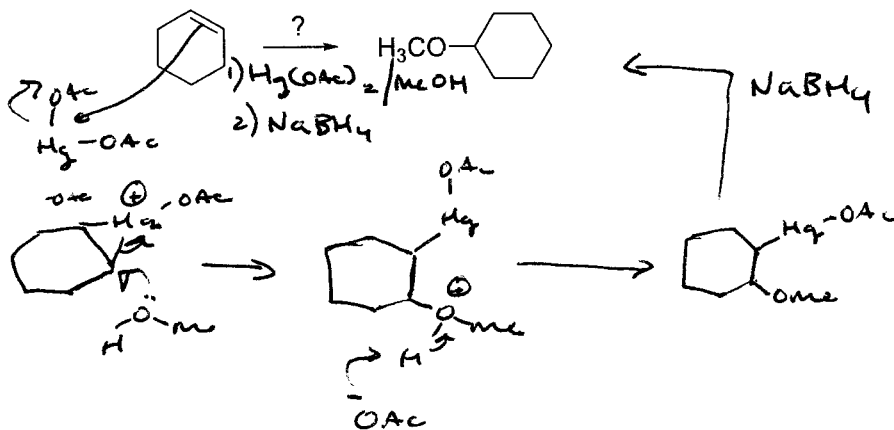


4. Provide reagents and a mechanism for the following:

Here MeOH = nucleophile
- instead of Br⁻ if
HBr was used.

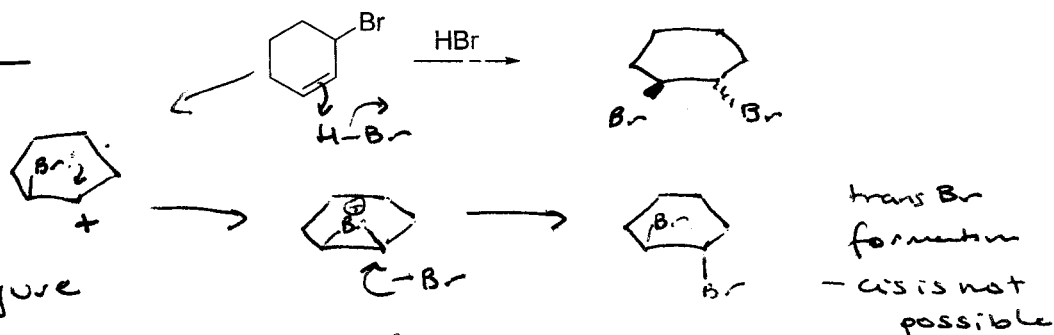


* Note the use of MeOH instead of H₂O w/ Hg(OAc)₂ give methoxide in product.

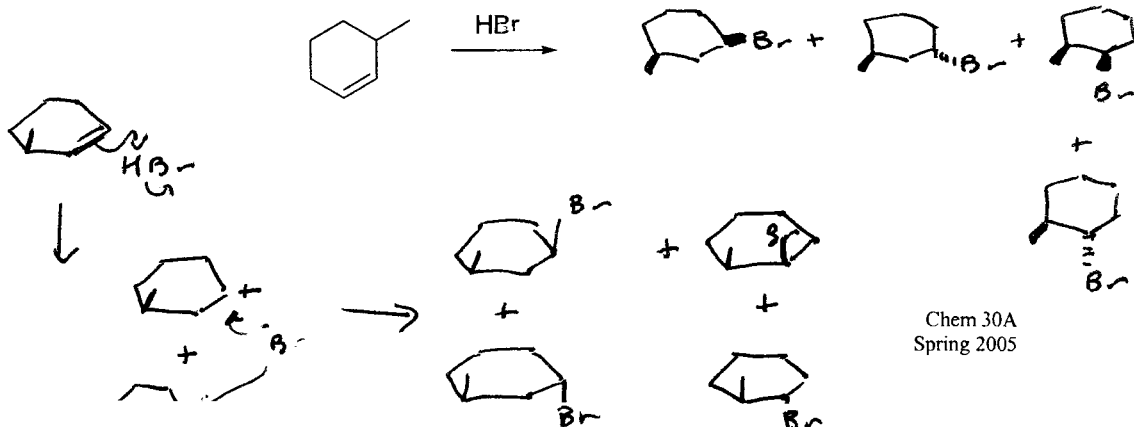


5. Predict the products and draw the mechanism for the following

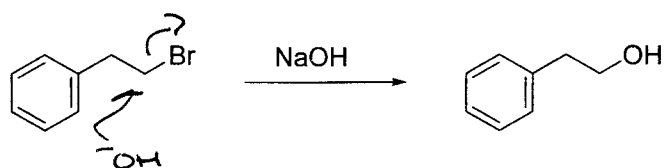
There are other answers possible.



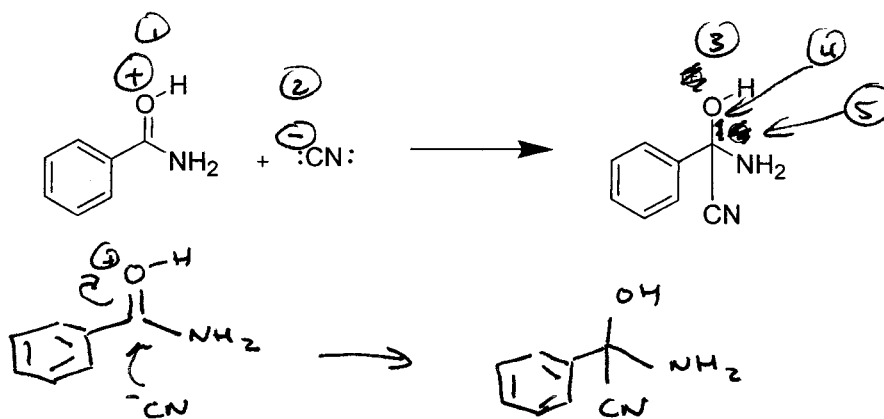
I suggest you figure out what they are.



6. Draw the mechanism for the following problem. (1 min)

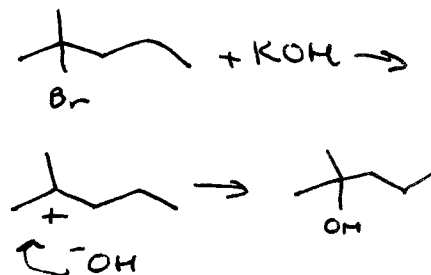


7. In the following reaction, there are five errors as it is currently written. Correct the errors, and rewrite the reaction as a proper mechanism should be written. Identify the electrophile and the nucleophile. Remember to include the arrows to show electron movement. (10 min)



8. You have a solution of a chemical X with the molecular formula $C_6H_{13}Br$. You combine equal volumes of each reactant and determine the rate of the reaction as shown in the table below. What is the reaction, and the reaction mechanism (draw the line structure for compound X)? (10 min)

	Rate	[] X, M	[] KOH, M
1	0.146	10	10
2	0.146	10	20
3	0.292	20	10
4	0.292	20	20



rate only changes when conc. of X inc.

∴ First order ∴ **SN1**

- b. Draw the energy profile of the above reaction.

SN1 is most likely w/ tertiary carbocation

