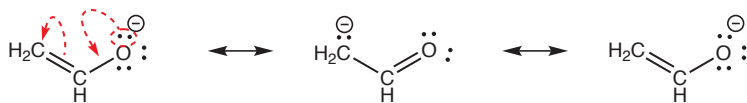
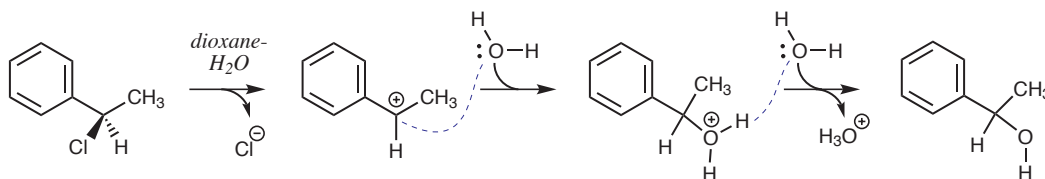
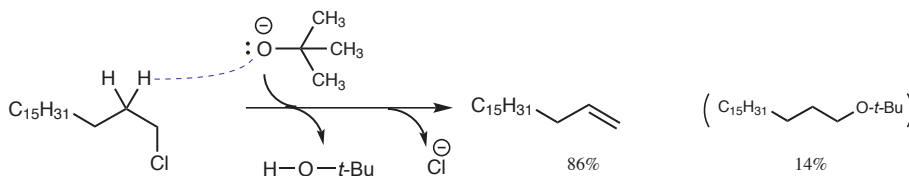
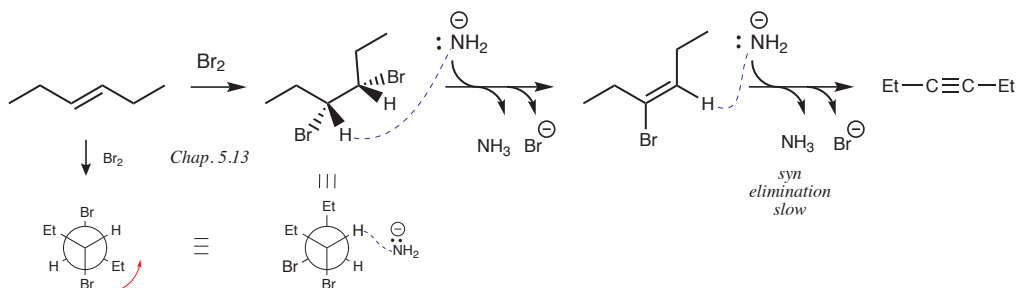
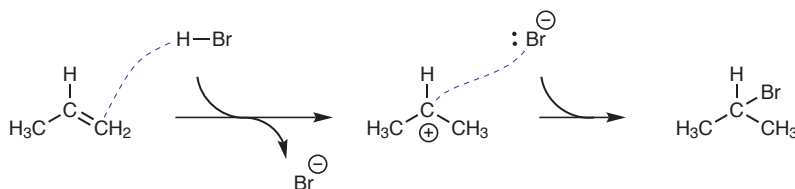
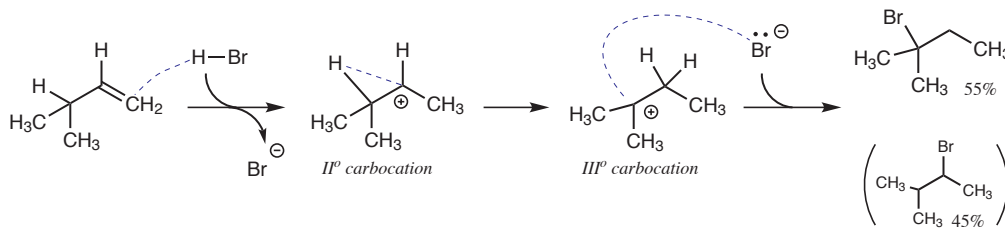
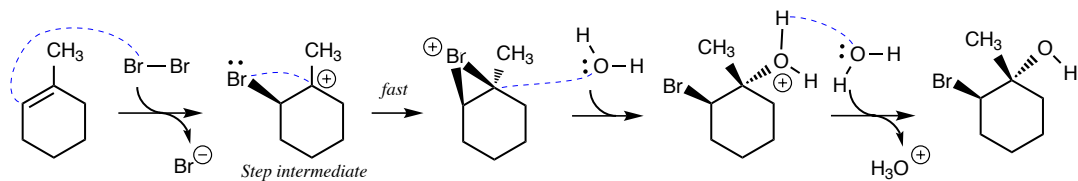


An ochem sampler. Print out these pages. Can you add the curved arrows? Look closely and you will see you can do all of them whether your class discussed them or not. Print out the next set and repeat those problems.

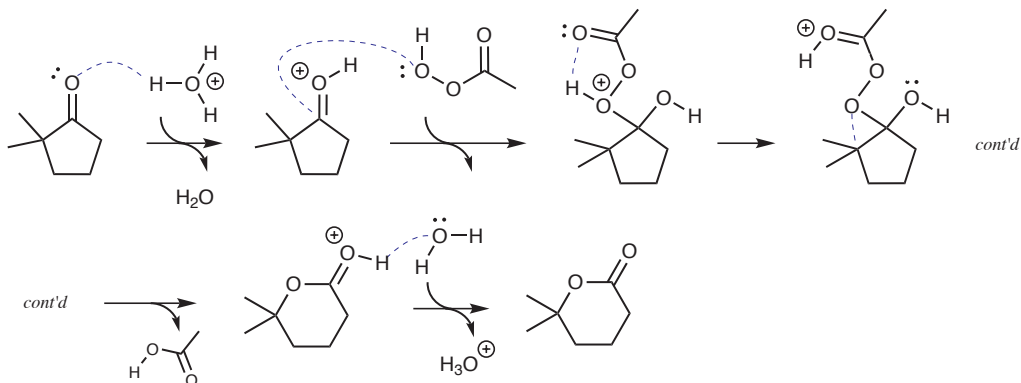
1.

2. An S_N1 solvolysis reaction of (*R*)-(1-chloroethyl)benzene to give *rac*-1-phenylethanol.3. An E2 elimination reaction of hydrogen chloride from 1-chlorooctadecane with potassium *t*-butoxide to give 1-octadecene. (See *Notes*.)4. A synthesis of 3-hexyne from *trans*-3-hexene by bromination and two elimination reactions. (See *Notes*.)5. Addition of hydrogen bromide to propene to give 2-bromopropane. (See *Notes*.)6. Addition of hydrogen bromide to 3-methyl-1-butene to give after rearrangement, 2-bromo-2-methylbutane. (See *Notes*.)

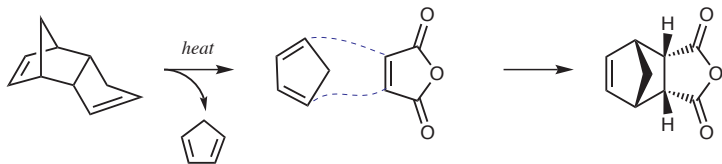
7. Bromination of methylcyclohexene to give (1R,2R)- and (1S,2S)-2-bromo-1-methylcyclohexanol.



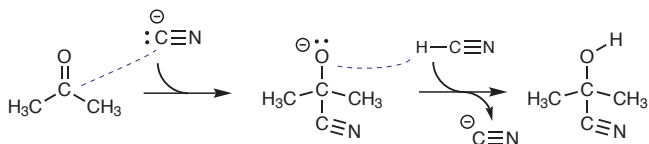
8. Acid catalyzed Baeyer-Villiger oxidation of 2,2-dimethylcyclopentanone with peracetic acid.



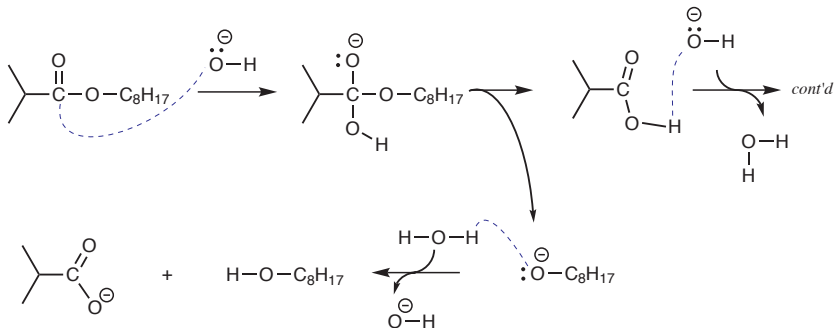
9. A reverse-forward Diels-Alder reaction between cyclopentadiene and maleic anhydride.



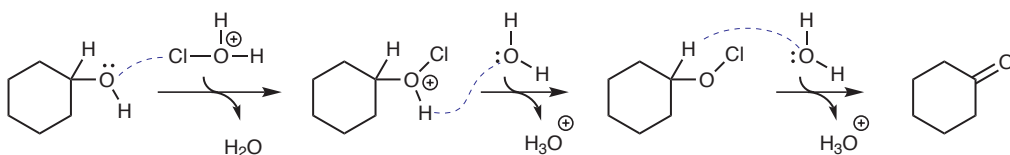
10. Formation of the cyanohydrin (2-hydroxy-2-methylpropanenitrile) from acetone. (See Notes.)



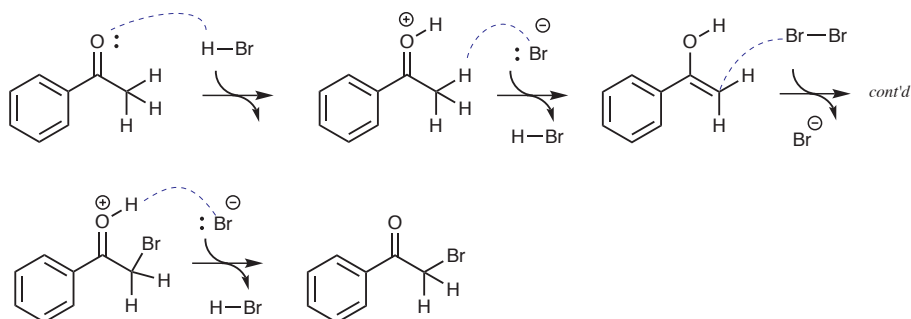
11. Base hydrolysis of octyl isobutyrate to give octanol and isobutyric acid. Step 1, treatment with base. (See Notes.)



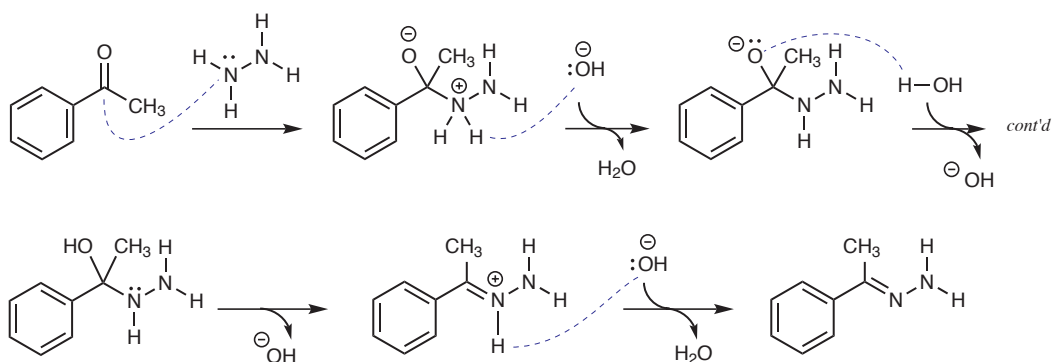
12. Oxidation of cyclohexanol to cyclohexanone with sodium hypochlorite (NaOCl, bleach).



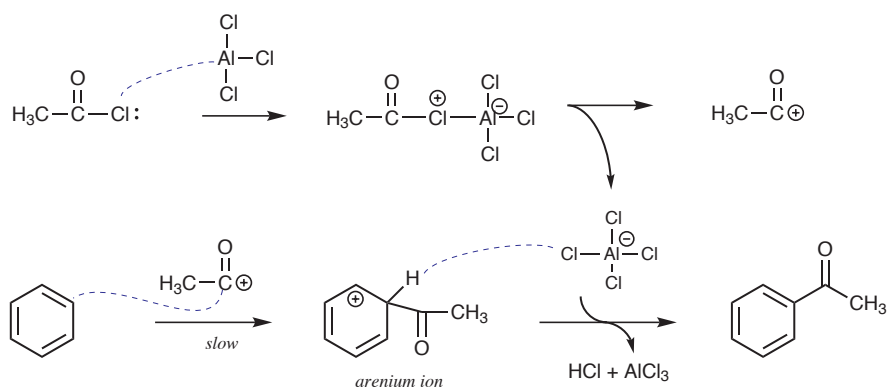
13. Acid catalyzed bromination of acetophenone to give α -bromoacetophenone. (See *Notes*.)



14. Reaction of the ketone with hydrazine under basic conditions to form the hydrazone.



15. Friedel Crafts acylation of benzene.



16. Nucleophilic aromatic substitution of 1-fluoro-4-nitrobenzene with ammonia to give 4-nitroaniline. (See *Notes*.)

