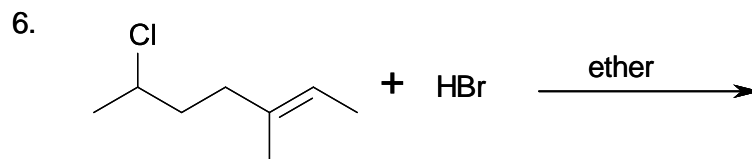
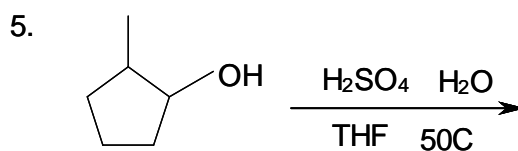
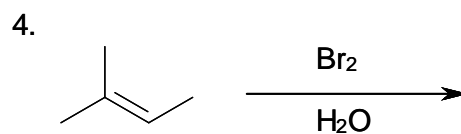
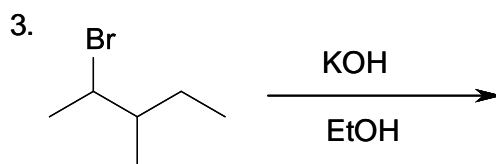
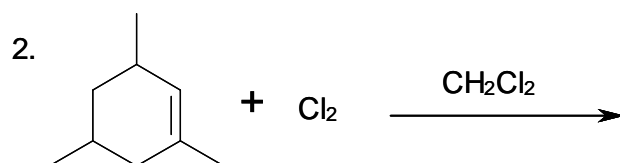
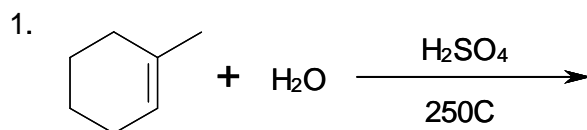
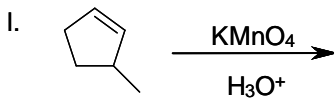
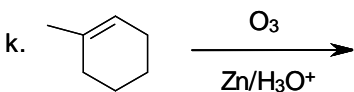
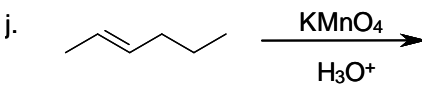
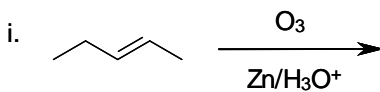
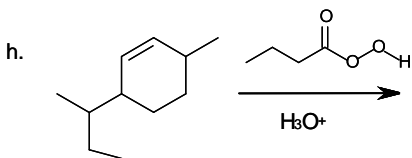
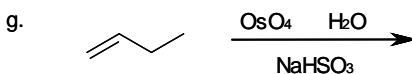
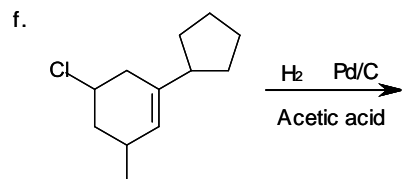
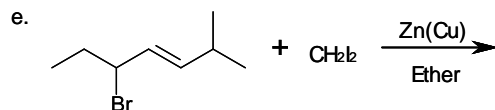
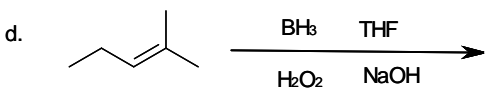
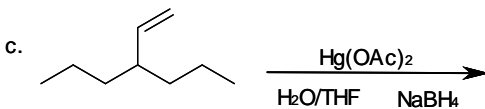
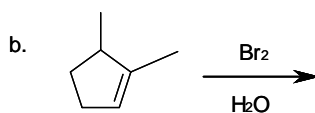


- I. For the following reactions:
- Label the type of reaction
 - Draw the complete mechanism
 - State whether the reaction is regioselective and explain why?



II. Write the products for the following reactions



- III. For the following prepare using any reagents and conditions you feel are necessary
- a. Prepare 2-Methyl-3-pentanol from 2-Methyl-2-pentanol
 - b. Prepare 3-Bromo-2-methyl-2-butanol from 2-Chloro-3-methylbutane
 - c. Prepare 1-Methylcyclopentanol from 1-Methylcyclopentene
 - d. Prepare Butane from 2-Butanol
 - e. Prepare a mixture of Propanone and Butanal from 2-Methyl-2-hexene
 - f. Prepare a mixture of Acetic acid and 2-Methylpropanoic acid from 4-methyl-2-pentene
 - g. Do two ways, prepare Pentanedial from Cyclopentene
 - h. Prepare 1,2-Dichloro-3-ethyl-4,5-dimethylcyclopentane from 3-ethyl-4,5-dimethylcyclopentene
 - i. Prepare 1-Methyl-2-propylcyclopropane from 2-Hexene
 - j. Prepare a Cis-1,2-Cyclohexandiol from 1-chlorocyclohexane
 - k. Prepare a Trans-1,2-Cyclohexandiol from a cyclohexanol