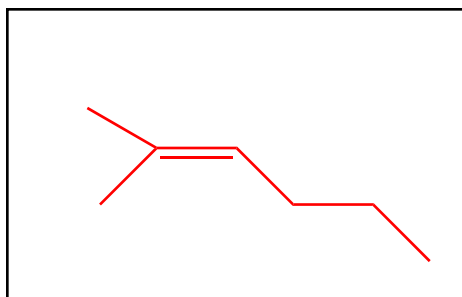


CHEMISTRY 2210 - PRACTICE EXAM #2 - SPRING 2013 (KATZ)

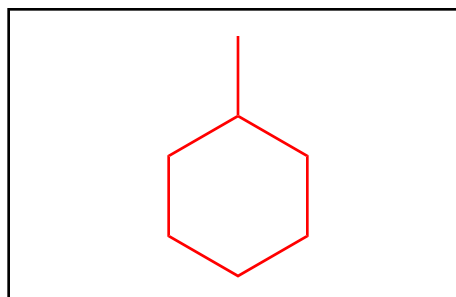
1. ISOMERS

- a. Draw structural formulas for three ISOMERIC compounds with the formula C_7H_{14} . One should be an ALKENE and one should be a CYCLIC ALKANE.

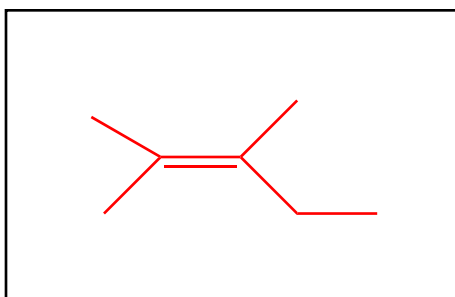
A)



B)

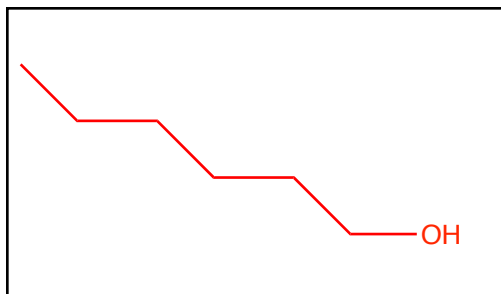


C)

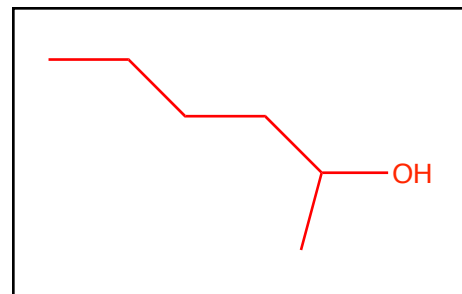


- b. Draw structural formulas for three ISOMERIC ALCOHOLS with the formula $C_6H_{14}O$. One should be a primary, one a secondary, and one a tertiary alcohol.

A)



B)

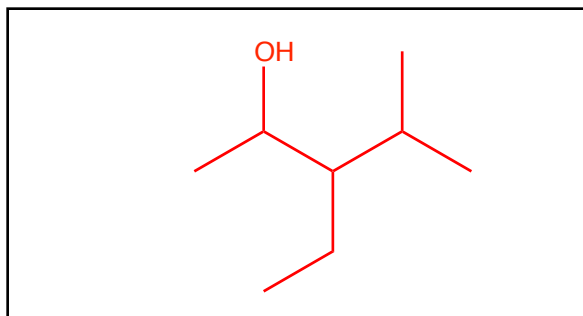


C)

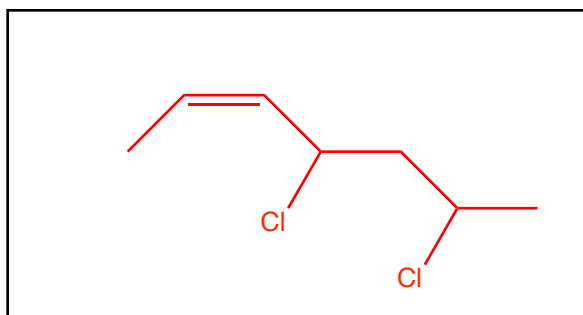


2. Draw correct structural formulas for the following compounds.

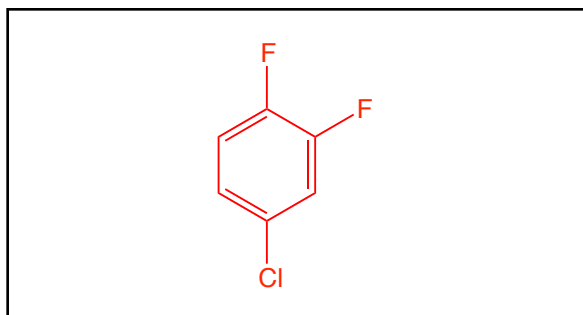
a) 3-ethyl-4-methyl-2-pentanol



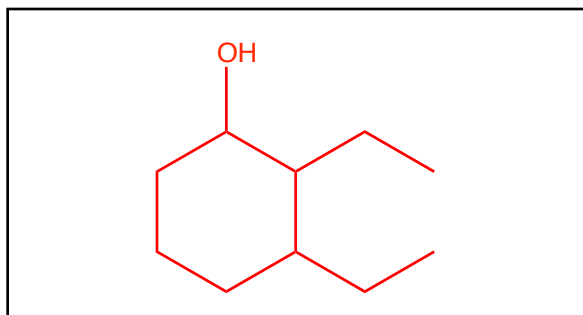
b) cis-4,6-dichloro-2-heptene



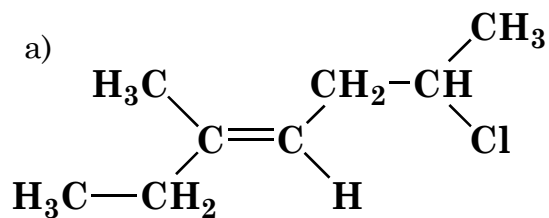
c) 4-chloro-1,2-difluoro benzene



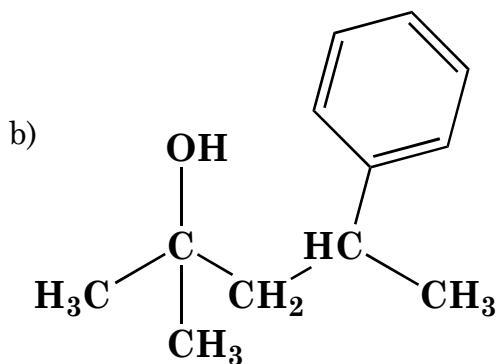
d) 2,3-diethyl cyclohexanol



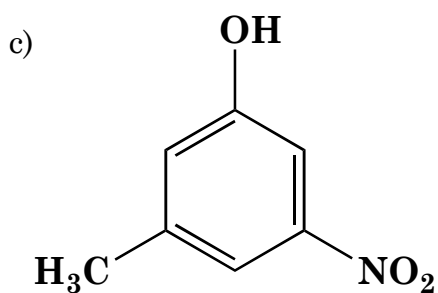
3. Give correct systematic names for the following compounds:



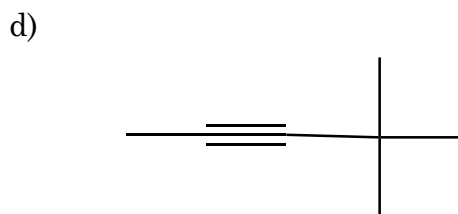
trans-6-chloro-3-methyl-3-heptene



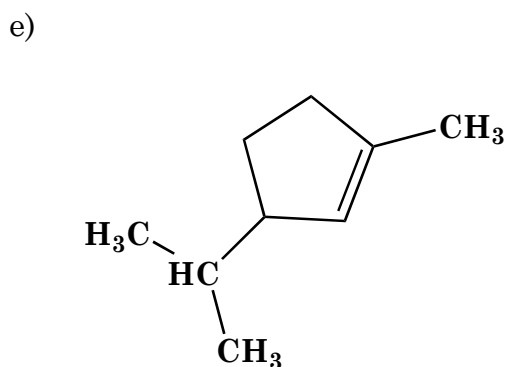
2-methyl-4-phenyl-2-pentanol



**1-hydroxy-3-methyl-5-nitro benzene
or
3-methyl-5-nitro phenol**



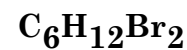
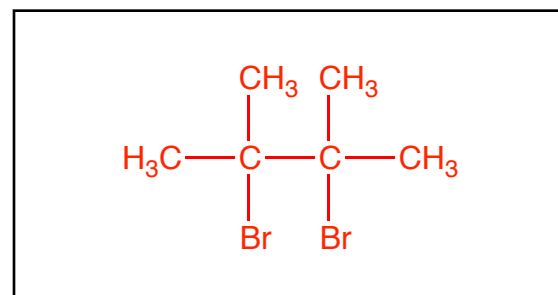
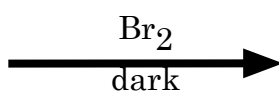
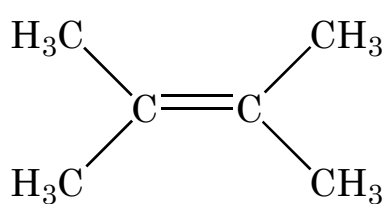
4,4-dimethyl-2-pentyne



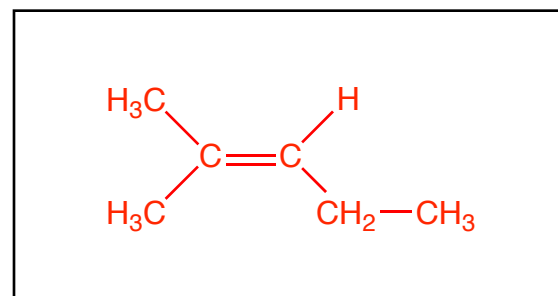
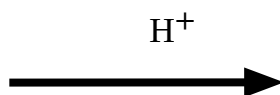
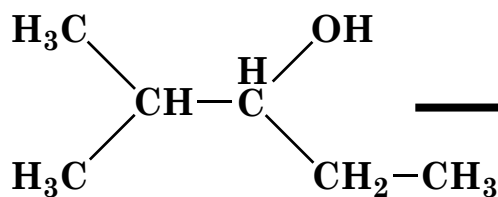
3-isopropyl-1-methyl cyclopentene

4. Draw complete structural formulas for the major products of the following reactions of organic compounds:

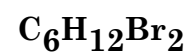
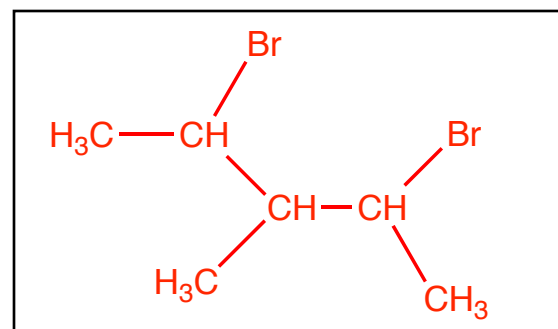
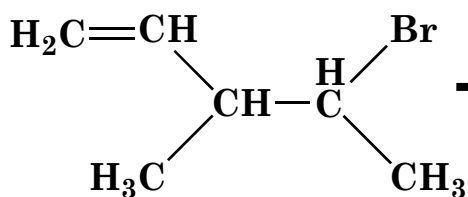
A)



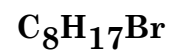
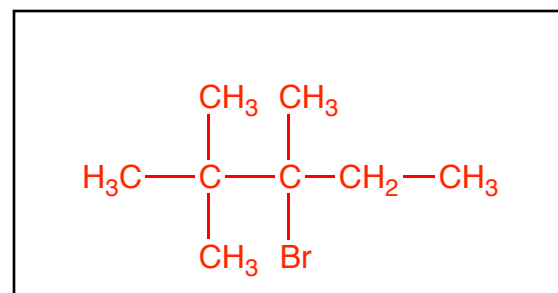
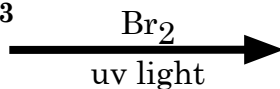
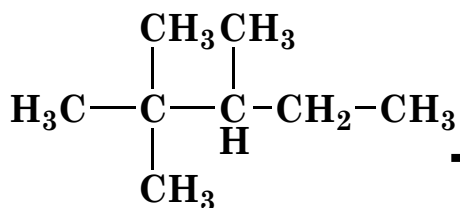
B)



C)



D)



5. Classify the reactions in Problem #4 as addition, dehydration, substitution, or condensation by circling the correct term. You may use a term more than once.

REACTION A- **ADDITION** DEHYDRATION SUBSTITUTION CONDENSATION

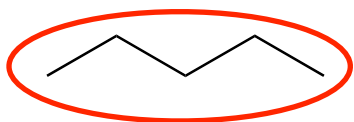
REACTION B- ADDITION **DEHYDRATION** SUBSTITUTION CONDENSATION

REACTION C- **ADDITION** DEHYDRATION SUBSTITUTION CONDENSATION

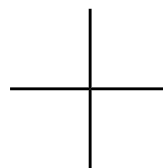
REACTION D- ADDITION DEHYDRATION **SUBSTITUTION** CONDENSATION

6. For each pair of compounds, circle the compound with the higher boiling point.

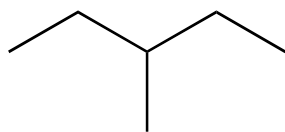
a.



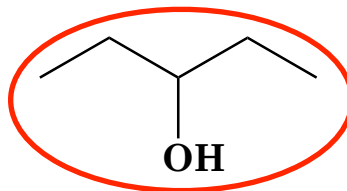
or



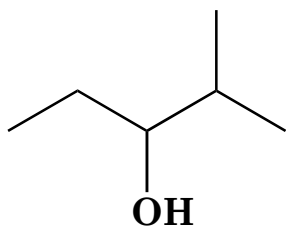
b.



or



c.



or

