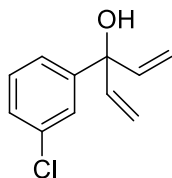
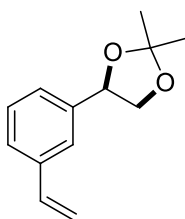


## WORKSHOP 17B

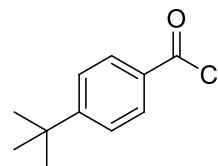
1. List all the way you know how to make a new carbon-carbon bond.
2. Design a synthesis of the following compounds all starting from benzene. Try and be creative don't do the same reaction over and over. This will help for the final. You may add up to four carbons in any one step. After each synthesis ask "is there another way to do this"?
3. For each compound list the expected/predicted  $^1\text{H}$  NMR Data and IR Data.



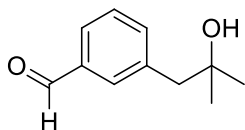
Compound A



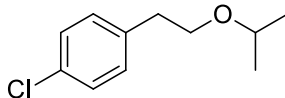
Compound B



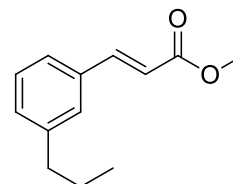
Compound C



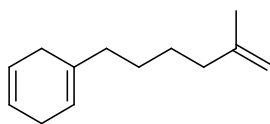
Compound D



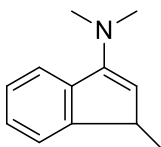
Compound E



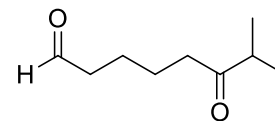
Compound F



Compound G



Compound H



Compound I