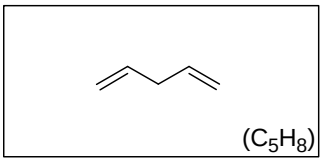
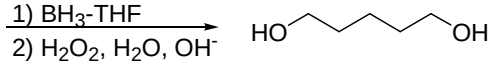
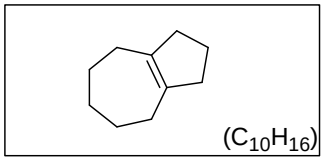
Organic Chemistry 1 – Spring 2010
Worksheet for Jacquie's recitation
Week of 2/18/10

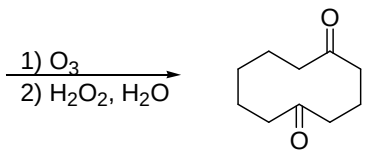
a.



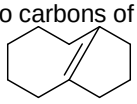


b.

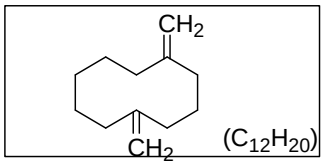


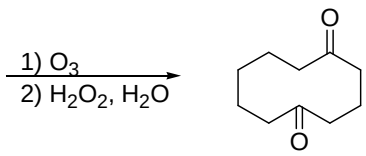


For this one, the number of carbons is the same in the starting and ending material, so no carbons were lost. This means that the alkene existed between two carbons of the starting material.
It might help to start out drawing the starting material as



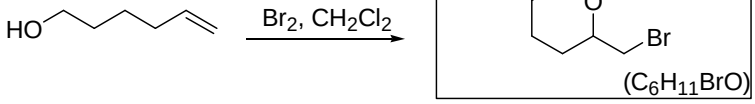
c.



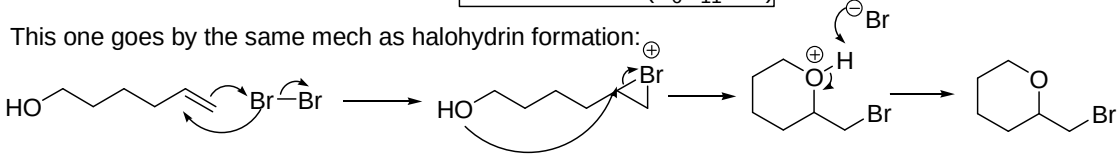


Now the number of carbons drops by two when you do ozonolysis, so you must have two single-carbon groups that are getting chopped off.

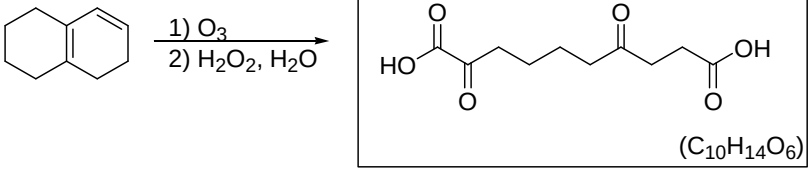
d.



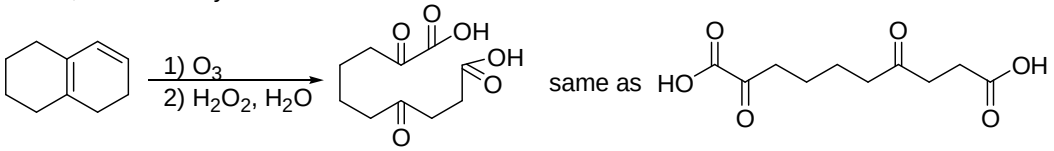
This one goes by the same mech as halohydrin formation:



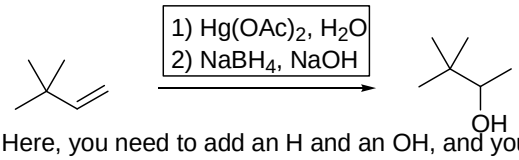
e.



For this, it's easier if you break the double bonds and redraw the molecule later.



f.



Here, you need to add an H and an OH, and you need to do it Markovnikov-style. So you've initially got two options: acid-cat hydration, or oxymerc-demerc. The problem with acid-cat hydration is that it'll give you a secondary carbocation which will rearrange. So oxymerc-demerc is your only choice.