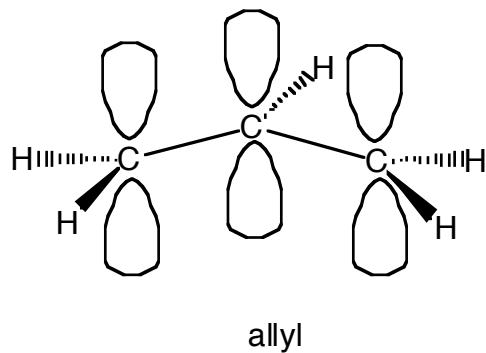


Problem 5, Chemistry 301X-2006

a. Construct the π molecular orbitals for allyl, $\text{H}_2\text{C} - \text{CH} - \text{CH}_2$, from the π molecular orbitals of ethylene and a $2p$ orbital. Please note that we are not (yet) dealing with electrons - that comes in part b. You can - must- build the MO picture, then think about how many electrons to put in.



b. Show the electronic occupancy for the allyl cation, anion, and radical.