



a. Calculate the electron density at each of the carbons (1-6) in fulvene.

Note that the molecular orbitals are constructed only from valence p-orbitals, and thus there are only 6 valence electrons to consider.

b. A picture of the ψ_6 molecular orbital is shown, looking down at the tops of the p orbitals. Notice that the size of a lobe correlates with the magnitude of its orbital coefficient, and the phase of the lobe correlates with the sign of its coefficient. Draw appropriate pictures for molecular orbitals ψ_1 - ψ_5 .