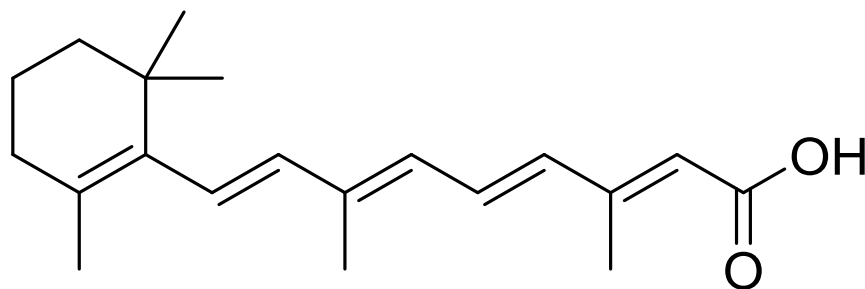
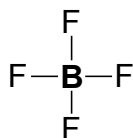


1. (2 pts) Circle all of the atoms in Retinoic Acid (below) that are sp^2 hybrid.

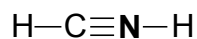


retinoic acid

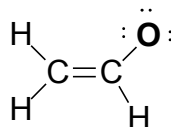
2. (4 pts) Calculate the formal charge on each **ATOM** in **BOLD** in the Lewis structures below. All non-bonded electrons are shown. Do not calculate the formal charge on any atom that is not in **BOLD**.



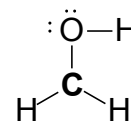
B _____



N _____



O _____



C _____

3. (4 pts) Draw a 3-D representation of CH_2Br_2 (use wedges and dashes where needed). Indicate the direction of the Dipole ($\text{+} \longrightarrow$) for CH_2Br_2 .