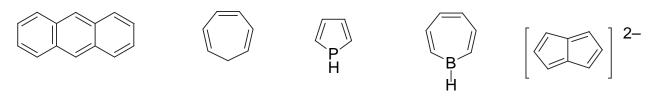
## 1. Which of the following are aromatic. Draw "Frost Circles" that support your answers



2. Which of the following are aromatic. Use the Huckel rule to support your answer



3. Compound **1** has an unusually large dipole moment for an organic hydrocarbon. Explain why (consider resonance structures for the central double bond)

4. Provide mechanisms for the formation of 2 and 3.

5. Provide a mechanism. This problem is easier than it looks!

HCI 
$$\cdot = ^{13}C$$

6. Devise syntheses of the following, using benzene and any other materials containing 3 carbons or less.