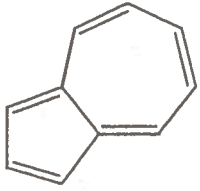
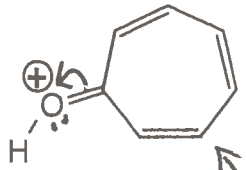
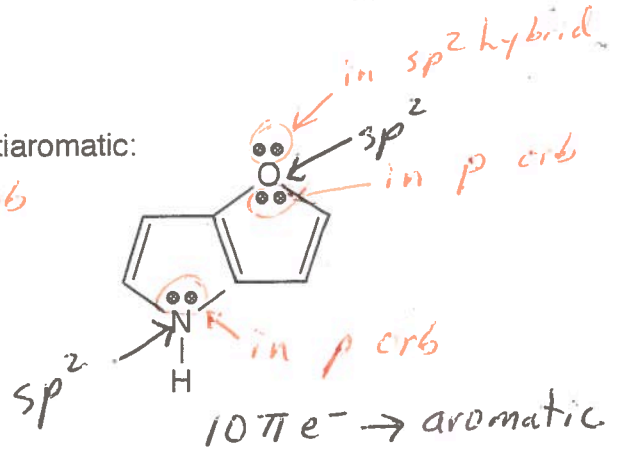
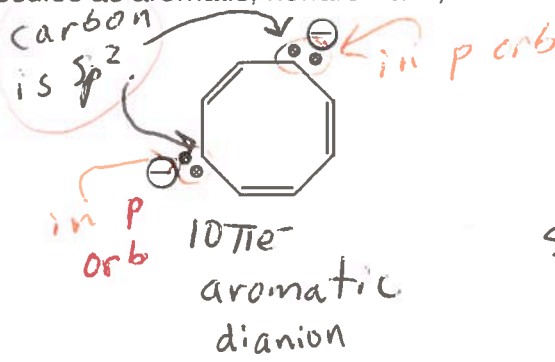


# MAD ORG. CHEM "MIN." #15

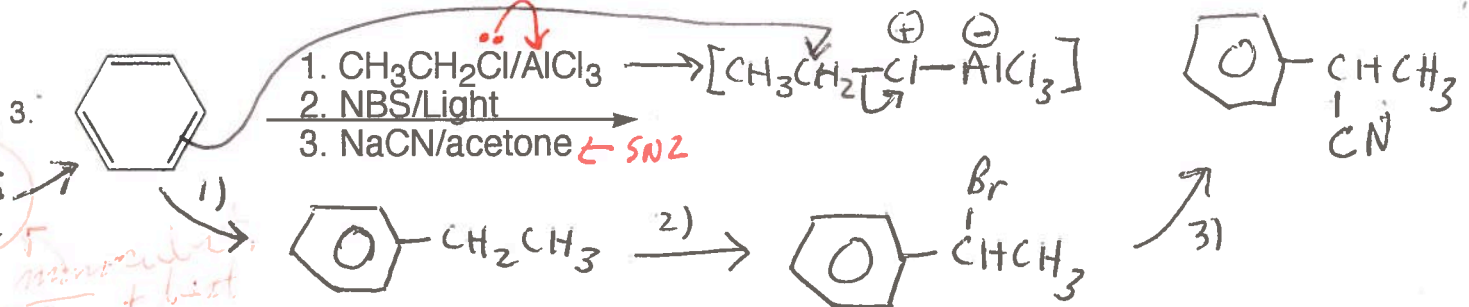
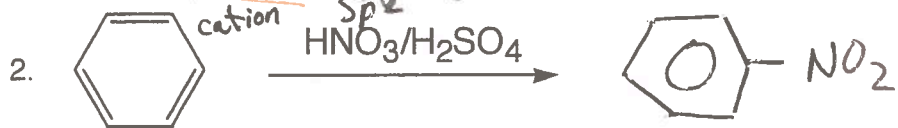
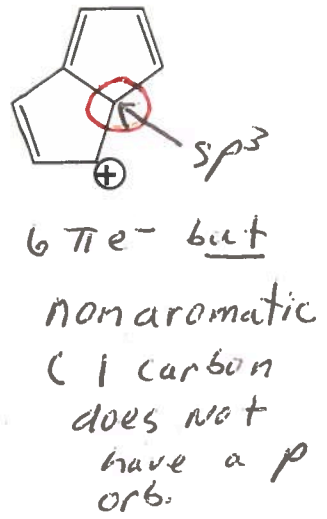
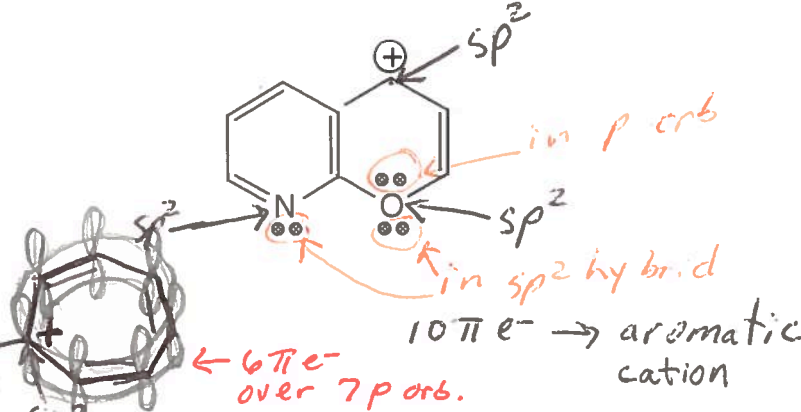
1. Label the following molecules as aromatic, nonaromatic, or antiaromatic:



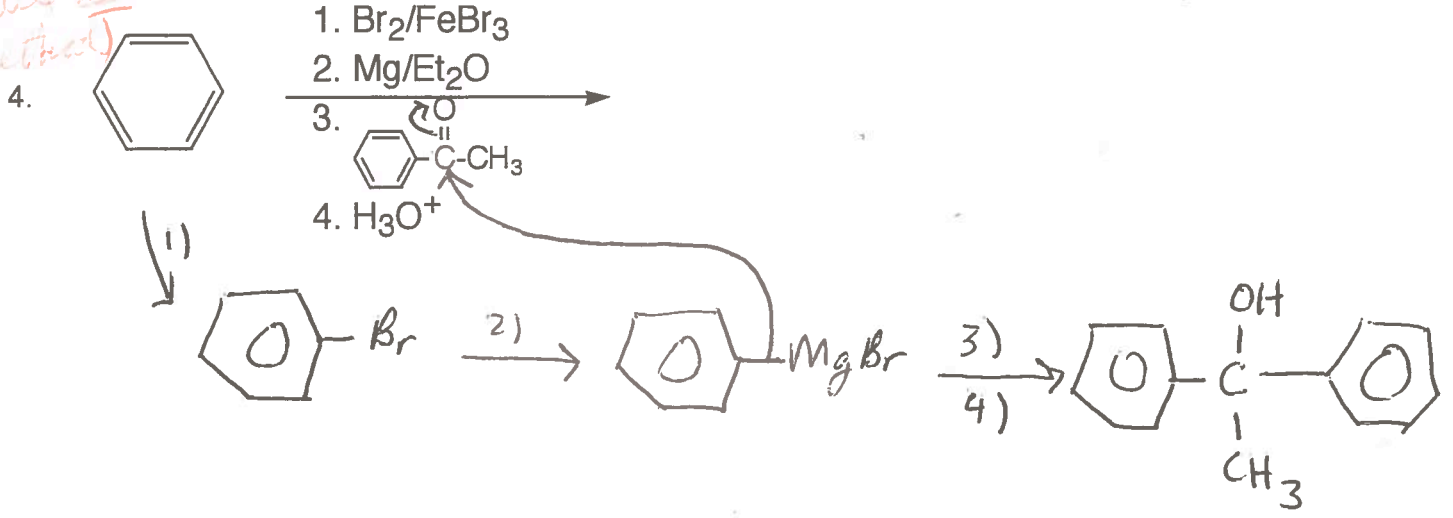
$10\pi e^- \rightarrow$  aromatic  
planar  
 $4n+2=10$   
 $n=2$



major contr.  $\rightarrow$   $H\ddot{O}^+$   
 $6\pi e^- \rightarrow$  aromatic cation



Xs  
for monosubstituted (still not best method)



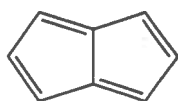
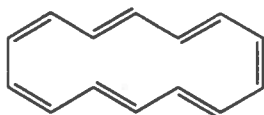
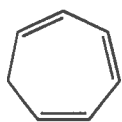
MAD ORG. CHEM "MIN." # 14 (PARTIAL) PLUS

LAST NAME \_\_\_\_\_ FIRST NAME \_\_\_\_\_

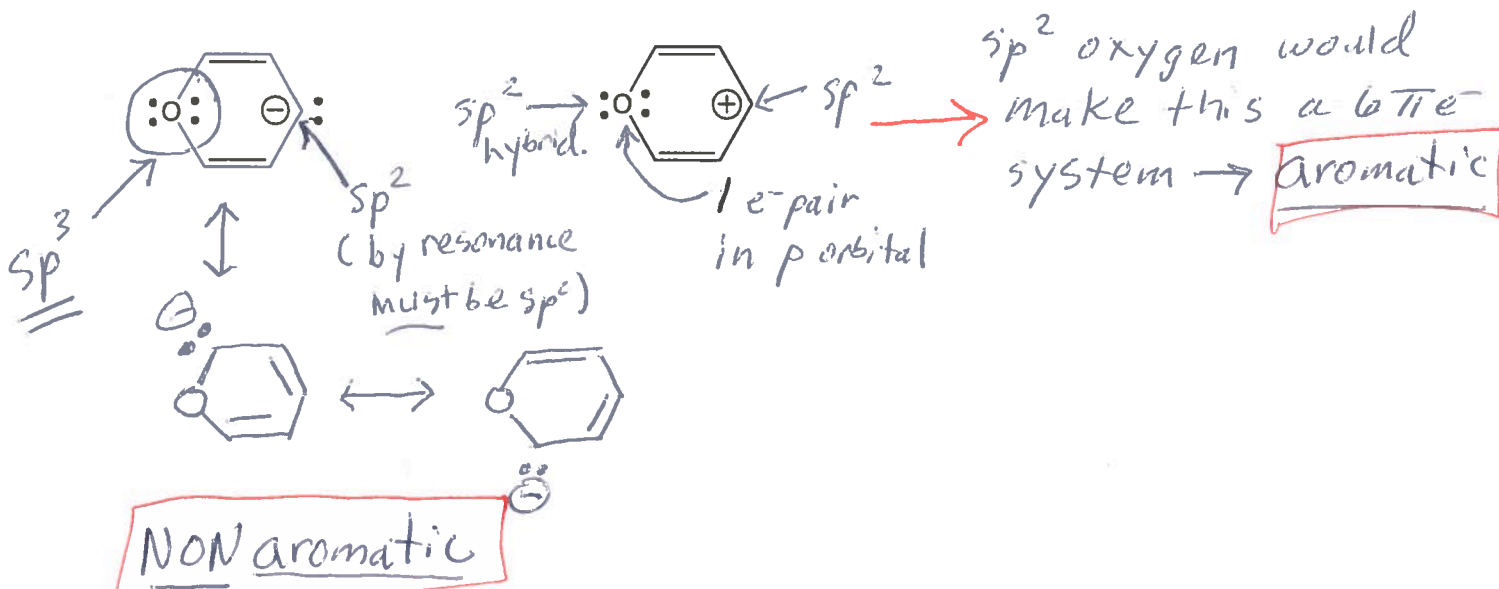
ID# \_\_\_\_\_ Circle SECTION: 10AM or 1PM

1. Copy your answers from Mad Org CHEM Min # 14 for the problem below.

3) Label the following molecules as aromatic, nonaromatic, or antiaromatic:



2. Label the following molecule as aromatic, nonaromatic, or antiaromatic:



\* if Oxygen is  $sp^2$ , would be antiaromatic (8πe<sup>-</sup>) and so less stable