

Chem 332  
Exam 3  
May 14, 2008  
Prof Fox  
50 minutes  
100 points

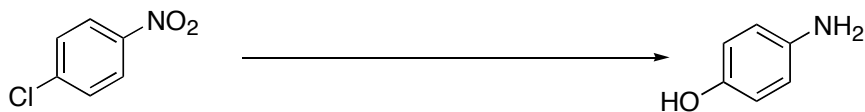
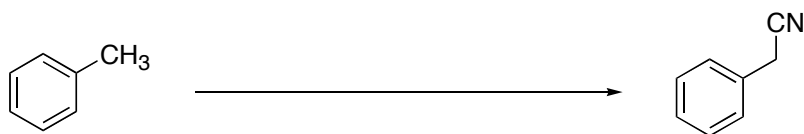
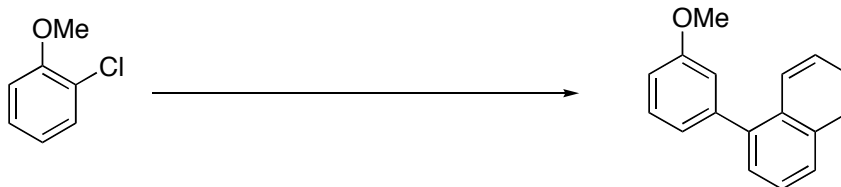
Show your work in detail

Write your name on every page

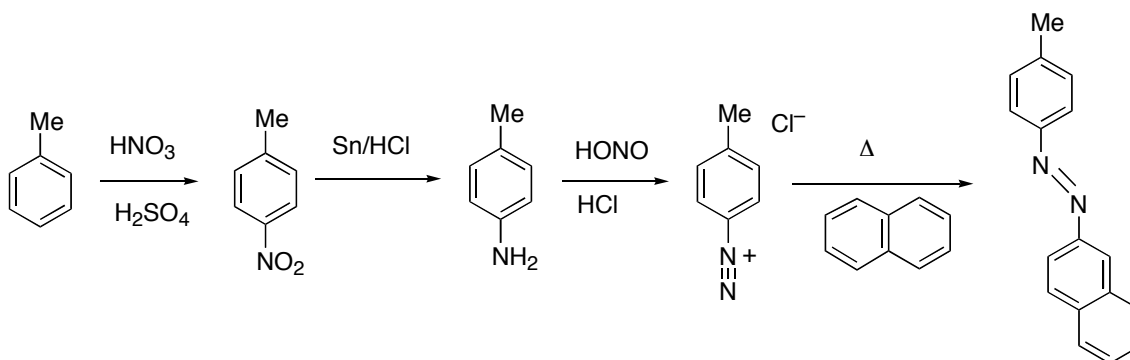
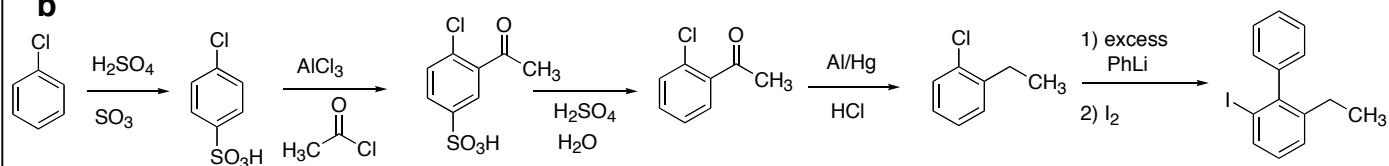
Name\_\_\_\_\_

Your Name\_\_\_\_\_

1. Provide the reagents needed for the following transformations. Mechanisms are not needed.  
(5 points each)



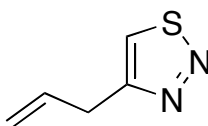
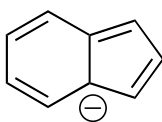
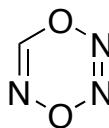
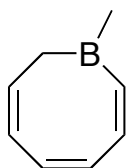
2. There is a problem with each of the following syntheses. 10 points each  
CIRCLE the problematic step, and describe the problem in the space below

**a****b**

Your Name\_\_\_\_\_

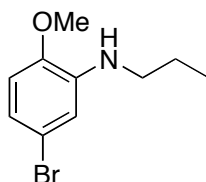
3. Circle the molecules that are aromatic.

(3 points each)



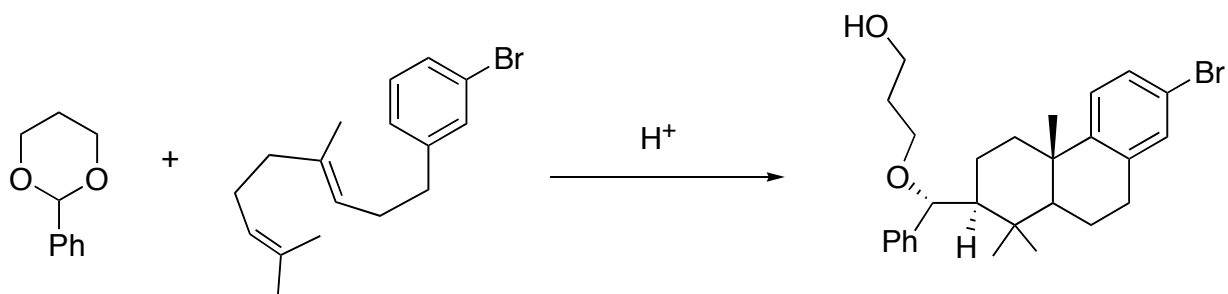
Your Name\_\_\_\_\_

4. Suggest a multistep synthesis, using **benzene** and any other materials that contain **5 carbons or less**. Reagents that do not end up in the product (e.g. PPh<sub>3</sub>) may contain more than 5 carbons. (25 points)



Your Name\_\_\_\_\_

5. Provide a detailed arrow pushing mechanism.  
(25 points)



Scratch paper