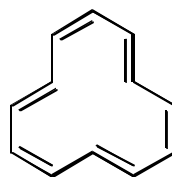
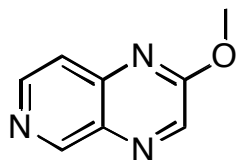
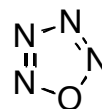
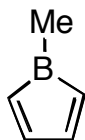
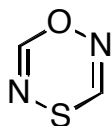


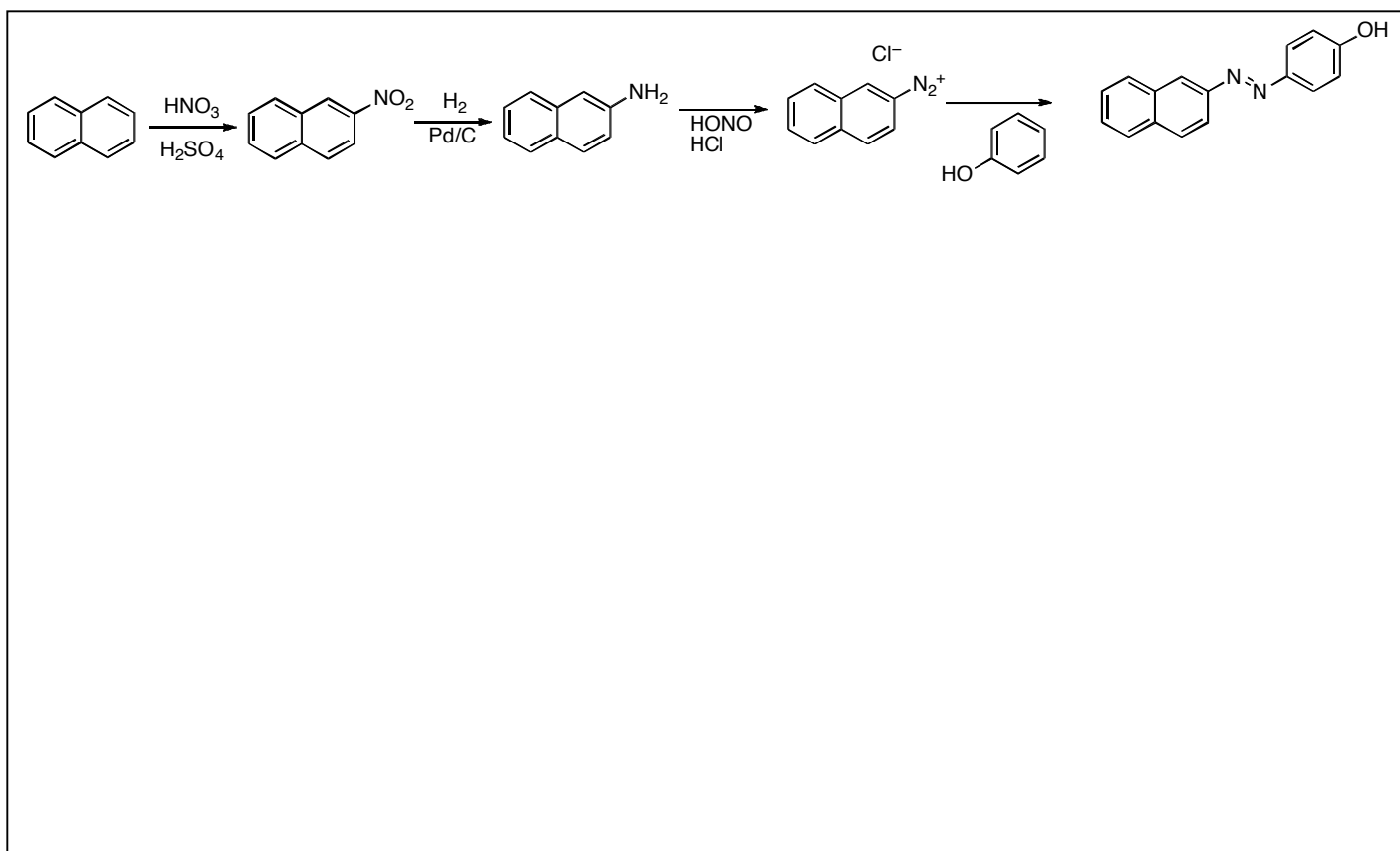
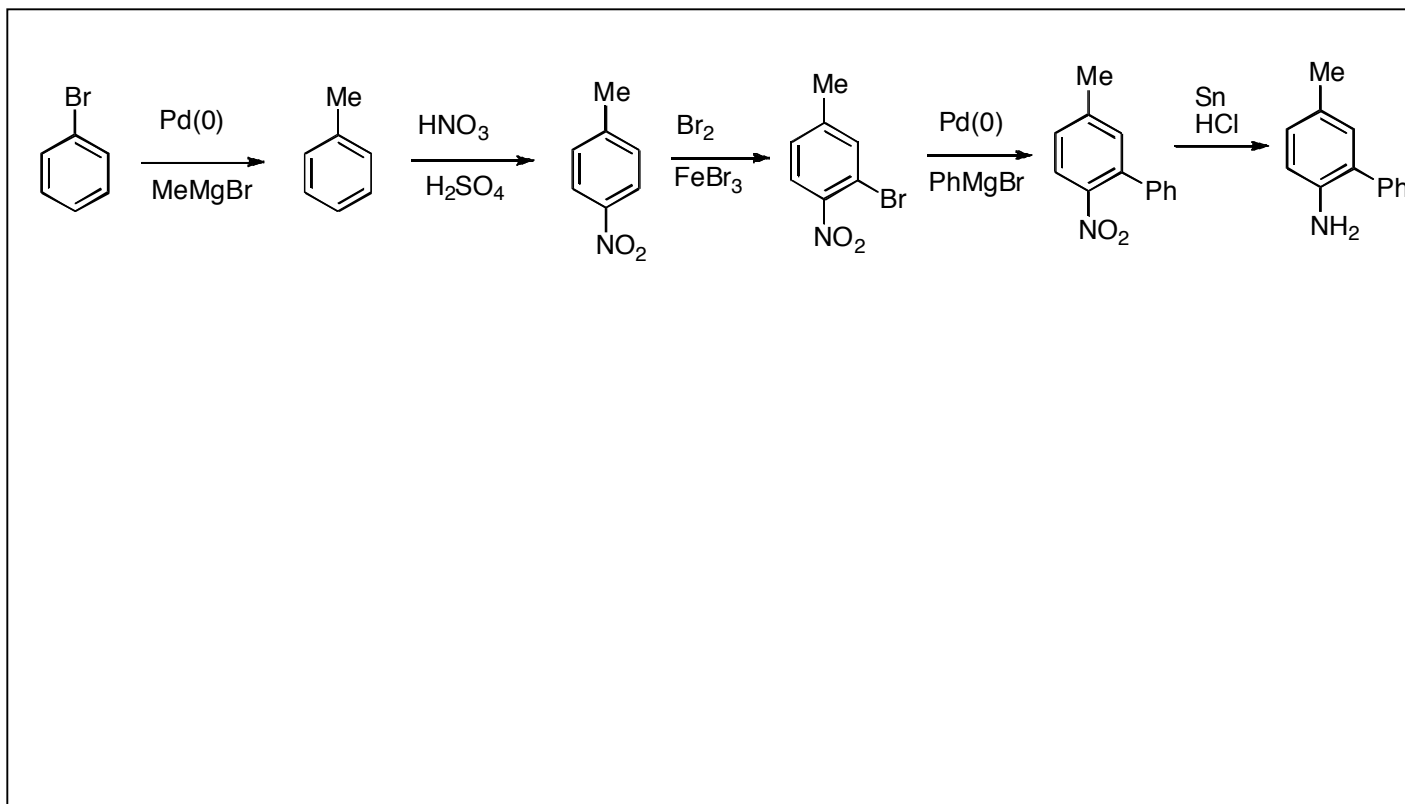
NAME _____

1. Circle the molecules that are aromatic. No partial credit. 3 points each



NAME _____

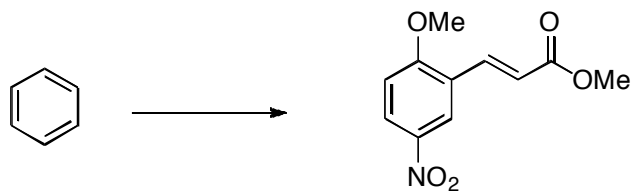
2. There is a problem with each of the following syntheses. (8 points each)
CIRCLE the problematic step, and describe the problem in the space below in 30 words or less



NAME _____

3. 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_3) may contain more than 5 carbons

(25 points)



NAME _____

4. Provide a detailed arrow pushing mechanism (24 points)

