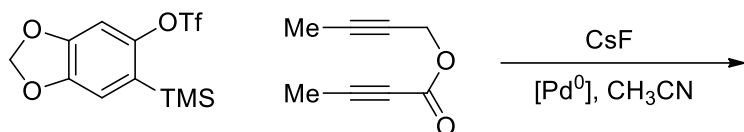
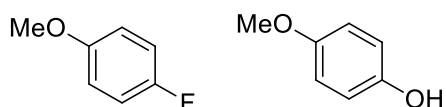


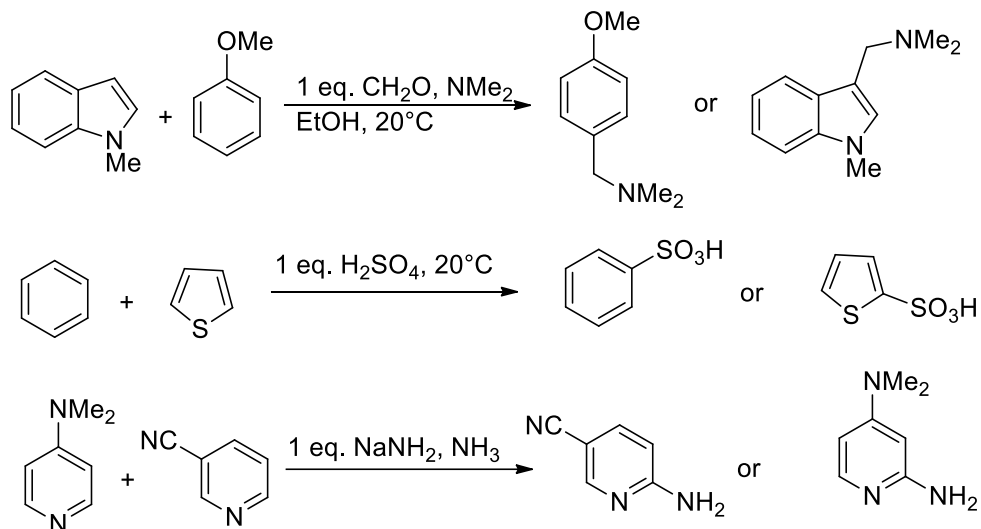
1. What product is formed in the shown reaction?



2. Propose a selective synthesis of the two molecules starting from anisole. [Hint: only the last step is different. No more than 3 or 4 steps are required in total.]



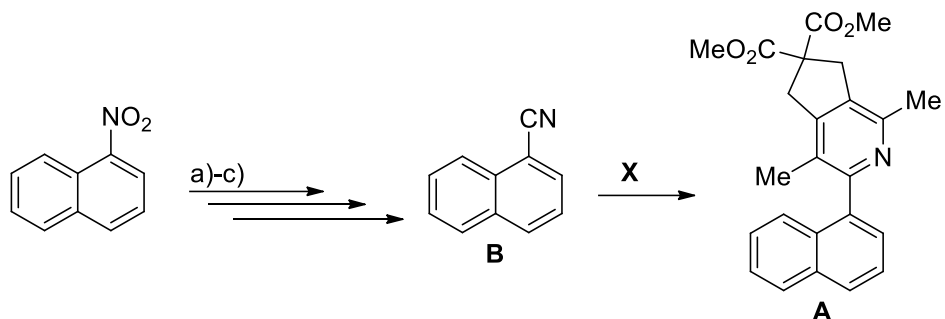
3. Reactivity competition: An **equimolar** mixture of two starting materials is reacted with **1 equivalent** of the indicated reagent. **Encircle** the major product



4. Target **A** is accessed from nitrile **B** and compound **X**.

I) What are the steps a)-c)?

II) Provide the structure **X** and describe the cyclization reaction.



5. Create a synthesis of quinoline **C** using aniline **D** as your starting point. „?” is a functional group/residue that you have to define.

