1. Which is a stronger base?

а

b

or

NMe₂

Hint: make a model and think about the geometry of the lone pair relative to the benzene ring

2. Propose syntheses using any starting materials that contain 3 carbons or less

3. Propose an arrow pushing mechanism

$$H_2O$$
 H_3C
 H_2O
 H_3C
 H_3C

4. Propose an arrow pushing mechanism