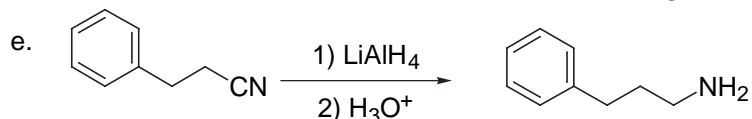
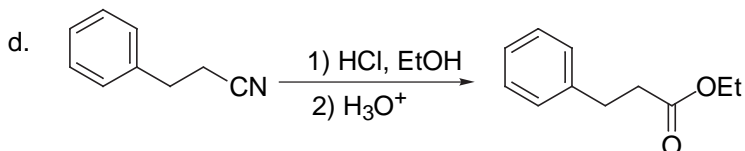
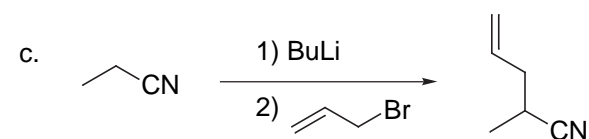
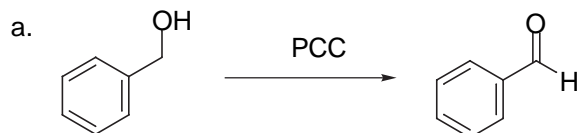


due Mon, Nov 25, 2002 **AT THE BEGINNING OF CLASS**

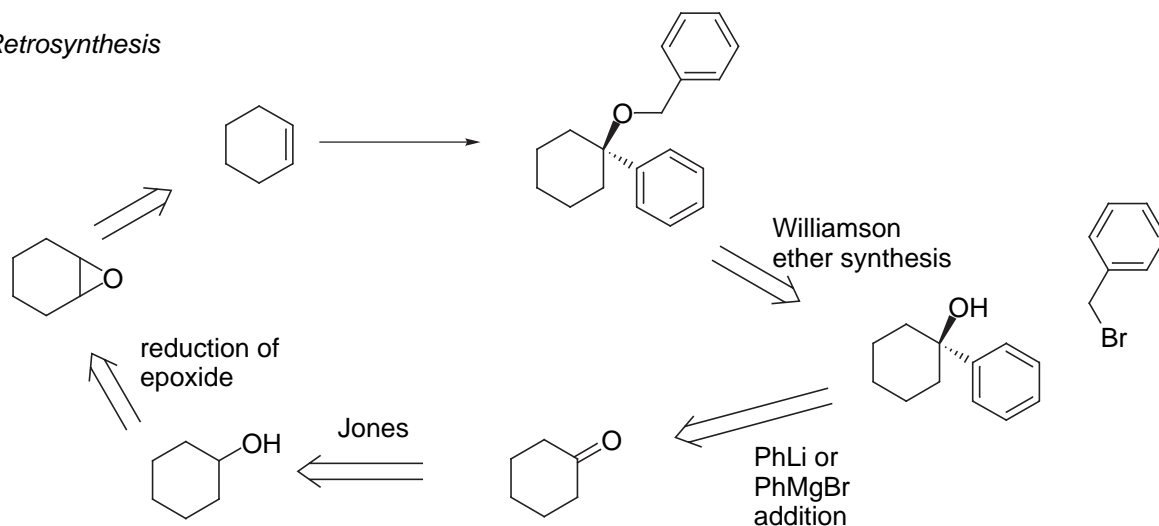
use extra paper (use a staple or paper clip)

1. Provide the reagents/reaction conditions for the following transformations. Write your answers over the arrows.

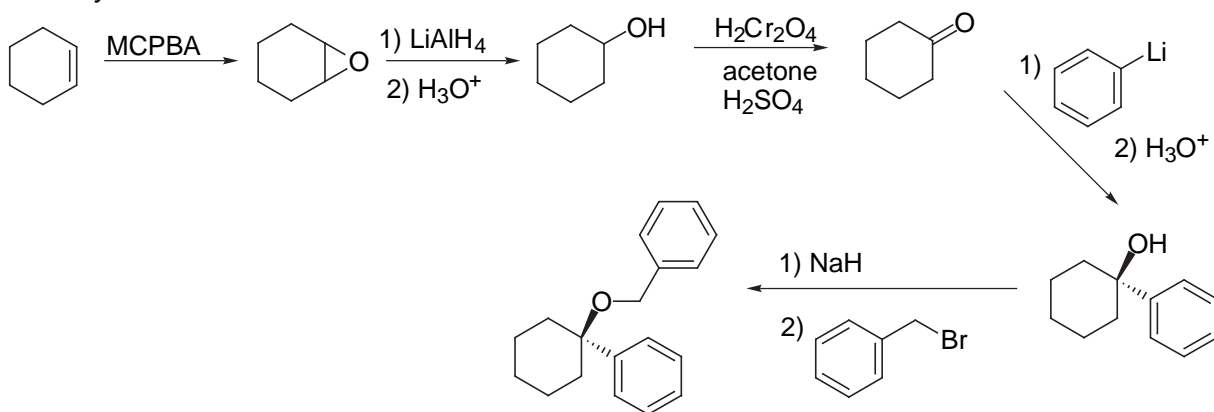


2. Provide a multistep syntheses starting from cyclohexene and any other materials.

Retrosynthesis



Forward synthesis



1) HCl (excess)
 2) H_3O^+

A
 $\text{C}_{10}\text{H}_8\text{O}_3$

$^1\text{H NMR}$
 3.3–3.8 (bs, 1H)
 4.72 (s, 2H)
 7.15–8.05 (m, 5H)

[illegible]