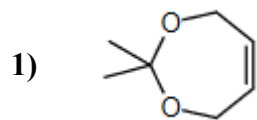
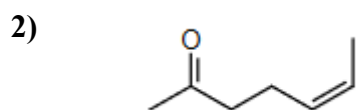


Practice problems:

Propose a retrosynthetic analysis of the following molecules, showing your thinking and the reagents that would be employed in the forward synthesis. **Follow the individual note/clue** for each molecule.

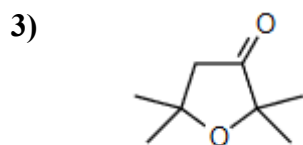


Note: Use acetylene as one of the starting materials

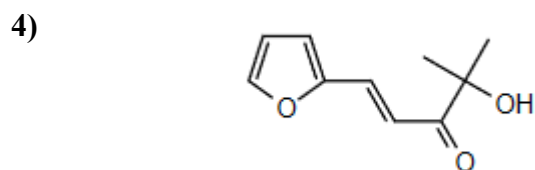


Note: Use acetylene as one of the starting materials

Clue: Get the *cis*-olefin through hydrogenation of alkyne.



Note: Use acetylene as one of the starting materials



Note: Use acetylene as one of the starting materials