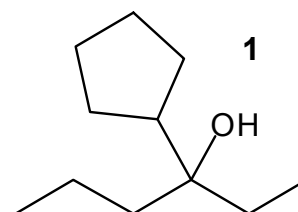


**In-Class Exercise:**  
**Multistep Synthesis with Organometallic Additions to Carbonyls**

1. Propose a multistep synthesis of the molecule **1** shown at right, using organic starting materials containing **five carbons or less** as starting materials, as well as any reagents and reactions we've learned about so far.



2. Molecule **2** would be a lot simpler to synthesize than molecule **1**. Why? Once again, Propose a multistep synthesis using organic starting materials containing five carbons or less as starting materials.

