1. Name the different parts/components that constitute the following retrosynthetic analysis, and the reaction employed (arrows at the bottom part) to synthesize this synthetic target (TGT). [★]

2. For the proposed synthetic targets (TGTs), identify the retrons and propose the corresponding disconnection steps, synthons, and synthetic equivalents to create these TGTs. Note that multiple solutions are possible, and the ones provided in the solution set are just a possibility. [★★]

$$\begin{array}{c} CO_2Me \\ \hline \\ Me \\ \hline \\ OH \\ \end{array}$$

3. Try to rank the next molecules based on their complexity. Then, use the Böttcher Score calculator (<a href="https://forlilab.org/services/bottcher/">https://forlilab.org/services/bottcher/</a>) to calculate the complexity index (C<sub>m</sub>) and the relation C<sub>m</sub>/atom. [★★]

4. Choose 3 of the previous molecules and build Ex-Target Trees in order to find the most efficient retrosynthetic route following the guidelines proposed in the episode (strategic bond finding & Corey's guidelines). [★★★]