1. Provide the intermediates in this synthesis of cubane from Eaton and coworkers in 1964. Be sure to understand the mechanism behind each step and identify the Name Reaction when applicable. For the final arrow sequence, provide the series of steps you would choose to employ to complete the synthesis (try to aim for 3–5 steps at most).

Eaton, P. E.; Cole, T. W. J. Am. Chem. Soc. 1964, 86, 3157.

2. Provide the intermediates/reagents in this synthesis of (–)-presilphiperfolan-8-ol by Snyder and coworkers. Be sure to understand the mechanism behind each step and identify the Name Reaction or reagent when applicable.

Hu, P.; Snyder, S. A. J. Am. Chem. Soc. 2017, 139, 5007.