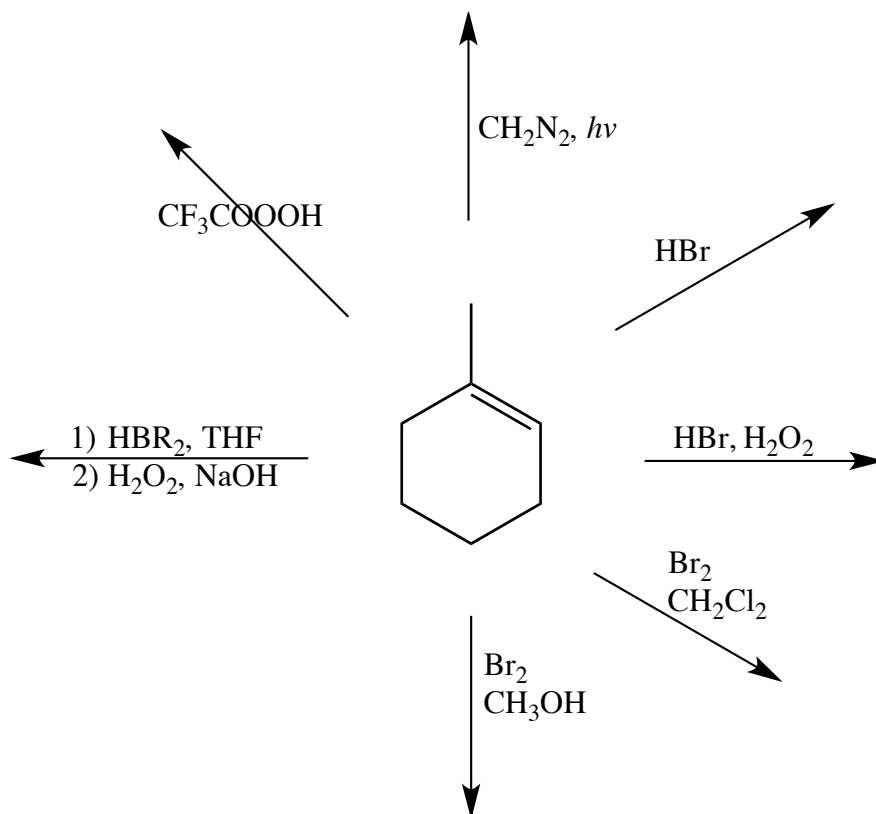


1. Show the major organic product(s) expected in the following reactions. Pay close attention to stereochemistry and regiochemistry where appropriate.



2. When the 3-bromo-2-butanol with the stereochemical structure **A** is treated with concentrated HBr it yields *meso*-2,3-dibromobutane; a similar reaction of the 3-bromo-2-butanol **B** yields ( $\pm$ )-2,3-dibromobutane. This classic experiment performed in 1939 by S. Winstein and H.J. Lucas was the starting point for a series of investigations of what are called *neighboring group effects*. Propose mechanisms that will account for the stereochemistry of these reactions.

