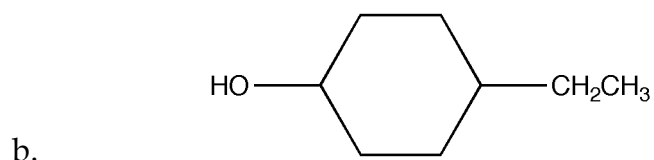
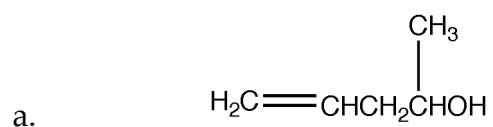


**Exercises 8 and 9: Hydrocarbons!**

1. Name the following compounds using IUPAC rules (including precedence).



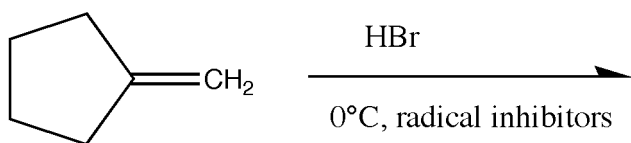
2. Draw structures for the following IUPAC-named compounds.

a. *cis*-3-methyl-2-pentenal

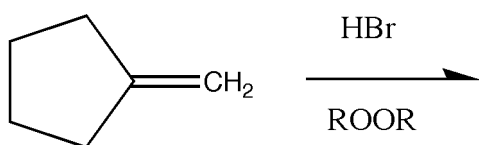
b. meso-2,3-butanediol

3. Give the major product(s) of the following reactions:

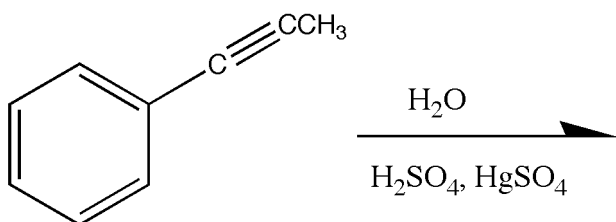
a.



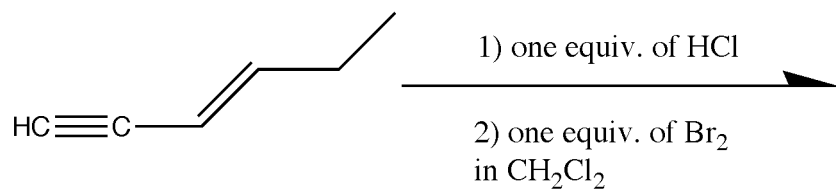
b.



c.

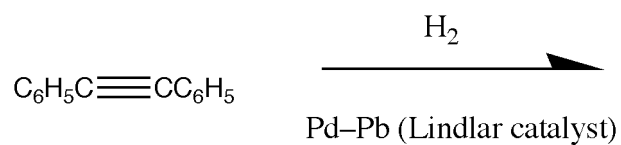


4. Show the **mechanism** and **predict** the major product of the following two-step process (the 1) and 2) refer to the order of the reagents added; assume that these reagents are added stepwise, and that there is no mixing between these reagents). Pay attention to stereochemistry, as needed.

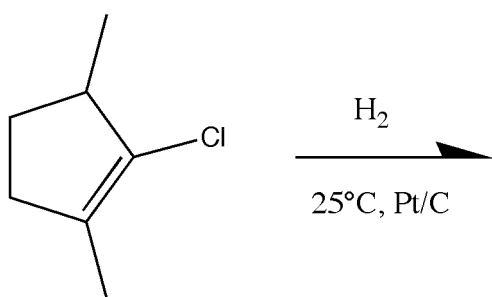


5. The following reactions are **stereoselective**. Using cis-trans drawings, or dash-wedge drawings, predict the major product:

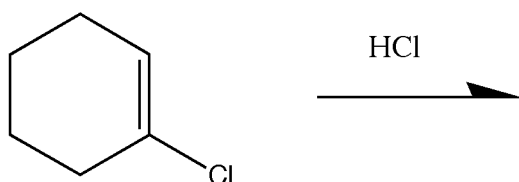
a.



b.



c.



d.

