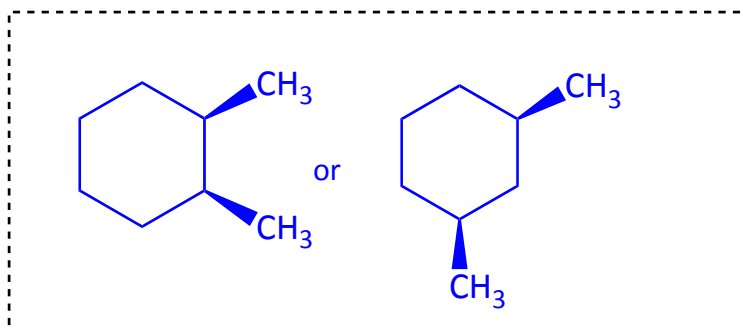
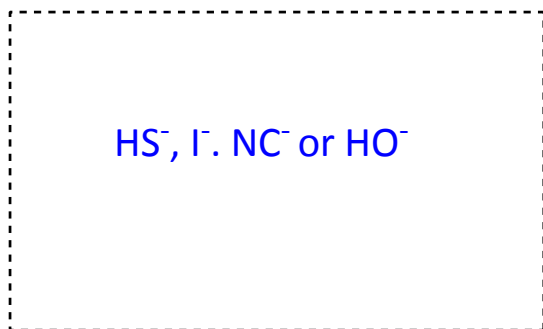


1. (7 pts) Draw structures to fit each description.

a) A strong nucleophile

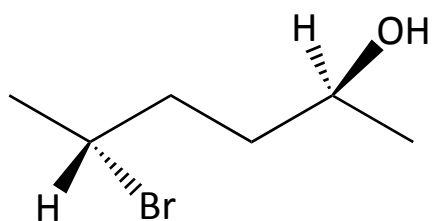
b) A meso dimethylcyclohexane.



4 pts

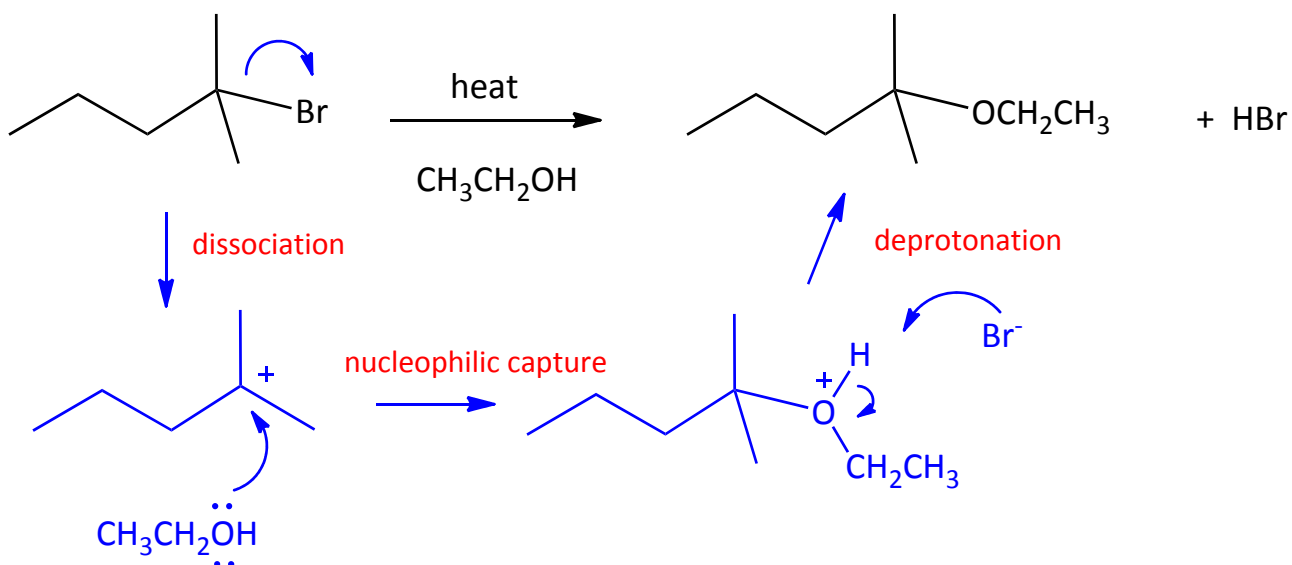
c) Write a complete name for the structure below, including all stereodescriptors (R, S, E, Z etc).

3 pts



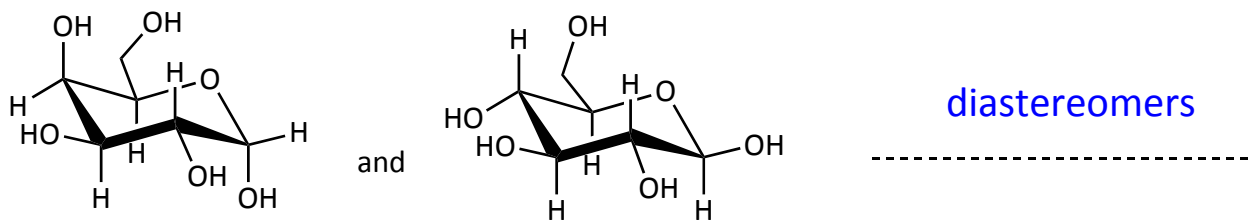
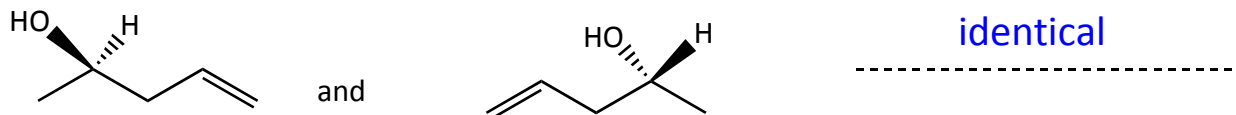
(2S, 5R)-5-bromo-2-hexanol

2. (5 pts) Draw a stepwise mechanism for the reaction below.

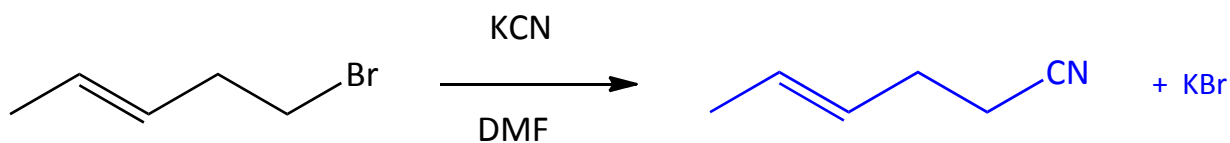
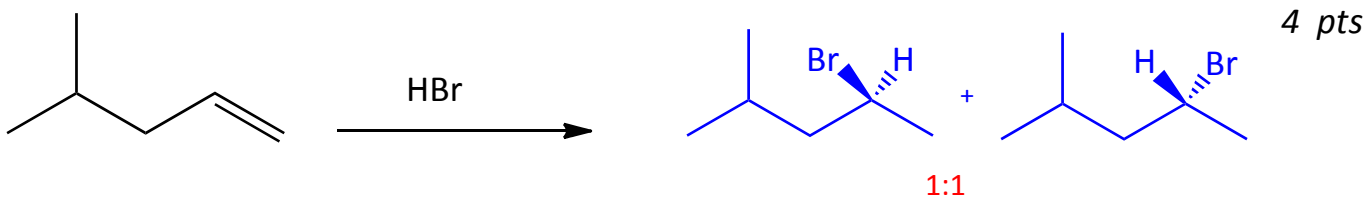


3. What term best describes the relationship between each pair of structures. Choices include: identical, enantiomers, diastereomers, conformers or Facebook Friends.

4 pts



4. Draw all the expected products of each reaction, including any potential stereoisomers.



5. (2 pts) Define the term **racemic mixture**.

A racemic mixture is an equal mixture of two enantiomers.

Total _____ / 22