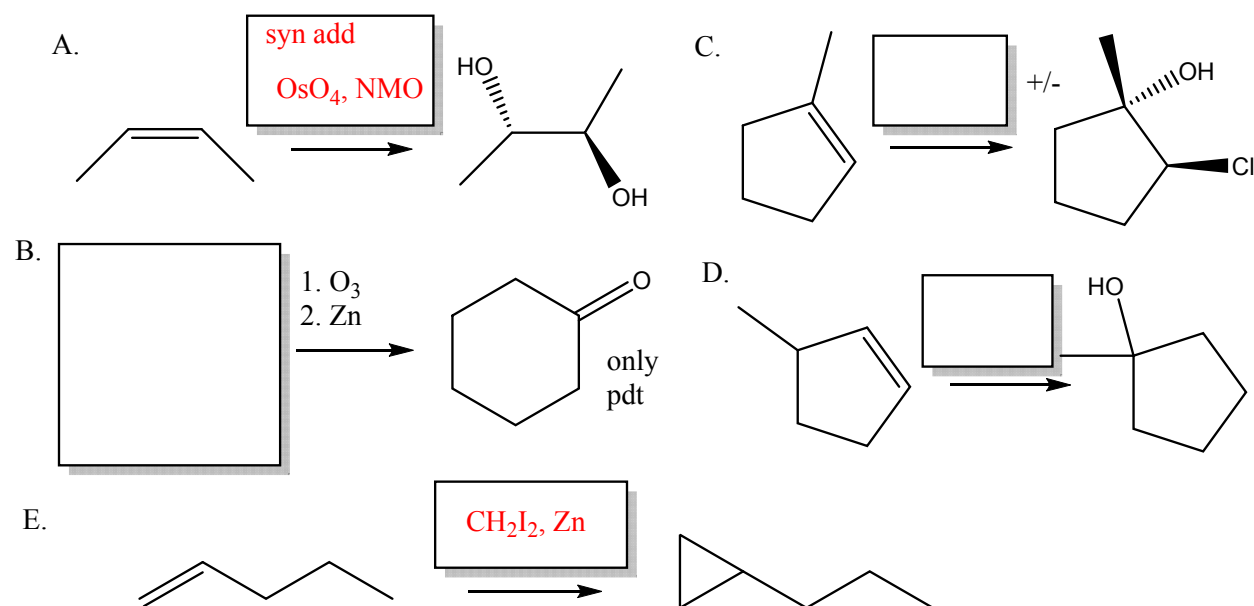


Discussion Worksheet #12
Multistep Synthesis With addition Reactions

Skill 1: Know your reagents!

- There is no shortcut here-just know the reagents for functional group transformations

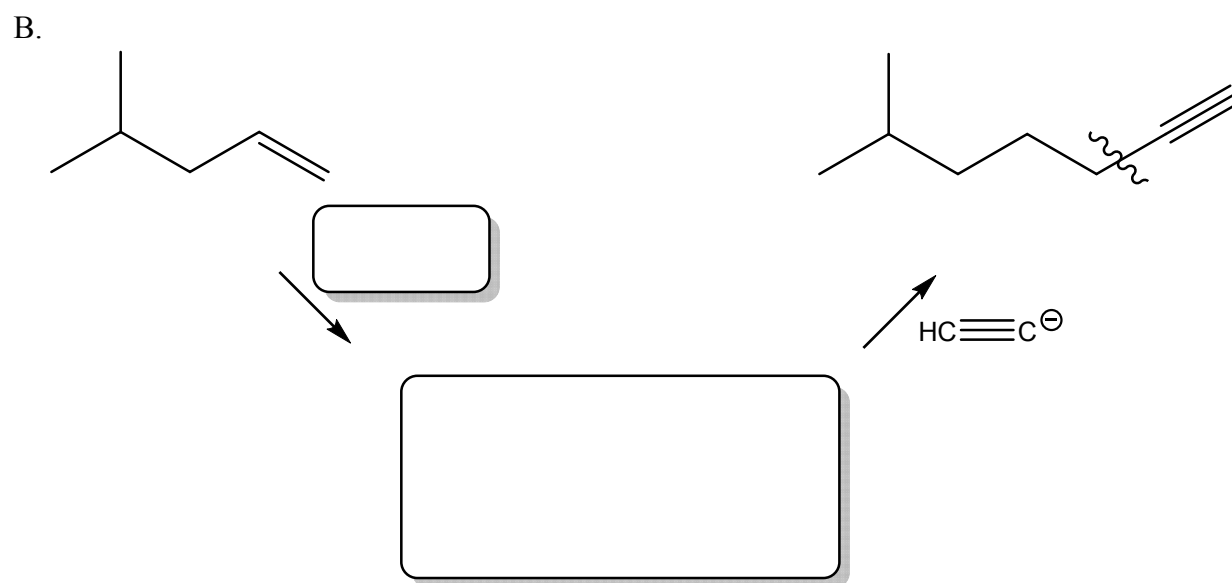
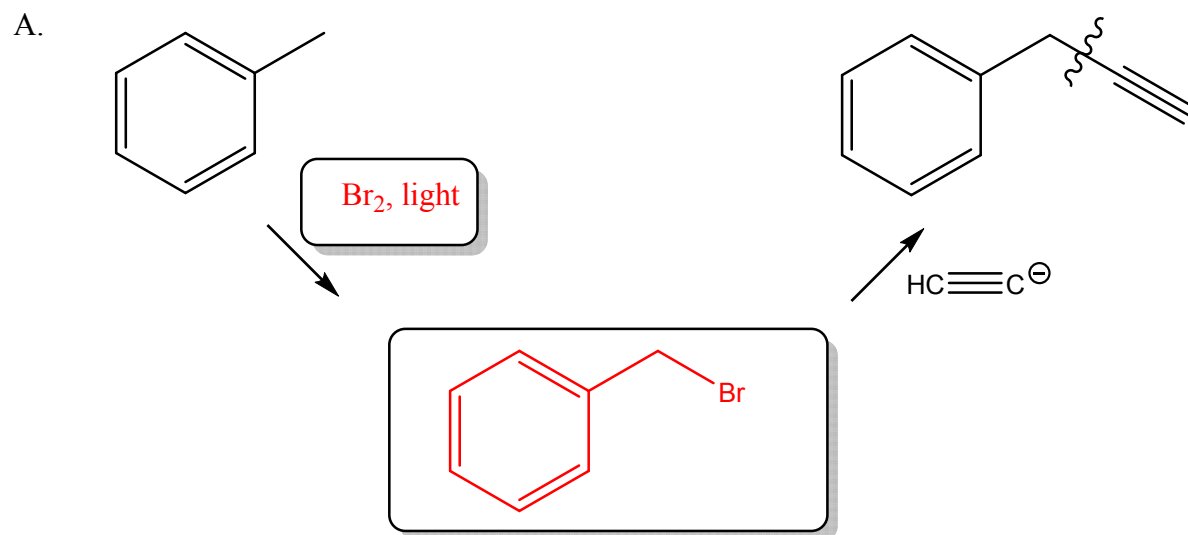
Problem 1. Provide reagents necessary to affect the following transformations.



Skill 2: Use retrosynthesis to plan new carbon carbon bond forming reactions

- Compare the starting material to the final product
- Find where the new C-C bond needs to be made
- Plan an intermediate to make that new carbon-carbon bond

Problem 2. Plan a retrosynthesis. Based on the bond disconnect in the final product, take one step back to provide the necessary electrophile, then fill in the reagents needed.



Skill 3: Take regiochemistry and stereochemistry into consideration!

Problem 3 Propose a multistep synthesis starting from the given material. You may use any inorganic reagents and any additional carbon source containing 4 or fewer carbons.

