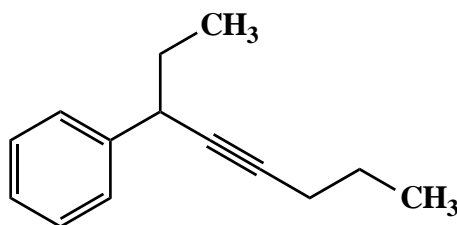


**An example from the Spring 1998 Examination #1:**

3. (25 points)

Design a synthesis of the racemic alkyne **1** from benzene and acetylene. Use any inorganic and organic reagents that are necessary. Show all reagents and stable synthetic intermediate compounds. (**N.B.** Do not draw mechanisms for each synthetic transformation!)

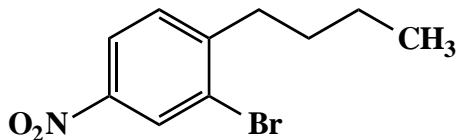


**1**

**An example from the Summer 1998 Examination #1:**

7. (25 points)

Design a synthesis of the substituted aromatic compound **2** from benzene. Use any inorganic and organic reagents that are necessary. Show all reagents and stable synthetic intermediate compounds. (**N.B.** Do not draw mechanisms for each synthetic transformation!)



**2**