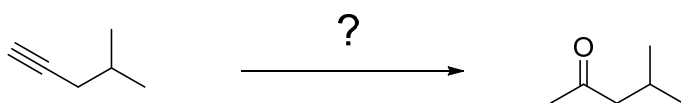


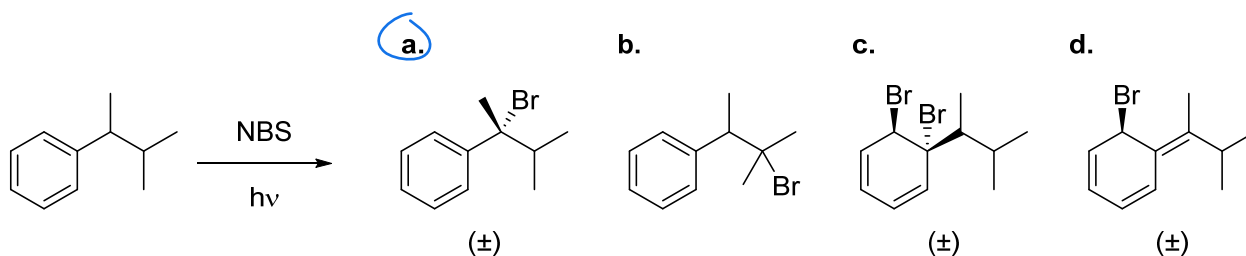
Name: \_\_\_\_\_

1. Circle the reagents required for the given reaction. (1 point)

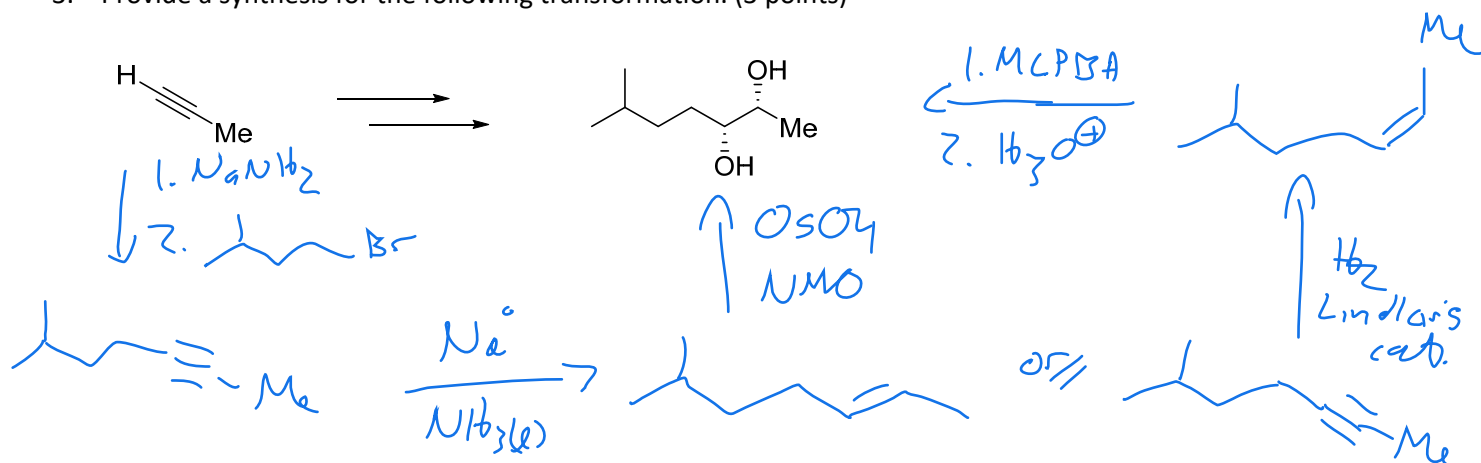


- a.  $\text{HgSO}_4, \text{H}_2\text{SO}_4, \text{H}_2\text{O}$       c. conc.  $\text{H}_2\text{SO}_4$   
 b. 1. 9-BBN      d. 1.  $\text{O}_3$   
      2.  $\text{NaOH}, \text{H}_2\text{O}_2$       2. DMS

2. Circle the major product for the following reaction. (1 point)



3. Provide a synthesis for the following transformation. (3 points)



4. a. Draw mechanisms to account for the formation of both products in the following reaction.  
 b. Label each step as initiation (I), propagation (P) or termination (T). (5 points)

