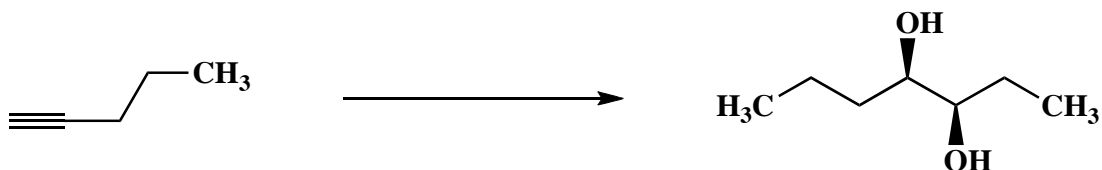


## Quiz #3

1. (10 points)

Use retrosynthetic logic to design a synthesis of the following racemic 1,2-diol from pent-1-yne, organic compounds that contain three or fewer carbons, and any additional inorganic reagents that are necessary. Show all reagents and stable synthetic intermediate compounds. Use a star to mark each step that creates a chiral product. Explain clearly why each starred step affords a racemic mixture.



2. (10 points)

Draw the structure of the expected major organic product for the following reaction. Specify stereochemistry, if relevant.

