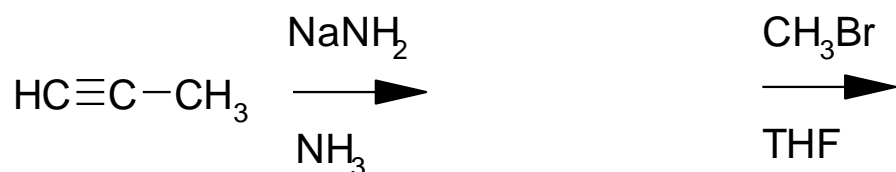


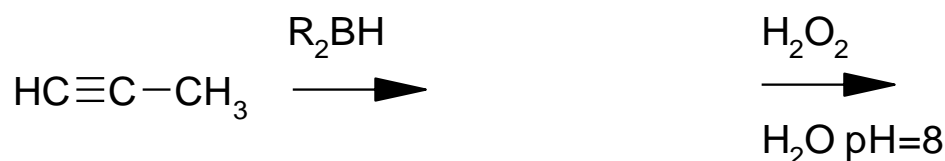
CHM 2210 - Ch 9 Homework (Alkynes)

Show products of the following reactions. Include intermediates where shown. (1 pt ea.)

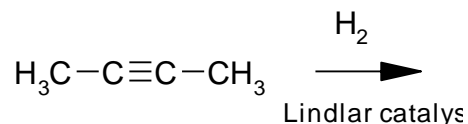
1. Count the carbons very carefully. Include the name of your product.



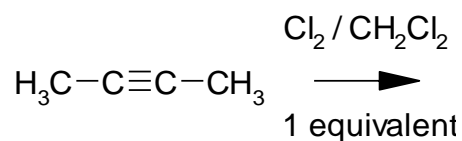
2. Compare pictures in chapter notes for internal and terminal alkyne reactions. Note the slight differences. The reactant is a terminal alkyne. Include the reactant's name as well.



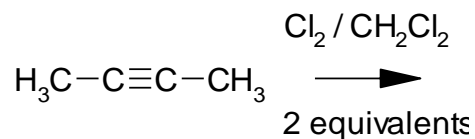
3. Show the geometry of your product and include its name.



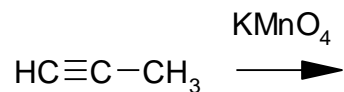
4. Show the geometry of your product and include its name.



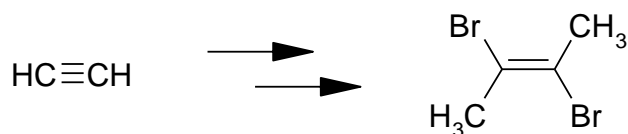
5. Two equivalents means two Cl_2 molecules for each alkyne molecule.



6. Show the geometry of both products and include their names.



7. Show an organic synthesis for the following. Show each acetylide anion and alkylation reaction separately. Refer to sections 9.8 and 9.9 in the text first, along with alkyne acidity and alkylation in the notes and the [Organic Synthesis Problems Ch 9](#) handout. Then, refer to sections 9.3 and 9.4, along with the addition of X_2 and hydration in the notes. (2 pts ea.)



8.

