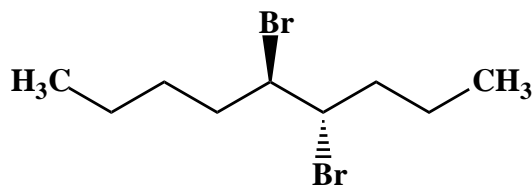


## Spring 1998 Take-Home Quiz

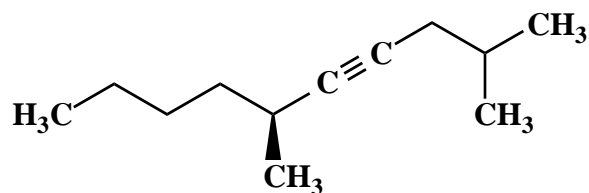
1. (20 points)

Use a retrosynthetic scheme to design a synthesis of the following racemic dibromide from acetylene, mono- or difunctional organic compounds containing four carbons or less, and any inorganic reagents. Draw clearly all reagents and isolable synthetic intermediate products. (N.B. Do **not** draw mechanisms for each synthetic transformation!)



2. (10 points)

Use the IUPAC nomenclature rules to name the following compound systematically.



(over)

3. (20 points)

Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Show **all** intermediates and denote **all** unshared electrons, formal charges and countercharges where appropriate.

