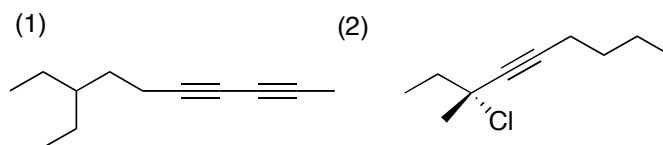


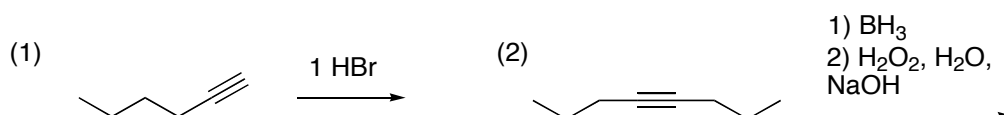
すべての解答は解答用紙に記入せよ。

1. Give IUPAC names for the following compounds (including the stereochemistry).

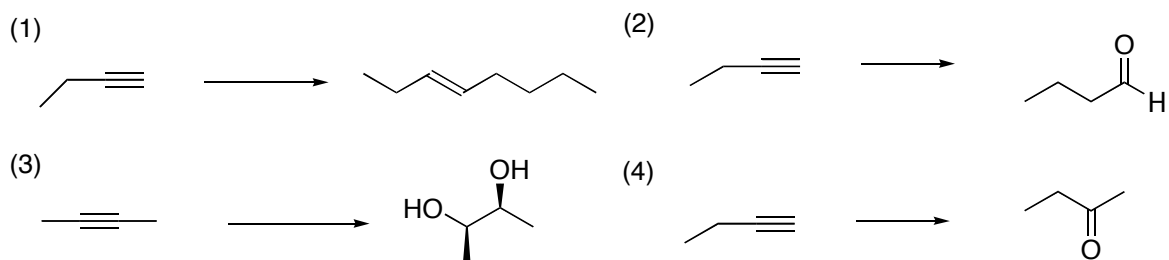


2. 1,2-diiodocyclopentane, の可能な立体異性体をすべて記し、キラル中心を明示し、R, S 配座を帰属せよ。化合物間の相互関係(diastereomer, enantiomer, meso compound) を示せ。

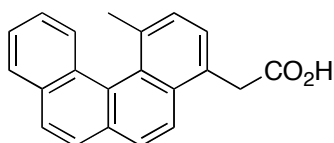
3. Predict the products of the following reactions.



4. How would you carry out the following transformations? More than one step may be needed.

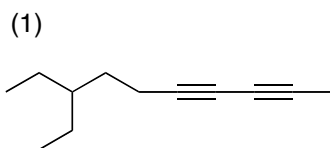


5. (やや高難度) 以下に示す化合物はキラルである。なぜキラルなのか説明せよ。

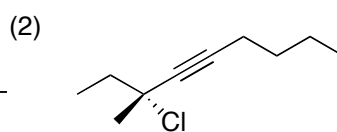


以上

1. Give IUPAC names for the following compounds (including the stereochemistry).

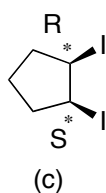
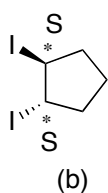
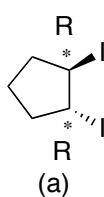


8-ethyl-2,4-decadiyne



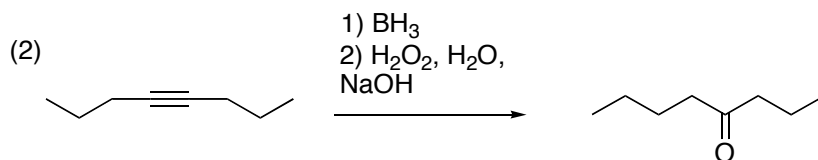
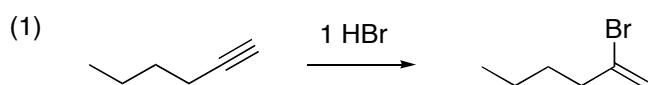
(R)-3-chloro-3-methyl-4-nonyne

2. 1,2-dichlorocyclopentane, の可能な立体異性体をすべて記し、キラル中心を明示し、化合物間の相互関係 (diastereomer, enantiomer, meso compound, etc.) を示せ。

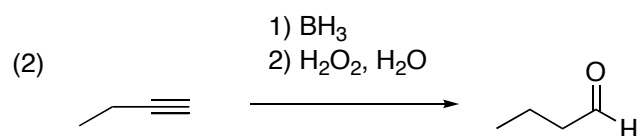
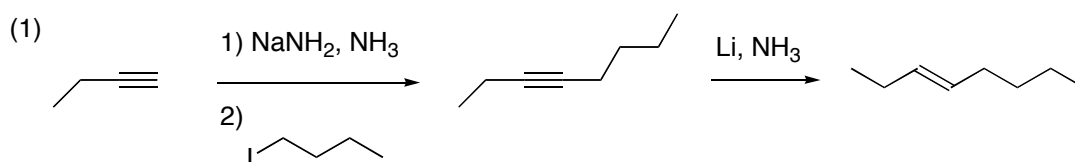


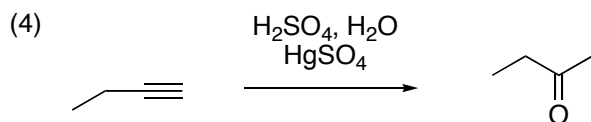
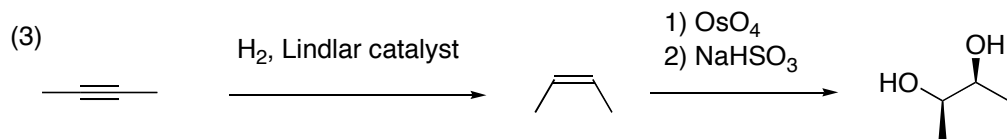
(a),(b) enantiomers
(a),(c) diastereomers
(b),(c) diastereomers
(c) meso compound

3. Predict the products of the following reactions.



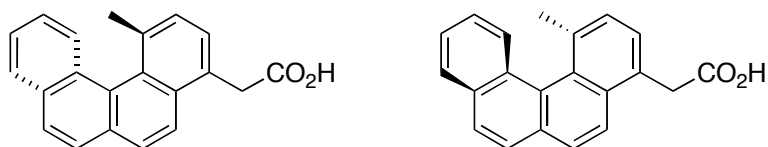
4. How would you carry out the following transformations? More than one step may be needed.





5. (やや高難度) 以下に示す化合物はキラルである。なぜキラルなのか説明せよ。

立体障害によりメチル基がベンゼン環の手前側にくるか、向こう側にくるかで2つの鏡像異性体がえられる。



以上