

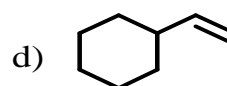
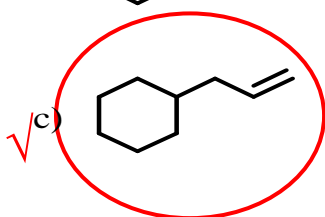
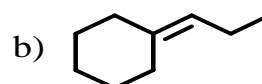
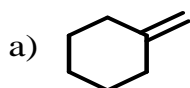
Name: ----- St. No. (-----)

Group NO. (-----) Serial No. (-----)

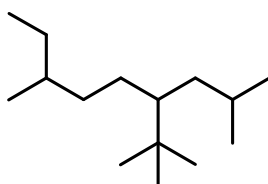
---

*I) Choose the correct answer for the following:*

1- Which of the following structures is allyl cyclohexane?



2- The IUPAC name for this compound



is:

a) 3-*tert*-Butyl-6-ethyl-1,1,6-trimethylpentane

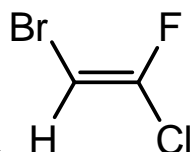
**b) 4-*tert*-Butyl-2,7-dimethylnonane**

c) 3-Isobutyl-2,2,6-trimethyloctane

d) 5-*tert*-butyl-2-ethylisononane

---

3- The IUPAC name for this compound



is:

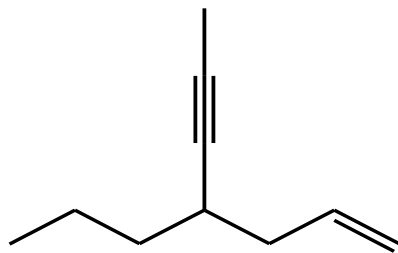
a) 1-Chloro-1-fluoro-2-bromoethene.

b) *trans*-2-Bromo-1-chloro-1-fluoroethene.

**c) E-2-Bromo-1-chloro-1-fluoroethene.**

d) Z-1-Chloro-1-fluoro-2-bromoethene.

---



4- The IUPAC name for this compound is:

a) 4-Allyl -2-heptyne

**b) 4- Propyl-1-hepten-5-yne**

c) 4-Propyl-6-hepten-2-yne

d) 4-Allyl-5-heptyne

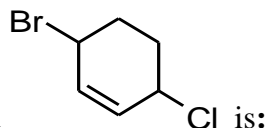
5- Which of the following structures is vinyl acetylene?

**a)  $\text{HC}\equiv\text{C}-\text{CH}=\text{CH}_2$**

b)  $\text{H}_2\text{C}=\text{CH}-\text{C}\equiv\text{C}-\text{CH}-\text{CH}_2$

c)  $\text{HC}\equiv\text{C}-\text{CH}_2-\text{CH}=\text{CH}_2$

d)  $\text{HC}\equiv\text{C}-\text{C}\equiv\text{CH}$



6- The IUPAC name for this compound is:

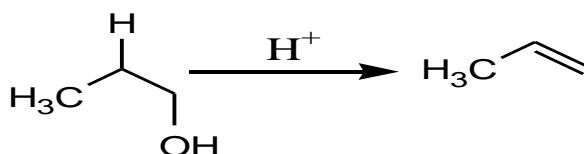
a) 1-Bromo-4-chloro-5-cyclohexene

b) 4-Bromo-1-chloro-2-cyclohexene

c) 6-Bromo-3-chlorocyclohexene

**d) 3-Bromo-6-chlorocyclohexene**

7- The following reaction can be classified as:



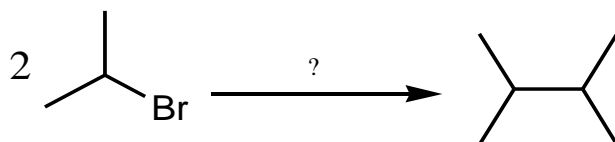
a) Addition

**b) Elimination**

c) Substitution

d) Hydrogenation

8- Which reaction conditions would be used to accomplish the following transformation?



a) Pt catalyst and  $\text{H}_2$

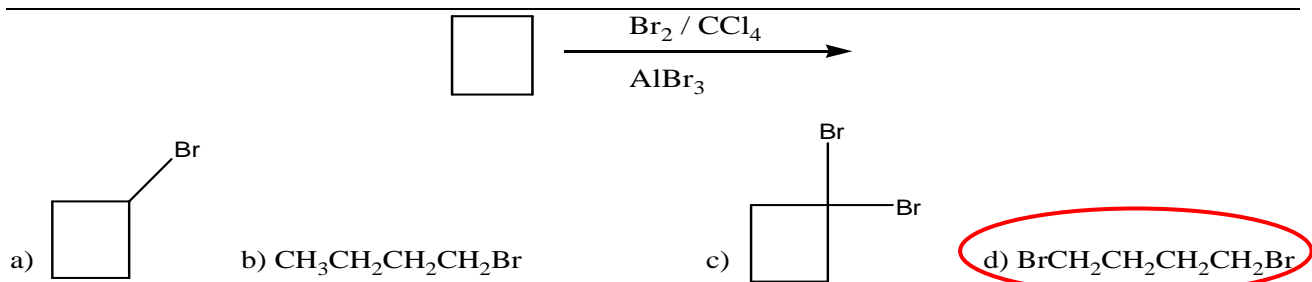
b)  $\text{Zn} / \text{H}^+$

**c) Na**

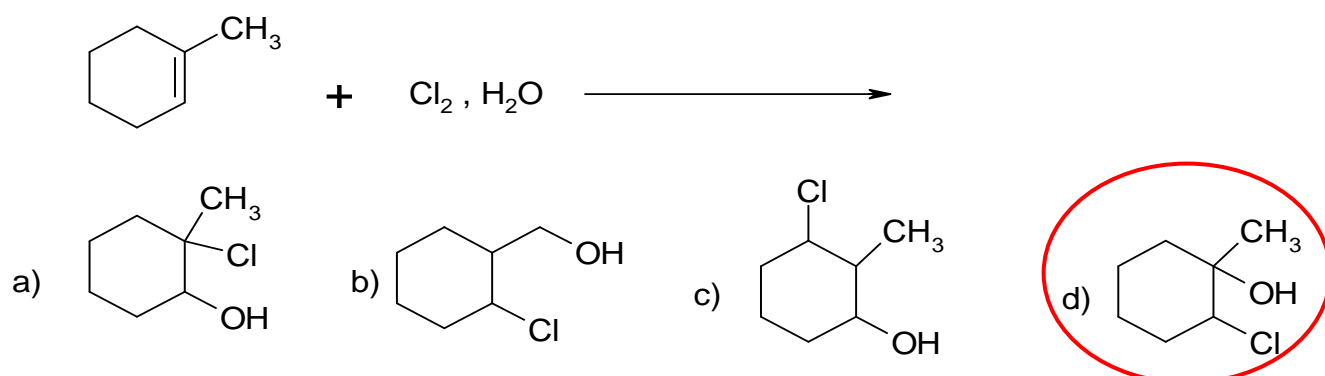
d)  $\text{LiAlH}_4$  in ether then  $\text{H}_3\text{O}^+$



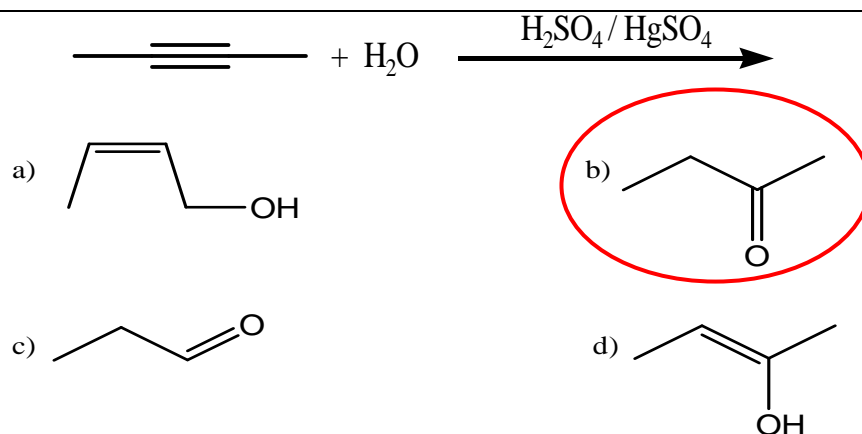
II) Choose the correct and the major product for the following reactions:



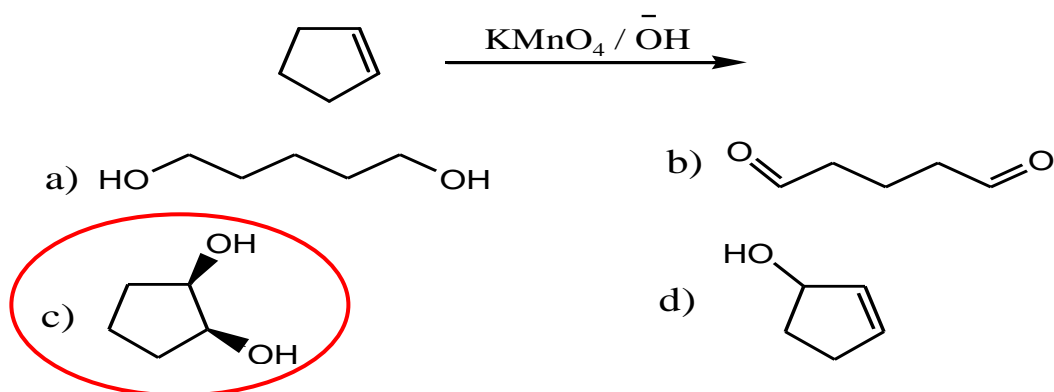
2-



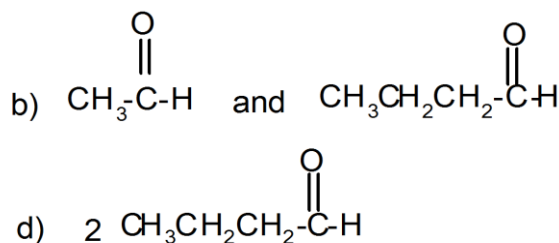
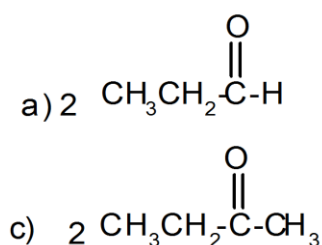
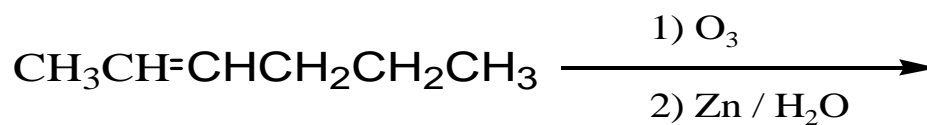
3-



4-



5-

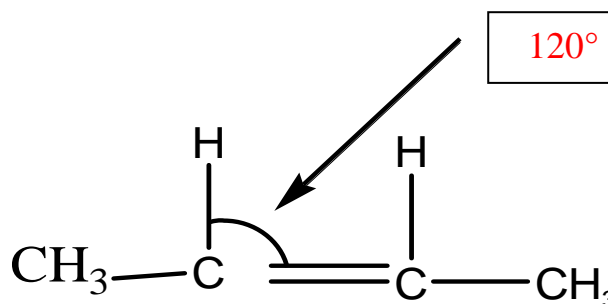


### III) Answer the following

- 1- The following name is **incorrect** according to IUPAC rules.  
3-Butyl-1-hexene. **Write the correct name.**

**3-Propyl-1-heptene**

- 2- What is the value of the bond angle indicated by the arrow in the following structure?



**Dr. Nahed Nasser, Dr. Noha Elnagdi**

**Dr. Seham AlTerary and Dr. Shatha AlAqeel**

وبالله التوفيق،،،