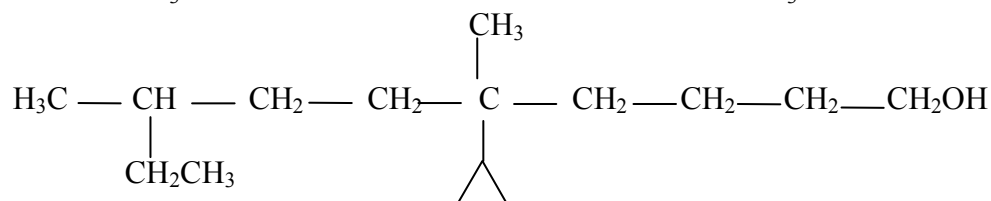
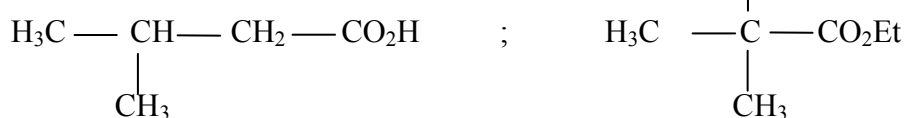
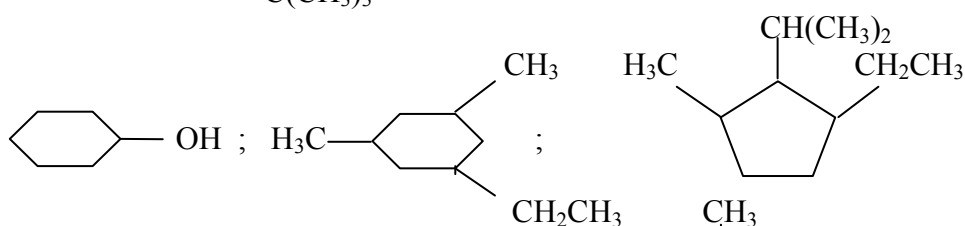
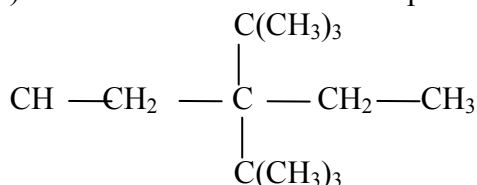


TD N°2 : Chimie organique I

EXERCICE 1 :

a) Etablir les formules des hydrocarbures et donner un nom à ces composés :
 6,6- diméthyl octane ; 2-éthyle propane ; 3,4,4- Triméthyl pentane.

b) Donner les noms de ces composés :

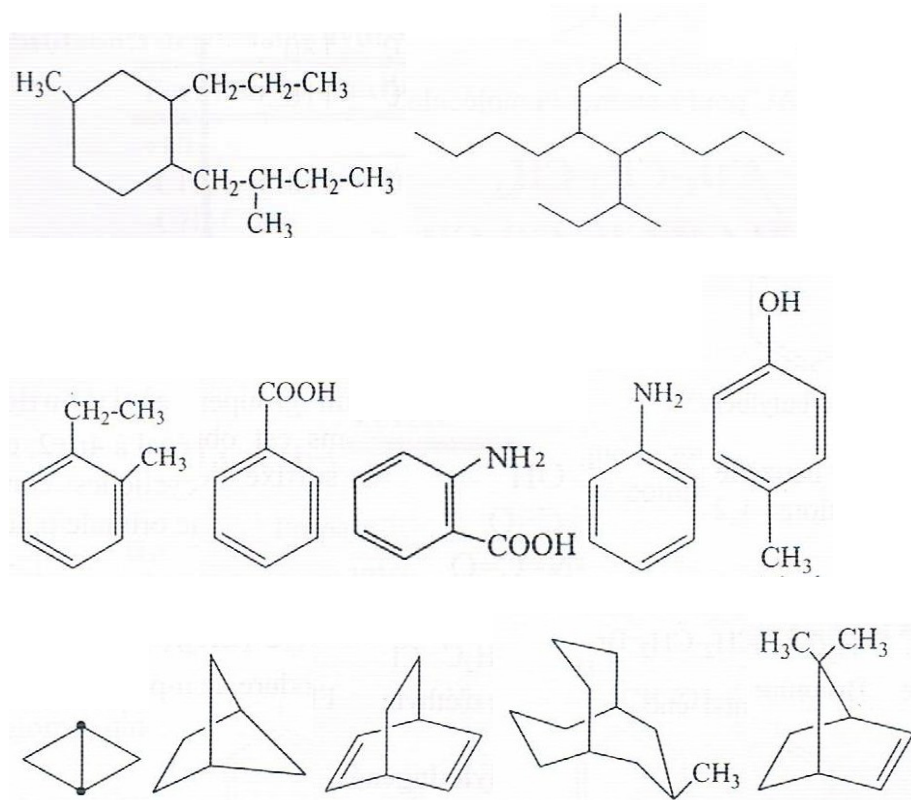


EXERCICE 2 :

Donner les formules, l'écriture semi développée puis topologique des composés suivants :

- 6-isopropyl, 4-méthyl, oct 4-ène, 2-yne
- 1,1 dichloro, 2-hydroxy propanoate de méthyle.
- isopropoxy benzène
- Acide 3-cyclopropyl, 2-méthoxy propanoïque
- N,N-Diméthyl benzyl amine
- 5-(2,3,3-triméthyl)butyl non2,4-diène
- 1-(4-méthylcyclohexyl)propan 1,3-diol
- 7-(3-hydroxy 1,3-diméthyl propyl) 6-éthyl, 4-oxo déc 10-énal
- 6-(3-aminopropyl) octan-1,3,8-triol
- Tertiobutanol
- acide phénylacétique
- acétophénone
- N,N-diéthyl amine
- N,N ditertiobutyl propanamide

EXERCICE 3 : donner un nom à ces composés



EXERCICE 4 :

Parmi les formules brutes suivantes quelles sont celles qui peuvent présenter un cycle benzénique.

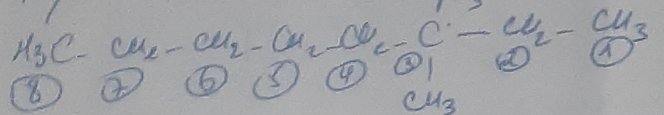
Indiquer les structures de tous les isomères porteurs de groupement phényle

On calculera préalablement les degrés d'insaturation

a) C_6H_6 b) C_7H_6O c) C_7H_5N .

exercice 1

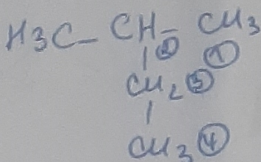
A/ 6,6-di Me octane



le nom selon l'I.U.P.A.C

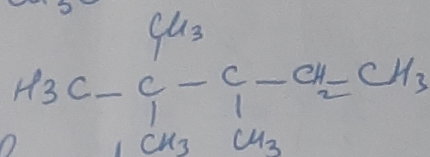
3,3-diméthyl octane
(indice le + faible)

2. Et propane



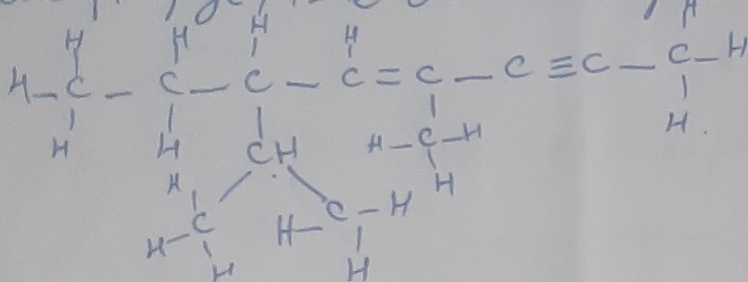
2 méthyle butane

3,4,4-Triméthyl pentane



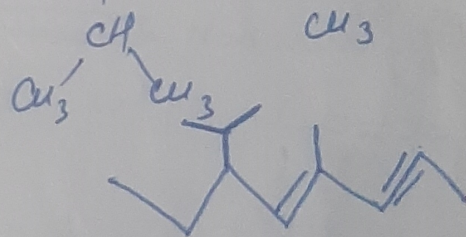
le nom: 2,2,3-Triméthyl pentane

B/ 6-isopropyl, 4-oct-ène, alcyne



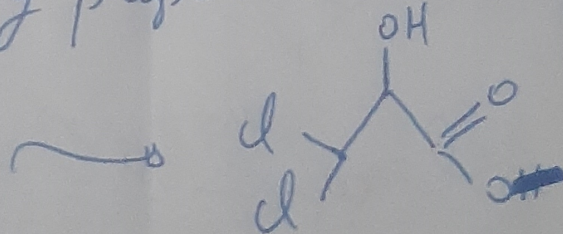
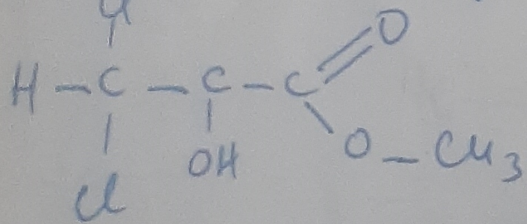
écriture développée

écriture semi-développée: $\text{H}_3\text{C}-\text{CH}_2-\text{CH}-\text{CH}=\text{C}-\text{C}\equiv\text{C}-\text{CH}_3$

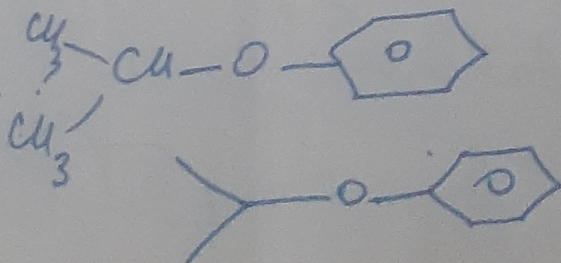


écriture topologique:

2) 3,3-dichloro, 2-Pychoxy propanoate de Méthyle

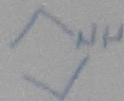
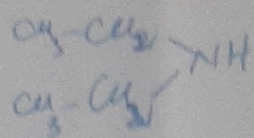


3) isopropoxy benzène

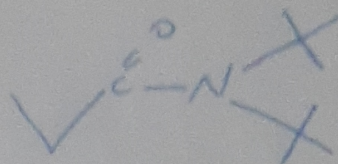
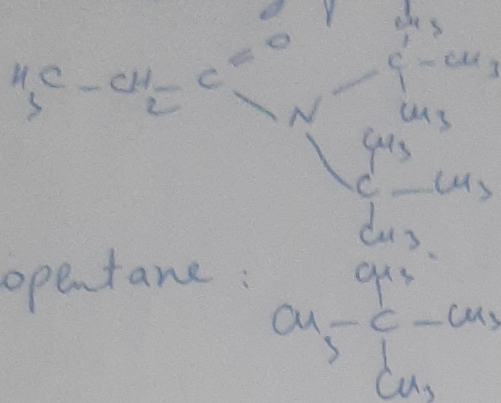


exos smile parties
12) acetophenone

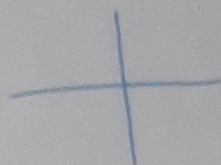
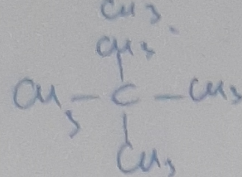
13) N,N-diethylamine



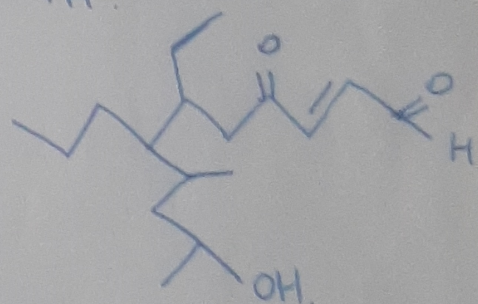
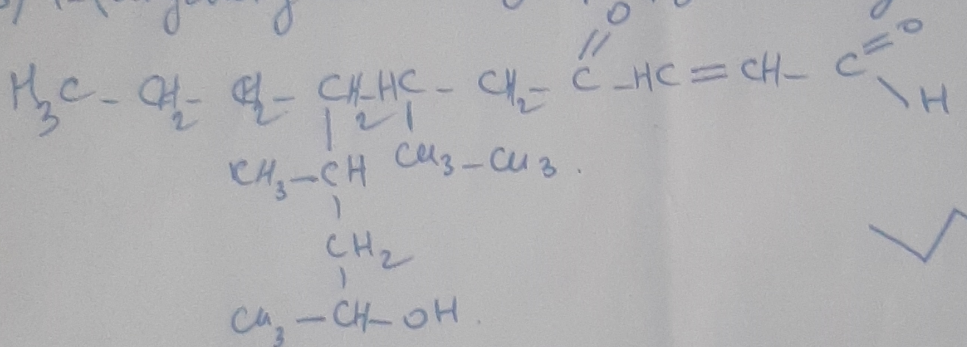
14) N,N-di-tert-butylpropanamide



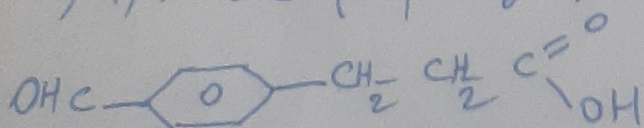
15) neopentane



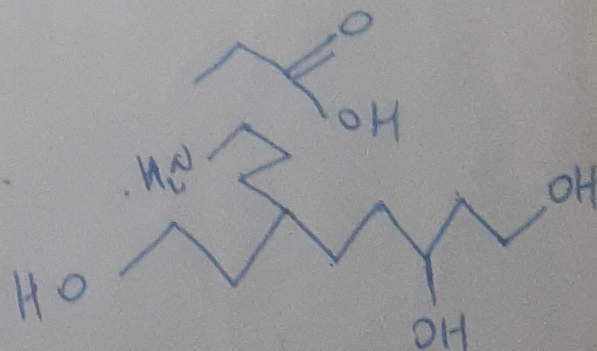
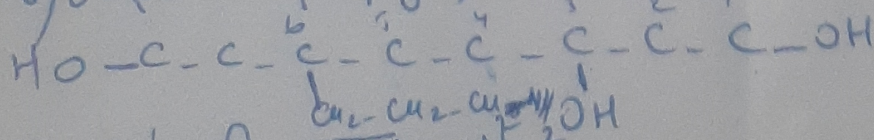
16) 4-(3-hydroxy 1,3-dimethyl)propyl 6-ethyl, 4-oxo, 2-ene decanal



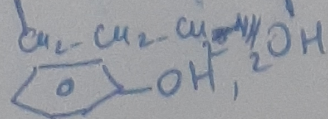
17) Acide 3(4-formyl phényle)propanoïque



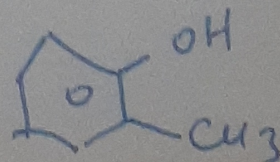
18) 6-(3-amino propyl) octan-1,3,8-Triol



19) phénol



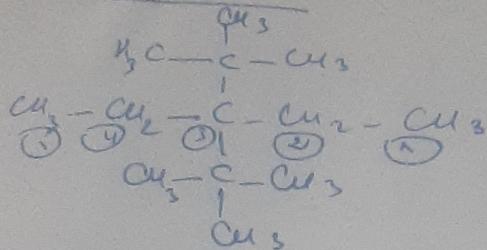
20) 1-hydroxy 1,2-méthyle benzène



ortho
césol

Exercice 2.

E

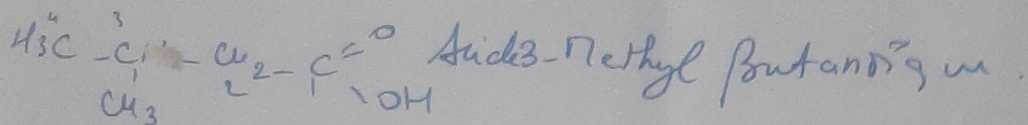


prendre le nom avec l'indice le plus faible pour les ramifications.

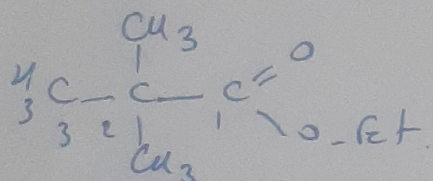
3,3-di-tert-butyl pentane.

4,4-diméthyl, 3-tert-butyl 2-éthyl pentane.

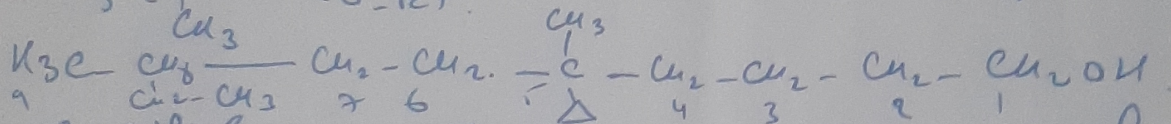
2,2,4,4-Tetraméthyl, 3,3-diéthyl pentane



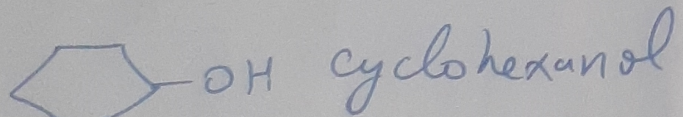
4-éthyl-2-méthyl pentanoïque.



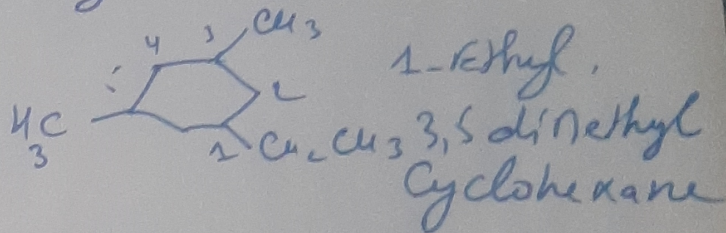
2,2-diméthyl propanoate d'éthyle



8-éthyl, 5-cyclopropyl, 5-méthyl nonanol.

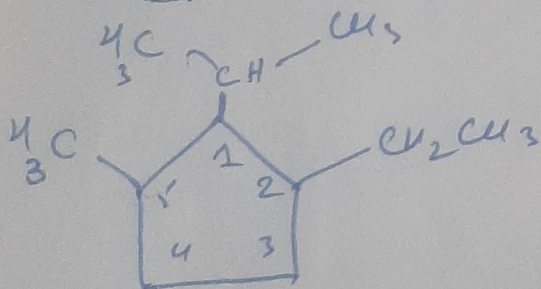


cyclohexanol.



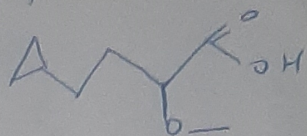
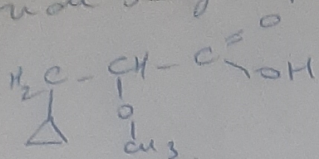
1-éthyl.

3,5-diéthyl Cyclohexane

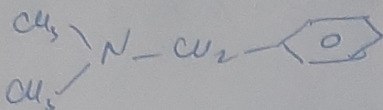


1-isopropyl, 2-éthyl, 1-méthyl Cyclopentane.

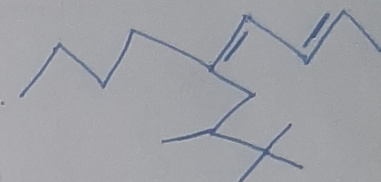
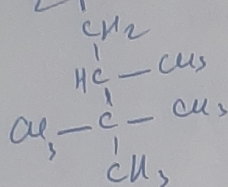
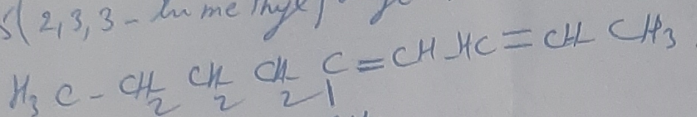
4) Acid 3-cyclopropyl, 2-methoxy propanoic acid.



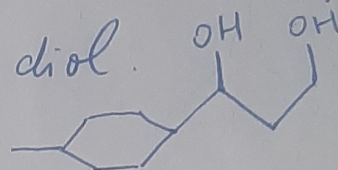
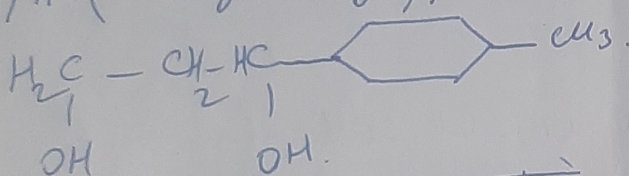
5) N,N-dimethyl benzyl amine.



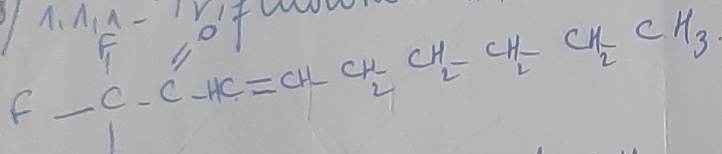
6) 5-(2,3,3-trimethyl)butyl non-2,4-diene.



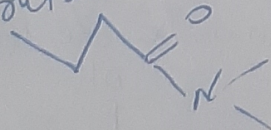
7) 1-(4-methylcyclohexyl)propan-1,3-diol.



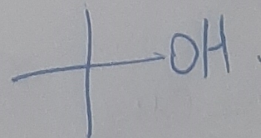
8) 1,1,1-Trifluoronon-2,4-diene 3,12-one.



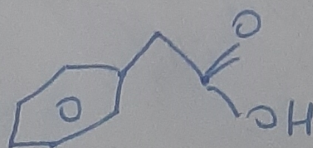
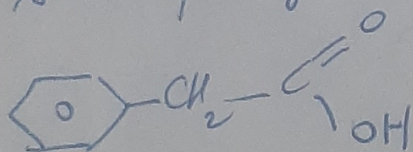
9) N,N-dimethyl butanamide: $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{C}(=\text{O})-\text{N}(\text{CH}_3)_2$



10) Tertiary butanol: $\text{CH}_3-\underset{\substack{| \\ \text{CH}_3}}{\overset{\substack{| \\ \text{CH}_3}}{\text{C}}}-\text{OH}$

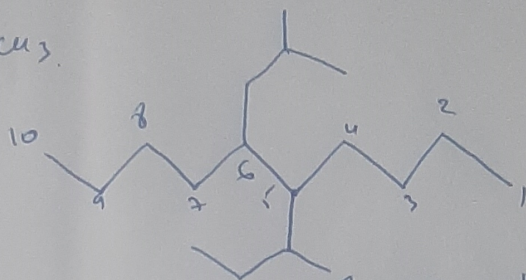
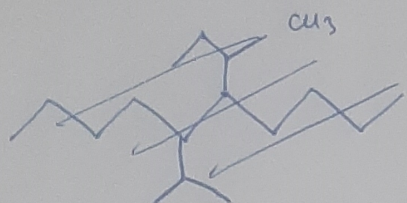
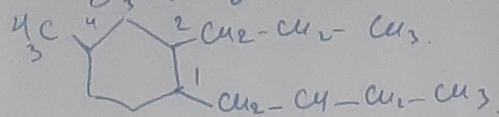


11) Acid phenyl Acet'ic acid:

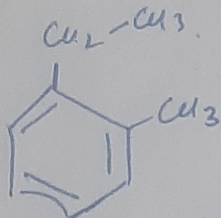


exercice 2 suite

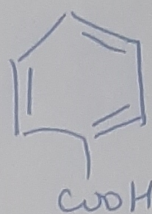
E) 1-(2-méthyl)butyl, 2-propyl, 4-méthyl cyclohexane.



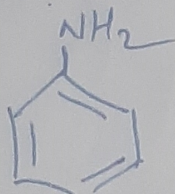
2-propyl, 6-(2-méthyl)propyl
décane.



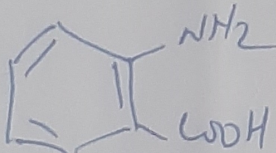
1,2 éthyl, méthyl benzène.
ortho.



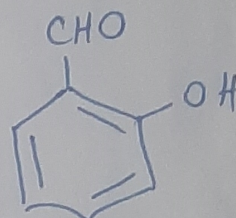
acide benzoïque.



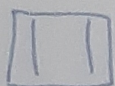
Aniline



acide para amino
benzoïque.



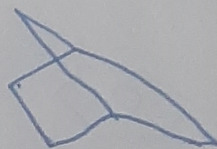
2-hydroxybenzaldéhyde
salicylaldéhyde.



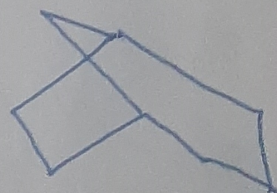
Cyclobutadiène



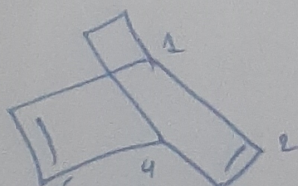
Bicyclo[1,1,0]
butane



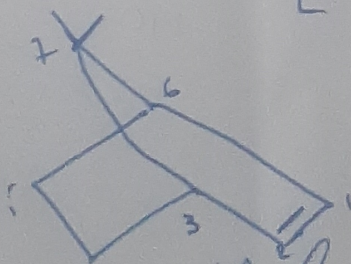
Bicyclo
[2,1,1]hexane



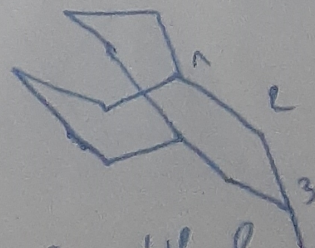
Bicyclo[3,2,1]
octane



Bicyclo[2,2,2]
octa-2,5-diene



7,7-diméthyl
bicyclo[2,2,1]hept-2-ène



3-méthyl bicyclo
[2,2,2]octane

Exercice 3 TD N°1

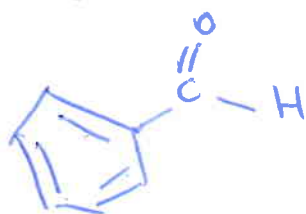
calcul de degrés d'insaturation:

$$i = \frac{2 + 2 \times 6 - 6}{2} = 4 \quad \text{C}_6\text{H}_6$$



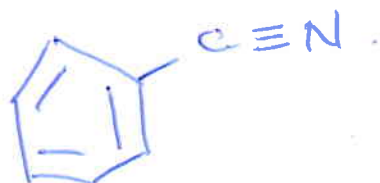
~~100~~

$$\text{C}_7\text{H}_6\text{O} \quad i = \frac{2 + 2 \times 7 - 6}{2} = 5$$



4 doubles liaisons + 1 cycle.

$$\text{C}_7\text{H}_5\text{N} \quad i = \frac{2 + 2 \times 7 - 5 - 1}{2} = 5$$



3 doubles liaisons.

1 liaison triple
+ 1 cycle.