

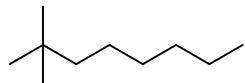
Capitolo Uno

Esercizi supplementari per il testo H. Hart, L. Craine, D. Hart
CHIMICA ORGANICA 5^a edizione

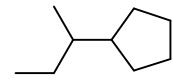
a cura di **Antonio Coviello**

2.1 Scrivete una formula di struttura condensata o poligonale per ciascuno dei seguenti composti:

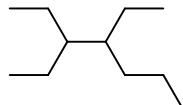
a. 2,2-dimetilottano



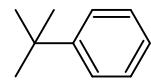
e. sec-butilciclopentano



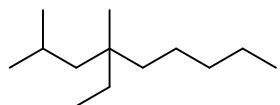
b. 3,4-dietileptano



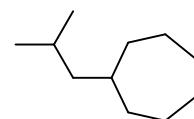
f. t-butilbenzene



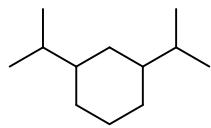
c. 4-etil-2,4-dimetilnonano



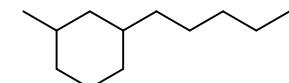
g. isobutilciclooctano



d. 1,3-diisopropilcicloesano



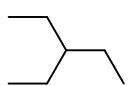
h. 1-metil-3-pentilcicloesano



2.2 Scrivete il nome IUPAC dei seguenti composti::



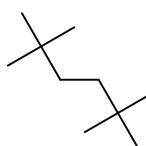
(a)



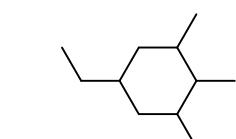
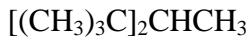
3-etyl-pentano



(b)

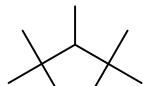


2,2,5,5-tetrametilesano



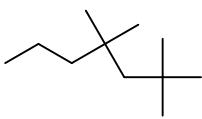
1-etyl-3,4,5-trimetilcicloesano

(d)

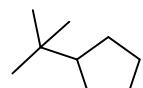


2,2,3,4,4-pentametilpentano

(e)



2,2,4,4-tetrametileptano



terbutilciclopentano

2.3 Ognuno dei nomi seguenti è scorretto. Date i nomi appropriati:

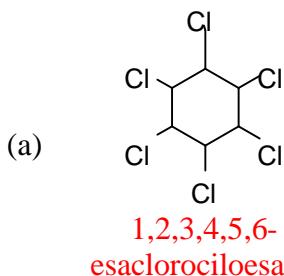
- a. 6-metilottano
b. terbutilmethano
c. 3-metil-3-isopropil-4-metildecano

3-metilottano
2,2-dimetilpropano
2,3,4,5-tetrametildecano

2.4 Scrivete le strutture di tutti i mono-cloroderivati (derivati con un solo atomo di cloro) isomeri di ciascuno dei seguenti alcani:

- a. n-pentano
b. ciclopentano
c. 2,2-dimetilbutano
d. 2,2-dimetilpropano

2.5 Scrivete il nome IUPAC di ciascuno dei seguenti composti:



(b)

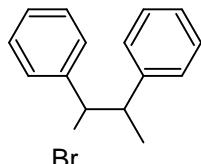


(c)

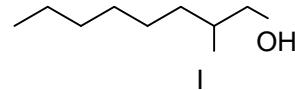


2.6 Scrivere le formule corrispondenti ai seguenti nomi:

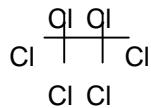
- a. 1-bromo-1,2-difenilpropano



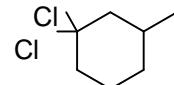
- c. 2-iodo-1-ottanol



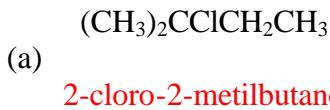
- b. esacloroetano



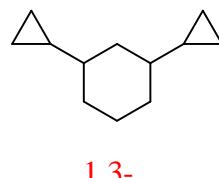
- d. 1,1-dicloro-3-metilcicloesano



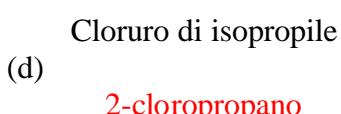
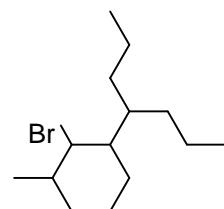
2.7 Dare i nomi IUPAC ai seguenti composti



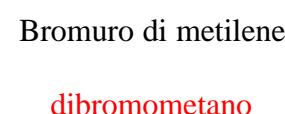
(b)



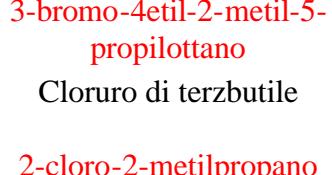
(c)



(e)

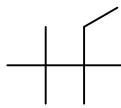


(f)

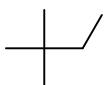


2.8 Scrivere le formule corrispondenti ai seguenti nomi:

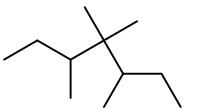
a. 2,2,3,3-tetrametilpentano



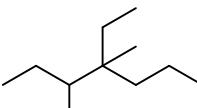
b. 2,3-dimetilbutano



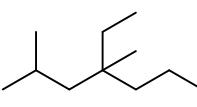
c. 3,4,4,5-tetrametileptano



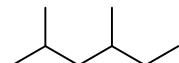
d. 4-etil-3,4-dimetileptano



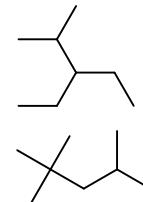
e. 4-etil-2,4-dimetileptano



f. 2,5-dimetilesano



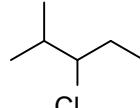
g. 3-etil-2-metilpentano



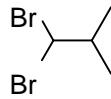
h. 2,2,4-trimetilpentano



i. 3-cloro-2-metilpentano



j. 1,2-dibromo-2-metilpropano



2.9 Scrivere le formule di struttura e il nome IUPAC dei seguenti composti:

a. $(CH_3)_2CHCH_2CH_2CH_3$

2-metilpentano

b. $CH_3CBr_2CH_3$

2,2-dibromopropano

c. $CH_3CH_2C(CH_3)_2CH_2CH_3$

3,3-dimetilpentano

d. $(C_2H_5)_2C(CH_3)CH_2CH_3$

3-etil-3-metilpentano

e. $CH_3CH_2CH(CH_3)CH(CH_3)CH(CH_3)_2$

2,3,4-trimetilesano

f. $CH_3CH_2CH(CH_3)CH(CH_2CH_3)CH_2CH_2CH_3$

4-etil-3-metileptano

g. $(CH_3)_3CCH_2C(CH_3)_3$

2,2,4,4-tetrametilpentano

h. $(CH_3)_2CClCH(CH_3)_2$

2-cloro-2,3-dimetilbutano

i. $(CH_3)_2CHCH_2CH_2CH(C_2H_5)_2$

5-etil-2-metileptano

j. $(CH_3)_2CHCH(CH_3)CH_2C(C_2H_5)_2CH_3$

5-etil-2,3,5-trimetileptano

k. $CH_3CH_2CH(CH_3)CH(Pr)CH(CH_3)_2$

3-metil-4-isopropileptano

2.10 Indicare un composto contenuto nei Problemi 8 e 9 che abbia:

a. nessun carbonio terziario

b. un carbonio terziario

c. due carboni terziari

d. nessun carbonio secondario

e. due carboni secondari

f. un numero di idrogeni secondari metà di quello degli idrogeni primari

2.11 Scegliere un composto (se esiste) contenuto nei Problemi 8 e 9 che abbia:

a. un gruppo iso-propilico

f. due gruppi sec-butilici

b. due gruppi iso-propilici

g. un gruppo terz-butile

c. un gruppo iso-butilico

h. due gruppi terz-butilici

d. due gruppi iso-butilici

i. un gruppo metilico, uno etilico, uno n-

e. un gruppo sec-butilico

propilico e uno sec-butilico