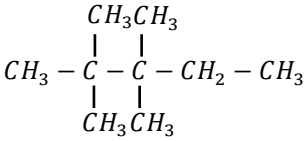
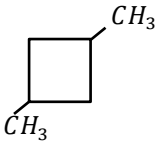
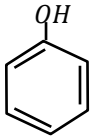
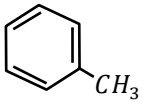
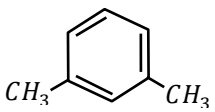
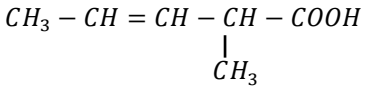
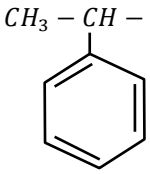
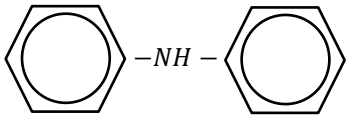
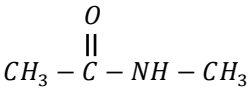
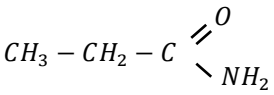
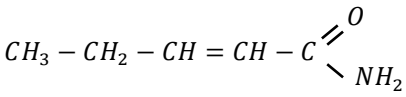
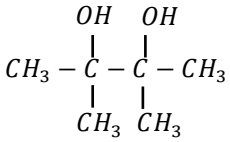
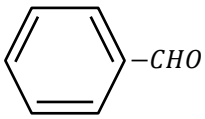
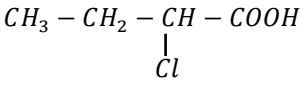
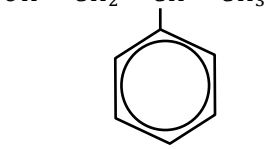
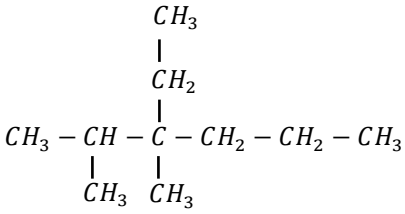
1. Formula los siguientes compuestos e indica a qué serie homóloga pertenecen:
   a) 2-metilbutan-2-ol
   b) Etilfeniléter
   c) Ciclohexano-1,4,-diona
   d) 4-etil-4-metilheptano
   e) Octa-2,4-dieno
   f) 3-etilocta-1,5-diino
   g) Pent-3-en-1-ino
   h) 2-etil-3-metilhepta-1,3-dien-6-ino
   i) Ciclohexino
   j) Ciclopenta-1,3-dieno
   k) M-dimetilbenceno
   l) 2-metilbutano-1,3-diol
   m) 3-metilpent-2-enal
   n) 4-fenilpentan-2-ona
   o) 3,3-dimetilpentanodiona
   p) Ácido pent-2-enoico
   q) Ácido pent-2-enodioico
   r) Acetato de etilo
   s) Butanamida
   t) Benzamida
   u) Butano-1,4-diamina

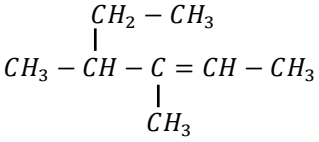
2. Nombra los siguientes compuestos e indica a qué serie homóloga pertenecen:
   a) 
   b) $CH_2 = CH - CH = CH_2$
   c) $CH \equiv C - C \equiv C - CH_3$
   d) $CH_2 = CH - CH_2 - C \equiv C - CH_3$
   e) 
   f) 
   g) 
   h) 
   i) 
   j) $CHO - C \equiv C - CH_2 - CHO$
   k) 
   l) $CH_3 - CH_2 - COO - CH_3$
   m) 
   n) 
   ñ) 
   o) 
   p) 
   q) 
   r) 
   s) $CH_3 - CO - CH_2 - CH_3$
   t) 
   u) 

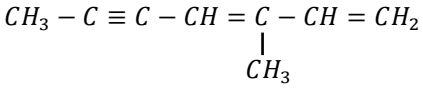
3. Formula los siguientes compuestos:
   a) 3-etil-2,5-dimetilheptano
   b) Hep-3-en-1,6-diino
   c) 1-etilciclohexa-1,3-dieno
   d) o-bromofenol
   e) 3,4-dicloropent-1-eno
   f) Hexa-1,4-dien-2-ol
   g) 2,3-dimetilbutanodial
   h) 3-metilbut-2-enal

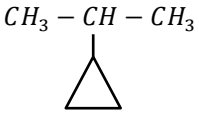
i) Ácido 3-bromobutanoico
j) Ácido hexa-2,5-dienoico
k) Acetato de isopropilo
l) Fenilmetilamina
m) N-metilpropenoamida

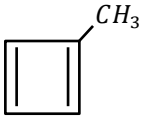
4. Nombra los siguientes compuestos:

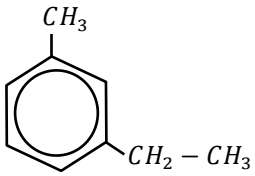
a) 

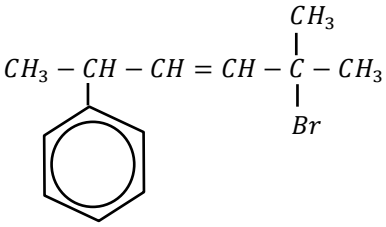
b) 

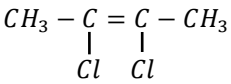
c) 

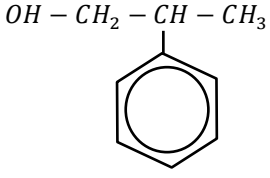
d) 

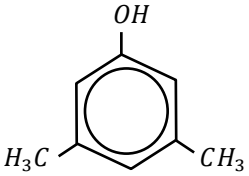
e) 

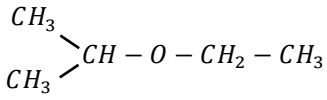
f) 

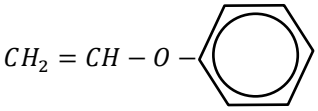
g) 

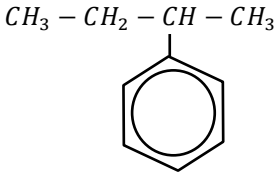
h) 

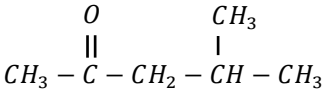
i) 

j) 

k) 

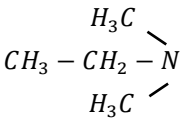
l) 

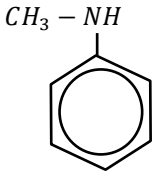
m) 

n) 

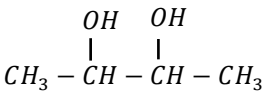
ñ) $COOH - CH_2 - CH = CH - CH_2 - COOH$

o) $COOH - CH_2 - COO - CH_2 - CH_3$

p) 

q) 

r) $COOH - CH_2 - CONH - CH_3$

s) 

5. Escribe la fórmula semidesarrollada y el nombre IUPAC de todos los isómeros de fórmula $C_4H_{10}O$.

6. Para los siguientes compuestos:
CHOO-CH=CH=COOH
CH_2=CH-CH_2-CHO;
CH_3-CH=CH-CH_3,
a) Escribe sus fórmulas desarrolladas y nómbralos.
b) Indica si presentan o no isomería geométrica y, en caso afirmativo, nombra sus isómeros.