HIDROCARBUROS | 4.º ESO

EJERCICIOS DE NOMENCLATURA

ALBA LÓPEZ VALENZUELA

ALCANOS Y CICLOALCANOS

1 propano

2 butano

3 undecano

4 metilpropano

5 2,3-dimetilbutano

6 5-etil-2,3,6-trimetil-4-propiloctano

7 metilbutano

8 3-metilhexano

9 3,3-dietilpentano

10 2,3,5-trimetil-4-propilheptano

11 hexametilpentano

12 3-etil-2,5-dimetilhexano

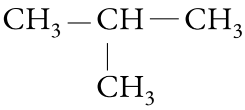
13 3,3,5-trimetilheptano

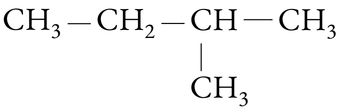
14 4-etil-2,4,6-trimetilheptano

15 3-etil-2,4,6-trimetil-5-propilnonano

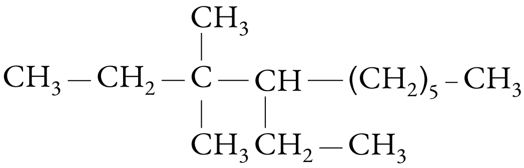
16 5-etil-3,7-dimetil-4-propildecano

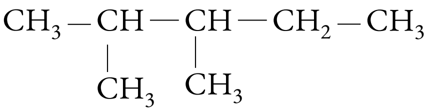
17 $CH_3-(CH_2)_7-CH_3$

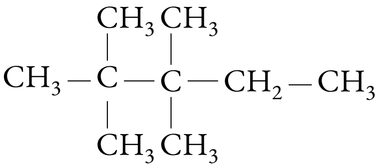
18

$$CH_3-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CH_3$$

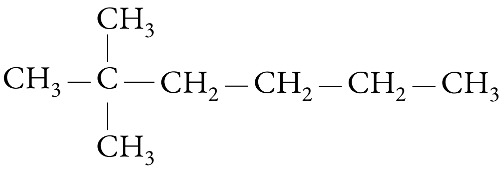
19

$$CH_3-CH_2-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CH_3$$

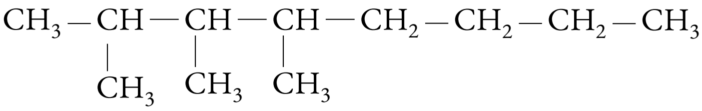
20 $CH_3-C(CH_3)_2-CH_2-CH_3$

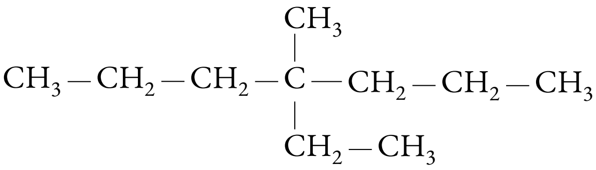
21

$$CH_3-CH_2-\overset{\displaystyle CH_3}{\overset{|}{\underset{\displaystyle CH_3}{\underset{|}{C}}}}-\underset{\displaystyle CH_2-CH_3}{\underset{|}{CH}}-(CH_2)_5-CH_3$$

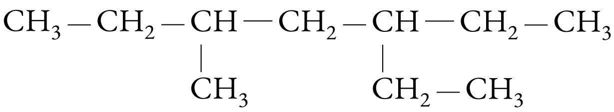
22

$$CH_3-\underset{\displaystyle CH_3}{\underset{|}{CH}}-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CH_2-CH_3$$

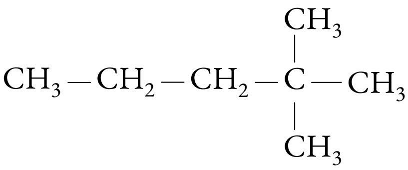
23

$$CH_3-\overset{\displaystyle CH_3}{\overset{|}{\underset{\displaystyle CH_3}{\underset{|}{C}}}}-\overset{\displaystyle CH_3}{\overset{|}{\underset{\displaystyle CH_3}{\underset{|}{C}}}}-CH_2-CH_3$$

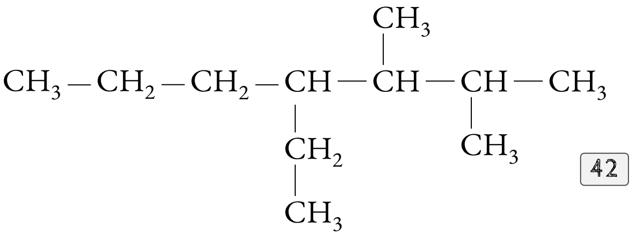
24

$$CH_3-\overset{\displaystyle CH_3}{\overset{|}{\underset{\displaystyle CH_3}{\underset{|}{C}}}}-CH_2-CH_2-CH_2-CH_3$$

25

$$CH_3-\underset{\displaystyle CH_3}{\underset{|}{CH}}-\underset{\displaystyle CH_3}{\underset{|}{CH}}-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CH_2-CH_2-CH_2-CH_3$$

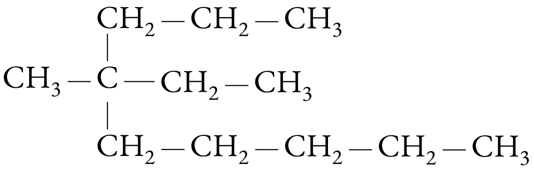
26

$$CH_3-CH_2-CH_2-\overset{\displaystyle CH_3}{\overset{|}{\underset{\displaystyle CH_2-CH_3}{\underset{|}{C}}}}-CH_2-CH_2-CH_3$$

27

$$CH_3-CH_2-\underset{\displaystyle CH_3}{\underset{|}{CH}}-CH_2-\underset{\displaystyle CH_2-CH_3}{\underset{|}{CH}}-CH_2-CH_3$$

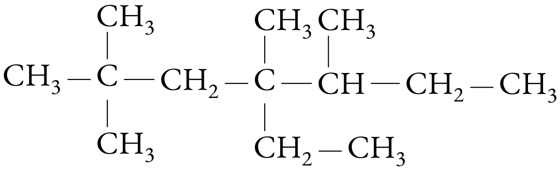
28

$$CH_3-CH_2-CH_2-\overset{\displaystyle CH_3}{\overset{|}{\underset{\displaystyle CH_3}{\underset{|}{C}}}}-CH_3$$

29 

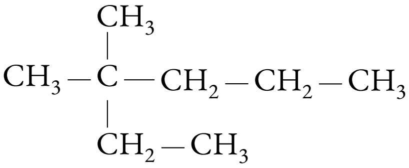
$$\begin{array}{ccccccccccccc} & & & & & & & & \mathrm{CH_3} & & & & \\ & & & & & & & & | & & & & \\ \mathrm{CH_3} & - & \mathrm{CH_2} & - & \mathrm{CH_2} & - & \mathrm{CH} & - & \mathrm{CH} & - & \mathrm{CH} & - & \mathrm{CH_3} \\ & & & & & & | & & & & | & & \\ & & & & & & \mathrm{CH_2} & & & & \mathrm{CH_3} & & \\ & & & & & & | & & & & & & \\ & & & & & & \mathrm{CH_3} & & & & & & \end{array}$$

30 

$$\begin{array}{cccccccccccccc} & & \mathrm{CH_2} & - & \mathrm{CH_2} & - & \mathrm{CH_3} & & & & & & & \\ & & | & & & & & & & & & & & \\ \mathrm{CH_3} & - & \mathrm{C} & - & \mathrm{CH_2} & - & \mathrm{CH_3} & & & & & & & \\ & & | & & & & & & & & & & & \\ & & \mathrm{CH_2} & - & \mathrm{CH_2} & - & \mathrm{CH_2} & - & \mathrm{CH_2} & - & \mathrm{CH_3} & & & \end{array}$$

31 

$$\begin{array}{ccccccccccccc} & & \mathrm{CH_3} & & & & \mathrm{CH_3} & & \mathrm{CH_3} & & & & \\ & & | & & & & | & & | & & & & \\ \mathrm{CH_3} & - & \mathrm{C} & - & \mathrm{CH_2} & - & \mathrm{C} & - & \mathrm{CH} & - & \mathrm{CH_2} & - & \mathrm{CH_3} \\ & & | & & & & | & & & & & & \\ & & \mathrm{CH_3} & & & & \mathrm{CH_2} & - & \mathrm{CH_3} & & & & \end{array}$$

32 

$$\begin{array}{ccccccccc} & & \mathrm{CH_3} & & & & & & \\ & & | & & & & & & \\ \mathrm{CH_3} & - & \mathrm{C} & - & \mathrm{CH_2} & - & \mathrm{CH_2} & - & \mathrm{CH_3} \\ & & | & & & & & & \\ & & \mathrm{CH_2} & - & \mathrm{CH_3} & & & & \end{array}$$

33 ciclohexano

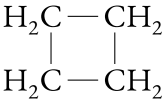
34 ciclopentano

35 2-etil-1,3-dimetilciclobutano

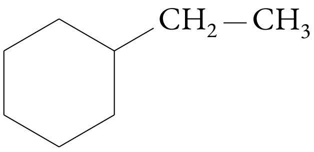
36 ciclopropilciclobutano

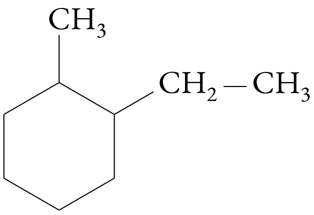
37 2-etil-1,1-dimetilciclopentano

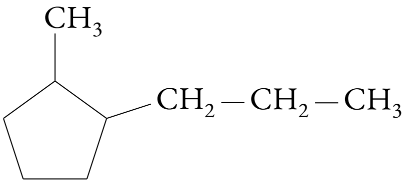
38 3-ciclobutilhexano

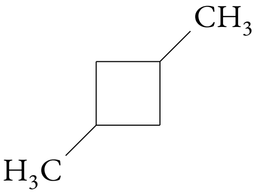
39 

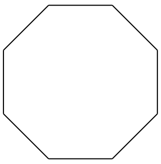
$$\begin{array}{ccc} \mathrm{H_2C} & - & \mathrm{CH_2} \\ | & & | \\ \mathrm{H_2C} & - & \mathrm{CH_2} \end{array}$$

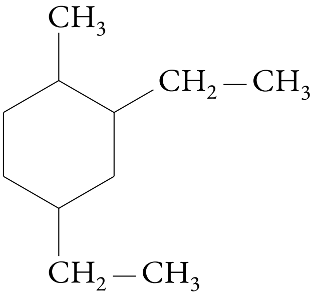
40 

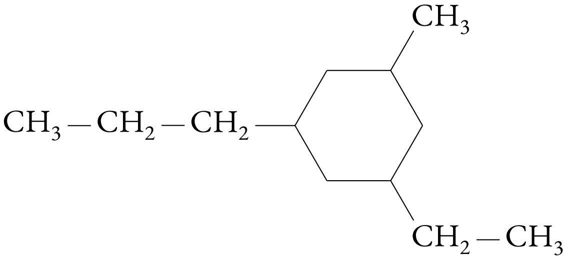
41 

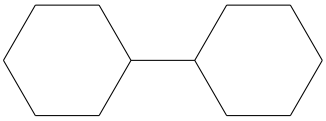
42 

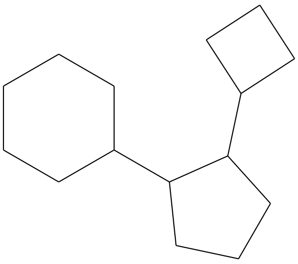
43 

44 

45 

46 

47 

48 

ALQUENOS Y CICLOALQUENOS

49 propeno

50 hept-2-eno

51 pent-1-eno

52 buta-1,2-dieno

53 butatrieno

54 hexa-2,4-dieno

55 metilpropeno

56 4,5-dimetilhex-2-eno

57 hepta-2,3-dieno

58 2-etil-3-metilhexa-1,3,4-trieno

59 4-etil-6,6-dimetilhepta-2,3-dieno

60 4-etil-3-metilhex-1-eno

61 3,4-dietilocta-1,3-dieno

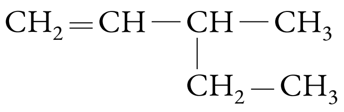
62 $CH_3-CH_2-CH=CH_2$

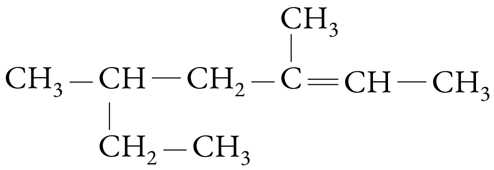
63 $CH_3-CH_2-CH=CH-CH_3$

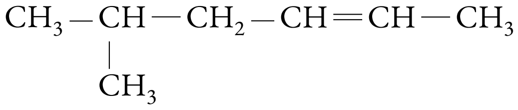
64 $CH_3-CH=CH_2$

65 $CH_3-CH_2-CH=CH-CH_2-CH_3$

66 $CH_3-CH_2-CH=CH-(CH_2)_5-CH_3$

67 
$CH_2=CH-\underset{\underset{CH_2-CH_3}{|}}{CH}-CH_3$

68 
$CH_3-\underset{\underset{CH_2-CH_3}{|}}{CH}-CH_2-\overset{\overset{CH_3}{|}}{C}=CH-CH_3$

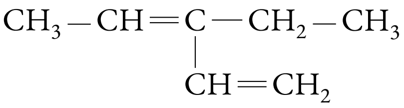
69 
$CH_3-\underset{\underset{CH_3}{|}}{CH}-CH_2-CH=CH-CH_3$

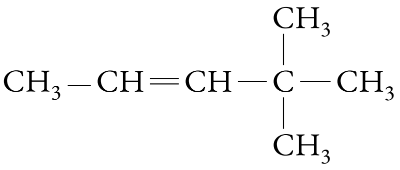
70 $CH_2=CH-CH=CH-CH_3$

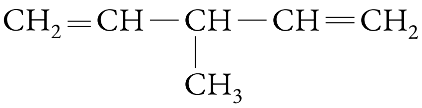
71 $CH_2=CH-CH_2-CH=CH-CH_3$

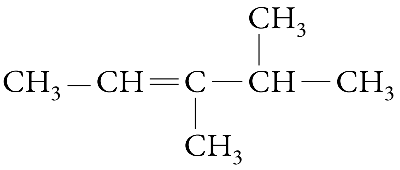
72 $CH_2=C=CH-CH=CH-CH_3$

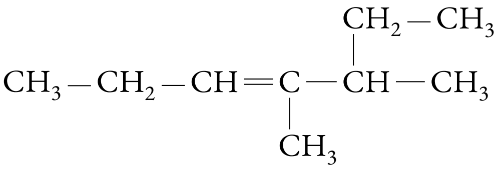
73 $CH_2=C=C=CH_2$

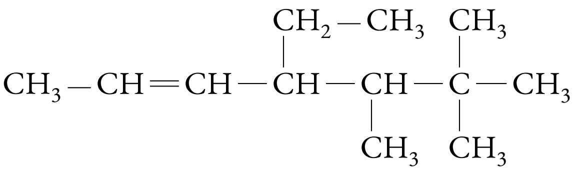
74 
$CH_3-CH=\underset{\underset{CH=CH_2}{|}}{C}-CH_2-CH_3$

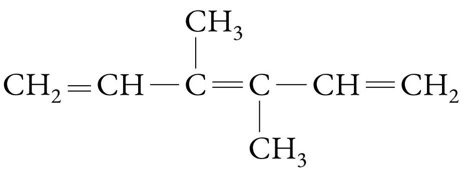
75 
$CH_3-CH=CH-\overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$

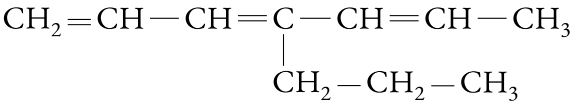
76 
$CH_2=CH-\underset{\underset{CH_3}{|}}{CH}-CH=CH_2$

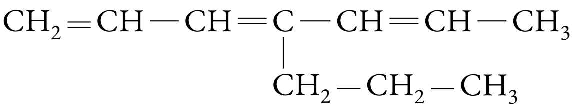
77 
$CH_3-CH=\underset{\underset{CH_3}{|}}{C}-\overset{\overset{CH_3}{|}}{CH}-CH_3$

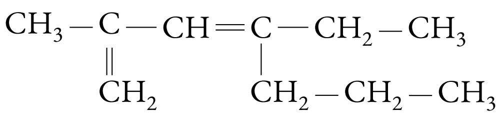
78 
$CH_3-CH_2-CH=\underset{\underset{CH_3}{|}}{C}-\overset{\overset{CH_2-CH_3}{|}}{CH}-CH_3$

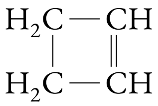
79 
$CH_3-CH=CH-\overset{\overset{CH_2-CH_3}{|}}{CH}-\underset{\underset{CH_3}{|}}{CH}-\overset{\overset{CH_3}{|}}{\underset{\underset{CH_3}{|}}{C}}-CH_3$

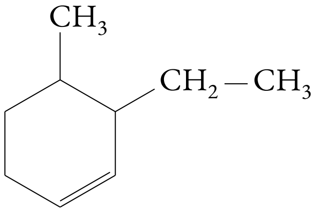
80 
$CH_2=CH-\overset{\overset{CH_3}{|}}{C}=\underset{\underset{CH_3}{|}}{C}-CH=CH_2$

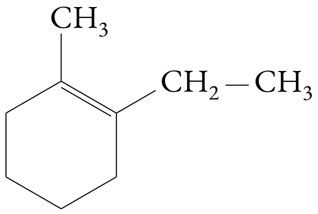
81 
$CH_2=CH-CH=\underset{\underset{CH_2-CH_2-CH_3}{|}}{C}-CH=CH-CH_3$

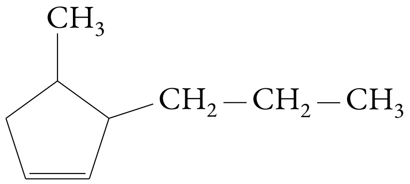
82 
$CH_2=CH-CH=\underset{\underset{CH_2-CH_2-CH_3}{|}}{C}-CH=CH-CH_3$

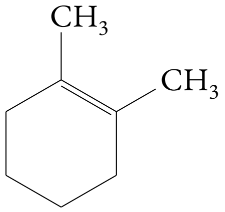
83 
$CH_3-\underset{\underset{\displaystyle CH_2}{\|}}{C}-CH=\underset{\underset{\displaystyle CH_2-CH_2-CH_3}{|}}{C}-CH_2-CH_3$

84 
$\begin{array}{l} H_2C-CH \\ \quad | \qquad \| \\ H_2C-CH \end{array}$

85 

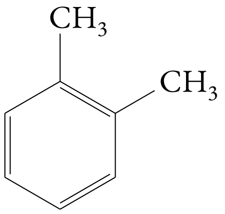
86 

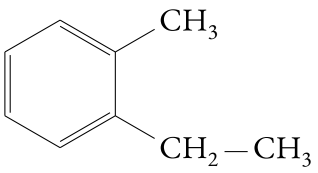
87 

88 

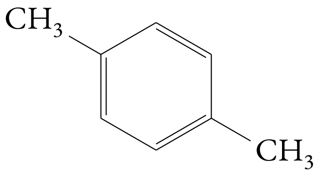
AROMÁTICOS

89 etilbenceno

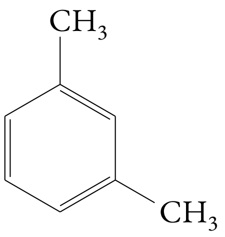
90 

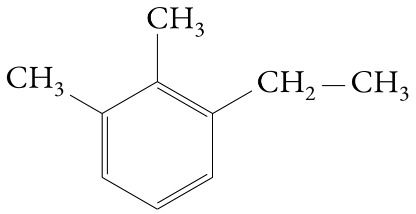
91 

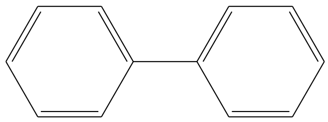
92 1-etil-3-propilbenceno

93 

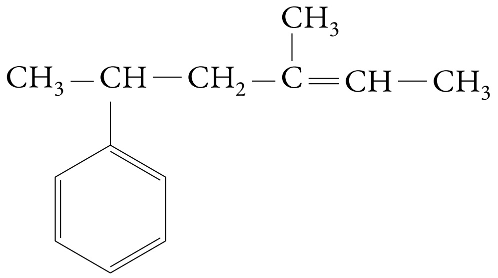
94 p-etilmetilbenceno

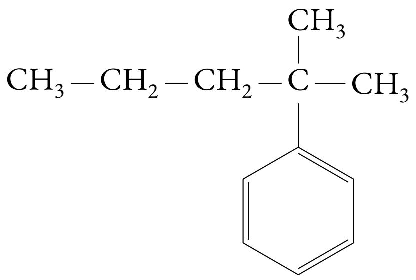
95 

96 

97 

98 1-etil-3,4-dimetilbenceno

99 

100 

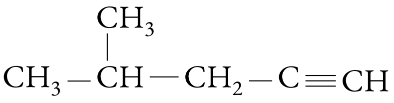
ALQUINOS Y CICLOALQUINOS

101 $CH{\equiv}CH$

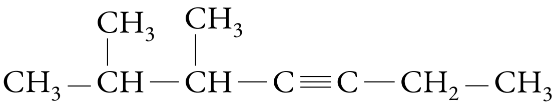
102 $CH_3-C{\equiv}CH$

103 $CH_3-C{\equiv}C-CH_2-CH_3$

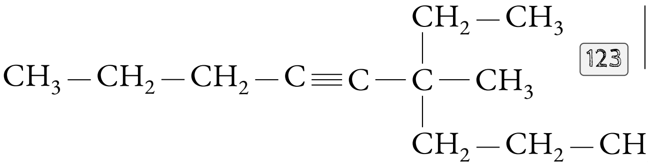
104 hex-3-ino

105

$CH_3-CH(CH_3)-CH_2-C{\equiv}CH$

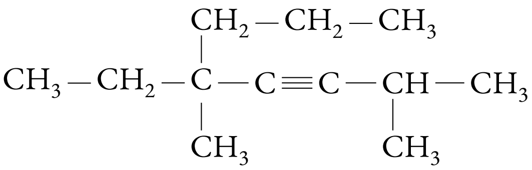
106 but-1-ino

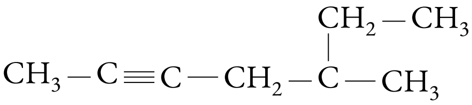
107

$CH_3-CH(CH_3)-CH(CH_3)-C{\equiv}C-CH_2-CH_3$

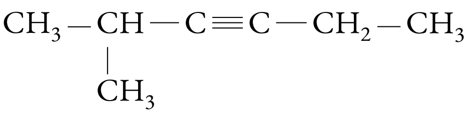
108 5,6-dimetilhept-3-ino

109

$CH_3-CH_2-CH_2-C{\equiv}C-C(CH_2-CH_3)(CH_2-CH_2-CH_3)-CH_3$

110 4,6-dimetilhept-1-ino

111

$CH_3-CH_2-C(CH_2-CH_2-CH_3)(CH_3)-C{\equiv}C-CH(CH_3)-CH_3$

112

$CH_3-C{\equiv}C-CH_2-C(CH_2-CH_3)-CH_3$

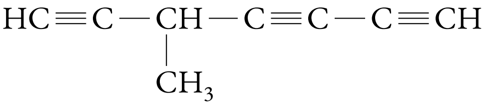
113

$CH_3-CH(CH_3)-C{\equiv}C-CH_2-CH_3$

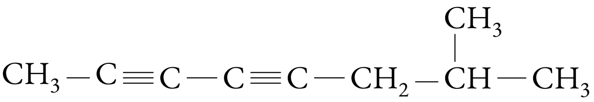
114 hexa-1,4-diino

115 $CH_3-C{\equiv}C-CH_2-C{\equiv}C-CH_3$

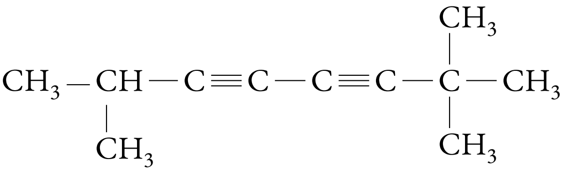
116 6-metilhepta-2,4-diino

117 $HC{\equiv}C-C{\equiv}C-C{\equiv}CH$

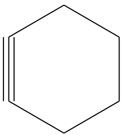
118

$HC{\equiv}C-CH(CH_3)-C{\equiv}C-C{\equiv}CH$

119

$CH_3-C{\equiv}C-C{\equiv}C-CH_2-CH(CH_3)-CH_3$

120 hept-2,5-diino

121

$CH_3-CH(CH_3)-C{\equiv}C-C{\equiv}C-C(CH_3)_2-CH_3$

122 3-etil-4-propilocta-1,5,7-triino

123


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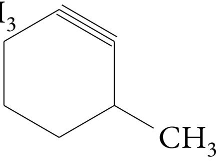
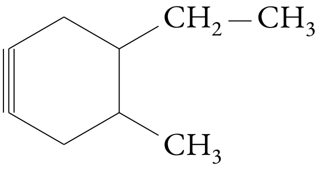
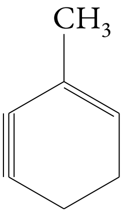


125 1,3-dimetilciclohexino

126


127 ciclohexa-1,4-diino

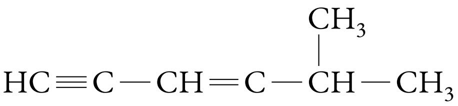
128


129 2,3-dietil-1-metilciclohexa-1,3-diino

ALQUENINOS Y CICLOALQUENINOS

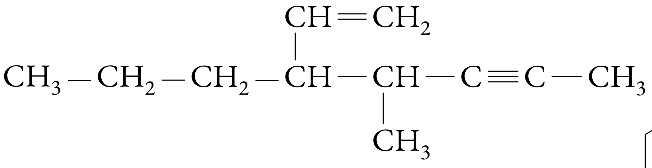
130 hex-1-en-3-ino

131 oct-3-en-1,7-diino

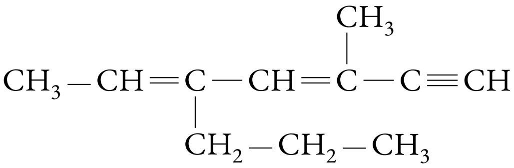
132 

$$\mathrm{HC{\equiv}C-CH{=}C-\overset{CH_3}{\overset{|}{CH}}-CH_3}$$

133 pent-1-en-4-ino

134 

$$\mathrm{CH_3-CH_2-CH_2-\overset{CH{=}CH_2}{\overset{|}{CH}}-\underset{CH_3}{\underset{|}{CH}}-C{\equiv}C-CH_3}$$

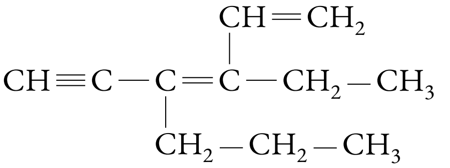
135 

$$\mathrm{CH_3-CH{=}\underset{CH_2-CH_2-CH_3}{\underset{|}{C}}-CH{=}\overset{CH_3}{\overset{|}{C}}-C{\equiv}CH}$$

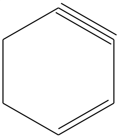
136 hept-3-en-1,6-diino

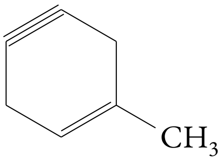
137 octa-1,3,7-trien-5-ino

138 $\mathrm{CH{\equiv}C-CH{=}CH-CH{=}CH_2}$

139 

$$\mathrm{CH{\equiv}C-\underset{CH_2-CH_2-CH_3}{\underset{|}{C}}{=}\overset{CH{=}CH_2}{\overset{|}{C}}-CH_2-CH_3}$$

140 

141 

AMPLIACIÓN: RADICALES Y ESTRUCTURAS ESQUELETO

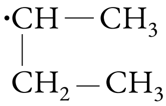
1 ciclobutilo

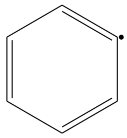
2 isopropilo

3 3-metilciclohexilo

4 $\cdot CH_2 - CH_3$

5 $\cdot CH_3$

6

$$\begin{array}{l} \cdot CH - CH_3 \\ \;| \\ CH_2 - CH_3 \end{array}$$

7


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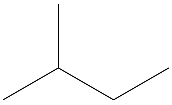

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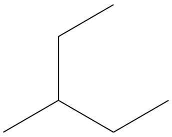

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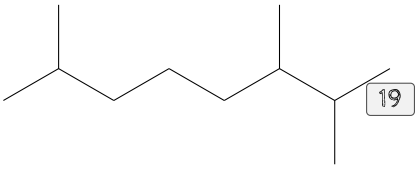

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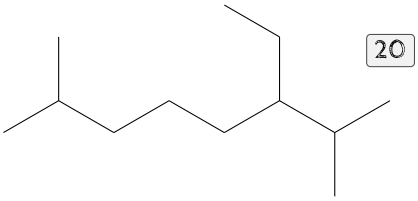

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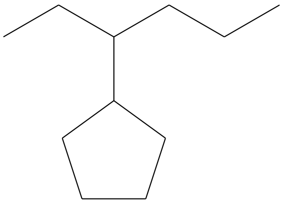

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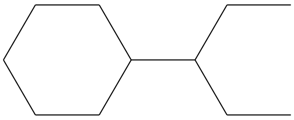

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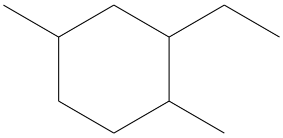

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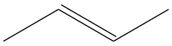

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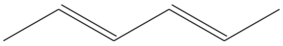

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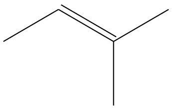

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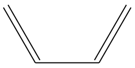

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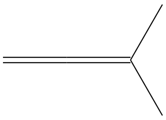

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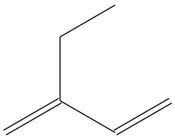

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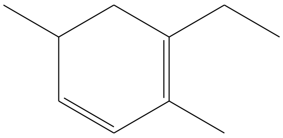

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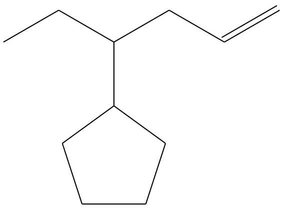

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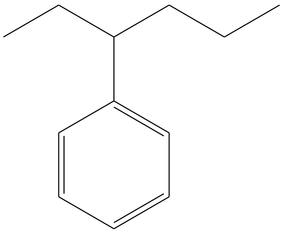

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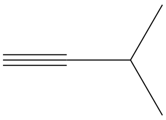

26