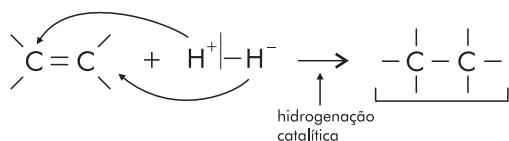


Química E – Semi-Extensivo – V. 4

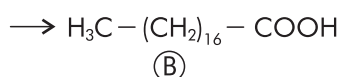
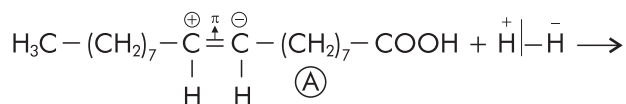
Exercícios

01) A

Sabatier – Senderens (= ou \equiv)

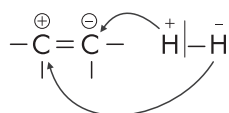


02) 23

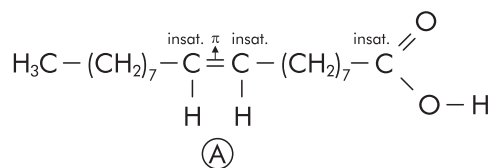


01. Correto.

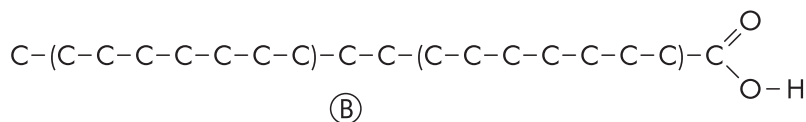
reação de adição



02. Correto.

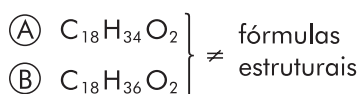


04. Correto.

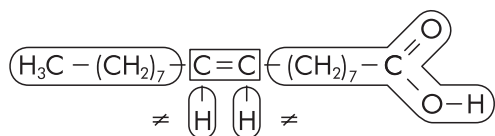
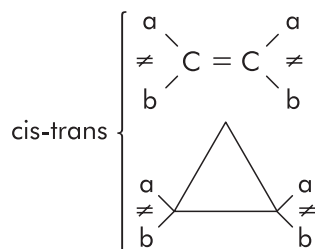


carbonos primários
carbonos secundários

08. Incorreto.

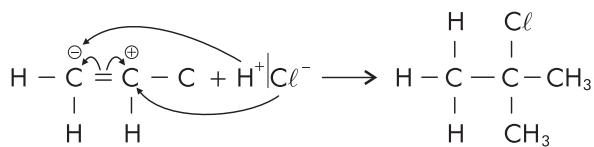


16. Correto.



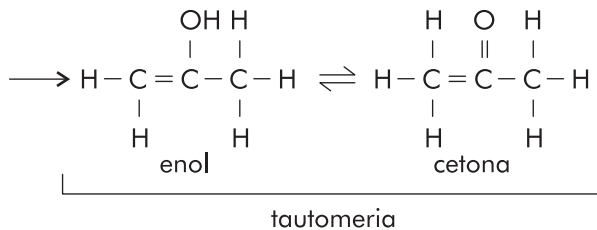
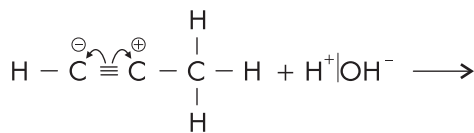
cis-trans

03) A

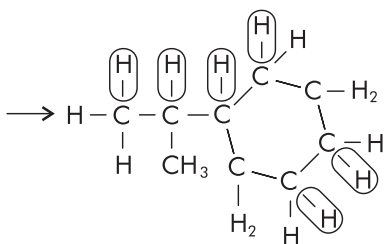
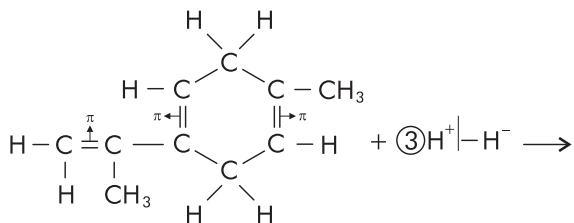


2-cloro-2-metilpropano

08) E

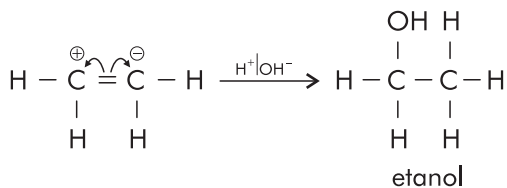


04)



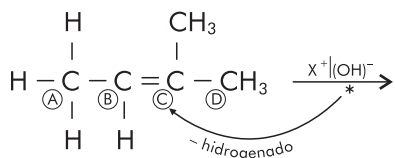
6 hidrogênios

05) D



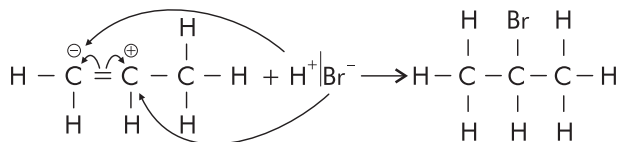
etanol

06) C



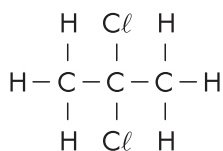
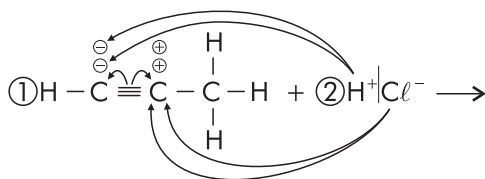
carbone \oplus hidrogenado da dupla $\Rightarrow \text{C}^\ominus$
carbone \ominus hidrogenado da dupla $\Rightarrow \text{C}^\oplus$

07) C

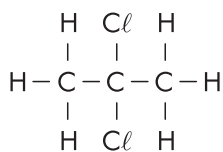


2-bromopropano

09) B

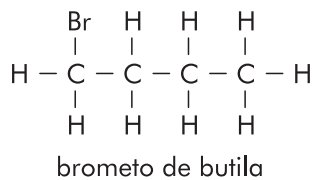
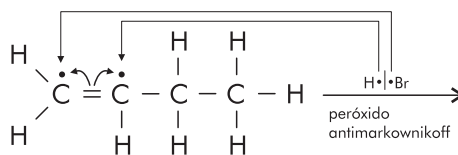


Quebrar as duas ligações π da tripla.

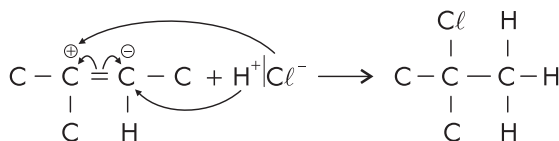


dialceto geminal

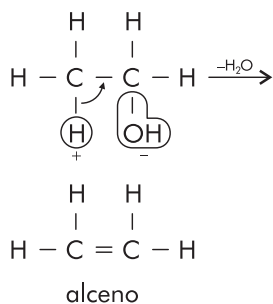
10) A



11) A



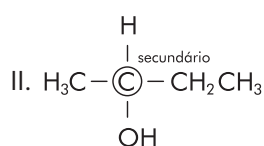
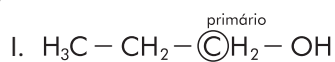
26) B



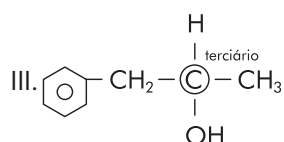
27) A

O hidrogênio eliminado deve ser do carbono vizinho da oxidrila (OH) menos hidrogenado.

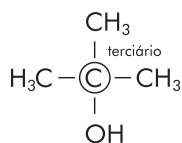
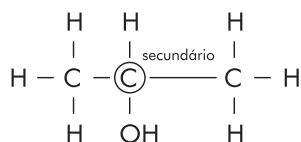
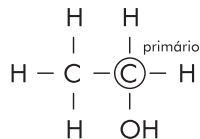
28) D



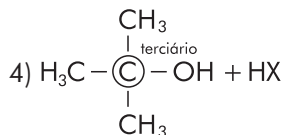
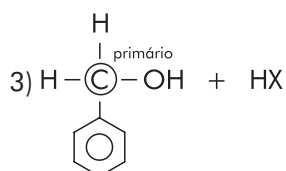
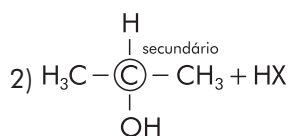
terciário > secundário > primário



29) B



30) D



+ reativo

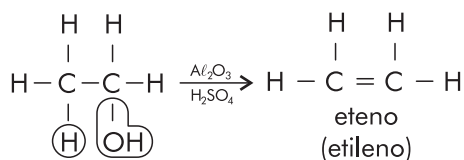
carbono terciário > carbono secundário > carbono primário

- reativo

carbono primário ligado no

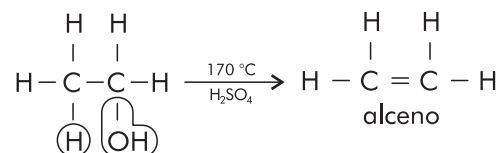


31) D

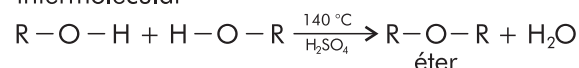


32) A

intramolecular



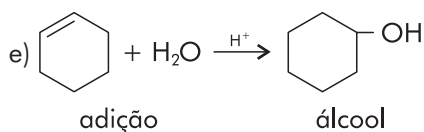
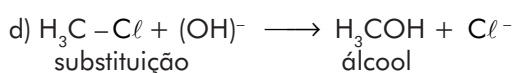
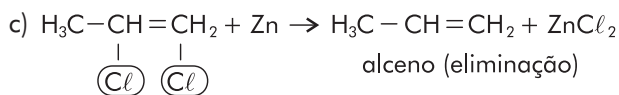
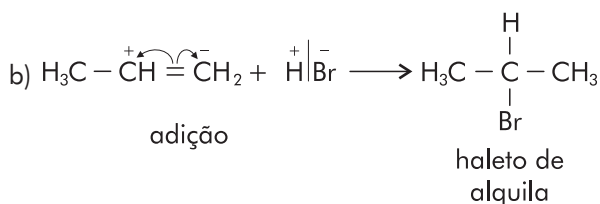
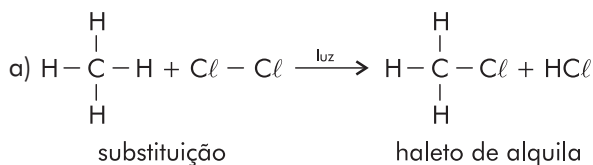
intermolecular

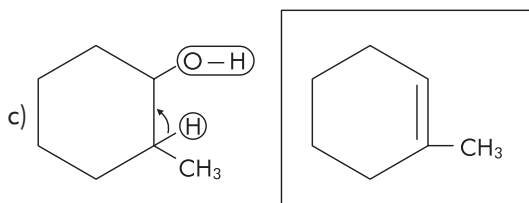
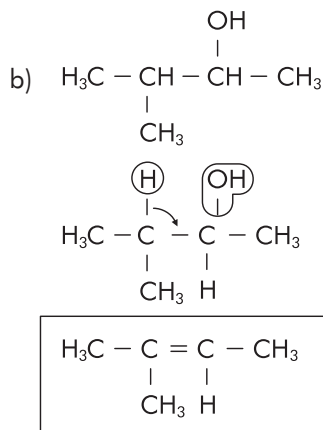
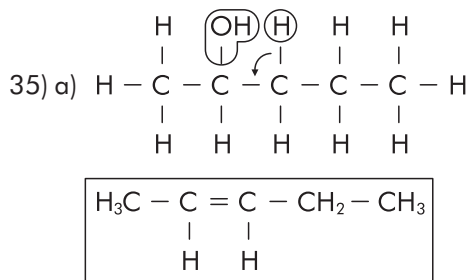


33) B

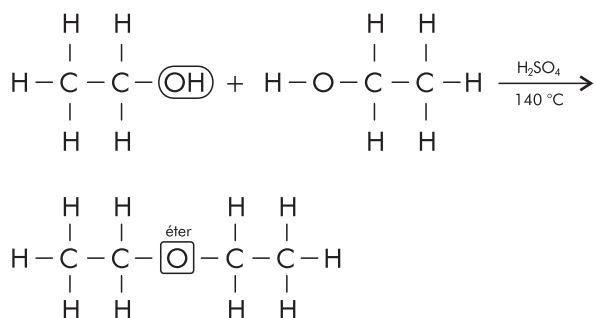
terciário > secundário > primário

34) 18

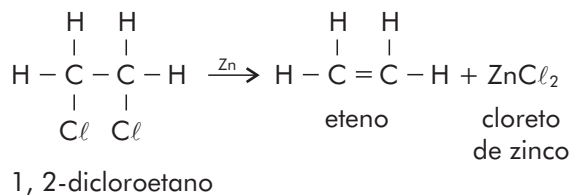




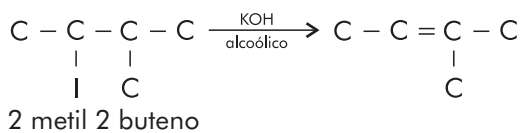
36) Porque o éter etílico é obtido pela desidratação intramolecular do etanol por meio do ácido sulfúrico – daí o nome.



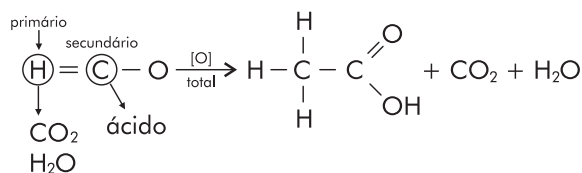
37) C



38) C

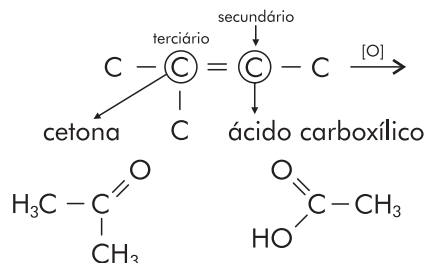


39) A

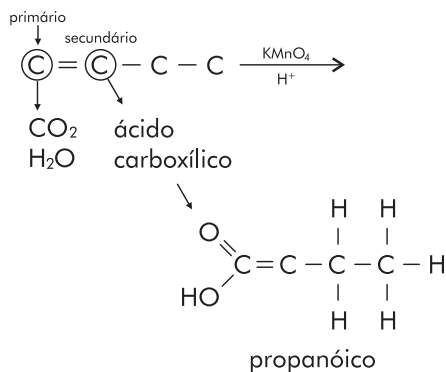


40) E

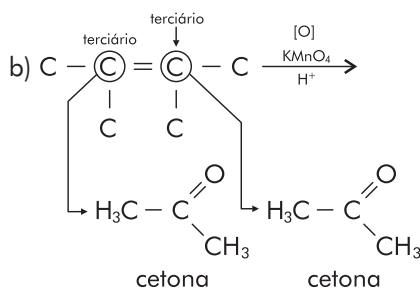
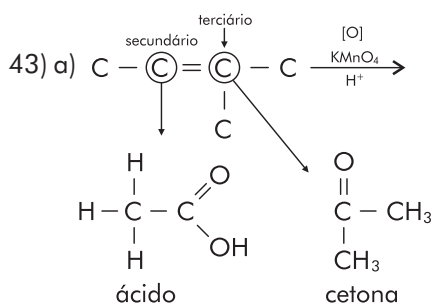
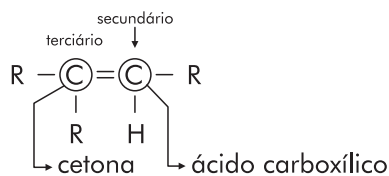
2-metil-2-buteno



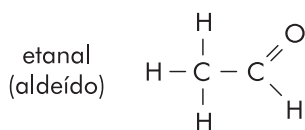
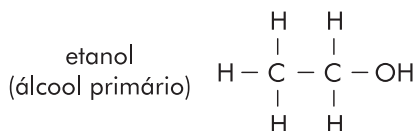
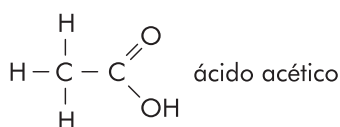
41) D



42) B



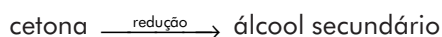
49) B



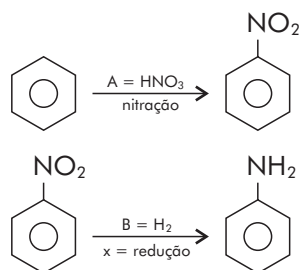
50) B



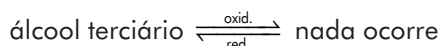
51) B



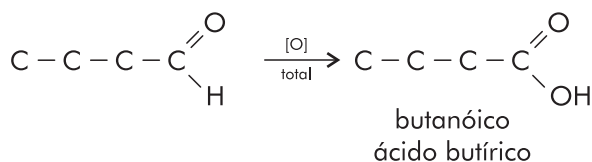
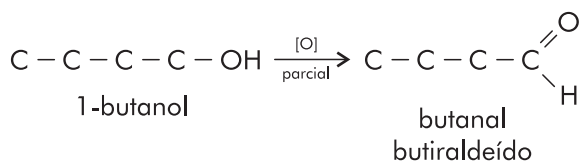
52) B



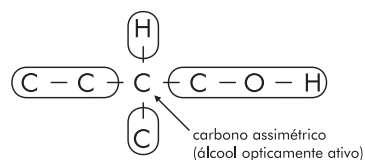
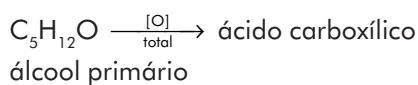
53) E



54) C

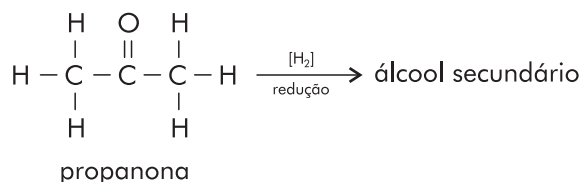


55) A

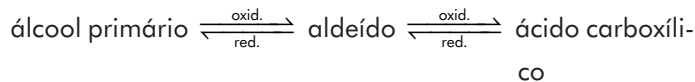


2-metil-1-butanol

56) A

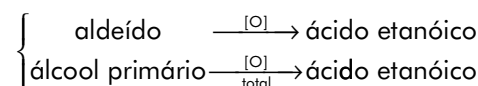


57) A

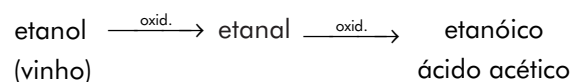


58) 12

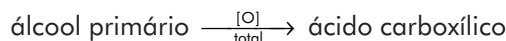
ácido etanóico



59) C

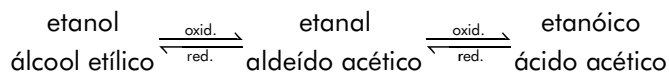


60) D

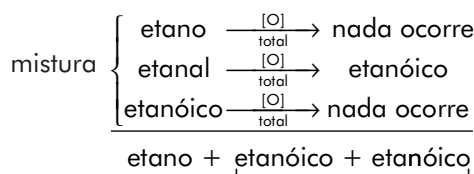


61) C

álcool etílico (álcool primário)



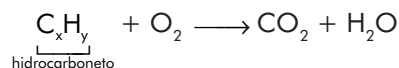
62) 96



63) 26

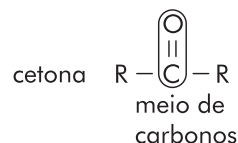
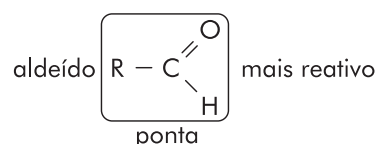
01. Falsa.

02. Verdadeira.

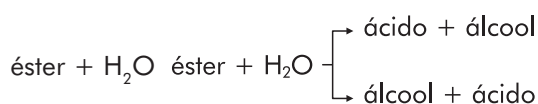


04. Falsa.

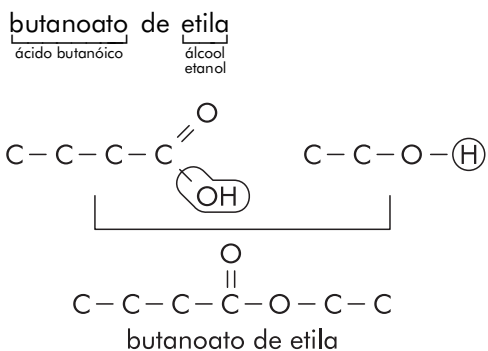
08. Verdadeira.



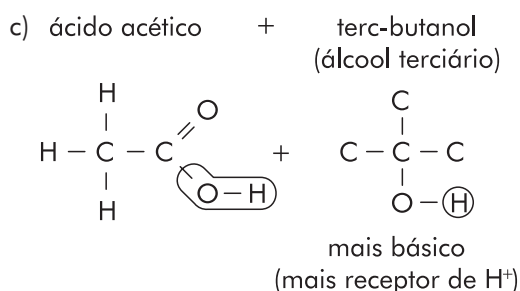
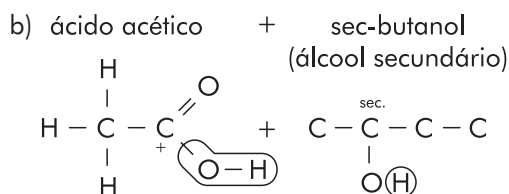
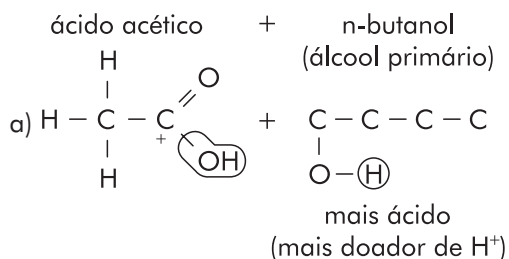
64) 42



65) A

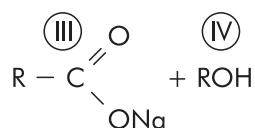
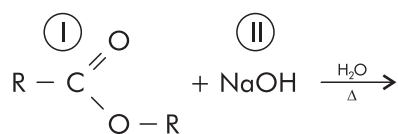


66) A



álcool primário > álcool secundário > álcool terciário

67) 63



01. Verdadeira.

02. Verdadeira. NaOH (base inorgânica forte)

04. Verdadeira.

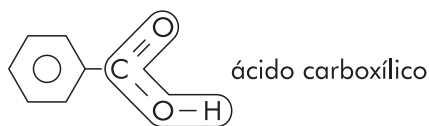
08. Verdadeira.

16. Verdadeira.

32. Verdadeira.

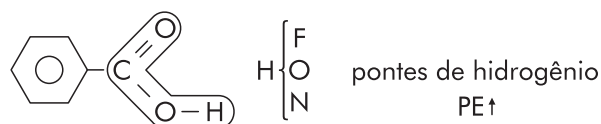
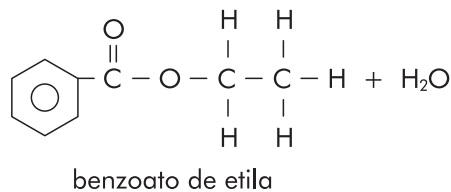
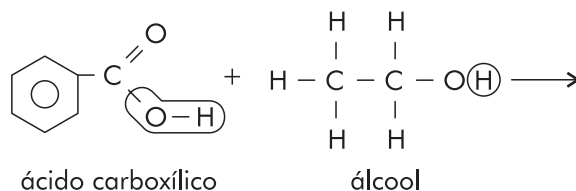
64. Falsa. ácido + álcool \rightleftharpoons éster + H₂O

68) 22

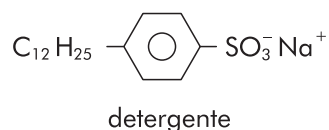
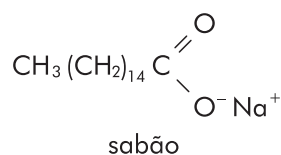


ácido carboxílico $\xrightarrow[\text{total}]{\text{red.}}$ álcool primário

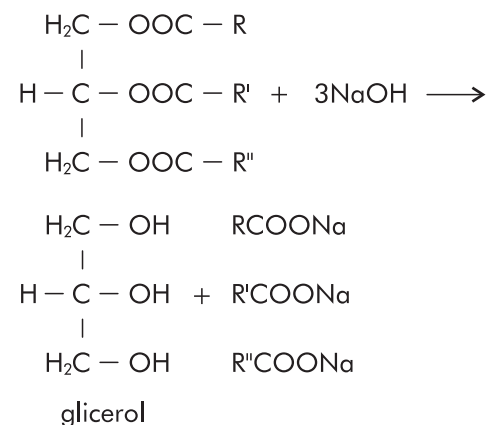
ácido carboxílico $\xrightarrow[\text{total}]{\text{red.}}$ álcool aromático (primário)



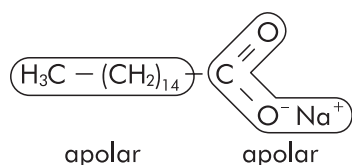
69) 45



01. Verdadeira.



02. Falsa.



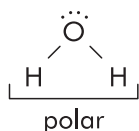
04. Verdadeira.

sabão } cadeia normal (biodegradável)
detergente }

08. Verdadeira.

detergente → cadeia ramificada (não-biodegradável)

16. Falsa.

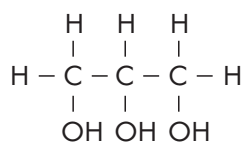


Polar dissolve polar.

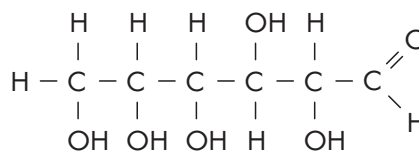
32. Verdadeira.



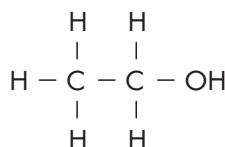
72) D



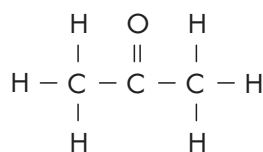
propanotriol
(glicerina)



glicose

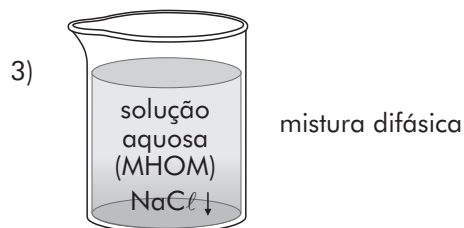
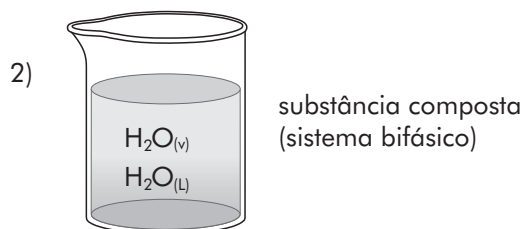
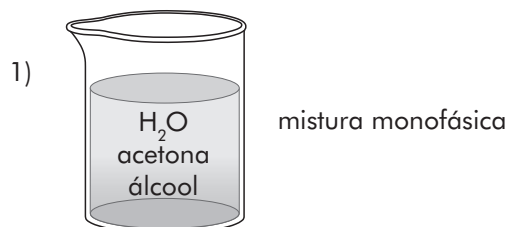


etanol
(álcool)

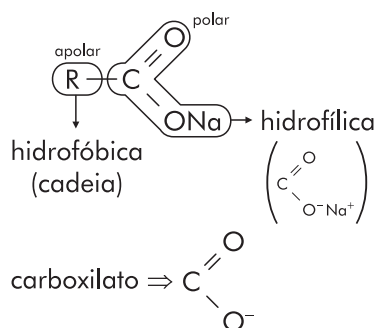


propanona
(acetona)

73) B



70) A



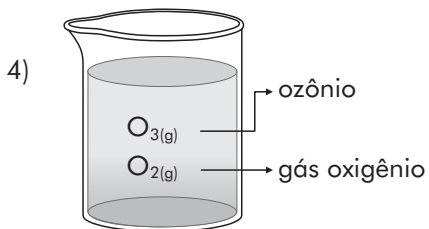
Ca, Mg sais insolúveis
H₂O dura ppt ↓

Obs.: precipitado (ppt)

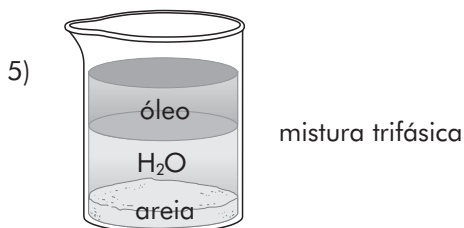
71) B

{ NaHCO₃ (sal)
 óleo vegetal
 H₂O

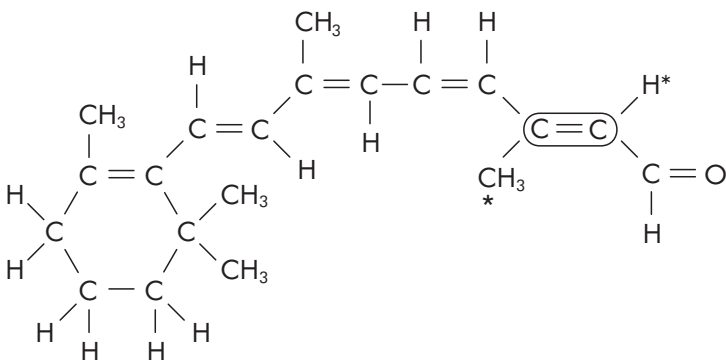
éster + base → sal + álcool
saponificação



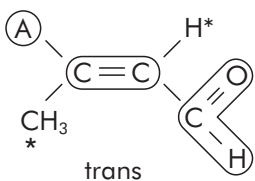
mistura homogênea (gases)
substâncias simples



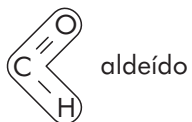
74) D



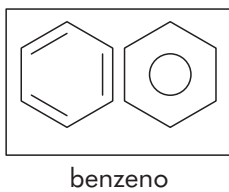
a) Falso.



b) Falso.



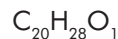
c) Falso.



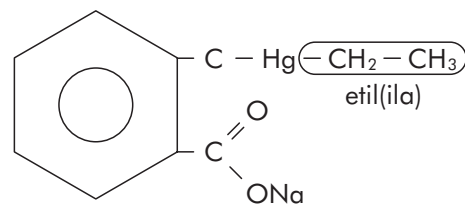
d) Verdadeiro.



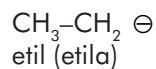
e) Falso.



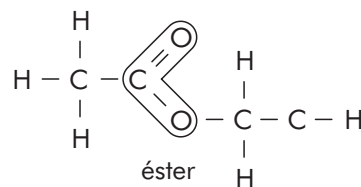
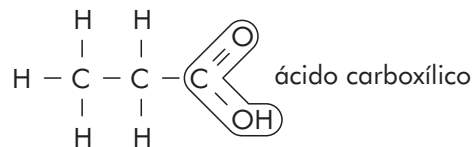
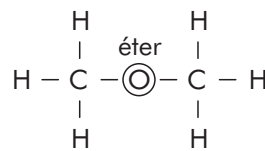
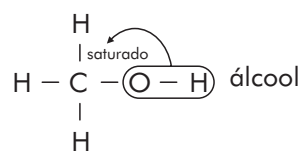
75) D



radical alifático



76) E



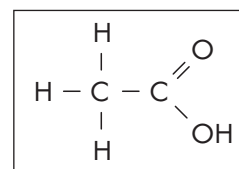
77) B

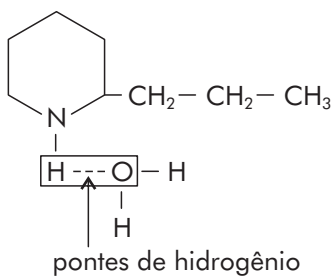
vinagre

↓
acetum

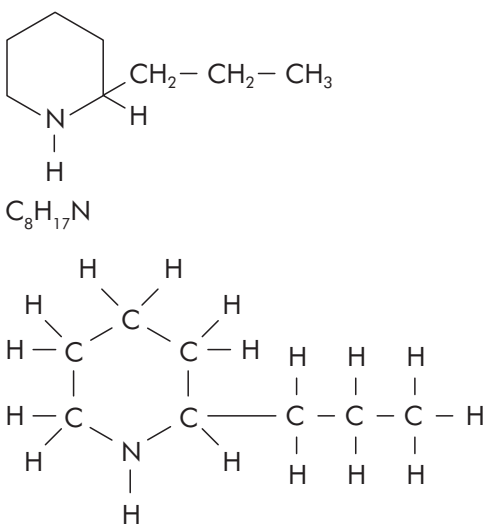
↓
acético

↓
etanóico

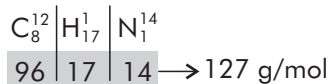




16. **Correto.**

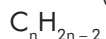


32. **Incorreto.**

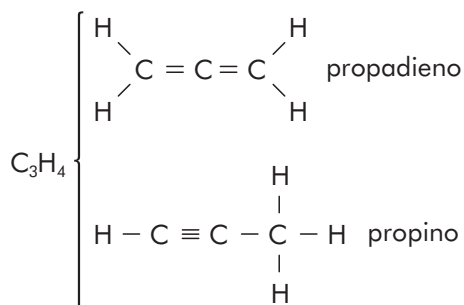
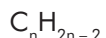


83) 03

Alcinos (3C)

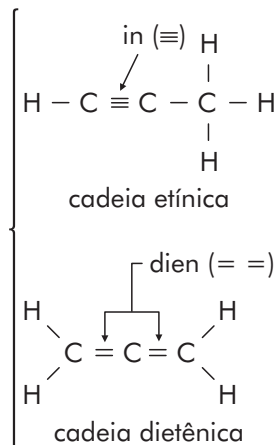


Alcadienos (3C)

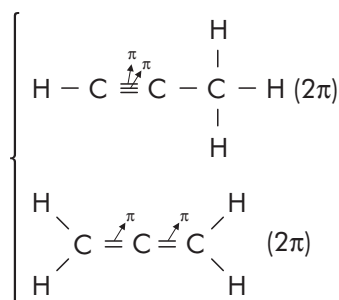


01. **Correto.**

02. **Correto.**



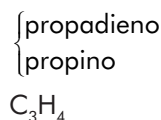
04. **Incorreto.**



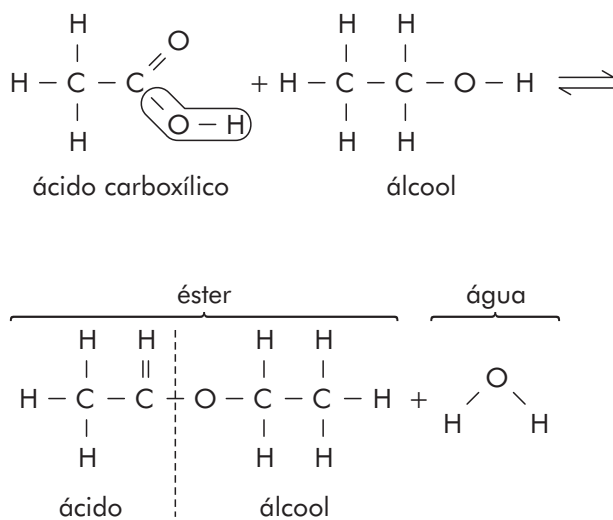
08. **Incorreto.** Ambos são hidrocarbonetos (C_xH_y).

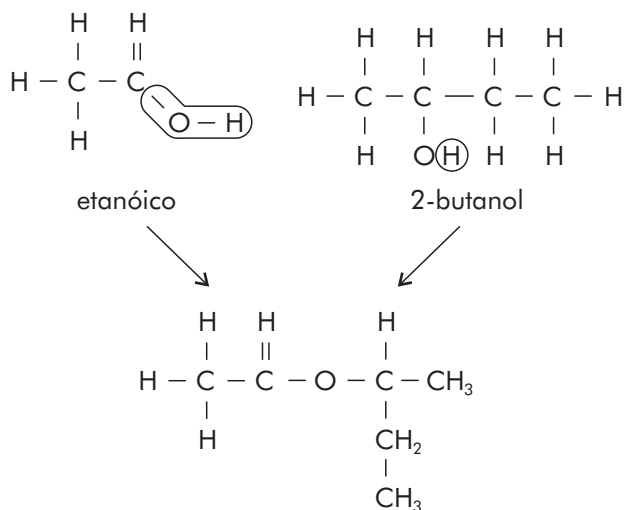
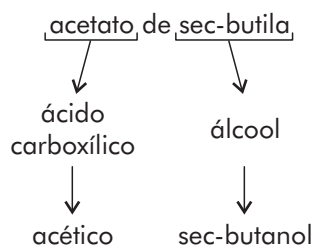
16. **Incorreto.** São isômeros de cadeia.

32. **Incorreto.**

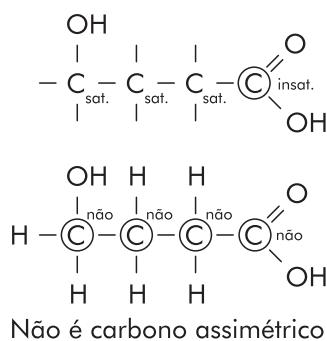
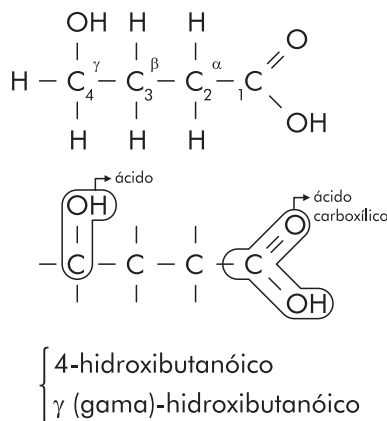


84) 16

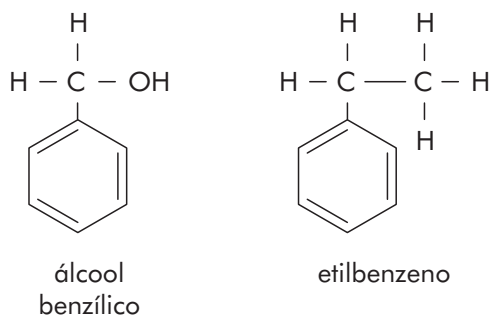




86) 28

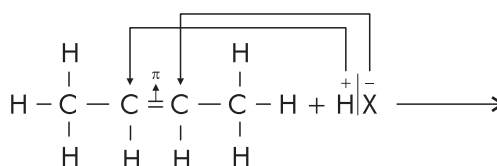
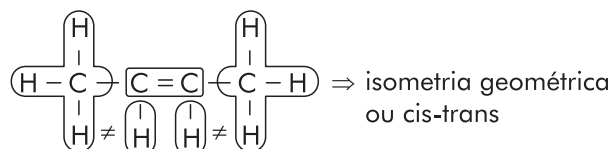
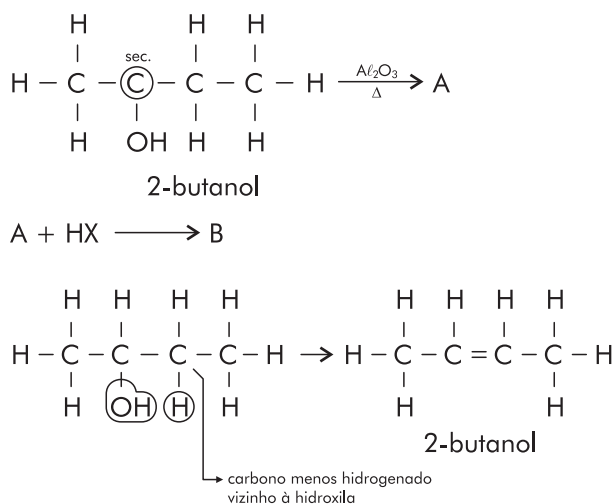


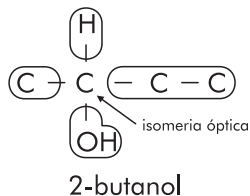
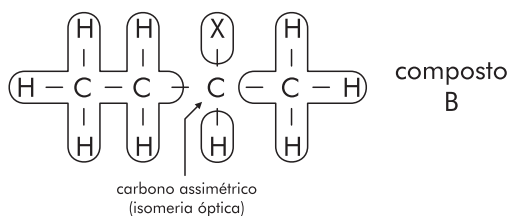
85) 11



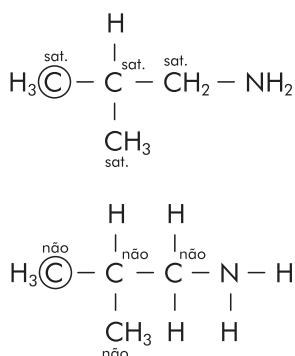
- Correta.** Como o etilbenzeno é um composto apolar, apresenta interação intermolecular do tipo dipolo induzido-dipolo induzido.
- Correta.** O álcool apresenta força intermolecular do tipo pontes de hidrogênio, que são mais fortes do que as de dipolo induzido. Assim, o etilbenzeno possui ponto de ebulição menor.
- Incorreta.** Como o álcool possui interações intermoleculares mais fortes, vaporiza menos e, portanto, apresenta uma pressão de vapor menor.
- Correta.** As pontes de hidrogênio não deixam de ser uma força intermolecular do tipo dipolo permanente-dipolo permanente.
- Incorreta.** O álcool, sendo polar, é mais solúvel em água do que o etilbenzeno, que é apolar.

87) 54

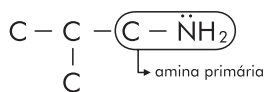




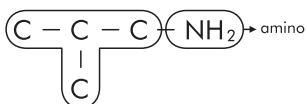
88) 78



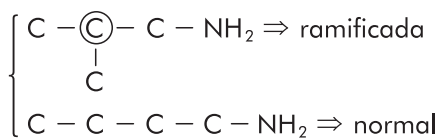
Não é carbono assimétrico.



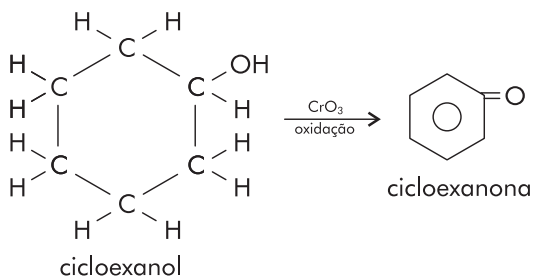
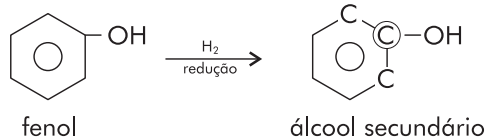
radical alcoíla ou alquila



isômero de cadeia

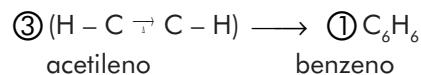


89) 03

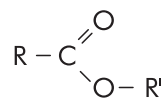


90) 42

01. **Incorreta.**

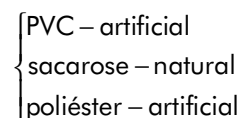


02. **Correta.**

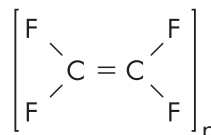


ésteres de ácido
carboxílicos
(= insaturados)
óleos

04. **Incorreta.**



08. **Correta.**

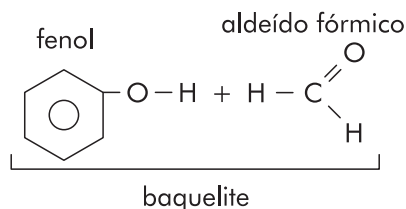


teflon
politetrafluoretileno

16. **Incorreta.** Vulcanização \Rightarrow reação do látex natural com quantidades controladas de enxofre (S).

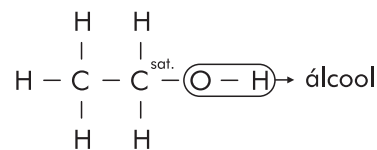
32. **Correta.**

baquelite \Rightarrow condensação



91) 48

01. **Falsa.**

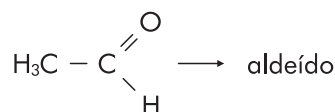


02. **Falsa.** $\text{H}_3\text{C} - \text{CH}_2 - \text{C} - \text{CH}_2$ éter

04. **Falsa.**

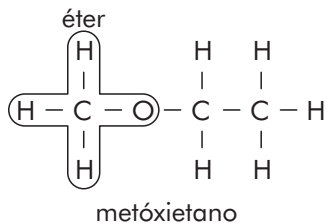
$\text{CH}_4 \rightarrow$ hidrocarboneto

08. **Falsa.**



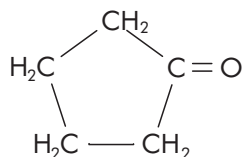
92) 92

01. **Incorreta.**



Metóxietano

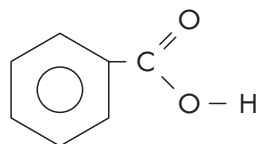
02. **Incorreta.**



ciclopentanona (an)

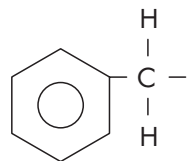
Ciclopentanona (An)

04. **Correta.**



ácido benzóico

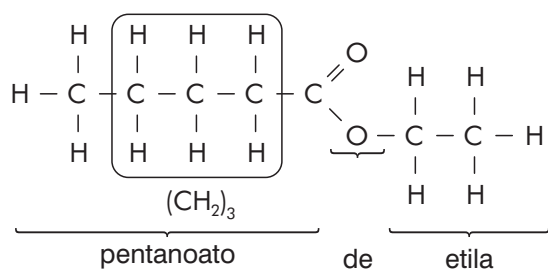
Ácido benzóico



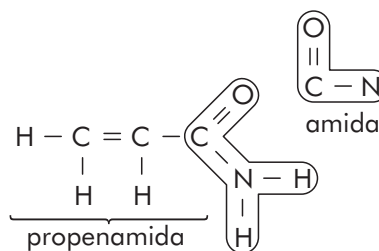
benzil (benzila)

Benzil (benzila)

08. **Correta.**

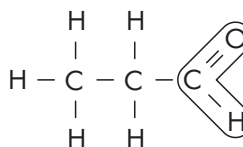


16. **Correta.**



Propenamida

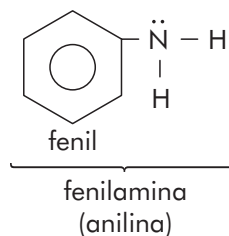
32. **Incorreta.**



aldeído ⇒ propanol

Aldeído ⇒ propanal

64. **Correta.**

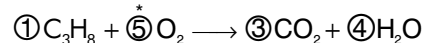


Fenilamina "Anlina"

93) 03

01. **Correta.** A combustão total de hidrocarbonetos forma gás carbônico (CO₂) e água (H₂O).

02. **Correta.** De acordo com a equação:



04. **Incorreta.** O hidrocarboneto é o propano.

08. **Incorreta.** O hidrocarboneto é o propano.

16. **Incorreta.** O produto da combustão total de hidrocarboneto é o CO₂ e a H₂O.

94) 28

substância A: metoxietano

substância B: 1-propanol

substância C: 2-propanol

01. **Incorreta.** Todos os carbonos com hibridização sp³.

02. **Incorreta.** Nenhum composto possui carbono assimétrico.

04. **Correta.** O composto B, segundo a IUPAC, é o 1-propanol.

08. **Correta.** A substância A é um éter; a B, um álcool.

16. **Correta.** No composto B a hidroxila está no carbono número 1; e no C, no carbono número 2.

32. **Incorreta.** O nome correto da substância A é o metoxietano.