

### Oefenvraagstukken hoofdstuk 3

#### Opgave 1

Propeen reageert in het donker met broom.

- 1 Geef de reactievergelijking in molecuulformules.
- 2 Geef de structuurformule en naam van de gevormde stof.
- 3 Hoe heet dit reactietype en verklaar je antwoord.

#### Opgave 2

Bij de additie van waterstofbromide aan 2-penteen ontstaan 2 isomeren.

- 4 Geef de reactievergelijking van deze additiereactie in structuurformules.
- 5 Leg uit waarom er twee isomeren zullen ontstaan.
- 6 Leg uit of bij additie van waterstofbromide aan 2-buteen ook twee isomeren zullen ontstaan.

#### Opgave 3

- 7 Geef de structuurformules en de namen van de vijf isomere koolwaterstoffen met de molecuulformule  $C_4H_8$ .
- 8 Leg uit of het kookpunt van butaan hoger of lager dan dat van methaan zal zijn.
- 9 Leg uit of het kookpunt van butaan hoger of lager dan dat van methylpropanaan.

#### Opgave 4

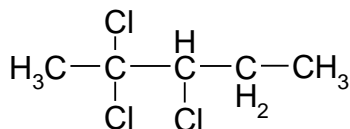
Teken de structuurformules van de volgende stoffen.

- 10 2,3-dichloor-3-propylhexaan
- 11 3-ethyl-3,4,5-trimethyl-1-octyn
- 12 1-broom-5-chloor-3-(1-methylethyl)cyclohexaan
- 13 2-methyl-2-butanol
- 14 4-hydroxy-2,2-dimethylbutaanzuur

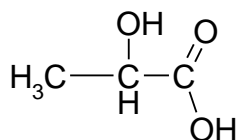
#### Opgave 5

- 15 Geef de namen van de onderstaande verbindingen.

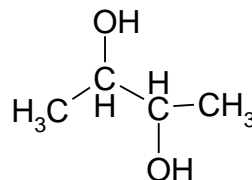
a



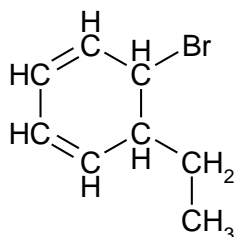
b



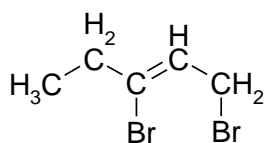
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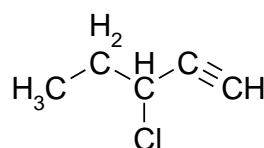
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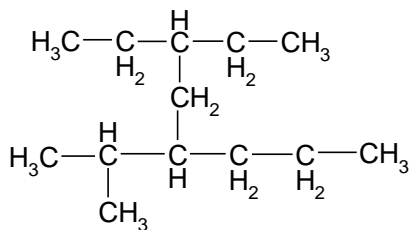
e



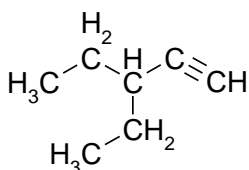
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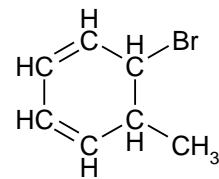
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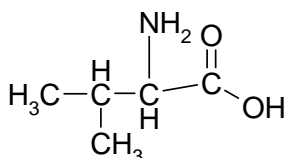
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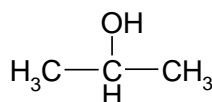
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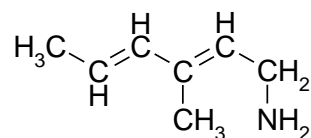
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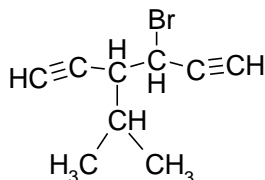
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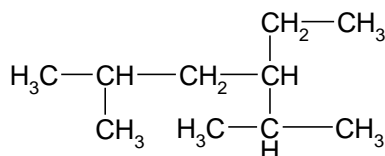
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m



n

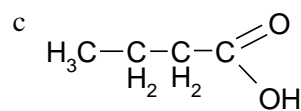
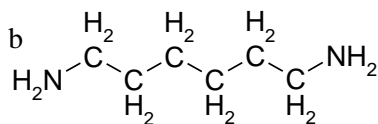
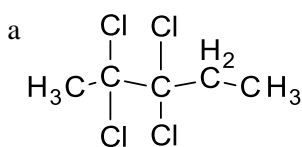


### Extra vraagstukken hoofdstuk 3 KOOLSTOFVERBINDINGEN 4-WO

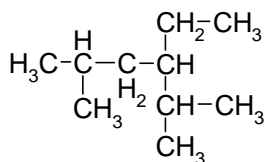
1 Geef de structuurformules van de volgende stoffen:

- |   |                                    |                               |
|---|------------------------------------|-------------------------------|
| a hexafluorethaan                           | b propylheptaan                    | c 4-(1-methylethyl)octaan     |
| d 2,2,4-trimethylpentaan                    | e 3-ethyl-1,4-hexadien             | f 2-amino-3-methyl-3-pentanol |
| g 4-hydroxybutaanzuur                       | h 2-hydroxypropaandizuur           |                               |
| i 2-pentaanamine                            | j 3-methyl-2,4-hexadien-2-amine    |                               |
| k 2,3-dihydroxybenzeencarbonsuur            |                                    | l 1,4,6-heptatriyn            |
| m 2-amino-3-fenylpropaanzuur                | n 1,2-propaandiol                  |                               |
| o 1,3,4,4-tetrabroom-3-(methylethyl)pentaan |                                    | p 2-methyl-3-ethyl-2-hexanol  |
| q 2-methylpropaancarbonsuur                 | r 2-chloor-3-methyl-1-butanol      |                               |
| s 1,1,3,-trichloor-2-propylcyclopentaan     | t 4,6-diethyl-3-fenyl-1,5-oktadien |                               |
| u 4,4-dimethyl-3-(1-methylethyl)-1-hexyn    |                                    |                               |

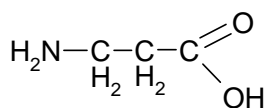
2 Geef de namen van de volgende stoffen:



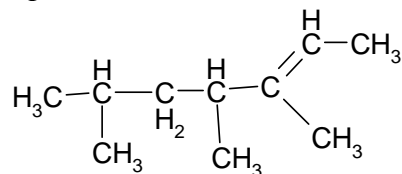
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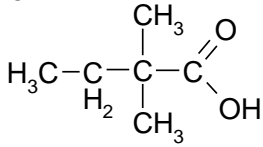
e



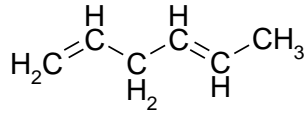
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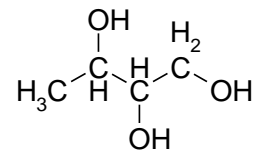
g



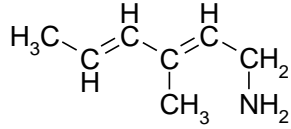
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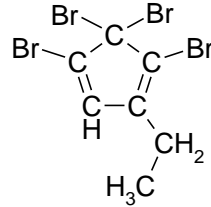
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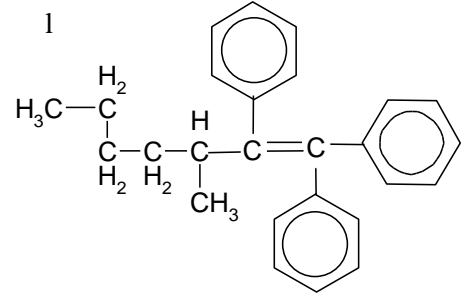
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k



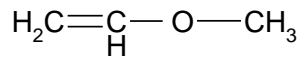
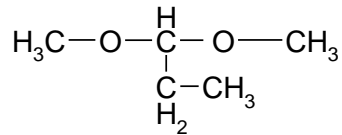
l



3 De stof methoxyethaan heeft de structuurformule  $\text{CH}_3\text{-O-CH}_2\text{-CH}_3$ . De groep  $\text{CH}_3\text{-O-}$  heet dus methoxy-.

a Geef de structuurformules van methoxymethaan en 1,2-dimethoxypropan.

b Geef de namen van de stoffen met de volgende structuurformules:



c Welke van de onder b gegeven stoffen zal het hoogste kookpunt hebben? Verklaar je antwoord.