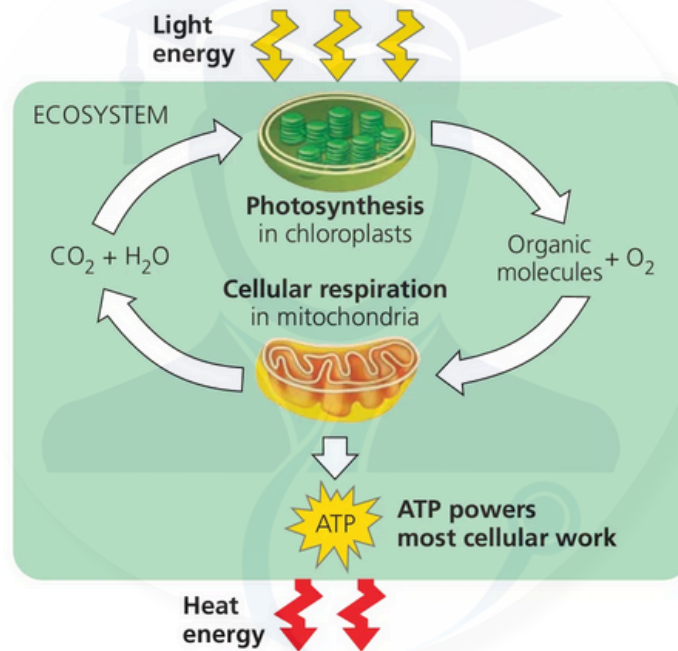


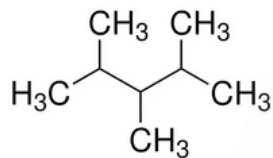
## Question 16\_2024

▼ **Figure 10.2 Energy flow and chemical recycling in ecosystems.** Energy flows into an ecosystem as sunlight and ultimately leaves as heat, while the chemical elements essential to life are recycled.

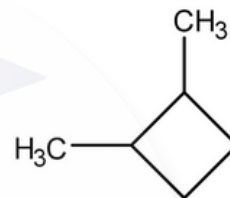


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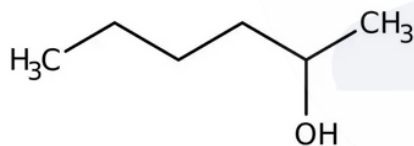
Question 41\_2024



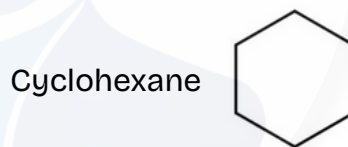
2,3-Dimethylpentane  
formula  $C_7H_{16}$



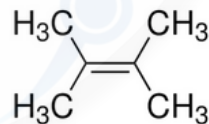
1,2-Dimethylcyclobutane  
formula  $C_6H_{12}$



2-Hexanol  
formula  $C_6H_{14}O_1$



Cyclohexane






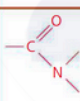



formula  $C_6H_{12}$

2,3-Dimethyl-2-butene

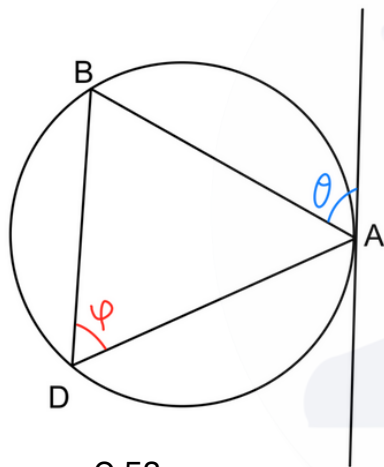
*Locomotive*

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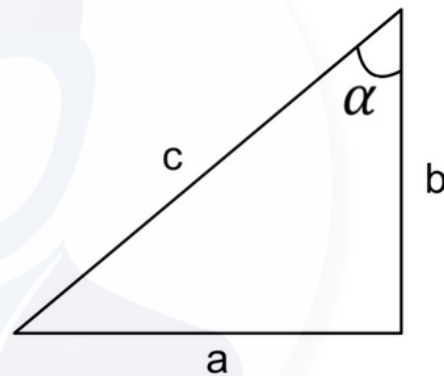
Class	Functional group	Name of functional group	Suffix in IUPAC name	Example of compound	General formula
alkane			-ane	$C_2H_6$ , ethane	$C_nH_{2n+2}$
alkene		alkenyl	-ene	$H_2C=CH_2$ , ethene	$C_nH_{2n}$
alkyne	$—C \equiv C—$	alkynyl	-yne	$HC \equiv CH$ , ethyne	$C_nH_{2n-2}$
alcohol	$—OH$	hydroxyl	-anol	$C_2H_5OH$ , ethanol	$C_nH_{2n+1}OH$
ether	$R—O—R'$	ether	-oxyalkane	$H_3C—O—C_2H_5$ , methoxyethane	$R—O—R'$
aldehyde		aldehyde (carbonyl)	-anal	$C_2H_5CHO$ , propanal	$R—CHO$
ketone		carbonyl	-anone	$CH_3COCH_3$ , propanone	$R—CO—R'$
carboxylic acid		carboxyl	-anoic acid	$C_2H_5COOH$ , propanoic acid	$C_nH_{2n+1}COOH$
ester*		ester	-anoate	$C_2H_5COOCH_3$ , methyl propanoate	$R—COO—R'$
amide		carboxamide	-anamide	$C_2H_5CONH_2$ , propanamide	
amine	$—NH_2$	amine	-anamine	$C_2H_5NH_2$ , ethanamine	
nitrile	$—C \equiv N$	nitrile	-anenitrile	$C_2H_5CN$ , propanenitrile	
arene	 $C_6H_5$	phenyl	-benzene	$C_6H_5CH_3$ , methyl benzene	

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Q 52



Q 54

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