

Unit 6: Intermolecular Forces & VSPER

Organic Chemistry Homework

Name _____

Block # _____

1. **Organic chemistry** involves molecules that are called **hydrocarbons** because they contain **hydrogen** and **carbon**.
2. Hydrocarbons often have **functional** groups attached that change their physical and chemical properties.

Write the organic names based on the length of the chain, type of bond, or functional group attached

Formula	Organic Name
CH ₄	Methane
CH ₃ CH ₃	Ethane
CH ₃ CH ₂ CH ₃	Propane

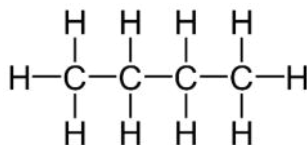
Formula	Organic Name
CH ₃ OH	Methanol
CH ₃ CH ₂ OH	Ethanol
CH ₃ CH ₂ CH ₂ OH	Propanol

$\begin{array}{c} \text{H} & \text{H} \\ & \\ \text{H}-\text{C}-\text{C}-\text{H} \\ & \\ \text{H} & \text{H} \end{array}$	Ethane
$\begin{array}{c} \text{H} & & \text{H} \\ & \diagdown & / \\ & \text{C}=\text{C} \\ & / & \diagdown \\ \text{H} & & \text{H} \end{array}$	Ethene
$\text{H}-\text{C}\equiv\text{C}-\text{H}$	Ethyne (also known as <i>acetylene</i>)

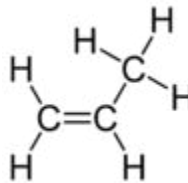
$\begin{array}{c} \text{R}-\ddot{\text{O}}: \\ \\ \text{H} \end{array}$	What type of group is this? Alcohol
$\begin{array}{c} :\text{O}: \\ \\ \text{R}-\text{C}-\text{H} \end{array}$	What type of group is this? Aldehyde
$\begin{array}{c} :\text{O}: \\ \\ \text{R}-\text{C} \\ \\ :\text{O}-\text{H} \end{array}$	What type of group is this? Carboxylic Acid

Write the formula and draw the following molecules:

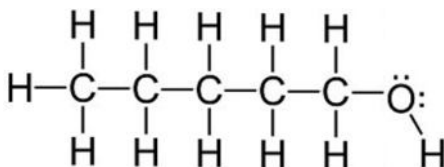
butane CH₃CH₂CH₂CH₃ or C₄H₁₀



propene CH₂=CHCH₃ or C₃H₆



Pentanol CH₃CH₂CH₂CH₂CH₂OH or C₅H₁₁OH



ethanoic acid CH₃COOH or HC₂H₃O₂

