

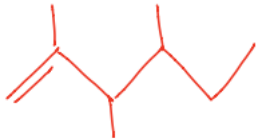
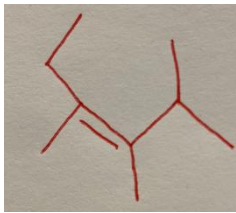






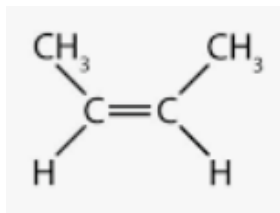
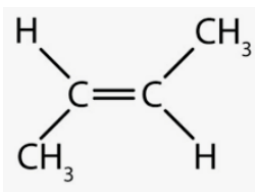
1. Name the following hydrocarbons. (Make sure you find the longest chain!)

<p>a.</p> $\begin{array}{c} \text{H}_3\text{C}-\text{C}=\text{C}-\text{CH}_3 \\   \quad   \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$ <p><b>2,3-dimethyl-2-butene</b></p>	<p>b.</p> $\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}=\text{C}-\text{CH}_3 \\   \quad \quad   \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$ <p><b>2,4-dimethyl-2-pentene</b></p>
<p>c.</p> $\begin{array}{c} \text{H}_2\text{C}=\text{CH}-\text{C}-\text{CH}_3 \\   \quad   \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$ <p><b>3,3-dimethyl-1-butene</b></p>	<p>d.</p> $\begin{array}{c} \text{CH}_3 \\   \\ \text{H}_3\text{C}-\text{CH}_2-\text{C}-\text{CH}=\text{C}-\text{C}-\text{CH}_3 \\   \quad \quad   \quad \quad   \\ \text{CH}_2 \quad \quad \text{CH}_3 \quad \quad \text{CH}_3 \\   \\ \text{CH}_2 \\   \\ \text{CH}_3 \end{array}$ <p><b>5,5-diethyl-2,2,3-trimethyl-3-heptene</b></p>
<p>e.</p> $\begin{array}{c} \text{H}_2\text{C}=\text{CH}-\text{CH}-\text{C}-\text{CH}_3 \\   \quad   \quad   \\ \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \end{array}$ <p><b>3,4,4-trimethyl-1-pentene</b></p>	<p>f.</p> $\begin{array}{c} \text{HC}\equiv\text{C}-\text{HC}-\text{CH}_3 \\   \\ \text{CH}_3 \end{array}$ <p><b>3-methyl-1-butyne</b></p>
<p>g.</p> $\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{C}\equiv\text{C}-\text{CH}-\text{CH}_3 \\   \quad \quad   \\ \text{CH}_2 \quad \quad \text{CH}_2 \\   \quad \quad   \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$ <p><b>3,6-dimethyl-4-octyne</b></p>	<p>h.</p> $\begin{array}{c} \text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}-\text{CH}-\text{C}\equiv\text{C} \\   \quad \quad   \quad \quad   \\ \text{CH}_3 \quad \quad \text{CH}_3 \quad \quad \text{CH}_2 \\   \\ \text{CH}_3 \end{array}$ <p><b>5,6-dimethyl-3-nonyne</b></p>
<p>i.</p> $\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{CH}-\text{C} \\   \quad   \quad    \\ \text{CH}_3 \quad \text{CH}_3 \quad \text{C} \\   \quad \quad   \\ \text{H}_3\text{C}-\text{CH}-\text{C} \\   \quad \quad    \\ \text{CH}_3 \quad \quad \text{C} \end{array}$ <p><b>2,5,6-trimethyl-3-heptyne</b></p>	<p>j.</p> $\begin{array}{c} \text{H}_3\text{C}-\text{CH}-\text{C}\equiv\text{C}-\text{C}-\text{CH}_3 \\   \quad \quad   \\ \text{CH}_3 \quad \quad \text{CH}_3 \end{array}$ <p><b>2,2,5-trimethyl-3-hexyne</b></p>

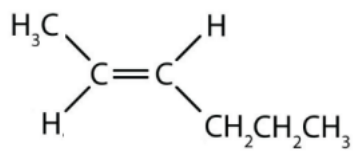
2. Draw structures for the following (use the structural formula of your choice).

<p>a. 2-ethyl-1-pentene</p> 	<p>b. 2,3-dimethyl-1-butene</p> 
<p>c. 2,3,4-trimethyl-1-hexene</p> 	<p>d. 2-ethyl-3,4-dimethyl-2-pentene</p> 
<p>e. 3-ethyl-1-pentyne</p> 	<p>f. 3,3-dimethyl-1-butyne</p> 
<p>g. 4,4,5-trimethyl-2-hexyne</p> 	<p>h. 4-ethyl-4-methyl-2-pentyne</p> 

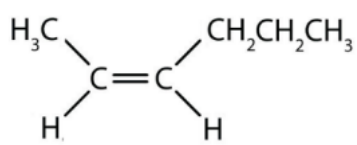
3. Identify each of the following as cis or trans isomers and write the IUPAC name.

<p>a.</p>  <p><b>cis-2-butene</b></p>	<p>b.</p>  <p><b>trans-2-butene</b></p>
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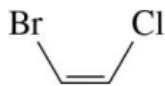
c.

***trans-3-hexene***

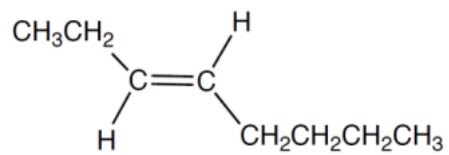
d.

***cis-3-hexene***

e.

***cis-1-bromo-2-chloroethene***

f.

***trans-3-octene***