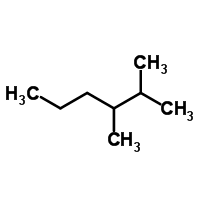
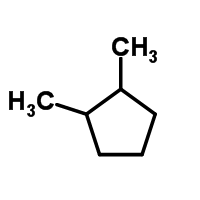
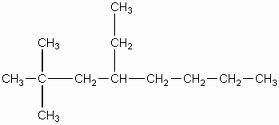
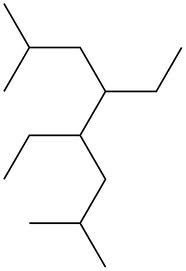
1. How many bonds must carbon always have?
2. What type of bonding occurs in alkanes?
3. Are alkanes saturated or unsaturated?
4. What is the difference between conformational isomers and structural isomers?

Ex. C5H12

1. Molecular formula for: alkane cycloalkane
2. Give the molecular formula for the following molecules. Then, state the name.
3. [](javascript:openWindow('/ImageView.aspx?id=10963',%20'zoom',%20500,%20550,%20'toolbar=no,menubar=no,resizable=no');%20void%200;) b. [](javascript:openWindow('/ImageView.aspx?id=16232',%20'zoom',%20500,%20550,%20'toolbar=no,menubar=no,resizable=no');%20void%200;)
4. Which of the following molecules has the molecular formula C5H10?
5. 2-methylpentane
6. cyclopentane
7. 1-methylcyclobutane
8. Pentane
9. Draw both the line formula and condensed structural formula for a linear alkane with 7 carbons.
10. Draw and name isomers for alkanes with the formula C6H14.
11. Fill in the chart with the corresponding prefix to number of carbons.

|  |  |
| --- | --- |
| Prefix | # of carbons |
| eth |  |
|  | 10 |
| Hept |  |
|  | 6 |
|  | 4 |
| meth |  |
| prop |  |
| Non | 5  8 |

1. What is the isopropyl group? Draw an example of it.
2. Name each of the following molecules.
   1.  b. 
3. Draw each of the following molecules.
   1. 1-ethyl-2,3,5-trimethylcycloheptane
   2. 2-ethyl-5-methyl-4-propyldecane
4. Draw and name isomers for C7H16.