

Problem Set 16: An Introduction to Organic Chemistry and Nomenclature of Hydrocarbons

1. Draw expanded structures, condensed structures and line structures for the following.
 - a. butane
 - b. cis-2-pentene
 - c. 2-methylhexane
 - d. 2-heptyne
 - e. 3-ethyl-2-methylpentane
2. Draw each of the following alkenes and determine which will have both a cis and a trans isomer. For those with a cis and trans version, draw both isomers.
 - a. 1-butene
 - b. 2-butene
 - c. 2-methyl-2-pentene
 - d. 3-methyl-2-pentene
 - e. 2-hexene
3. Circle the names that are **NOT POSSIBLE** by IUPAC nomenclature rules.
 - a. cis-1-hexene
 - b. trans-2-butyne
 - c. 2,3,4-trimethyloctane
 - d. 2,3,4-trimethylbutane
 - e. 2-methyl-1-butyne
 - f. 2-methyl-4-ethyldecane
 - g. 1-ethylheptane
 - h. 1-octyne
4. Name the following molecules:

