

Alkane Nomenclature**Name:**

1. Draw the structures with the following names:

a) 3-ethyloctane

b) 4-isopropyldecane

c) Sec-butylcycloheptane

d) 2,3-dimethyl-4-propylnonane

e) 2,2,4,4-tetramethylhexane

f) (Trans)-1,3-diethylcyclopentane

g) (Cis)-1-ethyl-4-methylcyclohexane

h) Isobutylcyclopentane

i) T-butylcyclohexane

j) Pentylcyclohexane

k) Cyclobutylcyclohexane

l) (Cis)-1-bromo-3-chlorocyclohexane

2. Each of the following descriptions applies to more than one alkane. In each case, draw and name two structures that match the description.

a) An isopropylheptane

b) A diethyldecane

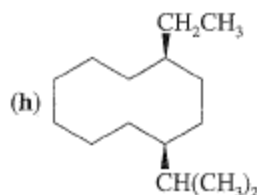
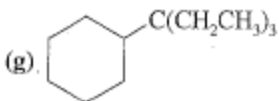
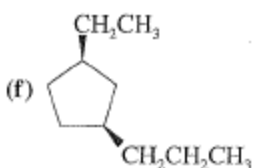
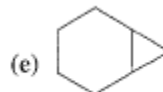
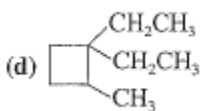
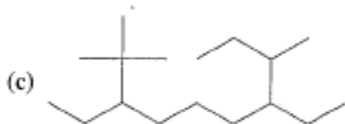
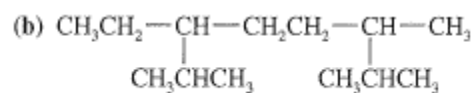
c) A cis-diethylcyclohexane

d) A (trans)-dihalocyclopentane

e) A (2,3-dimethylpentyl)cycloalkane

f) A bicyclononane

3. Give the IUPAC names of the following compounds



4. The following names are all incorrect or incomplete, but they represent real structures. Draw each structure and name it correctly.

a) 2-ethylpentane

b) 5-isopropylhexane

c) 5-chloro-4-methylhexane

d) 2-dimethylbutane

e) 2-cyclohexylbutane

f) 2,3-diethylcyclopentane