


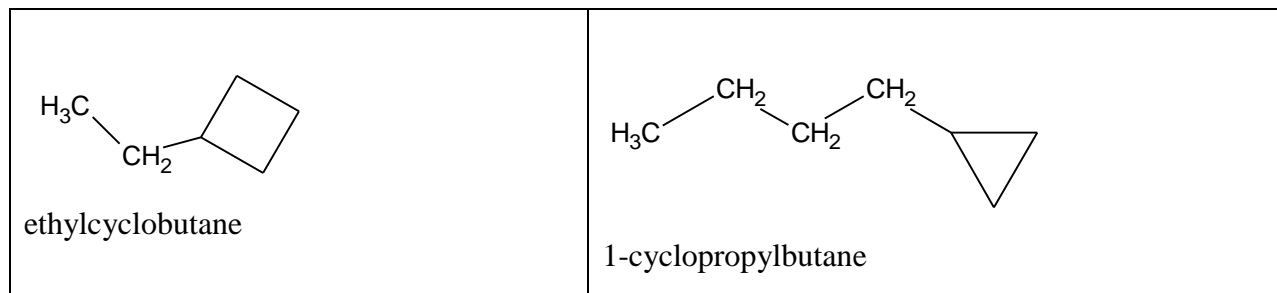
CHE 213 Cycloalkane IUPAC Nomenclature

1. Ring name: use cyclo prefix and alkane name corresponding to number of C's in the ring.

e.g., cyclobutane is 

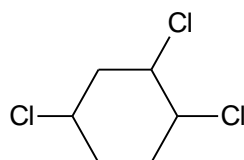
2. Rings substituted with C chains:

If the number of C atoms of the ring  $\geq$  number of C atoms of the chain, name as an alkyl substituted cycloalkane. Otherwise, name as a cycloalkyl substituted alkane.



3. Di- or poly-substituted rings: C-1 is the location of the first substituent. Loop clockwise or counter-clockwise so as to give the 2<sup>nd</sup> substituent the lower possible number.

- If two or more substituents could receive the same number location, number them by alphabetical priority.
- For alternative numbering schemes, use the one which has the lower number at the first instance of difference.



1,2,4-trichlorocyclohexane  
**not** 1,2,5- trichlorocyclohexane

4. For disubstituted cycloalkanes, when stereoisomers are being considered:

Use the leading prefix of *cis*- if both substituents are on the same side of the ring.

Use the leading prefix of *trans*- if substituents are on opposite sides of the ring.

