

1. Write structures for the following alkenes. If the compound can show *cis-trans* isomerization or the name is ambiguous, clearly indicate which structure you have drawn. If the structure can show geometric isomerization, clearly indicate which structure you have drawn using the *cis-trans* system.
- 1-bromo-3-methylcyclohexane
  - chlorocyclohexane
  - 1,1-dibromo-2-chlorocyclopentane
  - ethylcyclooctane
  - 1,1-dichloro-4-(3-methylhexyl)cyclooctane
  - isopropylcyclononane

2. Name the following compounds using the IUPAC nomenclature. You may substitute common names for side-chains as found in your lecture notes.

