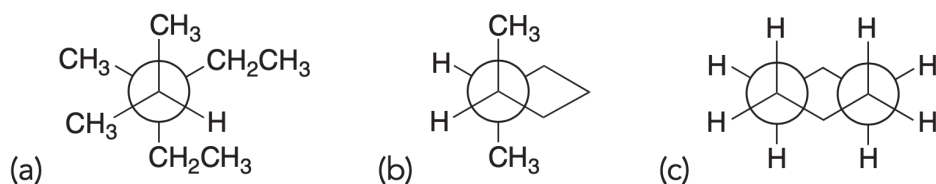


Hw3(1): Stereochemistry

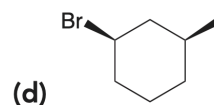
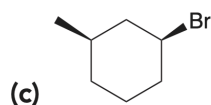
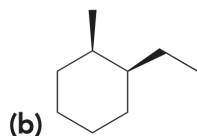
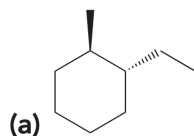
1. Draw a bond-line structure, and assign IUPAC names for each of the following compounds:



2. In each case below, identify the highest and lowest energy conformations. In cases where two or three conformations are degenerate, draw only one as your answer.



3. Draw both conformations for each of the following compounds, and identify the most stable one:

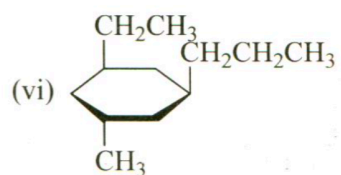
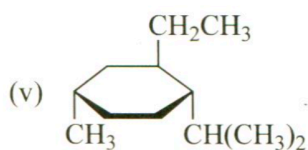
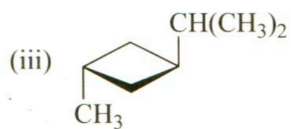


4. *trans*-1,3-Dichlorocyclobutane has a measurable dipole moment. Explain why the individual dipole moments of the C–Cl bonds do not cancel each other to produce a zero net dipole moment.



trans-1,3-Dichlorocyclobutane

5. Provide a systematic name for each of the following compounds:



6. For each of the following alkenes, assign the configuration of the double bond as either E or Z:

