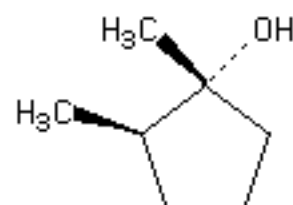
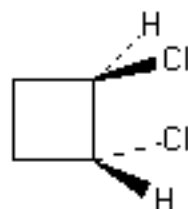
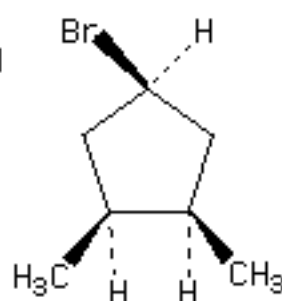
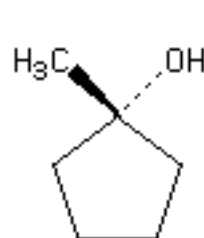
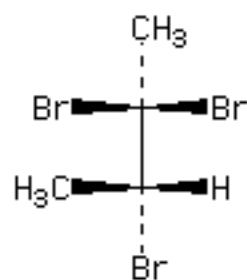
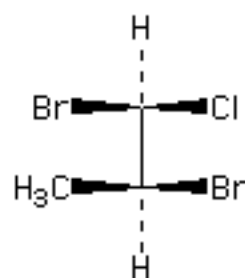
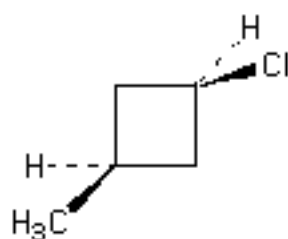
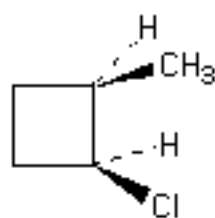


1. In the list of molecules below, circle those which are chiral. Name all molecules using R and S conventions when appropriate.



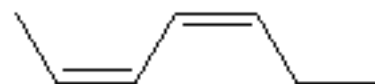
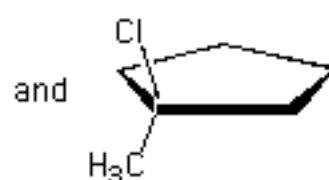
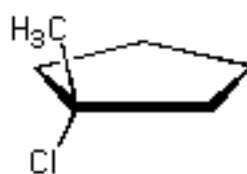
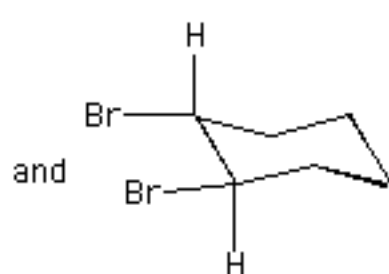
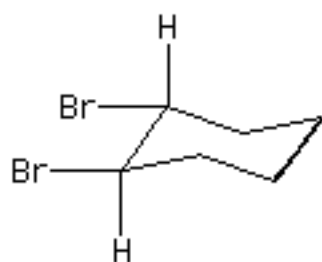
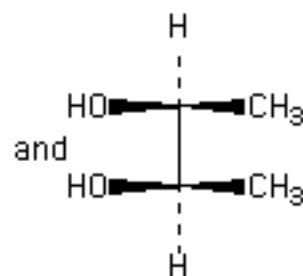
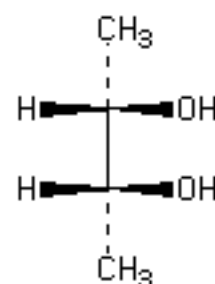
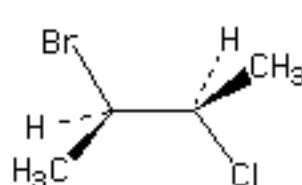
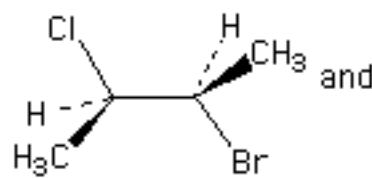
2. Draw and name all isomers (including enantiomers) of:

(a) All compounds with the formula $C_4H_8Cl_2$

(b) All compounds with the formula $C_3H_4Cl_2$

(c) All cyclic compounds with the formula $C_5H_8Cl_2$

3. In the pairs of molecules below, name each molecule (using R and S if appropriate) and indicate if they are diastereomers, enantiomers or identical.



and

