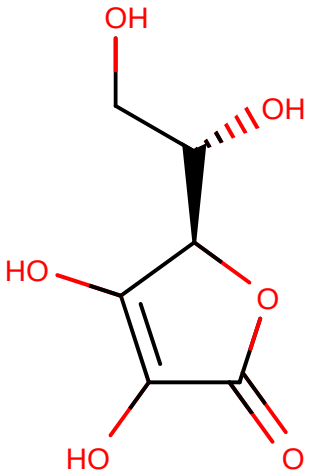
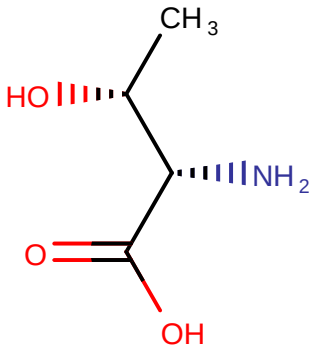
Problems:

1. Use Newman Projections to determine the lowest energy conformation of 3-methylpentane when viewing down the C2-C3 bond.

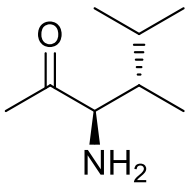
2. Newman projections! Draw the highest energy Newman projection for 2-bromo-2,3-dimethylpentane when looking down C1-C2 and C2-C3 bond. Draw the lowest energy Newman projection when looking down the C3-C4, C4-C5 bonds.

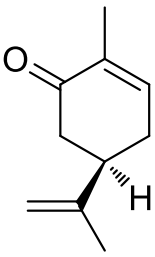
3. Label stereocenters with R or S as appropriate:





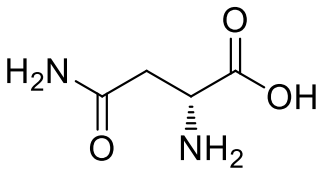
4. Label stereocenters with R or S as appropriate



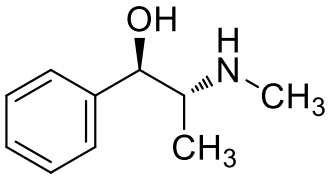


carvone

5. Label stereocenters with R or S as appropriate



asparagine (sweet)



pseudoephedrine

6. Draw the highest and lowest energy chair structure for 1,2-dimethylcyclohexane (a cyclohexane with two methyl groups as substituents. Don't worry about naming these.) Explain how you determined which were the highest and lowest energy