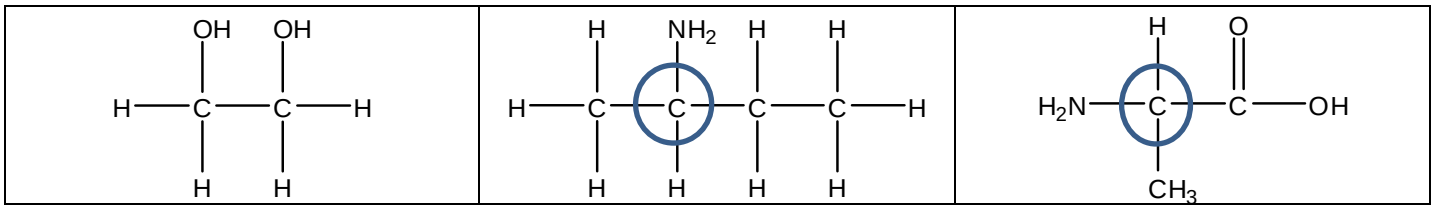
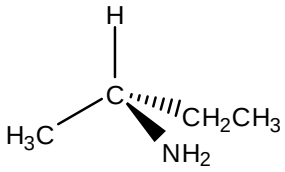
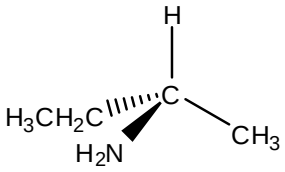
CHEM 3.5 Worksheet 2 Isomers Name YP Model answers

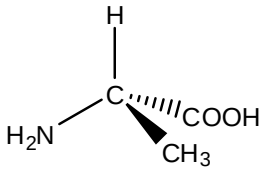
Question One- Identify the molecules that can form optical isomer, if so circle the chiral carbon

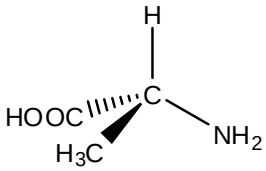


Question Two- for the molecules above that can form optical isomer, draw the 3D diagram of the enantiomer pair









Question Three- Discuss the differences (both physical and chemical) in properties of the enantiomer

The enantiomers have the same chemical properties (identical functional group) and physical properties such as melting point, boiling points EXCEPT

1. Physical properties- The solution of the two isomers rotate plane polarised light in opposite direction
2. Chemical properties- They may behave differently in biological system due to different in 3D shape and may not fit with biological enzymes