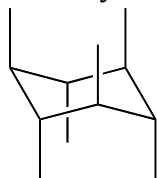


Flipping a Chair:

1. Make sure you have a properly drawn chair!



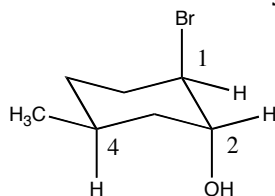
axial positions



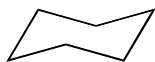
equatorial positions

Notice that the positions alternate up and down (axial up next to axial down, etc.)

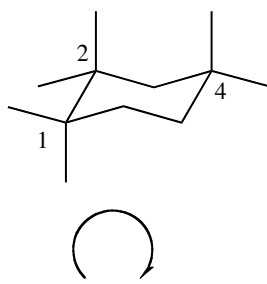
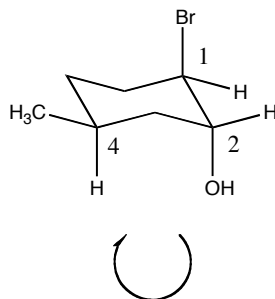
2. Number the carbons of your cyclohexane ring.



3. Draw the opposite chair with no substituents.

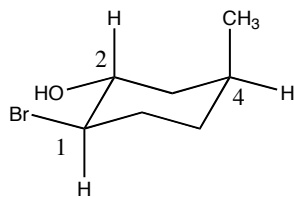


4. Number your carbons IN THE SAME DIRECTION as in the original structure. You will need to move carbon 1 over one atom (to left or right). Be sure to keep your numbering in the same direction. Clockwise in structure 1 = Clockwise in structure 2!



Note: If you reverse your numbering order (clockwise to counterclockwise), you will be drawing the enantiomer! (This is a common mistake that even experienced organic chemists fall into occasionally!)

5. Add your substituents to the correct carbon, ensuring that what was up in the original structure is now up in the new structure.



Note that we are now looking at the ring from the opposite side (the Br is on our side instead of on the far side of the ring) than in the original.