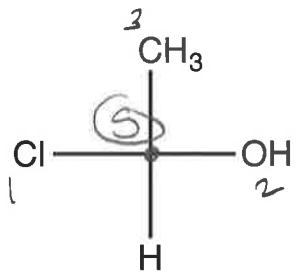
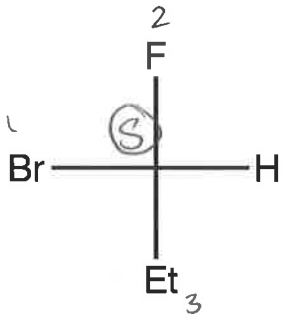
Stereochemistry #3: Fischer Projections

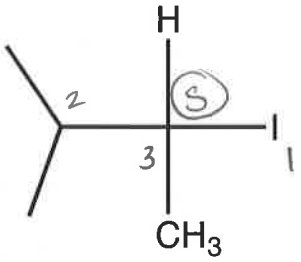
Alrighty, gang: One last worksheet, and we'll be all done with stereochem. And, believe it or not, this wraps up all of the material that will be covered on the first exam. So get pumped—you're a third of the way done with O Chem 1 ☺.

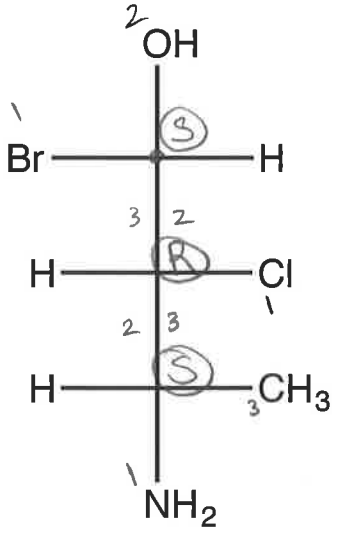
This worksheet will be short. All we are going to do is review Fischer Projections. We will first assign R&S to stereocenters in a Fischer Projection, and then we will convert between flat, bond line structures to Fischer Projections (and vice versa).

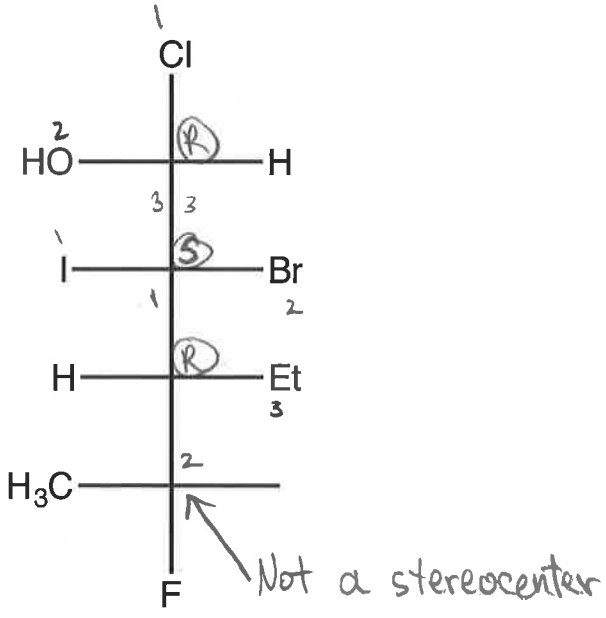
1.) Given the following Fischer Projections, identify the stereocenter(s) in each molecule, and correctly assign R&S.







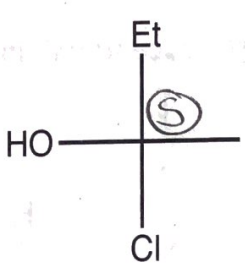


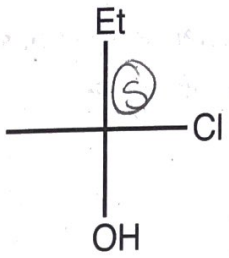


2.) Given the following pairs of Fischer Projections, identify the relationship between the molecules as one of the following: **enantiomers, diastereomers, the same molecule, or different molecules.**

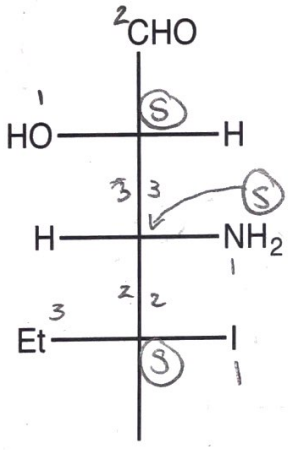
This is old hat for you seasoned, stereochem vets ☺.

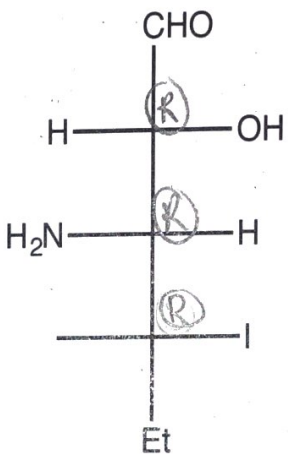
Relationship:



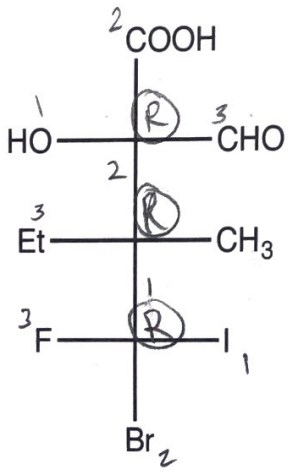


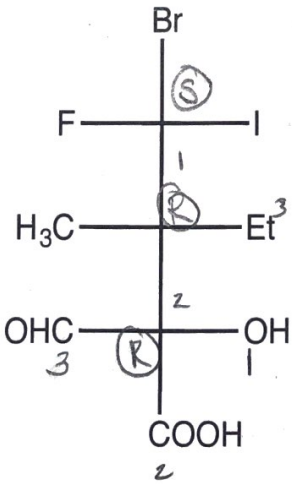
Same molecule





Enantiomers





Diastereomers

3.) Finally, take the give structure and transform it into the opposite form. In other words, if I give you a **Fischer Projection**, transform it into a **Bond-Line** structure.

Fischer Projection

Bond-Line Structure