Overview of a couple concepts that were confusing

PLEASE DO NOT USE THIS AS THE ONLY SOURCE TO STUDY FOR THE EXAM. THIS IS JUST SOME PRACTICE RELATED TO STEREOCHEMISTRY!

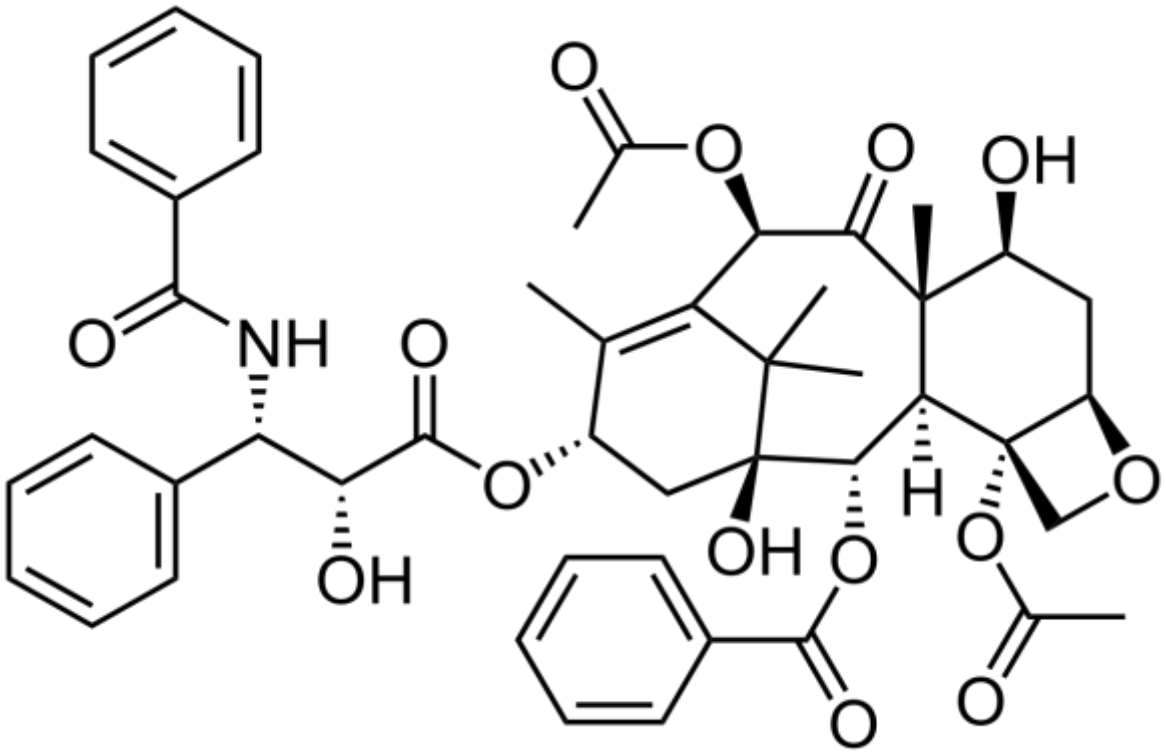
Please attempt the problems before you look at the solutions. It will help you understand the material better

Please Consider A and B as enantiomers

1. Calculate the **ee** (Enantiomeric Excess) for a mixture of **er** (Enantiomeric Ratio) =75:25, A:B.

2. Calculate the **er** (Enantiomeric Ratio) for a mixture that has A in 83% **ee** (Enantiomeric Excess).

3. Assign R or S configuration for each Stereo center in Paclitaxel **(Taxol).**



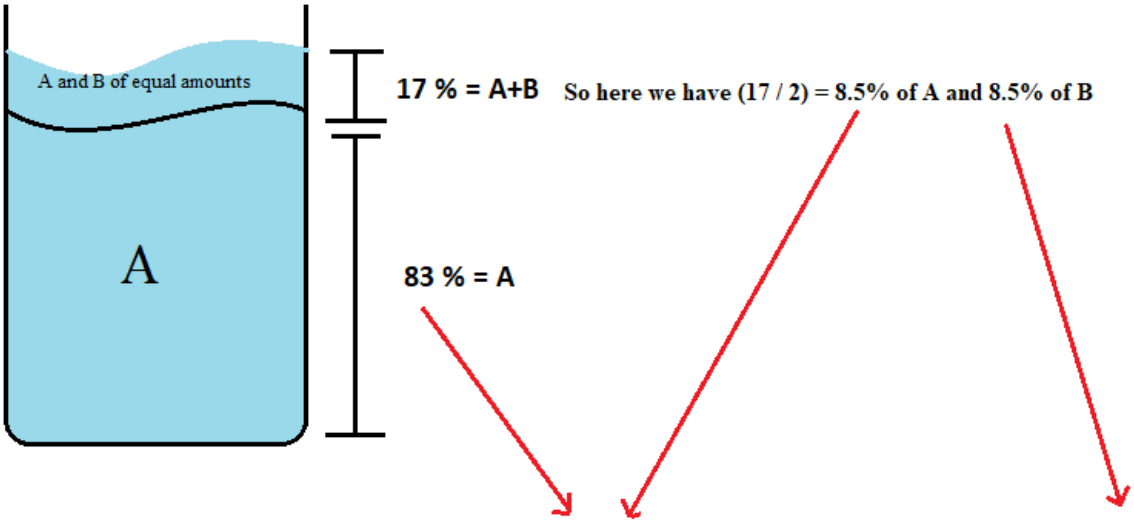
Solutions

1. Calculate the **ee** (Enantiomeric Excess) for a mixture of **er** (Enantiomeric Ratio) =75:25, A:B.

   To convert **er** to **ee** all you need to do is subtract the larger quantity from the smaller. So in this case the amount of A is 75 and B is 25. If you subtract these two values (75-25) you get 50 of A in excess. Which is the same thing as A being 50% **ee** (Enantiomeric Excess)

2. Calculate the **er** (Enantiomeric Ratio) for a mixture that has A in 83% **ee** (Enantiomeric Excess).
   This conversion seems a bit complicated at first, however once you think about it the right way it becomes straight forward!

   So when you have a mixture of in this case A in 83% **ee** (Enantiomeric Excess), the mixture will look something like this.



So to get the er (Enantiomeric Ratio) we need to sum the total amounts of A (83 + 8.5) = 91.5 and set the ratio to the amounts of B = 8.5

So you get your er of A:B to be 91.5 : 8.5

3. Assign R or S configuration for each Stereo center in Paclitaxel **(Taxol).**