Big O Analysis for the encode method:  
My big O for my encode method is n^2. This is because first of all I am using the visit method inside my method which makes the original notation is O (log (n)). However I then have two for loops inside each other, so it makes my other notation n^2. Since we are taking the worst case possible time, this makes my big o notation n^2.

Big O Analysis for the decode method:  
For my decode method, I have two for loops inside each other. And then I am calling a method that has another for loop inside that. Therefore this makes my big o notation n^3. I am not using any other algorithms and this is n^3 is the worst case scenario for my test. Therefore my big o notation is n^3.