problem 2:

The error is because when we inserting the complex number into the sequence, we are comparing complex numbers and decide where do we put it in the sequence. Since we did not implement the comparator operator so the complier gives an error.

problem 3b:

Since we want to print out each domain and it subdomain, and if there is no return data or pass in data to its subdomains, there is no way to know whether or not we are in a parent domain or subdomain. So there we cannot print out the format specified.

problem 4a:

The program has 3 nested loops and each loop run from 0 to N-1 and perform constant operations. So the complexity is O(n^3).

problem 4b:

The inner loop k=0 to N-1 is linear time, the second loop runs depend the index(i) of the first loop, so the second loop will run 0+1+2+…+N-1 = N^2. So the overall will run N\*N^2 = N^3, therefore the complexity is O(N^3)

problem 5a:

The first loop run from 0 to nmin and since the insert function always put the element at 0 position, so all the operation at first loop are constant time, so the first loop runs linear time. And the second loop runs from nmin to N and do all the operation in linear time. finally swap only times constant time and destroy old value of result takes linear time to clean up. So total complexity is O(n).

problem 5b:

the first loop runs from head of seq1 and seq2 to the end of either sequence. and the insertBefore put the value at the beginning of the res sequence, so it only take constant time. so the first loop runs linear time. the second loop runs from the where the first left of if seq1 or seq2 and continue to add the rest into the res sequence. finally swap only times constant time and destroy old value of \*this takes linear time to clean up. So total complexity is O(n).