

# LAB 10 REPORT

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MEASUREMENT RESULTS  
COMPARISONS  
ANALYSIS

## TABLE DATA

N	RECURSIVE TIME	ITERATIVE TIME
1	elapsed time: 0.000003s	elapsed time: 0.000003s
5	elapsed time: 0.000003s	elapsed time: 0.000002s
10	elapsed time: 0.000004s	elapsed time: 0.000002s
30	elapsed time: 0.008701s	elapsed time: 0.000003s
40	elapsed time: 0.903228s	elapsed time: 0.000003s
45	elapsed time: 8.102593s	elapsed time: 0.000002s
50	elapsed time: 90.135605s	elapsed time: 0.000002s

## ANALYSIS

NOTE - For measuring time, I used <chrono> since it appears to give a good time resolution.

The test table shows that as N gets larger, the recursive function takes significantly more time in finding the fibonacci number. The data I collected appears to show that the recursive method of solving for the fibonacci number starts to take longer when N is 5 which is not a lot. It is also interesting to note that the iterative function stays the same with the N chosen as shown in the table above.

I tried running for higher N values however I was told that by the time my computer would find the solution, the winter term would be over and possibly significantly more time would pass.