

Assignment 1 Programming Report

I implemented a different main method and use random class to generate the size for 10^1 , 10^2 , 10^3 , 10^4 , 10^5 , 10^6 . For each different size I did 10 times test:

	the range of expected % of red node	highest %	lowest %
10^1	20 ~ 30	30	20
10^2	20 ~ 30	30	20
10^3	24 ~ 28	28	24.29
10^4	25 ~ 26	25.9	25.04
10^5	25 ~ 26	25.28	25.45
10^6	25 ~ 26	25.35	25.43

From the result I think the size # get bigger, the range of expected % of red nodes in red-black tree get smaller, and from 10^4 , 10^5 , 10^6 we can see the expected % of red node is around 25%.