Generate the test data with the following commands:

python gen_input.py

Test the data with the fllowing commands:

python test.py

And finally I get the result:

Number of Nodes	Number of Links	Execution Time (N log N)
10	45	0. 025
20	179	0. 577
30	346	3. 501
40	93	1. 255
50	486	18. 037

Number of Nodes	Number of Links	Execution Time (N log N)
10	45	0. 027
20	179	0. 828
30	346	4. 409
40	93	0. 551
50	486	16. 128