

# CSCI 1913 Lab 7 Report

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## BinarySearch Vs LinearSearch



Graph of the Output

1. Based on the graph, for array size  $N \leq 7$ , linear search is more efficient than binary search.
2. Also based on the graph, for array size  $N > 7$ , binary search is more efficient than linear search.

Output generated by running BinaryVsLinear (see next page):

Array Size	LinearSearch	BinarySearch
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1	1	2
2	1.5	2.5
3	2	3
4	2.5	3.25
5	3	3.8
6	3.5	4
7	4	4.142857143
8	4.5	4.25
9	5	4.666666667
10	5.5	4.9
11	6	5.090909091
12	6.5	5.166666667
13	7	5.307692308
14	7.5	5.357142857
15	8	5.4
16	8.5	5.4375
17	9	5.705882353
18	9.5	5.888888889
19	10	6.052631579
20	10.5	6.15
21	11	6.285714286
22	11.5	6.363636364
23	12	6.434782609
24	12.5	6.458333333
25	13	6.56
26	13.5	6.615384615
27	14	6.666666667
28	14.5	6.678571429
29	15	6.724137931
30	15.5	6.733333333