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Lab 7

BinaryVsLinear Output:

Array Size	Linear Search Avg	Binary Search Avg
1	1	1
2	1.5	1.5
3	2	1.66667
4	2.5	2
5	3	2.2
6	3.5	2.33333
7	4	2.42857
8	4.5	2.625
9	5	2.77778
10	5.5	2.9
11	6	3
12	6.5	3.08333
13	7	3.15385
14	7.5	3.21429
15	8	3.26667
16	8.5	3.375
17	9	3.47059
18	9.5	3.55556
19	10	3.63158
20	10.5	3.7
21	11	3.7619
22	11.5	3.81818
23	12	3.86957
24	12.5	3.91667
25	13	3.96
26	13.5	4
27	14	4.03704
28	14.5	4.07143
29	15	4.10345
30	15.5	4.13333

Array Size vs Average Linear Search and Binary Search Comparisons
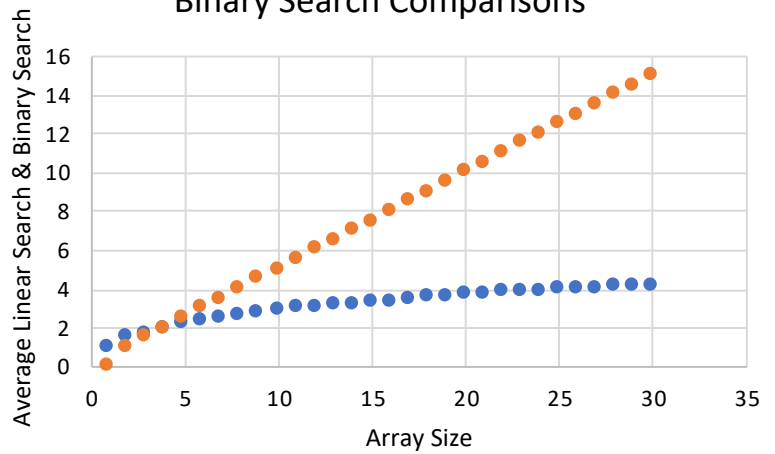
Short Answer Questions:

Q: Based on your graph, for what array sizes is linear search more efficient than binary search?
A: Linear search is more efficient than binary search for arrays of size 4 and below.

Q: Based on your graph, for what array sizes is binary search more efficient than linear search?
A: Binary search is more efficient than linear search for arrays of size 5 and above.