

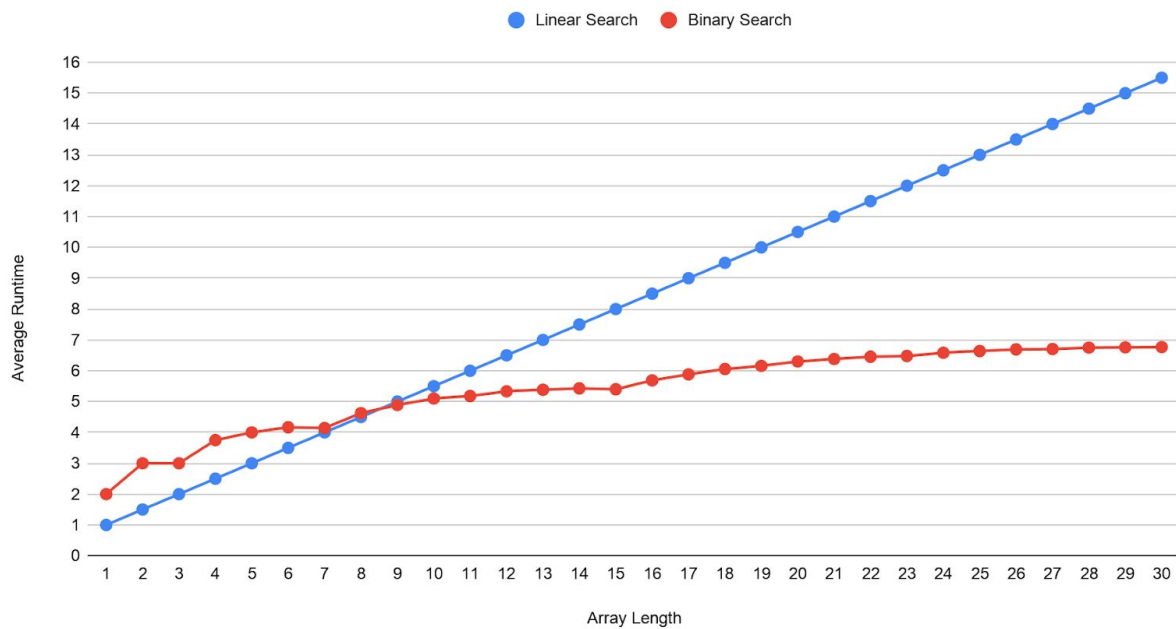
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2. Output:

1 1.0 2.0
2 1.5 3.0
3 2.0 3.0
4 2.5 3.75
5 3.0 4.0
6 3.5 4.166666666666667
7 4.0 4.142857142857143
8 4.5 4.625
9 5.0 4.888888888888889
10 5.5 5.1
11 6.0 5.181818181818182
12 6.5 5.333333333333333
13 7.0 5.384615384615385
14 7.5 5.428571428571429
15 8.0 5.4
16 8.5 5.6875
17 9.0 5.882352941176471
18 9.5 6.055555555555555
19 10.0 6.157894736842105
20 10.5 6.3
21 11.0 6.380952380952381
22 11.5 6.454545454545454
23 12.0 6.478260869565218
24 12.5 6.583333333333333
25 13.0 6.64
26 13.5 6.6923076923076925
27 14.0 6.703703703703703
28 14.5 6.75
29 15.0 6.758620689655173
30 15.5 6.766666666666667

3. Graph:

Average Runtime For Linear and Binary Searches



4. Short Answer

Linear search is more efficient than binary search for array sizes equal to or less than 8.

5. Short Answer

Binary search is more efficient than linear search for array sizes greater than 8.