

Results for the extraLargeArray
insert 1.1440299999999999 s
append 3.7724 ms

\$ node runtime.js
Results for the extraLargeArray
insert 9.8777 ms
append 573.3 μ s

Results for the extraLargeArray
insert 187.9 μ s
append 147.4 μ s

Results for the extraLargeArray
insert 50.4 μ s
append 110 μ s

Results for the extraLargeArray
insert 37.3 μ s
append 94.8 μ s

The insert function scales $O(n^2)$ quadratic. As the array gets longer the runtime becomes exponentially higher.

The append function scales $O(n)$ linear. As the array gets longer so does the runtime but it's consistent.

The append function scales much better because even when it takes in large arrays it doesn't increase the runtime as drastically as the insert function.