

Notes

tinyArray

append 169.8 μ s

insert 68.9 μ s

smallArray

append 661 μ s

insert 264.5 μ s

mediumArray

append 316.3 μ s

insert 390.6 μ s

largeArray

append 986.8 μ s

insert 13.3103 ms

extraLargeArray

append 6.5943 ms

insert 1.7734564000000002 s

Observation: each execution has a difference time that is returned but the append

Observation: insert was faster on a small scale but slower on a larger

Observation: insert grew exponentially while push grew linearly in time

Append is $O(n)$

Insert is $O(n^2)$

After comparing the two functions by running it and analyzing the results, I can see that for larger data sets, append performs much better and insert. insert grows much faster than append even though it starts off with a shorter time. As the data set grows, insert grows much faster almost on a curve up, append on the other hand shows a consistent trend that is linear. As for which is better, it depends on your data set size, but overall append is recommended.