

TIMING RESULTS

- tinyArray
 - Insert: 53 μ s
 - Append: 116.3 μ s
- smallArray
 - Insert: 57.9 μ s
 - Append: 122.1 μ s
- mediumArray
 - Insert: 321.1 μ s
 - Append: 166.5 μ s
- largeArray
 - Insert: 12.0838 ms
 - Append: 706.1 μ s
- extraLargeArray
 - Insert : 1.39 s
 - Append: 4.7 ms

THE REPORT

The append function is clearly the superior function. While it may start off 50ish microseconds slower, as the numbers get larger, it continues to perform reasonably well. The insert function begins to take a significantly larger amount of time the larger the numbers get.

This is likely due to the fact that the insert function puts the new numbers at the beginning of the array while the append function puts them at the end. Putting the numbers at the end remains very consistent. However putting them at the front requires re-indexing all existing numbers in the array. A pretty simple process when only a few numbers are being added, but when 100000 numbers are being added and repeatedly re-indexed, it takes a lot of processing to complete.

In conclusion, the append function is better.