

## **extraLargeArray**

### Results

insert 953.7929 ms

Append 3.25 ms

## **largeArray**

### Results

insert 9.7257

append 721.4  $\mu$ s

## **mediumArray**

### Results

insert 245.6  $\mu$ s

append 173.8  $\mu$ s

## **smallArray**

### Results

insert 60.6  $\mu$ s

append 122.1  $\mu$ s

## **tinyArray**

### Results

insert 46.6  $\mu$ s

append 103.9  $\mu$ s

## Results

When using unshift we see a larger time complexity with larger arrays due to its heavy workload. Unshift takes longer with bigger workloads because it must push the number into the beginning of an array, and shift every number 1 index every instance. The push method only adds to the end of an array and therefore only affects the last thing placed.

By the time smallArray we see that unshift actually scales faster than push. This is due to unshift being an  $O(n)$  time complexity that scales quicker with smaller workloads.