Time Analysis

Array Use	***doublerInsert Function***	***doublerAppend Function***
tinyArray	14.667 µs	41.583 µs
smallArray	26.334 µs	58.167 µs
mediumArray	157.167 µs	105.959 µs
largeArray	7.958083 ms	502.875 µs
extraLargeArray	784.72425 ms	3.4105 ms

The results show that the “Doubler Insert Function” returns faster times when the size of an input is small, however when the size grows, the “Doubler Append Function” starts to performs better and return faster times. The difference can be seen very clearly in the “*extraLargeArray*” when the function has to run through an array with the length of 100,000. Since the “Doubler Insert Function” uses the built in JavaScript method of *“UnShift()”*, which basically takes every element in an array and shifts them over by one index in order to add a new element at index 0. By knowing what the *“UnShift()”* method does, we can easily understand why it’s taking longer to execute, because for each of its iterations the function needs to move over the whole array over by one in order to insert a value into the index 0.