

Week 7 Assessment

Size	Insert	Append
Tiny	80.971 μ s	184.733 μ s
Small	70.711 μ s	141.544 μ s
Medium	247.753 μ s	207.529 μ s
Large	19.059402 ms	1.85986 ms
Extra-large	1.911824242 s	5.296375 ms

2.) After running all tests, it is evident that the doublerAppend method has faster run times. I also noticed that the larger the array gets, the longer the run time gets. The doublerAppend method uses a different code, utilizing the push method versus the appendInsert method which uses the unshift method, I think this might contribute to the difference in run time between the two. I am wondering if there is any method that would make the runtime for the doublerInsert method to be quicker than the doublerAppend method.

3.) **Extra credit:** Insert is the slower function because the method it uses isn't as efficient as the Append function. The doublerAppend function uses the push method which has a faster runtime of $O(1)$. The doublerInsert function uses the unshift method which has a runtime of $O(n)$. The append function adds onto the end of an array where the insert

function runs through every part of an array before adding onto it.