Assignment 4: Presentation of Results

In my assignment_4.py program I created 20 max heap priority queues and for each priority queue, I iterated through the "remove item, increment priorities, add new item" sequence 8000 times and calculated and recorded the average wait time for priority 40 items for each priority queue I created to find the largest increment value such that expected wait time for priority 40 items is ≤ 5.

Results:

Average weight times for priority 40 items is: 4.580732700135684
Average weight times for priority 40 items is: 4.798267326732673
Average weight times for priority 40 items is: 4.885245901639344
Average weight times for priority 40 items is: 4.926675094816686
Average weight times for priority 40 items is: 4.876528117359412
Average weight times for priority 40 items is: 4.6998654104979805
Average weight times for priority 40 items is: 4.8743961352657
Average weight times for priority 40 items is: 4.898113207547168
Average weight times for priority 40 items is: 4.908450704225351
Average weight times for priority 40 items is: 4.910519951632406
Average weight times for priority 40 items is: 4.975757575757575
Average weight times for priority 40 items is: 4.9843184559710485
Average weight times for priority 40 items is: 4.9194373401534515
Average weight times for priority 40 items is: 4.6983311938382535
Average weight times for priority 40 items is: 4.78007290400972
Average weight times for priority 40 items is: 5.0401002506265655
Average weight times for priority 40 items is: 4.896088019559901
Average weight times for priority 40 items is: 4.96564417177914
Average weight times for priority 40 items is: 5.070574162679425
Average weight times for priority 40 items is: 5.023456790123456

Some of my wait times were slightly above 5 by less than 0.05, however they were rare and for the majority of the cases they were ≤ 5