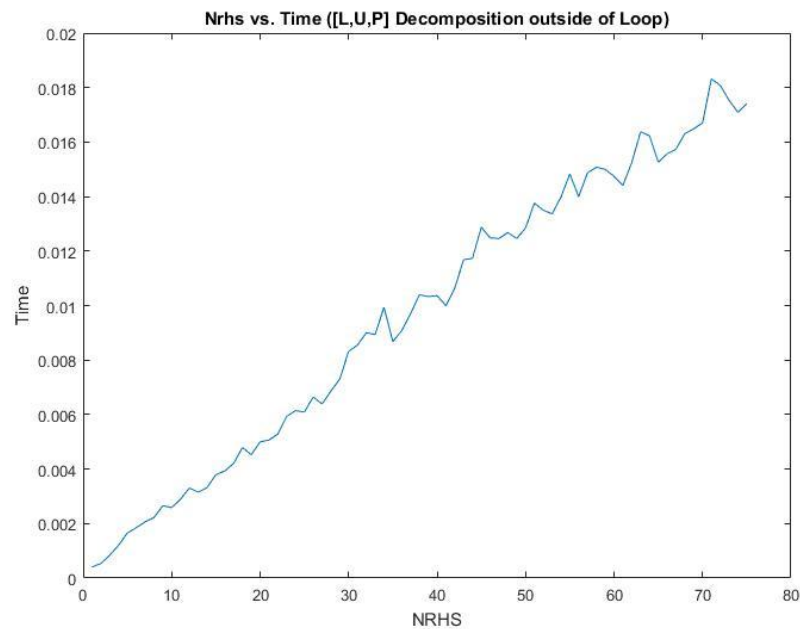


Problem 2.

- a. As NRHS values increase the amount of time computation takes increases. This makes sense because you're working with bigger matrices.



- b. This graph follows a similar trend but takes a lot longer compared to the having the LUP decomposition outside of the loops. You can see to compute as the number of nrhs gets close to 75, it takes almost a full second to compute the solution matrix. This is different because you're recomputing L, U, and P matrices every time.

