**Assignment 4**

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**What is the run time as a function of problem size?**

In my opinion, for the run times of these three algorithms slightly fluctuate but it is approximately the same for all problem sizes.

**Provide you a short analysis for the result that explains any differences in performance between the algorithms.**

First of all, KMP algorithm shows the best performance in comparison to the others. In addition, the total run time of the algorithm remains approximately constant when the problem size increases. On the other hand, Booyer Moore algorithm has worse throughput than KMP but still better than Robin Karp. It performs better for small and large patterns. Finally, Robin Karp has the longest run time. It shows a slightly worse performance for large and small patterns but approximately it remains the same for all lengths of patterns.

**log/log Polt**

Plot.tiff