

Lab 4

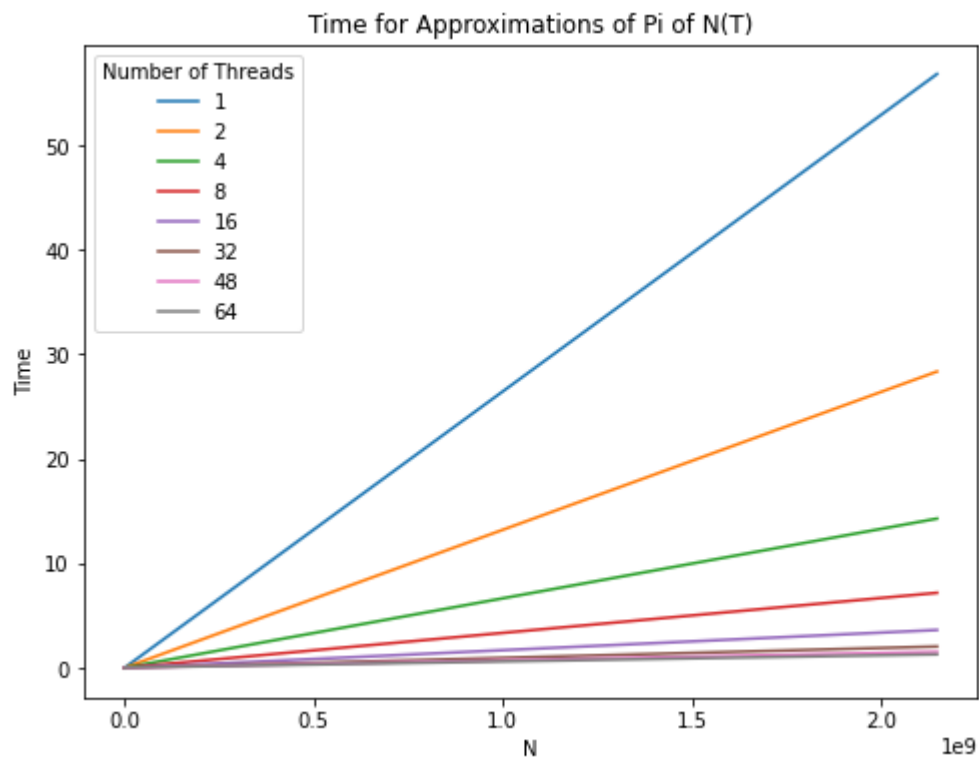
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Questions

(a) `#!/bin/bash`

```
#SBATCH --nodes=1  
#SBATCH --ntasks-per-node=1  
#SBATCH --cpus-per-task=64  
#SBATCH --time=00:30:00  
#SBATCH --partition=normal_q  
#SBATCH --account=cmda3634-rjh
```



(b) _____

(c) Times are cut in half when the number of processors doubles until $T = 32$ because there are only 32 threads so it is the fastest possible time already at $T=32$ threads.

(d) For $T = 32$ and $N = 2^{40}$, I estimated it would take around 2 hours to compute.

N	Digits of π
2^{10}	Around 1
2^{13}	Around 2
2^{16}	Around 3
2^{19}	Around 3
2^{22}	Around 4
2^{25}	Around 4
2^{28}	Around 5
2^{31}	Around 4

(e)

Looking at the data, T does not seem to matter for the number of digits of π accurately estimated.

(f) No assistance given nor received.