

PHYS338:Computational Physics

HW1

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Question 2

We have:

- $N - 1$ operations for summation.
 - N for multiplication.
- \Rightarrow The number of operations = $2N - 1$

Question 3

- The time needed in C program = 9.607000 s
- The time needed in MATLAB = 0.536607 s

\Rightarrow Time C/Time MATLAB \approx 18 times

- Specifications of my computer:

Operating System: Windows 10 Pro 64-bit (10.0, Build 18362)

System type: 64-bit Operating System, x64-based processor

Processor: Intel(R) Core(TM) i7-7500U CPU @ 2.70GHz 2.90 GHz

Intel memory (RAM): 8.00 GB (7.88 GB usable)

Question 4

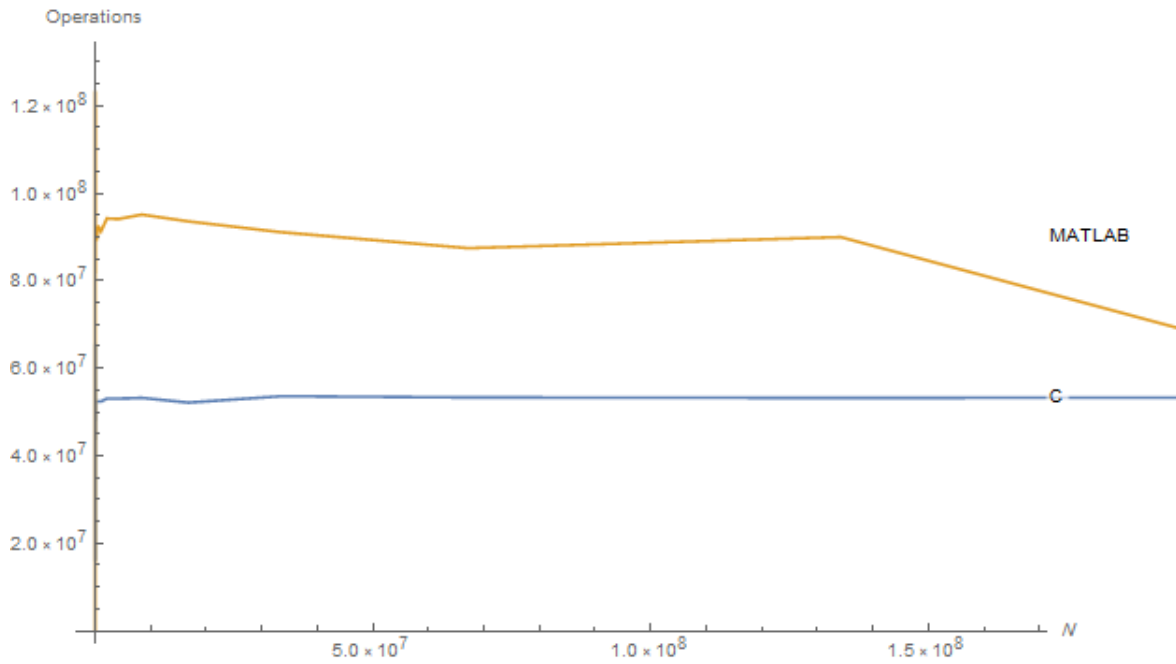


Figure 1: Number of operations per second VS N