CS575 Project 0

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1. Tell what machine you ran this on

   macOS Monterey

   Version 12.3.1

   MacBook Pro (13-inch, M1, 2020)

   Chip: Apple M1

   Memory: 8 GB

2. What performance results did you get?

   ```
   Using 1 threads
   Peak Performance =    302.70 MegaMults/Sec
   ```

   ```
   Using 4 threads
   Peak Performance =    933.94 MegaMults/Sec
   ```

3. What was your 4-thread-to-one-thread speedup?

   S = 933.94 / 302.70 = 3.085365

4. If the 4-thread-to-one-thread speedup is less than 4.0, why do you think it is this way?

   It's possible that the performance is limited by the system I'm using, such as the CPU, RAM, and other components, as well as the SIZE and NUMTRIES I chose.

5. What was your Parallel Fraction, Fp?

   Float Fp = (4. / 3.) * (1. - (1. / 3.085365)) = 0.901186