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CS475 – Spring 2018  
Project 00 – Simple OpenMP Experiment

### **Platform**

Home PC – using flip server to run program

### **Performance Results**

Using 4 threads:

Peak Performance: 1257.35 MegaMults/Sec  
Average Performance: 1229.10 MegaMults/Sec  
Average time = 0.00085774 secs

Using 1 thread:

Peak Performance = 326.57 MegaMults/Sec  
Average Performance = 316.42 MegaMults/Sec  
Average time = 0.00332019 secs

4 Thread to 1 Thread Speedup (S):

$$S = (\text{Execution time with one thread}) / (\text{Execution time with 4 threads}) = 3.87$$

Parallel Fraction:

$$F_p = (4./3.)*(1. - (1. / S)) = 0.989$$

### **Analysis**

In theory, the execution time with four threads will be four times faster than the execution time with one thread so I would expect S to be near 4.0. The speedup time in practice was 3.87 which is pretty close to 4 but with slow downs due to the machine and server.