1. **Machine:** OSU flip (Linux)

2. **Performance Results (SIZE:16384, NUMTRIES:20)**

Using 1 threads

Peak Performance = 1002.40 MegaMults/Sec

Average Performance = 867.04 MFLOPS

Using 4 threads

Peak Performance = 3124.72 MegaMults/Sec

Average Performance = 2775.64 MFLOPS

1. **Speedup (S)** = 3124.72 / 1002.40 = 3.12
2. **If the 4-thread-to-one-thread speedup is less than 4.0, why do you think it is this way?**

I think this happens because not all programs can use multiple threads. There may be other problems, such as other processes occupying the thread cycle, or all resources are limited and multiple threads are not allowed.

5. **Parallel Fraction:** = (4/3)\*(1 - (1/3.12)) = 0.9