

1. Tell what machine you ran this on

I ran the code on Flip1. I set the ARRAYSIZE to 5,000 and NUMTRIES to 1,000.

2. What performance results did you get?

I ran the codes in 4 rounds for both 1 thread and 4 threads and filled the peak results to the following form. I also calculate the average results for both situations.

	Execution time results (peak) for 1 thread (Mega-Multiplies per Second)	Execution time results (peak) for 4 threads (Mega-Multiplies per Second)
Round 1	301.41	827.23
Round 2	306.29	847.33
Round 3	305.21	812.21
Round 4	305.07	849.21
Average	304.49	833.99

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

$$S = 833.99 / 304.49 = 2.73$$

4. Why do you think it is behaving this way?

4-thread-to-one-thread speedup cannot achieve 4.0, as the overhead of using threading might cost some resource. The ideal speedup will be more than 3.0 and close to 4.0, and 2.73 is not a bad result for 4-thread-to-1-thread speedup.

5. What was your Parallel Fraction, F_p ?

$$F_p = (4.0 / 3.0) * (1.0 - (1.0 / 2.73)) = 84.49\%$$