

2 & 3) average wait time in chart 1: 2.8 units || context switches in chart 2 = 19

[illegible]

Test file: medium.txt				
#threads	Observed timing	Observed speedup compared to original	Expected speedup	
original	32.073	1	1	
1	32.566	0.984861512	1	
2	17.156	1.869491723	2	
3	12.446	2.576972521	3	
4	9.442	3.396843889	4	
8	7.7	4.165324675	8	
16	5.036	6.368745036	16	
Test file: hard.txt				
#threads	Observed timing	Observed speedup compared to original	Expected speedup	
original	10.951	1	1	
1	10.865	1.007915324	1	
2	10.844	1.009867208	2	
3	10.965	0.99872321	3	
4	10.838	1.010426278	4	
8	10.907	1.004034107	8	
16	10.911	1.003666025	16	
Test file: hard2.txt				
#threads	Observed timing	Observed speedup compared to original	Expected speedup	
original	10.883	1	1	
1	10.918	0.996794285	1	
2	11.065	0.98355174	2	
3	11.042	0.985600435	3	
4	10.88	1.000275735	4	
8	10.809	1.006846147	8	
16	10.888	0.999540779	16	

The hard and hard2 files both contained very large numbers which meant that the program was bottlenecked by the primality test algorithm. Multithreading therefore does not improve speed.