

[illegible]

```
/*  
 * CPU Report  
 */
```

```
model name      : Intel(R) Core(TM) i7-4770K CPU @ 3.50GHz  
vendor_id       : GenuineIntel  
cpu cores       : 4  
siblings        : 8  
cache size      : 8192 KB
```

```
/*  
* Serie Runtime Report In Seconds  
*/
```

10000	:	4.10e-05	:	1.24e-04	:	1.13e-04	:	8.80e-05	:	1.43e-04
20000	:	2.82e-04	:	1.35e-04	:	1.58e-04	:	2.26e-04	:	1.86e-04
10000	:	1.05e-04	:	1.13e-04	:	1.31e-04	:	1.13e-04	:	7.20e-05
20000	:	1.67e-04	:	2.10e-04	:	3.58e-04	:	1.66e-04	:	2.43e-04
10000	:	4.30e-05	:	7.10e-05	:	7.50e-05	:	1.22e-04	:	7.60e-05
20000	:	1.58e-04	:	3.49e-04	:	1.58e-04	:	1.59e-04	:	1.43e-04
10000	:	8.30e-05	:	7.20e-05	:	1.13e-04	:	7.50e-05	:	6.80e-05
20000	:	1.37e-04	:	1.99e-04	:	1.66e-04	:	1.43e-04	:	1.67e-04

```
/*
 * Parallel Runtime Report In Seconds
 */

2 10000      :4.29e-05:1.65e-04:3.43e-05:6.70e-05:3.98e-05
2 20000      :5.77e-05:6.27e-05:8.00e-05:7.64e-05:1.04e-04
4 10000      :4.28e-05:5.81e-05:6.00e-05:3.06e-05:4.83e-05
4 20000      :9.09e-05:6.95e-05:4.45e-05:9.57e-05:9.03e-05
6 10000      :1.13e-04:1.59e-04:4.12e-05:5.11e-05:6.44e-05
6 20000      :1.52e-04:3.95e-05:1.23e-04:1.95e-04:1.14e-04
8 10000      :6.50e-05:6.97e-05:1.22e-04:5.38e-05:1.86e-04
8 20000      :9.92e-05:2.17e-04:6.02e-05:2.29e-04:1.53e-04
```

```
/*
 * Speedup Report
 */

2 10000      :9.56e-01:7.52e-01:3.29e+00:1.31e+00:3.59e+00
2 20000      :4.89e+00:2.15e+00:1.97e+00:2.96e+00:1.79e+00
4 10000      :2.45e+00:1.94e+00:2.18e+00:3.69e+00:1.49e+00
4 20000      :1.84e+00:3.02e+00:8.04e+00:1.73e+00:2.69e+00
6 10000      :3.81e-01:4.47e-01:1.82e+00:2.39e+00:1.18e+00
6 20000      :1.04e+00:8.84e+00:1.28e+00:8.15e-01:1.25e+00
8 10000      :1.28e+00:1.03e+00:9.26e-01:1.39e+00:3.66e-01
8 20000      :1.38e+00:9.17e-01:2.76e+00:6.24e-01:1.09e+00
```

```
/*  
 * Parallel Calculation Report  
 */  
  
2 Cores CPU - Size Problem 10000
```

Try 1

Runtime 4.29e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	5000	10000	1.458333	1.458333
1	2	5000	10000	1.208333	2.666667

Try 2

Runtime 1.65e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	2	5000	10000	1.458333	1.458333
1	2	5000	10000	1.208333	2.666667

Try 3

Runtime 3.43e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	5000	10000	1.458333	1.458333
1	2	5000	10000	1.208333	2.666667

Try 4

Runtime 6.70e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	5000	10000	1.458333	1.458333
1	2	5000	10000	1.208333	2.666667

Try 5

Runtime 3.98e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	5000	10000	1.458333	1.458333
1	2	5000	10000	1.208333	2.666667

2 Cores CPU - Size Problem 20000

Try 1

Runtime 5.77e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	10000	20000	1.458333	1.458333
1	2	10000	20000	1.208333	2.666667

Try 2

Runtime 6.27e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	10000	20000	1.458333	1.458333
1	2	10000	20000	1.208333	2.666667

Try 3

Runtime 8.00e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	10000	20000	1.458333	1.458333
1	2	10000	20000	1.208333	2.666667

 Try 4

Runtime 7.64e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	2	10000	20000	1.458333	1.458333
1	2	10000	20000	1.208333	2.666667

Try 5

Runtime 1.04e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	2	10000	20000	1.458333	1.458333
1	2	10000	20000	1.208333	2.666667

4 Cores CPU - Size Problem 10000

Try 1

Runtime 4.28e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	2500	10000	0.744792	0.744792
1	4	2500	10000	0.713542	1.458333
2	4	2500	10000	0.651042	2.109375
3	4	2500	10000	0.557292	2.666667

Try 2

Runtime 5.81e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	2500	10000	0.744792	0.744792
1	4	2500	10000	0.713542	1.458333
2	4	2500	10000	0.651042	2.109375
3	4	2500	10000	0.557292	2.666667

Try 3

Runtime 6.00e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	2500	10000	0.744792	0.744792
1	4	2500	10000	0.713542	1.458333
2	4	2500	10000	0.651042	2.109375
3	4	2500	10000	0.557292	2.666667

Try 4

Runtime 3.06e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	2500	10000	0.744792	0.744792
1	4	2500	10000	0.713542	1.458333
2	4	2500	10000	0.651042	2.109375
3	4	2500	10000	0.557292	2.666667

Try 5

Runtime 4.83e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	2500	10000	0.744792	0.744792
1	4	2500	10000	0.713542	1.458333
2	4	2500	10000	0.651042	2.109375
3	4	2500	10000	0.557292	2.666667

4 Cores CPU - Size Problem 20000

Try 1

Runtime 9.09e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	5000	20000	0.744792	0.744792
1	4	5000	20000	0.713542	1.458333
2	4	5000	20000	0.651042	2.109375
3	4	5000	20000	0.557292	2.666667

Try 2

Runtime 6.95e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	5000	20000	0.744792	0.744792
1	4	5000	20000	0.713542	1.458333
2	4	5000	20000	0.651042	2.109375
3	4	5000	20000	0.557292	2.666667

Try 3

Runtime 4.45e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	5000	20000	0.744792	0.744792
1	4	5000	20000	0.713542	1.458333
2	4	5000	20000	0.651042	2.109375
3	4	5000	20000	0.557292	2.666667

Try 4

Runtime 9.57e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	5000	20000	0.744792	0.744792
1	4	5000	20000	0.713542	1.458333
2	4	5000	20000	0.651042	2.109375
3	4	5000	20000	0.557292	2.666667

Try 5

Runtime 9.03e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	4	5000	20000	0.744792	0.744792
1	4	5000	20000	0.713542	1.458333
2	4	5000	20000	0.651042	2.109375
3	4	5000	20000	0.557292	2.666667

6 Cores CPU - Size Problem 10000

Try 1

Runtime 1.13e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	6	1666	10000	0.498259	0.498259
1	6	1666	10000	0.489010	0.987269
2	6	1666	10000	0.470514	1.457783
3	6	1666	10000	0.442770	1.900553
4	6	1666	10000	0.405777	2.306330
5	6	1666	10000	0.359536	2.665867

Try 2

Runtime 1.59e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	6	1666	10000	0.498259	0.498259
1	6	1666	10000	0.489010	0.987269
2	6	1666	10000	0.470514	1.457783

3	6	1666	10000	0.442770	1.900553
4	6	1666	10000	0.405777	2.306330
5	6	1666	10000	0.359536	2.665867

Try 3

Runtime 4.12e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	6	1666	10000	0.498259	0.498259
1	6	1666	10000	0.489010	0.987269
2	6	1666	10000	0.470514	1.457783
3	6	1666	10000	0.442770	1.900553
4	6	1666	10000	0.405777	2.306330
5	6	1666	10000	0.359536	2.665867

Try 4

Runtime 5.11e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	6	1666	10000	0.498259	0.498259
1	6	1666	10000	0.489010	0.987269
2	6	1666	10000	0.470514	1.457783
3	6	1666	10000	0.442770	1.900553
4	6	1666	10000	0.405777	2.306330
5	6	1666	10000	0.359536	2.665867

Try 5

Runtime 6.44e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	6	1666	10000	0.498259	0.498259
1	6	1666	10000	0.489010	0.987269
2	6	1666	10000	0.470514	1.457783
3	6	1666	10000	0.442770	1.900553
4	6	1666	10000	0.405777	2.306330
5	6	1666	10000	0.359536	2.665867

6 Cores CPU - Size Problem 20000

Try 1

Runtime 1.52e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	6	3333	20000	0.498407	0.498407
1	6	3333	20000	0.489151	0.987558
2	6	3333	20000	0.470638	1.458196
3	6	3333	20000	0.442868	1.901064
4	6	3333	20000	0.405842	2.306907
5	6	3333	20000	0.359560	2.666467

Try 2

Runtime 3.95e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	6	3333	20000	0.498407	0.498407
1	6	3333	20000	0.489151	0.987558
2	6	3333	20000	0.470638	1.458196
3	6	3333	20000	0.442868	1.901064
4	6	3333	20000	0.405842	2.306907
5	6	3333	20000	0.359560	2.666467

Try 3

Runtime 1.23e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	6	3333	20000	0.498407	0.498407

1	6	3333	20000	0.489151	0.987558
2	6	3333	20000	0.470638	1.458196
3	6	3333	20000	0.442868	1.901064
4	6	3333	20000	0.405842	2.306907
5	6	3333	20000	0.359560	2.666467

Try 4

Runtime 1.95e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	6	3333	20000	0.498407	0.498407
1	6	3333	20000	0.489151	0.987558
2	6	3333	20000	0.470638	1.458196
3	6	3333	20000	0.442868	1.901064
4	6	3333	20000	0.405842	2.306907
5	6	3333	20000	0.359560	2.666467

Try 5

Runtime 1.14e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	6	3333	20000	0.498407	0.498407
1	6	3333	20000	0.489151	0.987558
2	6	3333	20000	0.470638	1.458196
3	6	3333	20000	0.442868	1.901064
4	6	3333	20000	0.405842	2.306907
5	6	3333	20000	0.359560	2.666467

8 Cores CPU - Size Problem 10000

Try 1

Runtime 6.50e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	8	1250	10000	0.374349	0.374349
1	8	1250	10000	0.370443	0.744792
2	8	1250	10000	0.362630	1.107422
3	8	1250	10000	0.350911	1.458333
4	8	1250	10000	0.335286	1.793620
5	8	1250	10000	0.315755	2.109375
6	8	1250	10000	0.292318	2.401693
7	8	1250	10000	0.264974	2.666667

Try 2

Runtime 6.97e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	8	1250	10000	0.374349	0.374349
1	8	1250	10000	0.370443	0.744792
2	8	1250	10000	0.362630	1.107422
3	8	1250	10000	0.350911	1.458333
4	8	1250	10000	0.335286	1.793620
5	8	1250	10000	0.315755	2.109375
6	8	1250	10000	0.292318	2.401693
7	8	1250	10000	0.264974	2.666667

Try 3

Runtime 1.22e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	8	1250	10000	0.374349	0.374349
1	8	1250	10000	0.370443	0.744792
2	8	1250	10000	0.362630	1.107422
3	8	1250	10000	0.350911	1.458333
4	8	1250	10000	0.335286	1.793620
5	8	1250	10000	0.315755	2.109375
6	8	1250	10000	0.292318	2.401693

7	8	1250	10000	0.264974	2.666667
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Try 4

Runtime 5.38e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	8	1250	10000	0.374349	0.374349
1	8	1250	10000	0.370443	0.744792
2	8	1250	10000	0.362630	1.107422
3	8	1250	10000	0.350911	1.458333
4	8	1250	10000	0.335286	1.793620
5	8	1250	10000	0.315755	2.109375
6	8	1250	10000	0.292318	2.401693
7	8	1250	10000	0.264974	2.666667

Try 5

Runtime 1.86e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	8	1250	10000	0.374349	0.374349
1	8	1250	10000	0.370443	0.744792
2	8	1250	10000	0.362630	1.107422
3	8	1250	10000	0.350911	1.458333
4	8	1250	10000	0.335286	1.793620
5	8	1250	10000	0.315755	2.109375
6	8	1250	10000	0.292318	2.401693
7	8	1250	10000	0.264974	2.666667

8 Cores CPU - Size Problem 20000

Try 1

Runtime 9.92e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	8	2500	20000	0.374349	0.374349
1	8	2500	20000	0.370443	0.744792
2	8	2500	20000	0.362630	1.107422
3	8	2500	20000	0.350911	1.458333
4	8	2500	20000	0.335286	1.793620
5	8	2500	20000	0.315755	2.109375
6	8	2500	20000	0.292318	2.401693
7	8	2500	20000	0.264974	2.666667

Try 2

Runtime 2.17e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	8	2500	20000	0.374349	0.374349
1	8	2500	20000	0.370443	0.744792
2	8	2500	20000	0.362630	1.107422
3	8	2500	20000	0.350911	1.458333
4	8	2500	20000	0.335286	1.793620
5	8	2500	20000	0.315755	2.109375
6	8	2500	20000	0.292318	2.401693
7	8	2500	20000	0.264974	2.666667

Try 3

Runtime 6.02e-05 [s]

Process	Total	problemSize	Total	Local	Total
0	8	2500	20000	0.374349	0.374349
1	8	2500	20000	0.370443	0.744792
2	8	2500	20000	0.362630	1.107422
3	8	2500	20000	0.350911	1.458333
4	8	2500	20000	0.335286	1.793620
5	8	2500	20000	0.315755	2.109375
6	8	2500	20000	0.292318	2.401693

7	8	2500	20000	0.264974	2.666667
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Try 4

Runtime 2.29e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	8	2500	20000	0.374349	0.374349
1	8	2500	20000	0.370443	0.744792
2	8	2500	20000	0.362630	1.107422
3	8	2500	20000	0.350911	1.458333
4	8	2500	20000	0.335286	1.793620
5	8	2500	20000	0.315755	2.109375
6	8	2500	20000	0.292318	2.401693
7	8	2500	20000	0.264974	2.666667

Try 5

Runtime 1.53e-04 [s]

Process	Total	problemSize	Total	Local	Total
0	8	2500	20000	0.374349	0.374349
1	8	2500	20000	0.370443	0.744792
2	8	2500	20000	0.362630	1.107422
3	8	2500	20000	0.350911	1.458333
4	8	2500	20000	0.335286	1.793620
5	8	2500	20000	0.315755	2.109375
6	8	2500	20000	0.292318	2.401693
7	8	2500	20000	0.264974	2.666667
