**In the name of GOD**

**multicore programming homework 2**

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size 1 MB: n = m = p = 512

size 10 MB: n = m = p = 1619

size 100 MB: n = p = 128 m = 204800

1 D:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| #threads |  | | | | | | | |
| 1 MB | Speedup | 10 MB | Speedup | 100 MB | Speedup | 1 GB | Speedup |
| 1 | 0.924300 | - | 40.225900 | - | 75.268667 | - |  | - |
| 2 | 0.596500 | 1.5495 | 21.333400 | 1.8855 | 42.078000 | 1.7887 |  |  |
| 4 | 0.525900 | 1.7575 | 18.456000 | 2.1795 | 35.861200 | 2.2228 |  |  |
| 8 | 0.521100 | 1.7737 | 17.937200 | 2.2425 | 33.164333 | 2.2695 |  |  |

2 D:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| #threads |  | | | | | | | |
| 1 MB | Speedup | 10 MB | Speedup | 100 MB | Speedup | 1 GB | Speedup |
| 1 | 1.036667 | - | 40.541333 | - | 72.407000 | - |  | - |
| 2 | 0.801333 | 1.2936 | 24.261000 | 1.6710 | 44.078000 | 1.6427 |  |  |
| 4 | 0.620667 | 1.6703 | 19.555333 | 2.0731 | 33.519333 | 2.1601 |  |  |
| 8 | 0.563333 | 1.8402 | 19.265333 | 2.1043 | 34.854000 | 2.0774 |  |  |

Intel Core i7 7500U

2 Cores 4 Threads