Assignment 6

Sequential Program: 1583574812 nanoseconds

True Sharing:

|  |  |  |
| --- | --- | --- |
| Threads | Running Time (nanoseconds) | Value of Pi |
| 1 | 1599239393 |  |
| 2 | 800651255 |  |
| 4 | 400125765 |  |
| 8 | 200094674 | 3.14159265138563892350 |

Atomic Instruction:

|  |  |  |
| --- | --- | --- |
| Threads | Running Time (nanoseconds) | Value of Pi |
| 1 | 1595465391 |  |
| 2 | 798659444 |  |
| 4 | 399393288 |  |
| 8 | 199687364 | 3.14159265138563936759 |

Global Array (False-Sharing):

|  |  |  |
| --- | --- | --- |
| Threads | Running Time (nanoseconds) | Value of Pi |
| 1 | 1648263833 |  |
| 2 | 2553742802 |  |
| 4 | 2741123185 |  |
| 8 | 2665836061 | 3.14159265138563936759 |

Global Array (Both True-Sharing and False-Sharing):

|  |  |  |
| --- | --- | --- |
| Threads | Running Time (nanoseconds) | Value of Pi |
| 1 | 1597368188 |  |
| 2 | 799441880 |  |
| 4 | 399749696 |  |
| 8 | 199940055 | 3.14159265138563936759 |