Level 9 Homework

#### C Monte Carlo Method

###### b)

Batch 1:

NT: 100

NSIM: 10, 000

Call: 2.10932

Put: 5.88443

NT: 100

NSIM: 100, 000

Call: 2.13295

Put: 5.8726

NT: 500

NSIM: 10, 000

Call: 2.12329

Put: 5.94285

NT: 500

NSIM: 100, 000

Call: 2.14885

Put: 5.83729

NT: 500

NSIM: 1,000, 000

Call: 2.13249

Put: 5.84333

Batch 2:

NT: 100

NSIM: 10, 000

Call: 7.88566

Put: 8.02358

NT: 100

NSIM: 100, 000

Call: 7.96187

Put: 8.01715

NT: 500

NSIM: 10, 000

Call: 7.90847

Put: 8.13933

NT: 500

NSIM: 100, 000

Call: 8.0094

Put: 7.95242

Conclusion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | NT | NSIM | Call | Put |
| Batch 1 | 100 | 10, 000 | 2.10932 | 5.88443 |
| 100 | 100, 000 | 2.13295 | 5.8726 |
| 500 | 10, 000 | 2.12329 | 5.94285 |
| 500 | 100, 000 | 2.14885 | 5.83729 |
| 500 | 1000, 000 | 2.13249 | 5.84333 |
| Batch 2 | 100 | 10, 000 | 7.88566 | 8.02358 |
| 100 | 100, 000 | 7.96187 | 8.01715 |
| 500 | 10, 000 | 7.90847 | 8.13933 |
| 500 | 100, 000 | 8.0094 | 7.95242 |

###### c)

Batch 4:

NT: 100

NSIM: 10, 000

Call: 87.7119

Put: 1.31043

NT: 100

NSIM: 100, 000

Call: 90.1399

Put: 1.29849

NT: 500

NSIM: 10, 000

Call: 91.1309

Put: 1.30124

NT: 500

NSIM: 100, 000

Call: 93.0212

Put: 1.25552

Conclusion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | NT | NSIM | Call | Put |
| Batch 4 | 100 | 10, 000 | 87.7119 | 1.31043 |
| 100 | 100, 000 | 90.1399 | 1.29849 |
| 500 | 10, 000 | 91.1309 | 1.30124 |
| 500 | 100, 000 | 93.0212 | 1.25552 |