Options Assignment II

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Problem 1. Solution. (Part-a)

Table 1: Add caption

| initial muias | |
|----------------|----------|
| initial price | 95 |
| delta T | 0.003846 |
| simple mean mu | 0.1 |

| Standard Normal z's for price paths | | | | | Geometric Brownian Motion | | | |
|-------------------------------------|-----|----------|----------|----------|---------------------------|-----|----------|-------|
| day | | path 1 | path 2 | path 3 | day | | path 1 | path |
| | 0 | | | | | 0 | 95 | |
| | 1 | 0.3509 | 0.998721 | -2.17713 | | 1 | 95.93443 | 97.68 |
| | 2 | 1.453172 | -0.21527 | 0.656491 | | 2 | 99.90453 | 97.09 |
| | 3 | -0.11691 | 0.505587 | -0.37038 | | 3 | 99.57862 | 98.47 |
| | 4 | -1.657 | -1.42633 | -0.47922 | | 4 | 95.07816 | 94.63 |
| | 5 | 0.247389 | -0.88206 | -1.10601 | | 5 | 95.7364 | 92.33 |
| | 256 | -2.18253 | 1.761832 | 0.562654 | | 256 | 86.66135 | 161.1 |
| | 257 | -0.83838 | -0.405 | -0.63016 | | 257 | 84.65684 | 159.3 |
| | 258 | 1.023172 | -0.02578 | 0.619309 | | 258 | 87.1086 | 159.5 |
| | 259 | 0.237953 | -0.54412 | 0.067146 | | 259 | 87.68857 | 156. |
| | 260 | -1.16899 | 0.11891 | 0.017869 | | 260 | 84.87356 | 157.3 |

 $\begin{array}{c} \mathbf{GBM} \\ \mathrm{sigma} \\ \mathrm{log\ mean\ m} \end{array}$