Monte Carlo Simulations for Sample Mean

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November 2020

Data generating process:

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| Parameter | meaning | Values |
| nSims | Number of simulations | Start with small value for debugging, but then 10,000 |
| N | Population size | 10,000 |
| n | Sample size | 100,1000,5000,9000,9900 |
|  | population | Generated from |
| θ | Mean of | 2 |
|  | Variance of | 1 |
|  | Sample | Selected without replacement from |
|  | Mean of sample | Generated from sample |
|  | Variance of Monte Carlo draws |  |

Theoretical value for :