

Monte Carlo Simulations (MA323) Lab 10

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Run the code using - python3 180123021.py

The values obtained are -

	M = 100	M = 1000	M = 10000	M = 100000
I_M	1.969896	1.994782	2.001598	2.002314
\hat{I}_M	1.999654	1.999218	2.000211	2.000118
95% confidence (I_M)	[1.883220, 2.056573]	[1.967029, 2.022535]	[1.992983, 2.010212]	[1.999584, 2.005044]
95% confidence (\hat{I}_M)	[1.993463, 2.005844]	[1.997196, 2.001241]	[1.999572, 2.000849]	[1.999915, 2.000320]
Length for I_M (l)	0.173353	0.055506	0.017229	0.005459
Length for \hat{I}_M (l')	0.012381	0.004044	0.001277	0.000404
Ratio (l/l')	14.001544	13.724217	13.493216	13.507435