MA323(Lab-10)

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Mathematics and Computing

Valueof M	Im	Im_Tilda	95% Confidence Interval for Im	95% Confidence Interval for Im_Tilda	Ratio of Length of both the intervals
100	1.956237	1.995504	[1.912563, 1.999910]	[1.995259, 1.995749]	178.181073
1000	2.029268	1.999402	[2.017293, 2.041243]	[1.999330, 1.999473]	166.897927
10000	2.002734	2.000505	[1.998982, 2.006486]	[2.000484, 2.000525]	184.197122
100000	1.998138	1.999935	[1.996929, 1.999346]	[1.999928, 1.999941]	182.167723

For each value of m, m numbers of U are calculated, then Im and Im_Tilda are
calculated using formulae given in Assignment,
Then **Mean(Im) is approximately equal to Mean(Im_Tilda)**.
Variance(Im) << Variance(Im_Tilda)..
Then using formulae given in Lecture 10, 95% Confidence interval is calculated for Im
as well as Im_Tilda.
Then ratio of length is calculated(**Length(Interval of Im) / Length(Im_Tilda)**)..

Screenshot of output of code is shown on right side::