MA311 (Scientific computing)-IITG

16-08-18

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1. Let $f(x) = e^x - x - 1$. Use Newton's method to find the zero in $[-1, 1]$. Compare the results with those obtained using Secant method and bisection method. In all the cases compute the root up to an accuracy of 10^{-6}.

2. Use Newton's method, Secant method and bisection method to compute the root of the function $f(x) = x - 0.8 - 0.2 \sin x$, in $[0, \pi/2]$ accurate within 10^{-4}. Tabulate all the results and compare.