

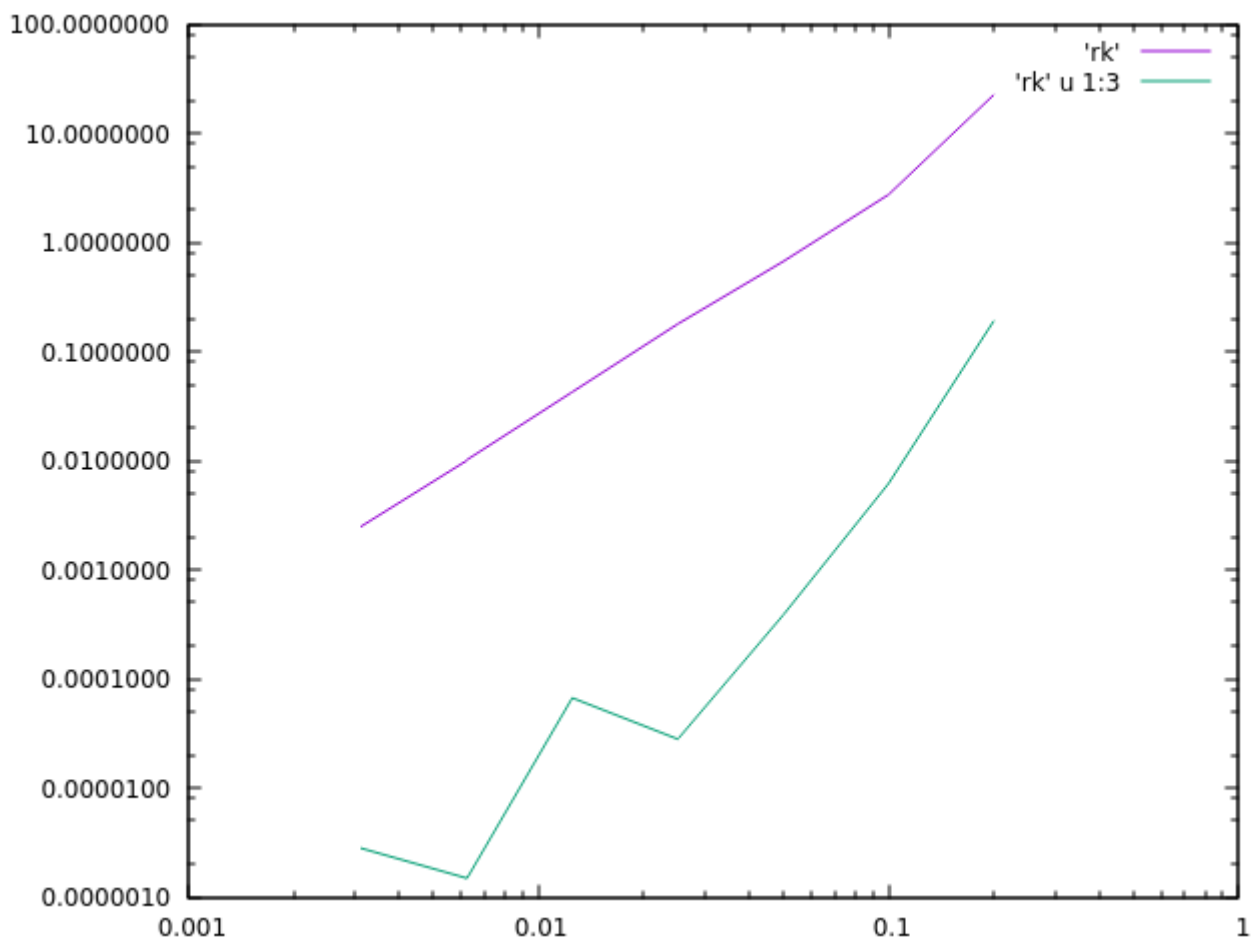
Lab Assignment 11-10-18

-Deerghanshu, 160122011.

h	RK2		RK4	
	error	alpha	error	alpha
0.2	22.640579		0.191222	
0.1	2.741975	3.045624	0.006162	4.955771
0.05	0.667346	2.038708	0.000384	4.003952
0.025	0.179023	1.898289	2.8E-05	3.781994
0.0125	0.042503	2.074505	6.7E-05	-1.257066
0.00625	0.010153	2.065613	1E-06	5.502024
0.003125	0.002533	2.003251	3E-06	-0.909759

Here, we can see that error in case of RK2 converges in the order of 2 while, in case of RK4 it converges with order 4.

Following is a log-logscale of error vs h.



The slope of graph for RK2 (violet) is almost 2 while that of RK4 (green) is almost 4.