Lab Assignment 16-08-18

- Deerghanshu, 160122011.

Q1.

	Newton	Secant	Bisection
1	-0.418023	-3.09975	0
2	-0.194492	-0.565287	
3	-0.0940954	-0.397085	
4	-0.0463104	-0.215138	
5	-0.0229766	-0.13303	
6	-0.0114465	-0.0799456	
7	-0.00570662	-0.0491041	
8	-0.00283655	-0.0301108	
9	-0.00140563	-0.0185491	
10	-0.000726685	-0.0114364	
11	-0.000398466	-0.00705017	
12	-9.92E-05	-0.00435889	
13	-9.92E-05	-0.00267684	
14		-0.00166761	
15		-0.00108332	
16		-0.000596415	
17		-0.000271809	
18		-0.000271809	

Bisection method finds the roots in its first iteration.
But, comparing the three methods, Newton method seems to have the highest converging speed.

Q2.

	Newton	Secant	Bisection
1	1	0.91672	0.785398
2	0.964453	0.967517	1.1781
3	0.964334	0.96432	0.981748
4	0.964334	0.964334	0.883573
5		0.964334	0.93266
6			0.957204
7			0.969476
8			0.96334
9			0.966408
10			0.964874
11			0.964107
12			0.96449
13			0.964299
14			0.964395

Here we can conclude that the order of converging speed is:

Newton > Secant > Bisection