| 6.1 iteration method | | | | 6.2(b) iteration method | | | | 6.2(c)Newton Raphson Method | | | |
| x=2*sin(√x) | | | | x=f(x) | | | | | | | |
x	f(x)	error(%)		x	f(x)	error(%)		x	f(x)	f'(x)	error (%)
0.5	1.299273878	61.51696664		3	3.18079096	5.683837		3	-3.2	1.5	41.55844
1.299274	1.817147504	28.49926188		3.18079096	3.333959168	4.594184		5.133333	48.09007	55.68667	20.22562
1.817148	1.950573917	6.840366928		3.333959168	3.442543247	3.154182		4.26975	12.95624	27.17244	12.57115
1.950574	1.969742513	0.973152375		3.442543247	3.506329986	1.819188		3.792934	2.947603	15.26344	5.36458
1.969743	1.972068881	0.117965856		3.506329986	3.538293714	0.903366		3.599819	0.397973	11.21642	0.995451
1.972069	1.972344178	0.013957858		3.538293714	3.552707191	0.405704		3.564338	0.012373	10.52152	0.033002
1.972344	1.972376656	0.001646628		3.552707191	3.558848119	0.172554		3.563162	1.34E-05	10.49875	3.58E-05
1.972377	1.972380486	0.000194187		3.558848119	3.561396032	0.071543		3.563161	1.57E-11	10.49873	4.21E-11
1.97238	1.972380938	2.28995E-05		3.561396032	3.562441114	0.029336		3.563161	-2.1E-14	10.49873	6.66E-14
1.972381	1.972380991	2.70042E-06		3.562441114	3.562867726	0.011974		3.563161	-1.4E-14	10.49873	3.33E-14
1.972381	1.972380997	3.18445E-07		3.562867726	3.56304153	0.004878		3.563161	4.26E-14	10.49873	1.11E-13
1.972381	1.972380998	3.75525E-08		3.56304153	3.563112282	0.001986		3.563161	1.42E-14	10.49873	4.44E-14
1.972381	1.972380998	4.42835E-09		3.563112282	3.563141074	0.000808		3.563161	-4.3E-14	10.49873	1.11E-13
1.972381	1.972380998	5.22227E-10		3.563141074	3.563152789	0.000329		3.563161	-1.4E-14	10.49873	3.33E-14
1.972381	1.972380998	6.15841E-11		3.563152789	3.563157555	0.000134		3.563161	4.26E-14	10.49873	1.11E-13
1.972381	1.972380998	7.26086E-12		3.563157555	3.563159495	5.44E-05		3.563161	1.42E-14	10.49873	4.44E-14
1.972381	1.972380998	8.54872E-13		3.563159495	3.563160284	2.21E-05		3.563161	-4.3E-14	10.49873	1.11E-13
1.972381	1.972380998	9.99201E-14		3.563160284	3.563160605	9.01E-06		3.563161	-1.4E-14	10.49873	3.33E-14
1.972381	1.972380998	1.11022E-14		3.563160605	3.563160735	3.67E-06		3.563161	4.26E-14	10.49873	1.11E-13
1.972381	1.972380998	0		3.563160735	3.563160788	1.49E-06		3.563161	1.42E-14	10.49873	4.44E-14
1.972381	1.972380998	0		3.563160788	3.56316081	6.07E-07		3.563161	-4.3E-14	10.49873	1.11E-13
1.972381	1.972380998	0		3.56316081	3.563160819	2.47E-07		3.563161	-1.4E-14	10.49873	3.33E-14
1.972381	1.972380998	0		3.563160819	3.563160822	1E-07		3.563161	4.26E-14	10.49873	1.11E-13
1.972381	1.972380998	0		3.563160822	3.563160824	4.09E-08		3.563161	1.42E-14	10.49873	4.44E-14
1.972381	1.972380998	0		3.563160824	3.563160824	1.66E-08		3.563161	-4.3E-14	10.49873	