

Console

Iteration	x1 f(z)		x2		z
0		0.000000	2.000000	1.000000	-1.000000
1		0.000000	1.000000	0.500000	-0.085786
2		0.000000	0.500000	0.250000	0.439207
3		0.250000	0.500000	0.375000	0.171840
4		0.375000	0.500000	0.437500	0.041756
5		0.437500	0.500000	0.468750	-0.022340
6		0.437500	0.468750	0.453125	0.009627
7		0.453125	0.468750	0.460938	-0.006377
8		0.453125	0.460938	0.457031	0.001620
9		0.457031	0.460938	0.458984	-0.002379
10		0.457031	0.458984	0.458008	-0.000380

The solution of this equation is 0.458008 after 10 Iterations