

1. $x^2 - 3x + 2 = 0$

Enter the initial guesses: 0 5

Iteration	x0	x1	x2	f(x2)
1	0.000000	5.000000	-1.000000	6.000000
2	5.000000	-1.000000	-7.000000	72.000000
3	-1.000000	-7.000000	-0.454545	3.570248
4	-7.000000	-0.454545	-0.113043	2.351909
5	-0.454545	-0.113043	0.546200	0.659735
6	-0.113043	0.546200	0.803222	0.235500
7	0.546200	0.803222	0.945899	0.057028
8	0.803222	0.945899	0.991489	0.008583
9	0.945899	0.991489	0.999567	0.000433
10	0.991489	0.999567	0.999996	0.000004

The approximate root is 0.999996

2. $x \log_{10} x - 1.2 = 0$

Enter the initial guesses: 1 4

Iteration	x0	x1	x2	f(x2)
1	1.000000	4.000000	2.494868	-0.209419
2	4.000000	2.494868	2.717208	-0.020397
3	2.494868	2.717208	2.741201	0.000484
4	2.717208	2.741201	2.740645	-0.000001

The approximate root is 2.740645

3. $x \ln x - 1.2 = 0$

Enter the initial guesses: 1 3

Iteration	x0	x1	x2	f(x2)
1	1.000000	3.000000	1.728191	-0.254549
2	3.000000	1.728191	1.865929	-0.036109
3	1.728191	1.865929	1.888698	0.001000
4	1.865929	1.888698	1.888085	-0.000004

The approximate root is 1.888085

4. $3x = \cos x + 1$

Enter the initial guesses: 0 1

Iteration	x0	x1	x2	f(x2)
1	0.000000	1.000000	0.578085	-0.103255
2	1.000000	0.578085	0.605959	-0.004081
3	0.578085	0.605959	0.607105	0.000014
4	0.605959	0.607105	0.607102	-0.000000

The approximate root is 0.607102

5. $4 \sin x = e^x$

Enter the initial guesses: 0 4

Iteration	x0	x1	x2	f(x2)
1	0.000000	4.000000	-0.070640	-1.214122
2	4.000000	-0.070640	-0.158251	-1.484000
3	-0.070640	-0.158251	0.323502	-0.110403
4	-0.158251	0.323502	0.362223	-0.019103
5	0.323502	0.362223	0.370325	-0.000531
6	0.362223	0.370325	0.370557	-0.000003

The approximate root is 0.370557