

```
>> run main
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Newton with x0=3.0
```

n	x	f(x)
0	3.000000000000000e+00	9.000000000000000e+00
1	2.437500000000000e+00	2.036865234375000e+00
2	2.213032716315110e+00	2.563633850614186e-01
3	2.175554938721488e+00	6.463361488812325e-03
4	2.174560100666446e+00	4.479068050233792e-06
5	2.174559410293313e+00	2.158273559871304e-12
6	2.174559410292980e+00	-4.440892098500626e-16
7	2.174559410292980e+00	-4.440892098500626e-16

```
Nroot1 =
```

```
2.1746
```

```
Newton with x0=2.5
```

n	x	f(x)
0	2.500000000000000e+00	2.625000000000000e+00
1	2.230769230769231e+00	3.791533909877129e-01
2	2.176650207900208e+00	1.358464532314763e-02
3	2.174562452216795e+00	1.973570361801791e-05
4	2.174559410299432e+00	4.185984892046690e-11
5	2.174559410292980e+00	-4.440892098500626e-16
6	2.174559410292980e+00	-4.440892098500626e-16

```
Nroot2 =
```

```
2.1746
```

```
-----
Secant with x0=3, x1=2.5
```

n	x	f(x)
0	2.500000000000000e+00	2.625000000000000e+00
1	2.294117647058823e+00	8.420516995725604e-01
2	2.196883428228948e+00	1.471012873173900e-01
3	2.176301702527455e+00	1.131753459442031e-02
4	2.174586221934466e+00	1.739541855689808e-04
5	2.174559442836684e+00	2.111399166615513e-07
6	2.174559410293588e+00	3.945732629517806e-12
7	2.174559410292980e+00	1.776356839400250e-15
8	2.174559410292980e+00	-4.440892098500626e-16

```
SecantRoot1 =
```

```
2.1746
```

```
-----
Steffensen with x0=3
```

n	x	f(x)
0	3.000000000000000e+00	9.000000000000000e+00
1	2.943750000000000e+00	8.121970458984373e+00

2	2.884323096080784e+00	7.241289670443109e+00
3	2.821373434940594e+00	6.359627589116213e+00
4	2.754534966186990e+00	5.479541013752657e+00
5	2.683456373334138e+00	4.604983416949556e+00
6	2.607886435699827e+00	3.742165646952511e+00
7	2.527871896333360e+00	2.901045275655515e+00
8	2.444203924423074e+00	2.097937169941939e+00
9	2.359385350870704e+00	1.359975508238714e+00
10	2.279472615676871e+00	7.316110427307083e-01
11	2.216103280265766e+00	2.774110711407629e-01
12	2.182417991833528e+00	5.126545429903606e-02
13	2.174873316004761e+00	2.037030957350972e-03
14	2.174559924191816e+00	3.334119409892367e-06
15	2.174559410294359e+00	8.945733043219661e-12
16	2.174559410292980e+00	-4.440892098500626e-16
17	2.174559410292980e+00	-4.440892098500626e-16

StefRoot1 =

2.1746

Steffensen with x0=2.5

n	x	f(x)
0	2.500000000000000e+00	2.625000000000000e+00
1	2.415535444947210e+00	1.840106431880669e+00
2	2.331445502952307e+00	1.133063317889633e+00
3	2.255522585795603e+00	5.554636238698674e-01
4	2.201045344174577e+00	1.750297406198946e-01
5	2.177911443493598e+00	2.179848308591747e-02
6	2.174617403524390e+00	3.762688186799146e-04
7	2.174559427848583e+00	1.138987881788012e-07
8	2.174559410292982e+00	1.199040866595169e-14
9	2.174559410292980e+00	-4.440892098500626e-16

StefRoot2 =

2.1746

>>