Lecture 5 Terminal

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Bisection
          k          xmin          xmax            dx
Result:
          1             0        1.5708        1.5708
          2             0      0.785398      0.785398
          3      0.392699      0.785398      0.392699
          4      0.589049      0.785398       0.19635
          5      0.687223      0.785398     0.0981748
          6      0.736311      0.785398     0.0490874
          7      0.736311      0.760854     0.0245437
          8      0.736311      0.748583     0.0122718
          9      0.736311      0.742447    0.00613592
         10      0.736311      0.739379    0.00306796
         11      0.737845      0.739379    0.00153398
         12      0.738612      0.739379    0.00076699
         13      0.738995      0.739379   0.000383495
         14      0.738995      0.739187   0.000191748
         15      0.738995      0.739091   9.58738e-05
         16      0.739043      0.739091   4.79369e-05
         17      0.739067      0.739091   2.39684e-05
         18      0.739079      0.739091   1.19842e-05
         19      0.739085      0.739091   5.99211e-06
         20      0.739085      0.739088   2.99606e-06
         21      0.739085      0.739087   1.49803e-06
         22      0.739085      0.739086   7.49014e-07
         23      0.739085      0.739086   3.74507e-07
         24      0.739085      0.739085   1.87254e-07
         25      0.739085      0.739085   9.36268e-08
         26      0.739085      0.739085   4.68134e-08
         27      0.739085      0.739085   2.34067e-08
         28      0.739085      0.739085   1.17033e-08
0.739085
```

```
Secant
          k             x            dx
Result:
          1             0      0.611015
          2      0.611015      0.160518
          3      0.771533     -0.0334125
          4      0.738121     0.000957596
          5      0.739078      6.7976e-06
          6      0.739085     -1.44793e-09
          7      0.739085      2.18912e-15
0.739085
```

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False Position
          k          xmin          xmax            dx
Result:
          1      0.611015        1.5708     -0.611015
          2       0.72327        1.5708     -0.112254
          3      0.737266        1.5708    -0.0139964
          4      0.738878        1.5708    -0.00161186
          5      0.739062        1.5708   -0.000183753
          6      0.739082        1.5708    -2.09233e-05
          7      0.739085        1.5708    -2.38215e-06
          8      0.739085        1.5708    -2.71208e-07
          9      0.739085        1.5708    -3.08769e-08
         10      0.739085        1.5708    -3.51532e-09
         11      0.739085        1.5708    -4.00217e-10
         12      0.739085        1.5708    -4.55647e-11
         13      0.739085        1.5708    -5.18752e-12
         14      0.739085        1.5708    -5.90528e-13
         15      0.739085        1.5708    -6.72795e-14
         16      0.739085        1.5708    -7.66054e-15
         17      0.739085        1.5708    -8.88178e-16
         18      0.739085      0.739085      0.831711
0.739085
```

```
Ridder
          k             x            dx
Result:
          1      0.736432        9.99e+99
          2      0.739085      0.00265313
          3      0.739085       2.4532e-07
          4      0.739085      5.34583e-12
          5      0.739085      2.22045e-16
0.739085

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Newton
          k             x            dx
Result:
          1             0            -1
          2             1      0.249636
          3      0.750364      0.011251
          4      0.739113     2.77575e-05
          5      0.739085     1.70123e-10
```