

Blog Entry © Wednesday, October 8, 2025, Quadratic and Cubic Equation Solver by James Pate Williams, Jr.

Reference: “Handbook of Mathematical Functions Tenth Printing” © 1972 by Milton Abramowitz and Irene A. Stegun

QuadraticCubicSolver

File Help

A[0]: f[1].real = +0.00000000e+00 z[1].real = +2.00000000e+00
A[1]: f[2].real = +0.00000000e+00 z[2].real = -1.00000000e+00
A[2]: f[1].imag = +0.00000000e+00 z[1].imag = +0.00000000e+00
A[3]: f[2].imag = +0.00000000e+00 z[2].imag = +0.00000000e+00

Compute

Cancel

QuadraticCubicSolver

File Help

A[0]: f[1].real = +0.00000000e+00 z[1].real = +0.00000000e+00
A[1]: f[2].real = +0.00000000e+00 z[2].real = +0.00000000e+00
A[2]: f[1].imag = +0.00000000e+00 z[1].imag = +1.00000000e+00
A[3]: f[2].imag = +0.00000000e+00 z[2].imag = -1.00000000e+00

Compute

Cancel

QuadraticCubicSolver

File Help

A[0]: 0.056

A[1]: -18.1

A[2]: 1.0

A[3]: 0.0

Compute

Cancel

f[1].real = +0.00000000e+00 z[1].real = +1.80969055e+01

f[2].real = -3.75607104e-15 z[2].real = +3.09445169e-03

f[1].imag = +0.00000000e+00 z[1].imag = +0.00000000e+00

f[2].imag = +0.00000000e+00 z[2].imag = +0.00000000e+00

QuadraticCubicSolver

File Help

A[0]: -34.8

A[1]: -18.1

A[2]: 0.0

A[3]: 1.0

Compute

Cancel

f[1].real = +0.00000000e+00 z[1].real = +5.00526510e+00

f[2].real = -2.66453526e-14 z[2].real = -2.50263255e+00

f[3].real = -2.66453526e-14 z[3].real = -2.50263255e+00

f[1].imag = +0.00000000e+00 z[1].imag = +0.00000000e+00

f[2].imag = +0.00000000e+00 z[2].imag = +8.30366799e-01

f[3].imag = +0.00000000e+00 z[3].imag = -8.30366799e-01

QuadraticCubicSolver

File

Help

A[0]:

A[1]:

A[2]:

A[3]:

Compute

Cancel

f[1].real = +4.44089210e-16 z[1].real = +1.20556943e+00

f[2].real = +1.16573418e-15 z[2].real = -1.10278472e+00

f[3].real = +1.16573418e-15 z[3].real = -1.10278472e+00

f[1].imag = +0.00000000e+00 z[1].imag = +0.00000000e+00

f[2].imag = +0.00000000e+00 z[2].imag = +6.65456951e-01

f[3].imag = +0.00000000e+00 z[3].imag = -6.65456951e-01

QuadraticCubicSolver

File

Help

A[0]:

A[1]:

A[2]:

A[3]:

Compute

Cancel

f[1].real = +0.00000000e+00 z[1].real = +0.00000000e+00

f[2].real = +0.00000000e+00 z[2].real = +0.00000000e+00

f[1].imag = +0.00000000e+00 z[1].imag = +1.00000000e+00

f[2].imag = +0.00000000e+00 z[2].imag = -1.00000000e+00

QuadraticCubicSolver

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A[0]:

-1

A[1]:

-2

A[2]:

1

A[3]:

1.0

Compute

Cancel

f[1].real = +6.66133815e-16

z[1].real = +1.24697960e+00

f[2].real = +0.00000000e+00

z[2].real = -1.80193774e+00

f[3].real = +2.22044605e-16

z[3].real = -4.45041868e-01

f[1].imag = +0.00000000e+00

z[1].imag = +0.00000000e+00

f[2].imag = +2.14956928e-15

z[2].imag = +0.00000000e+00

f[3].imag = -3.23843150e-17

z[3].imag = -0.00000000e+00