commandwindow

clear

clc

syms v

v=0.5

for i=1:70

 iter(i+1)=i

v(i+1)=sqrt(10/3\*(34.3+0.02\*v(i))\*(500+(log(v(i)))^3))

ea(i+1)=abs((v(i+1)-v(i))/v(i+1))\*100

if ea(i+1)<=1E-11

 break

end

end

table(iter',v',ea')

v =

 0.5000

iter =

 0 1

v =

 0.5000 239.0507

ea =

 0 99.7908

iter =

 0 1 2

v =

 0.5000 239.0507 294.1668

ea =

 0 99.7908 18.7363

iter =

 0 1 2 3

v =

 0.5000 239.0507 294.1668 302.6077

ea =

 0 99.7908 18.7363 2.7894

iter =

 0 1 2 3 4

v =

 0.5000 239.0507 294.1668 302.6077 303.8532

ea =

 0 99.7908 18.7363 2.7894 0.4099

iter =

 0 1 2 3 4 5

v =

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361

ea =

 0 99.7908 18.7363 2.7894 0.4099 0.0601

iter =

 0 1 2 3 4 5 6

v =

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629

ea =

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088

iter =

 0 1 2 3 4 5 6 7

v =

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669

ea =

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013

iter =

 0 1 2 3 4 5 6 7 8

v =

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674

ea =

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002

iter =

 0 1 2 3 4 5 6 7 8 9

v =

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675

ea =

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10

v =

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675

ea =

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10 11

v =

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675 304.0675

ea =

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10 11 12

v =

 Columns 1 through 12

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675 304.0675

 Column 13

 304.0675

ea =

 Columns 1 through 12

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000 0.0000

 Column 13

 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10 11 12 13

v =

 Columns 1 through 12

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675 304.0675

 Columns 13 through 14

 304.0675 304.0675

ea =

 Columns 1 through 12

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000 0.0000

 Columns 13 through 14

 0.0000 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

v =

 Columns 1 through 12

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675 304.0675

 Columns 13 through 15

 304.0675 304.0675 304.0675

ea =

 Columns 1 through 12

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000 0.0000

 Columns 13 through 15

 0.0000 0.0000 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

v =

 Columns 1 through 12

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675 304.0675

 Columns 13 through 16

 304.0675 304.0675 304.0675 304.0675

ea =

 Columns 1 through 12

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000 0.0000

 Columns 13 through 16

 0.0000 0.0000 0.0000 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

v =

 Columns 1 through 12

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675 304.0675

 Columns 13 through 17

 304.0675 304.0675 304.0675 304.0675 304.0675

ea =

 Columns 1 through 12

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000 0.0000

 Columns 13 through 17

 0.0000 0.0000 0.0000 0.0000 0.0000

iter =

 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

v =

 Columns 1 through 12

 0.5000 239.0507 294.1668 302.6077 303.8532 304.0361 304.0629 304.0669 304.0674 304.0675 304.0675 304.0675

 Columns 13 through 18

 304.0675 304.0675 304.0675 304.0675 304.0675 304.0675

ea =

 Columns 1 through 12

 0 99.7908 18.7363 2.7894 0.4099 0.0601 0.0088 0.0013 0.0002 0.0000 0.0000 0.0000

 Columns 13 through 18

 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

ans =

 18×3 table

 Var1 Var2 Var3

 \_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

 0 0.5 0

 1 239.05 99.791

 2 294.17 18.736

 3 302.61 2.7894

 4 303.85 0.40992

 5 304.04 0.060144

 6 304.06 0.0088222

 7 304.07 0.0012941

 8 304.07 0.00018981

 9 304.07 2.7842e-05

 10 304.07 4.0838e-06

 11 304.07 5.9902e-07

 12 304.07 8.7865e-08

 13 304.07 1.2888e-08

 14 304.07 1.8904e-09

 15 304.07 2.7729e-10

 16 304.07 4.0679e-11

 17 304.07 5.9635e-12

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