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16ENG04005

ASSIGNMENT 1

Code:

commandwindow

clear

clc

format short g

syms v

v = 0.5

for f = 1:20

iter(f+1) = f;

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

Ea(f+1)=(abs(v(f+1)-v(f))/v(f+1))\*100;

if Ea(f+1)<=1E-11

break

end

end

table(iter',v',Ea')

Command window:

v =

0.5

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