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16ENG02017

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