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ELECTRICAL AND ELECTRONICS ENGINEERING
ENGINEERING MATHS ASSIGNMENT 1
17/ENG04/079

MATLAB CODE

```
commandwindow
clear
clc
close all
format short g
syms v
v=0.5
for i= 1:45
    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
end
[iter',v',ea']
```

SOLUTION

v =

0.5

ans =

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