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MATRIC NO: 17/ENG01/013

ENG 382: ENGINEERING MATHEMATICS IV ASSIGNMENT 1

```
commandwindow
clear
clc
format short
v=0.5;
m=3.5;
g=9.81;
f=m*g;
v=sqrt((((f+(0.02)*v))*(log(v))^3)+(10*v)+17150)/0.3);
for i=1:inf
    iter(i+1)=i;
v(i+1)=sqrt((((f+(0.02)*v(i))*(log(v(i)))^3)+(10*v(i))+17150)/0.3);
ea(i+1)=abs(((v(i+1)-v(i))*100));
if ea(i+1)<=0.00000000001
    break
end
end
table=table(iter',v',ea')
```

ANS:

table =

20×3 table

Var1	Var2	Var3
0	239.05	0
1	294.2	5514.9
2	302.65	844.85
3	303.89	124.7
4	304.08	18.312
5	304.1	2.6871

6	304.11	0.39425
7	304.11	0.057844
8	304.11	0.0084868
9	304.11	0.0012452
10	304.11	0.00018269
11	304.11	2.6804e-05
12	304.11	3.9326e-06
13	304.11	5.7699e-07
14	304.11	8.4651e-08
15	304.11	1.242e-08
16	304.11	1.8247e-09
17	304.11	2.6716e-10
18	304.11	3.979e-11
19	304.11	5.6843e-12