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MATRIC NUMBER: 17/ENG02/061

DEPARTMENT: COMPUTER ENGINEERING

COURSE CODE: ENG 382

MATLAB Code

```
1) commandwindow
2) clear
3) clc
4) format short
5) m= 3.5;
6) V=0.5;
7) g= 9.8;
8) F= m*g
9) V= sqrt(((F+(0.02*V)*(log(V)^3))+(10*V)+17150)/0.3);
10) for i = 1:inf
11)     Drag(i+1)=i;
12)     V(i+1)=sqrt((((F+(0.02*V(i)))*(log(V(i)))^3)+(10*V(i))+17150)/0.3);
13)     Er(i+1)= abs(((V(i+1)-V(i))/V(i+1))*100);
14)     if Er(i+1)<=1E-11
15)         break
16)     end
17) end
18) Result= table(Drag', V', Er')
19)
20)
```

Output

F = 34.3000

Result =

17x3 table

Var1	Var 2	Var 3
0	239.37	0
1	294.22	18.642
2	302.62	2.7751
3	303.85	0.40782
4	304.04	0.059835
5	304.06	0.0087769
6	304.07	0.0012874
7	304.07	0.00018884
8	304.07	2.7699e-05
9	304.07	4.0629e-06
10	304.07	5.9594e-07
11	304.07	8.7413e-08
12	304.07	1.2822e-08
13	304.07	1.8807e-09
14	304.07	2.7585e-10
15	304.07	4.0473e-11
16	304.07	5.9381e-12