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17/ENG07/011 17/ENG07011
Petroleum Engineering

Command Window

```
Clear
clc
Format short
M = 2.5;
V = 0.5;
= 4.5;
F = u + v
V = Sy.F.cos F + (0.02*V)/(1+(V)^3)+
    (10*V)+(71.5*0.1)/10.3)i

for i = 1:10:1
  Table(i+1) = i;
    V(i+1) = Sy+(((1+0.02*V(i)))
             +((log(V(i)))^3)+(10*V(iii))
             +(71.5(0.1)10.3));
Ex(i+1) = abs(((V(i+1)-V(i))/V(i+1))*100
1+Ex(i+1) <= 1E-7
        track
  end
end
Table1 = table(0+er; V; Ex')
```

Output

Iter	V	Ex
0	0.5	0
1	739.02	99.71
2	294.17	18.730
3	302.61	2.7894
4	303.85	0.40992
5	304.04	0.06222
6	304.06	0.001241
7	304.07	0.0001891
8	304.07	2.7842e-05
9		

Her	V	Eq
10	304.07	4.0888e-06
11	304.07	8.7865e-09
12	304.07	1.2586e-6.5
13	304.07	1.8904e-09
14	304.07	2.7727e-6.0
15	304.07	4.06798e-4
16	304.07	5.9625e-12

Converging at Her . Te, V = 304.07

Prove:

$$\frac{So.0gv^2}{Tot\ (lav)^2} = 0.02$$

If V = 304.07

recall $\bar{E}_0 = 9.5 + 3.5 = 34.30$

Subst. taking V = 304.07

$\bar{E}(1) = 0.3 \times (304.07)$

$Soot\ (1.0)\ 0.4.073$

$\Gamma(0) = 403\ 19593 1 - 6680 S14$

$\Gamma \cdot 0 = 34.31$