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Matic No: 1712NA011015

ASSIGNMENT 1

Solution

Command window

clear

clc

format short

V = 0.5

m = 3.5

g = 9.8

F = m * g

$V = \text{sqrt}(\text{ccc}(F + 0.02 * V) * (\text{clog}(V))^3) + (10 * V) + 17150$

for i = 1 : Inf

iter(i+1) = i

$V(i+1) = \text{sqrt}(\text{ccc}(F + (0.02 * V(i)) * (\text{clog}(V(i)))^3) + (10 * V(i)))$

$E_a(i+1) = \text{abs}((V(i+1) - V(i)) / (V(i+1) * 100))$

if $E_a(i+1) < 1E-11$

break

end

end

table = table(iter, 'v', 'Ea')

Output

iter	v	Ea
0	0.5	0
1	239.05	97.791
2	294.17	18.736
3	302.61	2.7894
		0.40992

