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Elect/Elect

Assignment

Command window

clear

clc

format short

$$V = 0.5$$

$$m = 3.3$$

$$g = 9.8$$

$$f = mg$$

$$V = \text{sqrt}(((f + (0.2 * V)) * (\log(V) \wedge 3)) + (10 * V) + (17.5 / 0.3) * g)$$

for i = 1 ; it

$$\text{iter}(i+1) = i$$

$$V(i+1) = \text{sqrt}(((f + (0.2 * V(i)) * (\log(V(i) \wedge 3)) + (10 * V(i) + (17.5 / 0.3) * g))$$

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

if Err(i+1) <= 1E-11

break

end

end

end

table = table(iter, 'V', 'Err')

output

iter	V	ϵ_a
0	0.5	0
1	239.05	97.791
2	294.17	18.736
3	302.61	2.7894
4	303.35	0.40992
5	304.04	0.060144