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Chemical Engr

Solution

- Command window
- clear
- clc
- syms x
- format short g
- f = exp(-0.5 \* x) \* (4 - x) - 2
- fprime = diff(f)
- x = 0.5;
- for i = 1:10
- iter(i) = i
- x(i) = x
- x(i+1) = x
- Ca(i+1) = abs((x(i+1) - x(i)) / x(i+1)) \* 100
- if Ca(i+1) < 1E-21
- break
- end
- end
- table = table(iter, x, Pa')

Table: Perseus Variable stars = periodic variation  
 'Error'

Output

Table =

U <sub>BY</sub>	Values of x	Errors
0	0.5	0
1	0.83819	40.397
2	0.88496	5.2054
3	0.88571	0.084972
4	0.88571	2.2247e <sup>-05</sup>
5	0.88571	1.5293e <sup>-12</sup>
6	0.88571	0