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GNIS 382 Assignment 2 Electrical/Electronics Engineering

Solution

commandwindow

```
clc
clc
format short g
x(1) = 0.5;
k = 1;
tol = 1E-21;
maxI = 50;
er(1) = 0;
syms x
g = (exp(-0.5*x)*(4-x)) -2;
gprime = diff(g);
for k = 2 : maxI,
    x(k) = (x(k-1)) - ((subs(g, x, x(k-1))) /subs(gprime, x(k-1)))
    K = [K k];
    er(k) = abs (x(k) - x(k-1))*100;
    If er(k) <= tol, break, end;
end
table = [k' x' er']
```

Answer.

1	0.5	0
2	0.83889	33.889
3	0.88496	4.6065
4	0.88571	0.07526
5	0.88571	1.9704e-05
6	0.88571	1.3345e-12
7	0.88571	0