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Assignment 2

Command window

clear

clc

format short g

x(1) = 0.5;

k = 1;

tol = 1E-21;

max1 = 50;

err(1) = 0;

Sym x

G = (exp(0.5*x) * (4-x)) - 2;

G_prime = diff(G)

for k = 2:max1;

x(k) = (x(k-1) - (subs(G, x(k-1)) / subs(G_prime, x(k-1))));

k = [k k];

err(k) = abs(x(k) - x(k-1))

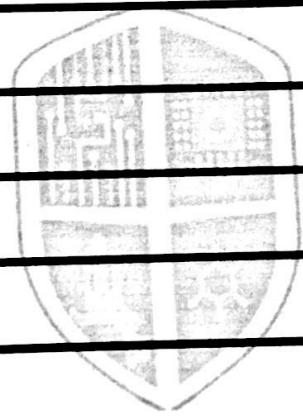
if err(k) <= tol, break, end

end

Table = [k' x' err']

Table 2 [k1 x1 err']

1	0.5	0
2	0.83889	33.889
3	8.88571	4.6065
4	0.88571	0.07826
5	0.88571	1.9704E-05
6	0.88571	1.3545E-12
7	0.98371	0



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