

Command window

clc

clear all

close all

format long g

$x(1) = 0.5;$

$k = 1;$

$tol = 1e-24;$

$max1 = 50;$

$err(1) = 0;$

syms x

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

$Gprime = diff(G)$

for $k = 2 : max1;$

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

$k = [k k];$

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

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

end

table = [k' x' err']