

UJIAGBE ANTHONY OSAGIE

CIVIL ENGINEERING

17/ENG03/053

ENG 382: ENGINEERING MATHEMATICS

ASSIGNMENT 2

Command Window

clear

clc

Syms X

format short g

f = exp(0.5 \* X) \* (4 - X) - 2;

f\_prime = diff(f);

X = 0.5

for i = 1:10;

iter(i+1) = i;

X(i) = X;

X = double(subs(2 - (f/f\_prime)))

X(i+1) = X;

eq(i+1) <= 1E-21;

break

end

end

Z = zeros = table(iter, X, eq)

Z = zeros. properties. Variable names = { Iteration number;  
(values of X; errors)

OUTPUT

Za Rodgu =

Iter	Values of $x$	Error
0	0.5	0
1	0.83889	40.397
2	0.88496	5.2054
3	0.88571	0.084972
4	0.88571	$2.22470 \times 10^{-5}$
5	0.88571	$1.52930 \times 10^{-12}$
6	0.88571	0