



**F.Y.B.TECH. / SEM - I / ENGINEERING MATHEMATICS - I / SCILAB PRACTICAL / AY: 2020-21**

**NAME OF EXERCISE :** Regula Falsi Method

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**BRANCH :** Computer Science

**DIV :** J

**DATE :** 03-04-2021

**QUESTION:**

Find the root of the equation  $f(x) = xe^x - 3 = 0$  by using Regula Falsi Method.

**CODE:**

```
deff("[y] = f(x)", "y = x*exp(x) - 3")
a = 1
b = 1.5
c = 0
c1 = 1
i = 0
eps = 0.0001
while (abs(c-c1)>eps)
    r = (a*f(b)-b*f(a))/(f(b)-f(a))
    if (f(a)*f(c)<0)
        b = r
    end
    if (f(b)*f(c)<0)
        a = r
    end
    c1 = c
    c = r
    i = i + 1
    disp(c)
end
disp("No. of iterations = ", i)
disp("Root = ", c)
```

**OUTPUT:**

```
1.0351774
1.0455958
1.0486491
1.0495412
1.0498016
1.0498776
no. of iterations
6.
Root =
1.0498776
```



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Scilab 6.1.0 Console

File Edit Control Applications ?



Scilab 6.1.0 Console

Startup execution:

loading initial environment

--> exec('C:\Users\AYUSH JAIN\OneDrive\Desktop\SCILAB3.sce', -1)

1.0351774

1.0455958

1.0486491

1.0495412

1.0498016

1.0498776

"No. of iterations = "

6.

"Root = "

1.0498776

--> |