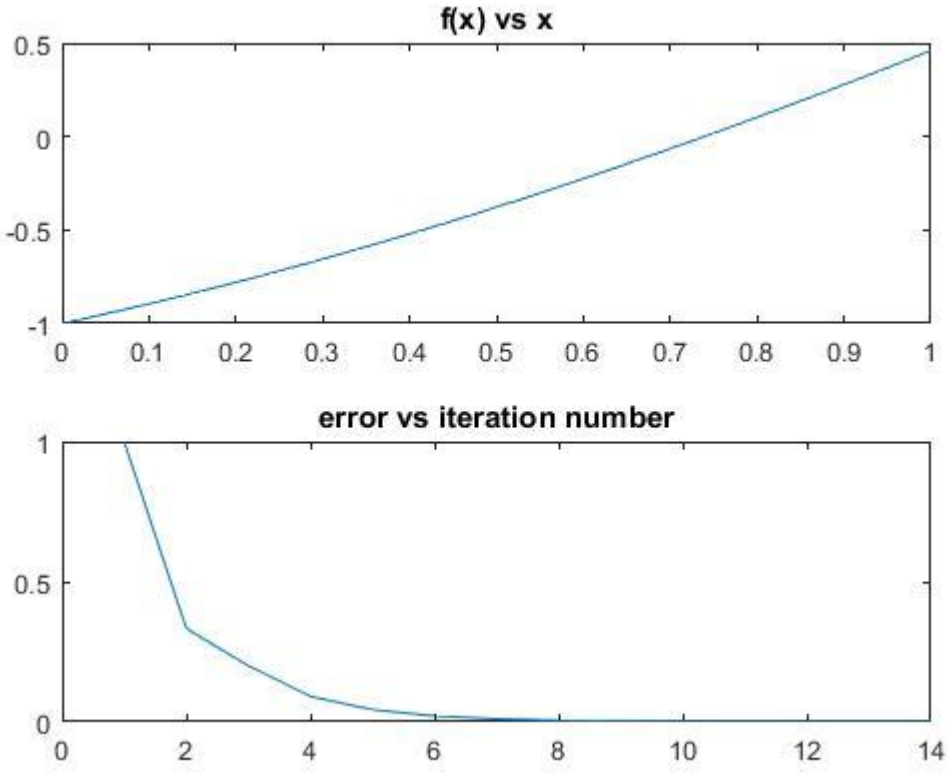
- **x – cos(x) = 0**
  - **<u>Bisection Method</u>**

    <u>Output:</u>

    Root: 0.739078

    Iterations required: 14

    >Plots :



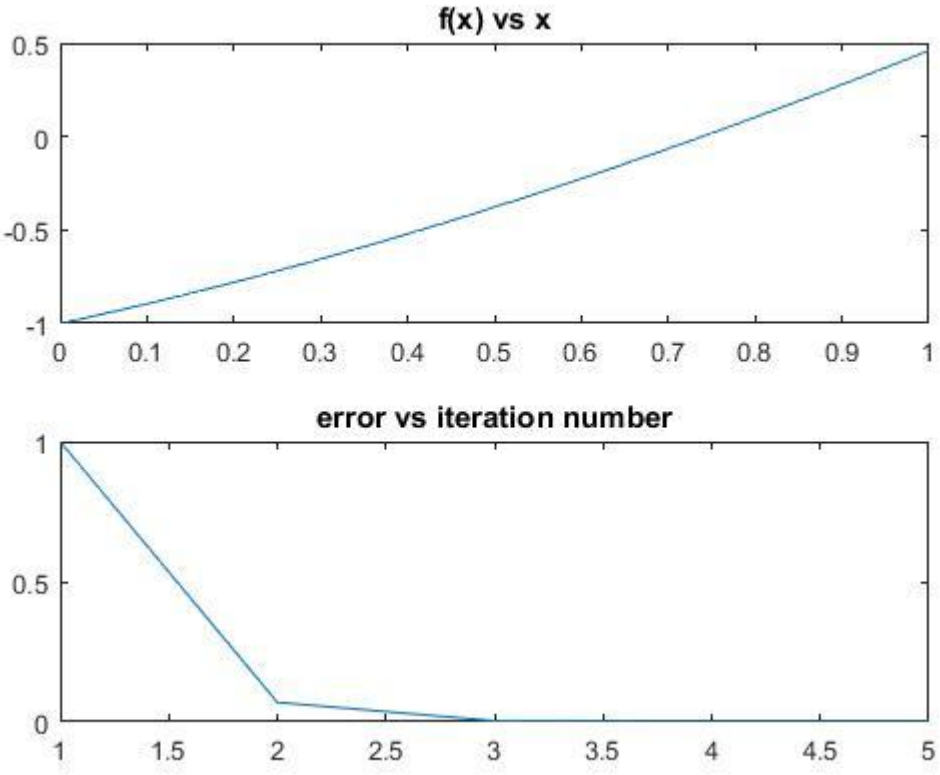
  - **<u>False Position Method</u>**

    <u>Output:</u>

    Root: 0.739085

    Iterations required: 5

    >Plots :



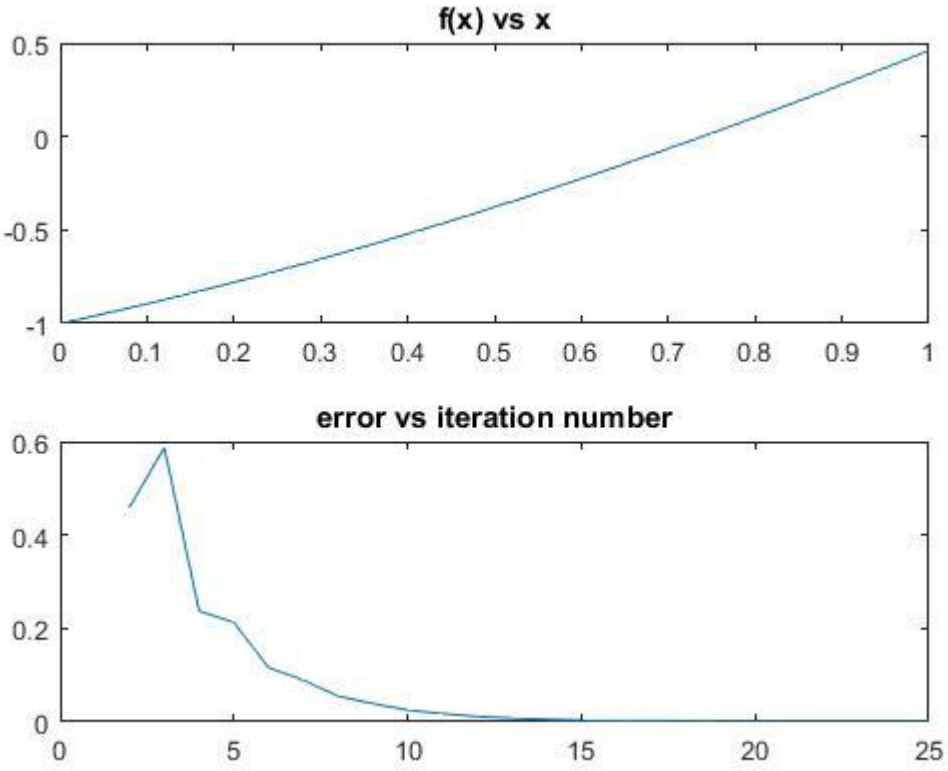
- **<u>Fixed Point Method</u>**

  <u>Output:</u>

  Root: 0.739106

  Iterations required: 25

  >Plots:



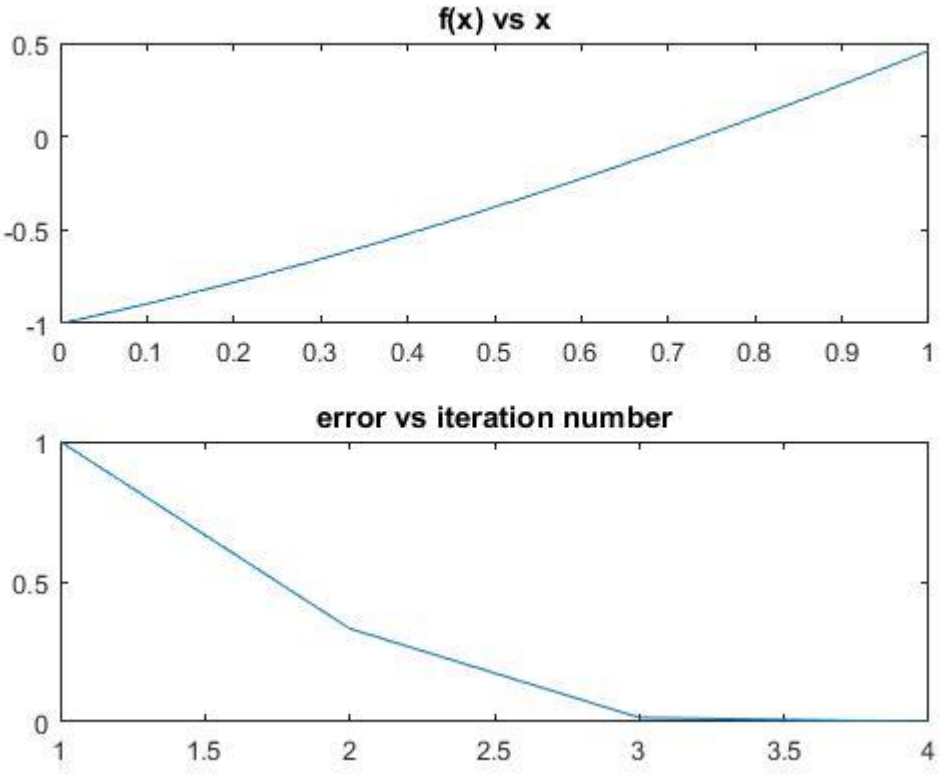
- **Newton-Raphson Method:**

  Output:

  Root: 0.739085

  Iterations required: 4

  >Plots:



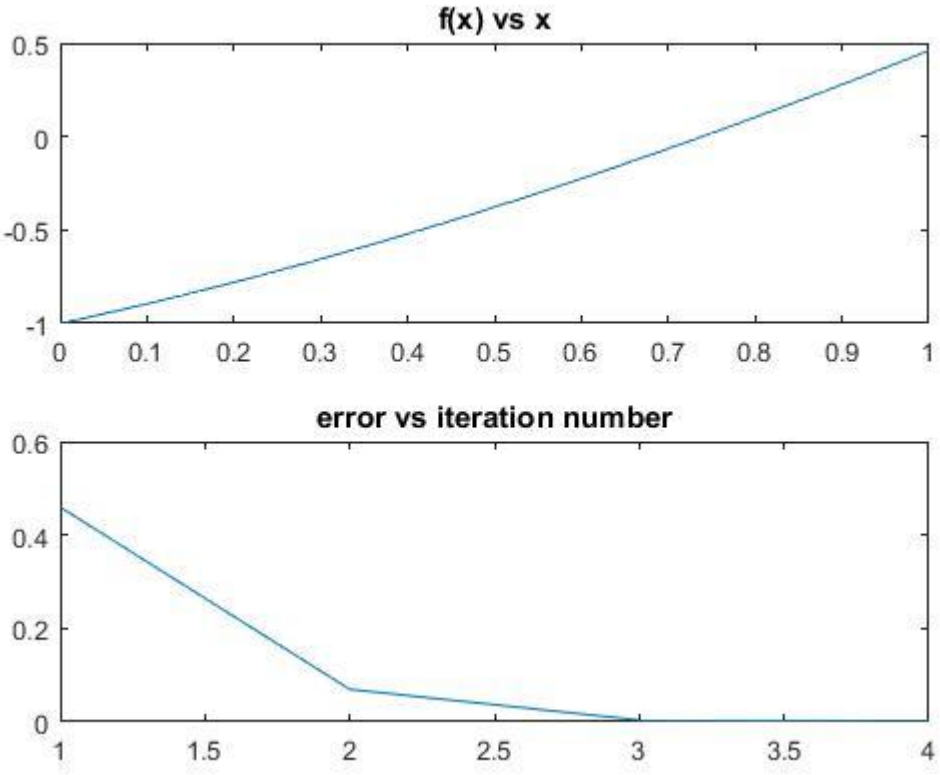
- **Secant Method**

  Output:

  Root: 0.739085

  Iterations required: 4

  >Plots:



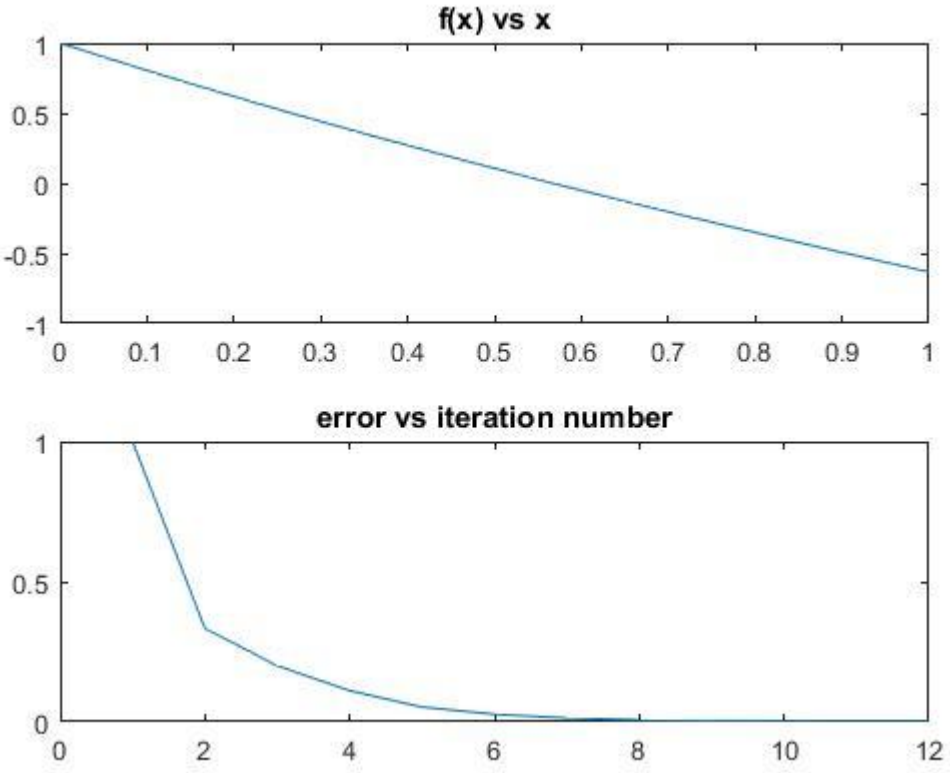
- **exp(-x) – x = 0**
  - **<u>Bisection Method:</u>**

    <u>Output:</u>

    Root: 0.567139

    Iterations required: 12

    >Plots:



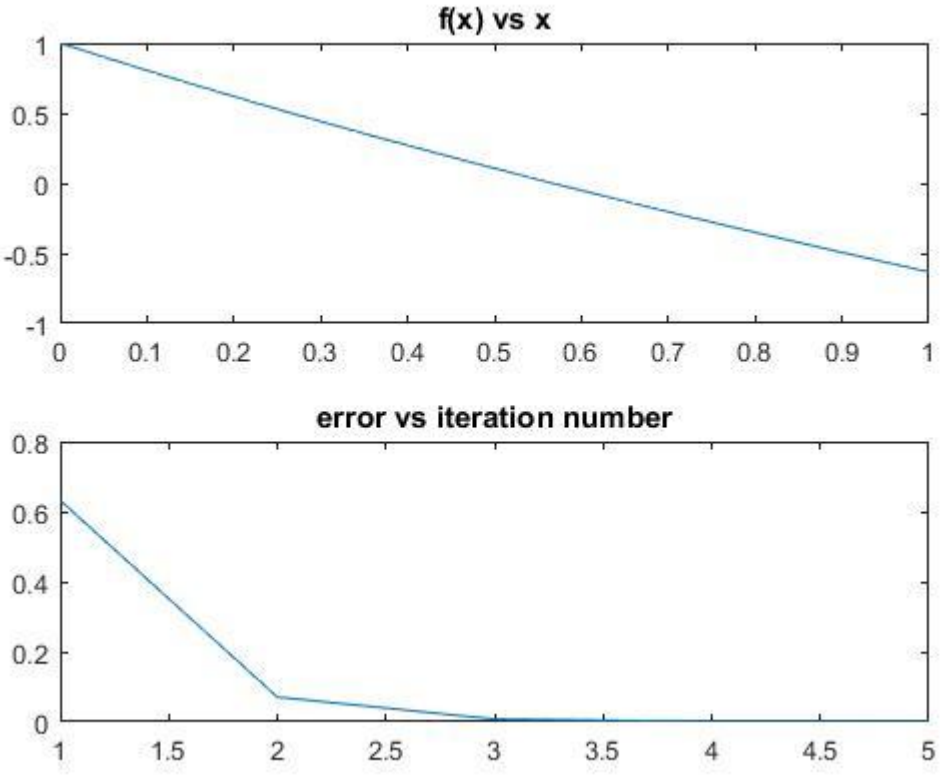
- **False Position Method:**

  Output:

  Roots: 0.567150

  Iterations required: 5

  >Plots



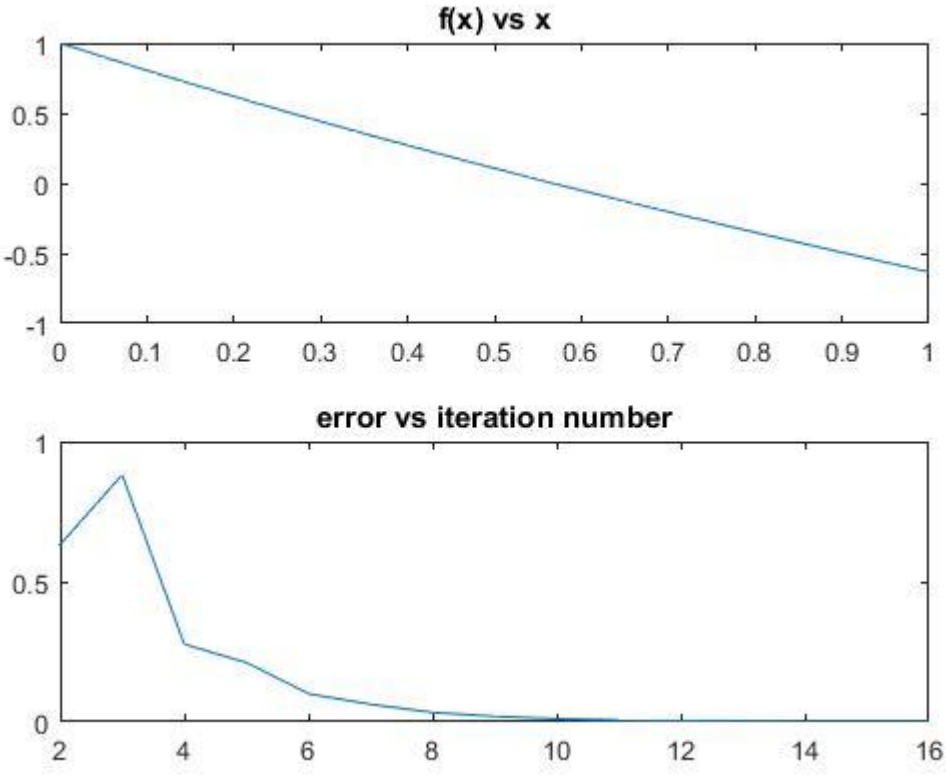
- **Fixed Point Method:**

  Output:

  Roots: 0.567068

  Iterations required: 16

  >Plots



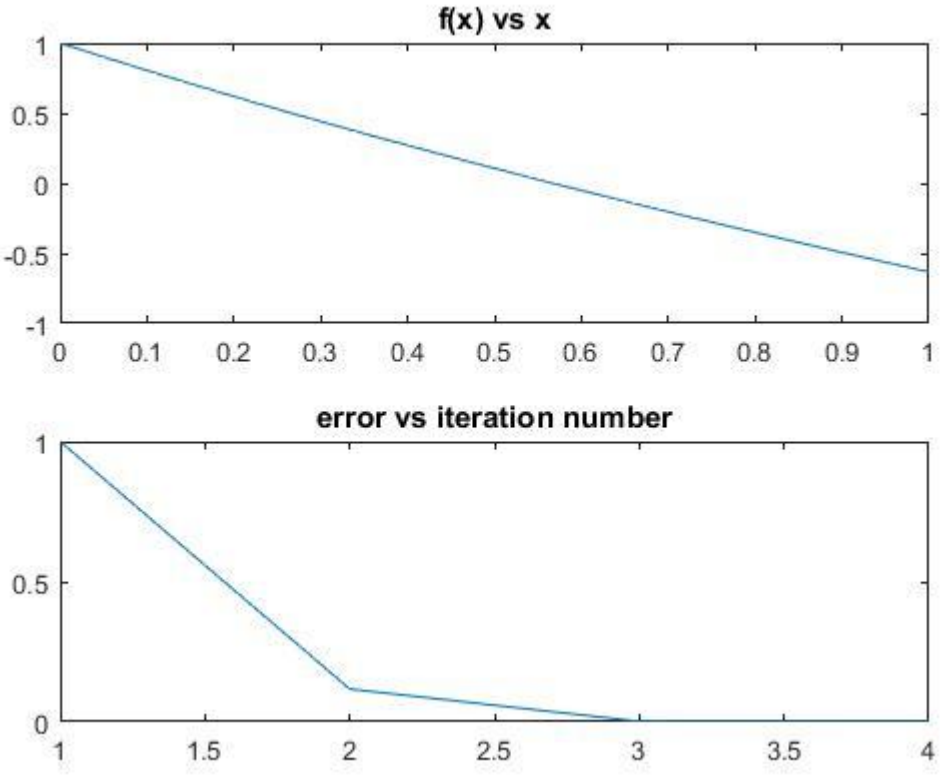
- **<u>Newton Method:</u>**

  <u>Output:</u>

  Roots: 0.567143

  Iterations required: 4

  >Plots



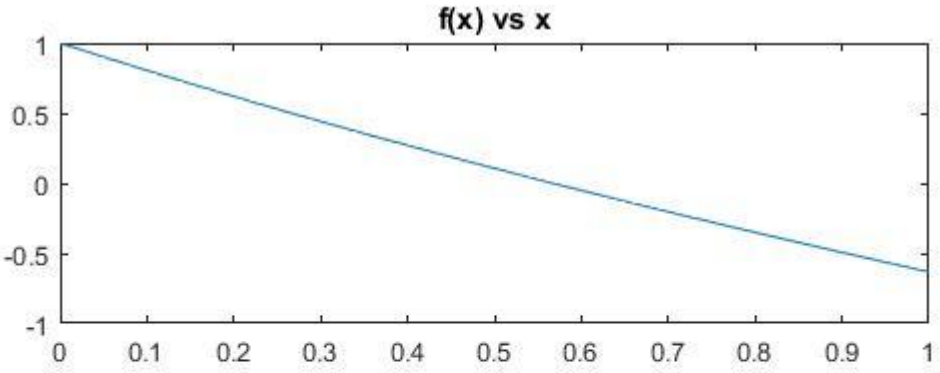
- **<u>Secant Method:</u>**

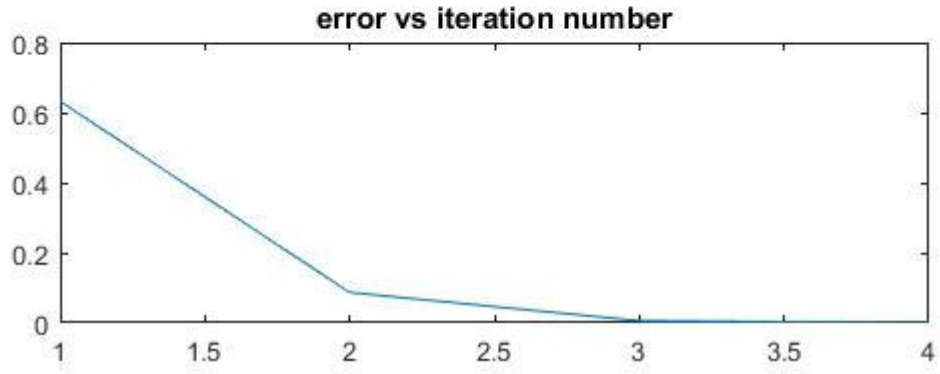
  <u>Output:</u>

  Roots: 0.567143

  Iterations required: 4

  >Plots


f(x) vs x
1
0.5
0
-0.5
-1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


error vs iteration number
0.8
0.6
0.4
0.2
0
1
1.5
2
2.5
3
3.5
4