

0.90

0.88

20

30

40

50

х

60

70

80

Lagrange Interpolation Lagrange Polynomial Curve 6.2 Data Points Interpolated Point 6.0 5.8 > 5.6 5.4 5.2 5.0 ż 5 i 3 6 0 4

х

Output:

```
Secant Method for f(x) = exp(-x) - x
Initial guesses: x0 = -1 , x1 = 3.0
Iteration 1: x = 1.230358
Iteration 2: x = 0.405214
Iteration 3: x = 0.585141
Iteration 4: x = 0.567682
Iteration 5: x = 0.567142
Iteration 6: x = 0.567143
Root of eqn: 0.5671432905804034
```

```
Secant Method for f(x) = exp(-x) - x
Initial guesses: x0 = 1.0 , x1 = 2.0
Iteration 1: x = 0.487142
Iteration 2: x = 0.58378
Iteration 3: x = 0.567386
Iteration 4: x = 0.567143
Iteration 5: x = 0.567143
Root of eqn: 0.5671432904419066
```



