

```

1 import numpy as np
2 from sympy import *
3 from sympy import log as ln
4 import sympy
5
6
7
8 def Reimann_Int(a, b, N):
9     h = (b - a) / (N - 1)
10    x = np.linspace(a, b, N)
11    f = 1 / np.log(x)
12
13    I_riemannL = h * sum(f[:N-1])
14
15    #I_riemannR = h * sum(f[1::])
16
17    return print(f"Reimann left Int:{I_riemannL}")
18
19 t = Symbol('t')
20 f = 1 / ln(t)
21
22 from numpy import integrate
23
24 Li_200_ = integrate(f, (t, 2, 200))
25
26 print(f"Li(200) using standard function:{Li_200_}")
27
28 for i in range (0, 2000):
29     i += 1
30     if (Li_200_ - Reimann_Int(2, 200, i)) == 1e4:
31         print(f"No. of steps(value of N) needed to produce 3 decimal place accuracy:
32 {i}")
33     else:
34         continue
35

```