

```

1 from sympy import *
2 from sympy import log as ln
3 from sympy import symbols
4 from sympy import diff
5 from sympy import Function
6 from sympy import plot
7
8 t = Symbol('t')
9 f = 1 / ln(t)
10 f_2nd_derv = diff(f, t, 2)
11 f_4th_derv = diff(f, t, 4)
12
13 print(f"Function, f(t): {f}\nSecond Derv, f''(t): {f_2nd_derv}\nFourth Derv,
f''''(t): {f_4th_derv}")
14
15 f_2 = lambdify(t, f_2nd_derv)
16 f_4 = lambdify(t, f_4th_derv)
17
18 print(f"Second Derv, f''(2): {f_2(2)}\nFourth Derv, f''''(2): {f_4(2)}")
19
20 Function('f_2nd_derv')
21 Function('f_4th_derv')
22 plt = plot(f, f_2nd_derv, f_4th_derv, (t, 2, 500), title="Derv. and Monotonicity",
legend= True, xlabel='t', ylabel='f(t) & derv. of f(t)')
23 plt.show
24

```