```
 1: from numpy import arange
 2: from pylab import *
 3:
 4: def p3():
 5:
 6:     def deriv(f, x, h=0.1):
 7:         return (f(x + h) - f(x)) / h
 8:
 9:     data = loadtxt('data1.txt')
10:     T_plot = data[0]
11:     E3 = data[5]
12:     C = [(E3[x + 1] - E3[x]) / 0.1 for x in range(len(T_plot) - 1)]
13:     m = len(T_plot) - 1
14:     C.append((E3[m] - E3[m - 1]) / 0.1)
15:     i, C_max = max(enumerate(C), key=lambda x: x[1])
16:     print(T_plot[i], C_max, i)
17:     plot(T_plot, C)
18:     show()
19:
20: if __name__ == "__main__":
21:     p3()
```