import matplotlib.pyplot as plt

import numpy as np

from math import sin

e = 2.71

def f(x):

result = x - x\*\*3/6 - x\*\*5/120

return result

x = np.linspace (0.0,7.0,100)

y = np.e\*\*np.sin(5\*x)

y2 = x - x\*\*3/6 - x\*\*5/120

y3 = f(2.7)

plt.title('Метод Тейлора, графік F(x) = e^sin(5x)')

plt.xlim (0, 7 +0.2)

plt.ylim (-5,5+1)

plt.plot(x,y,label = 'e^sin(5x)')

plt.plot(x,y2,label = 'x=0')

plt.plot(2.7,y3,label = 'x=2.7', marker = 5)

plt.legend()

plt.show()