from scipy.interpolate import lagrange

from numpy import \*

import matplotlib.pyplot as plt

def jop(x):

return 2\*x\*\*3-15\*x+5

x = array([-3, -1, 1, 2],dtype =float)

y = array([3, 3, -13, -12], dtype = float)

U = array([-4, -2, -1.5, 0.5])

def L(x, y, k):

summa=0

for g in range (len(y)):

p1=1

p2=1

for i in range (len(y)):

if i==g:

p1 \*= 1

p2 \*= 1

else:

p1\*=(k-x[i])

p2\*=(x[g]-x[i])

summa += y[g]\*p1/p2

return summa

xnew = linspace (min(x), max(x))

ynew = [L(x,y,i) for i in xnew]

plt.plot(x, y, 'o', xnew, ynew)

plt.title('LB\_7 Ihor Uchiha')

plt.legend(loc='upper left')

plt.xlabel('x')