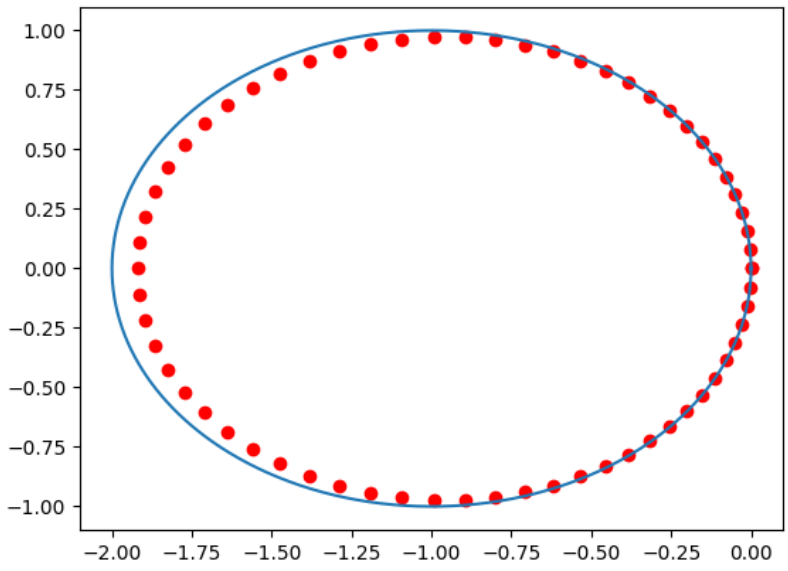
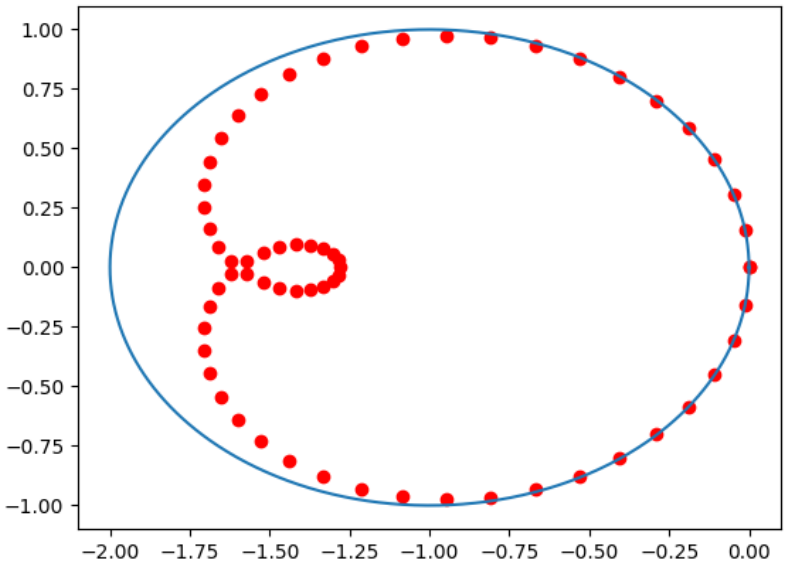
NumPDE-HW5-附录

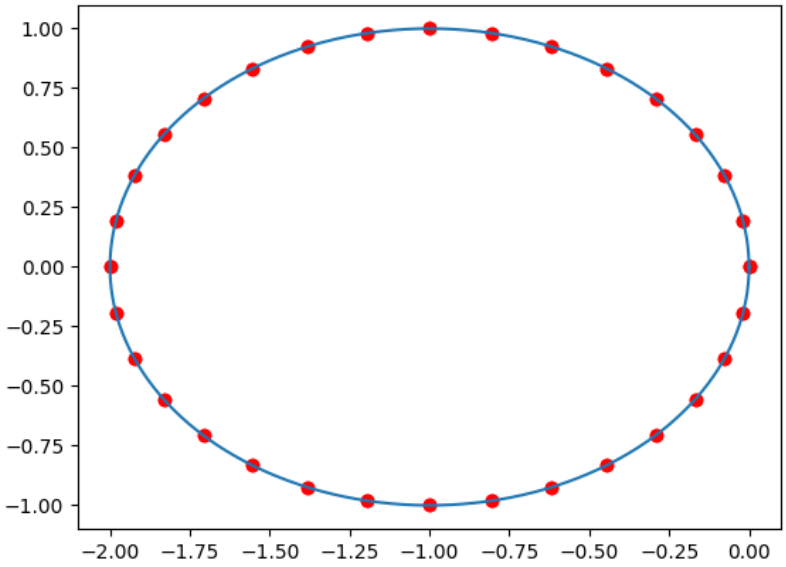
Rui Fan, 3200102142

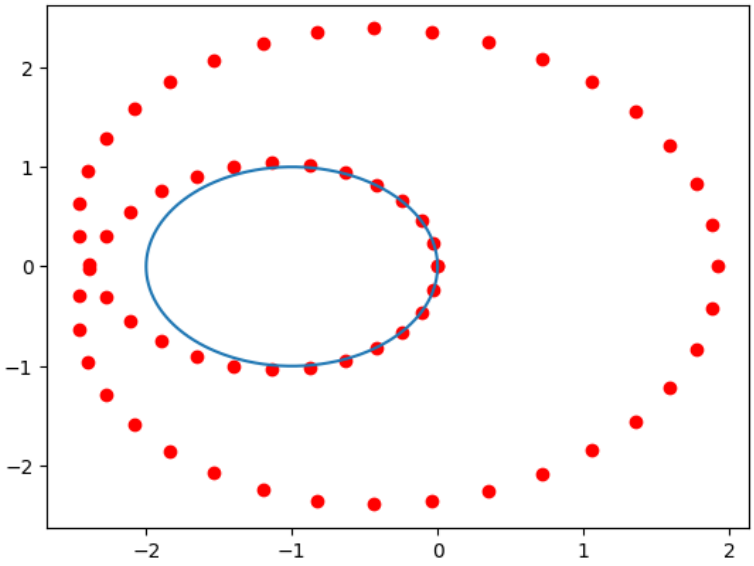
```
import matplotlib.pyplot as plt
from numpy import *
from math import pi
```

```
arr_mu = [0.8, 1.6, 2.0, 2.4]
m = 64
for mu in arr_mu:
    eigens = np.array([-mu/2 * (3 - 4*np.exp(-2j*pi*i/m) + np.exp(-4j*pi*i/m)) + mu**2/2 * (1 - 2*np.exp(-2j*pi*i/m) + np.exp(-4j*pi*i/m)) for i in range(m+1)])
    plt.scatter(eigens.real, eigens.imag, color = 'r')
    C = np.array([np.exp(1j*t)-1 for t in np.linspace(0, 2*pi, 1000)])
    plt.plot(C.real, C.imag)
    plt.show()
```




1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
−2.00
−1.75
−1.50
−1.25
−1.00
−0.75
−0.50
−0.25
0.00


1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
−2.00
−1.75
−1.50
−1.25
−1.00
−0.75
−0.50
−0.25
0.00


2
1
0
−1
−2
−2
−1
0
1
2