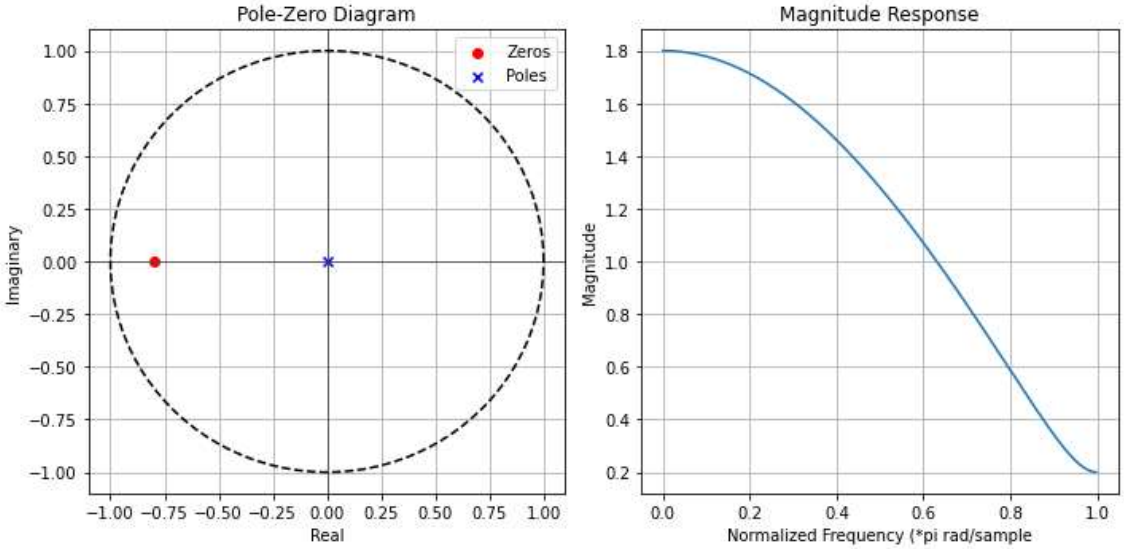
```
import numpy as np
import matplotlib.pyplot as plt
from scipy.signal import freqz
a=[1,0.8]
b=[1,0]
zeros=np.roots(a)
poles=np.roots(b)
plt.figure(figsize=(10,5))
plt.subplot(1,2,1)
plt.scatter(np.real(zeros),np.imag(zeros),color='red',marker='o',label='Zeros')
plt.scatter(np.real(poles),np.imag(poles),color='blue',marker='x',label='Poles')
theta=np.linspace(0,2*np.pi,100)
plt.plot(np.cos(theta),np.sin(theta),linestyle='--',color='black')
plt.axvline(0,color='black',linewidth=0.5)
plt.axhline(0,color='black',linewidth=0.5)
plt.title('Pole-Zero Diagram')
plt.xlabel('Real')
plt.ylabel('Imaginary')
plt.grid(True)
plt.legend()
w,h=freqz(a,b)
plt.subplot(1,2,2)
plt.plot(w/np.pi,np.abs(h))
plt.title('Magnitude Response')
plt.xlabel('Normalized Frequency (*pi rad/sample')
plt.ylabel('Magnitude')
plt.grid(True)
plt.tight_layout()
plt.show()
```

Output:


Pole-Zero Diagram
Zeros
Poles
Imaginary
Real
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
−1.00 −0.75 −0.50 −0.25 0.00 0.25 0.50 0.75 1.00
Magnitude Response
Magnitude
Normalized Frequency (*pi rad/sample
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0 0.2 0.4 0.6 0.8 1.0