Solución de laboratorio 3
FISI-6510

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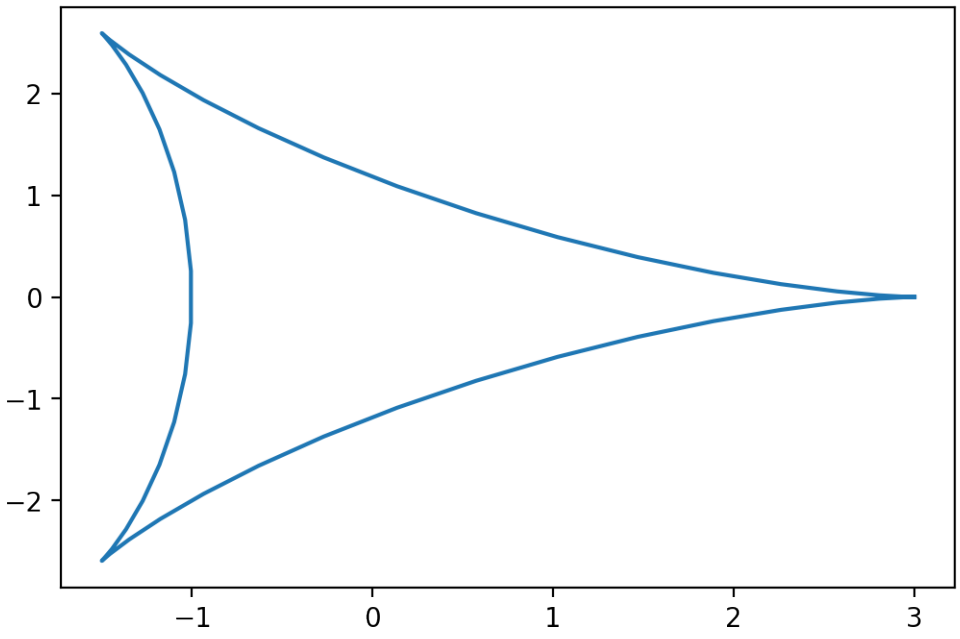
1 a)

[21]:
```
import numpy as np
import matplotlib.pyplot as plt
```

[22]:
```
theta=np.linspace(0,2*np.pi)
x=2*np.cos(theta)+np.cos(2*theta)
y=2*np.sin(theta)-np.sin(2*theta)
```

[23]:
```
plt.figure(dpi=200)
plt.plot(x,y)
plt.show()
```

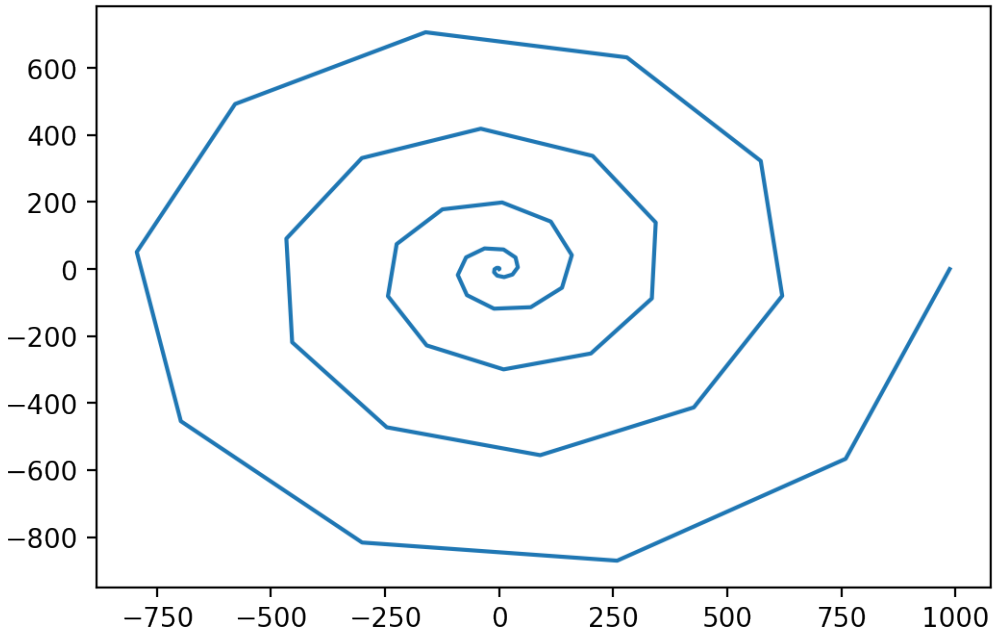


2 b)

[58]:
```
theta=np.linspace(0,10*np.pi)
r=theta**2

x=r*np.cos(theta)
y=r*np.sin(theta)
```

[59]:
```
plt.figure(dpi=200)
plt.plot(x,y)
plt.show()
```

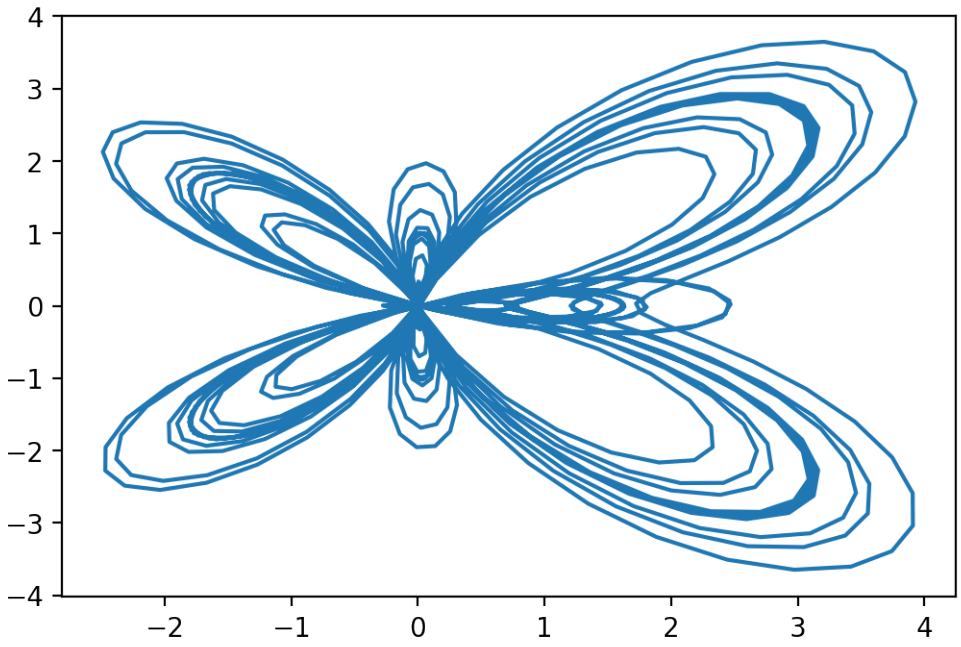


3 c)

Aquí mostramos la gráfica de la función de Fey transformada a coordenadas cartesianas

[79]:
```
theta=np.linspace(0,24*np.pi,1000)
r=np.exp(np.cos(theta))-2*np.cos(4*theta)+np.sin(theta/12)**5

x=r*np.cos(theta)
y=r*np.sin(theta)
plt.figure(dpi=200)
plt.plot(x,y)
plt.show()
```



Aquí tenemos la gráfica polar de la función de Fey

[80]:
```
plt.figure(dpi=200)
plt.polar(theta,r)
plt.show()
```