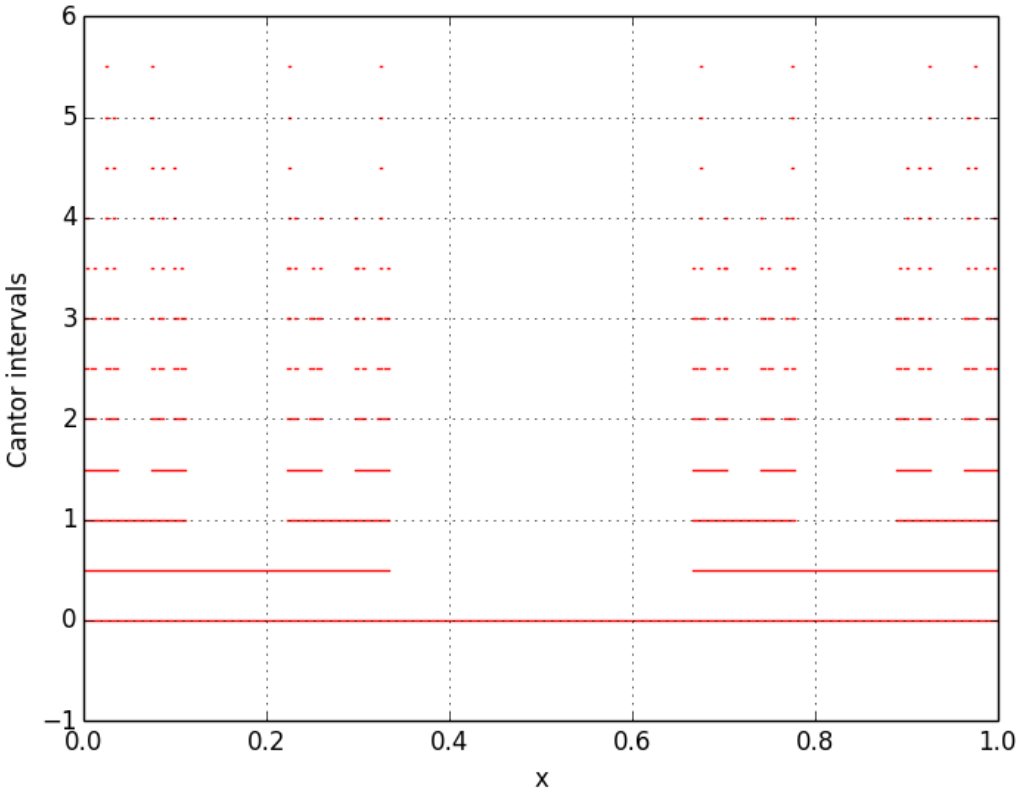
Deber Seminario

Fauto Fabian Crespo Fernandez

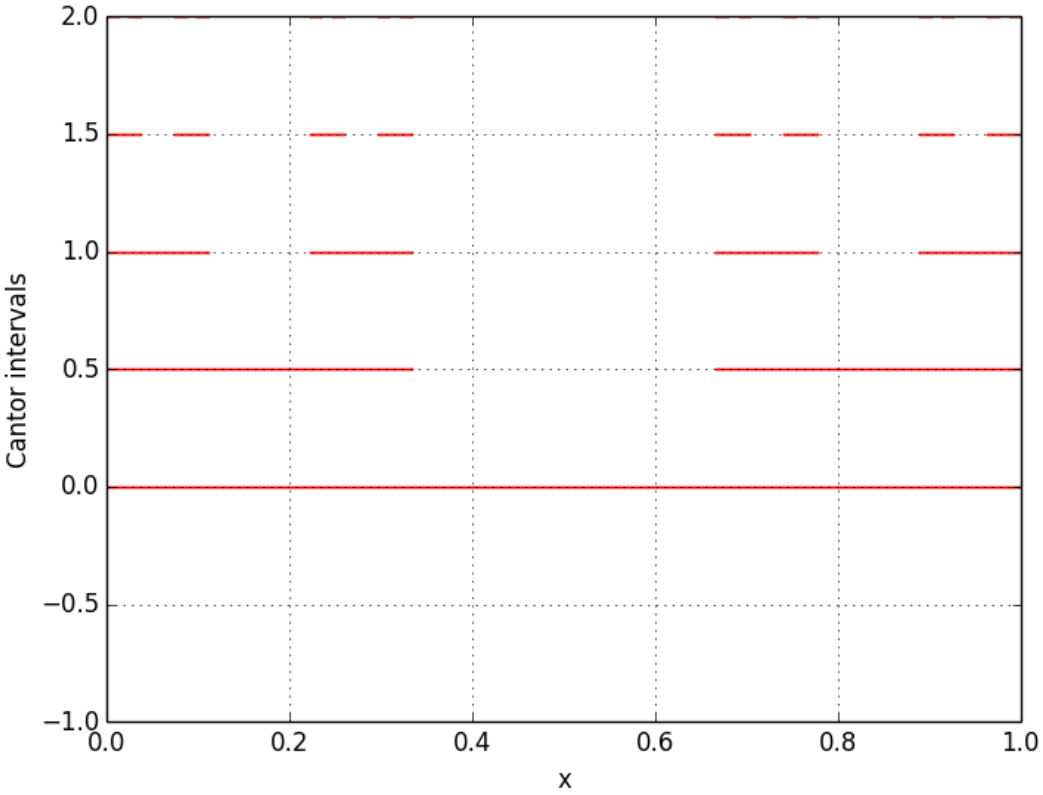
Conjunto de Cantor en Python

Implementación del grafico de los conjunto de Cantor en Python

Para n=12



Para n=5



Código en Python:

```
import numpy as np
import matplotlib.pyplot as plt
import pylab as pl
import math
n=5
cantorIntervals=[]
def NCantorIntervalsBetweenXyY(x,y,n):
if n == 0:
return []
interior_points = [2.*x/3. + y/3., x/3. + 2.*y/3.]
return NCantorIntervalsBetweenXyY(x, interior_points[0], n-1) + interior_points +
NCantorIntervalsBetweenXyY(interior_points[1], y, n-1)
def CantorIntervalsBetween0y1(n):
return [0.] + NCantorIntervalsBetweenXyY(0., 1., n) + [1.]



h=0
for i in range(n):
temp=CantorIntervalsBetween0y1(i)
```

```
j=0
while (j < len(temp)):
plt.plot([temp[j],temp[j + 1]],[h,h], 'r-')
j=j+2
h=h+0.5

plt.axis([0, 1, -1, n / 2])
plt.xlabel('x')
plt.ylabel('Cantor intervals')

plt.grid(True)
plt.show()
```