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Apêndice

Utilizamos dois códigos de programação, em Matlab, para representar geometricamente o conjunto $\mathbb{D}$. Além de 'pulverizar' conjunto de Cantor, a função `cantorfun`, desempenha o papel da função $f : [0, 1] \rightarrow \Gamma$ definida por $f(\theta) = e^{2\pi i \theta}$, tal que $\theta \in [0, 2\pi]$.

```
function cantorfun(a,b,level)
PI=3.141592;
if (level== 1)
c1 = 2 * PI * a;
c2 = 2 * PI * (a + (b - a) * 3/8);
for i = c1 : .0001 : c2
line([0, cos(i)], [0, sin(i)])
end
c1 = 2 * PI * (b - (b - a) * 3/8);
c2 = 2 * PI * b;
for i = c1 : .0001 : c2
line([0, cos(i)], [0, sin(i)])
end
else
cantorfun(a, (a + (b - a) * 3/8),level-1)
cantorfun((b - (b - a) * 3/8),b,level-1)
end
```

Já a segunda função, chamada de `cantor`, apenas plota os gráficos obtidos do código anterior.

```
function cantor(a,b,level)
close all;
figure(1);
hold on
```

```
axis([-1.2,1.2,-1.2,1.2]);  
cantorfun(a,b,level);  
title(['Representation of Cantor set to level ',num2str(level)]);
```