Classical Fractals

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The Cantor Set

Properties

Cobwebbing
The Cantor Set: What is it?

- Made by an iterative procedure.
  1. Start with the interval \([0, 1]\).
  2. Remove the middle third of the interval. Left with a pair of intervals \([0, 1/3] \cup [2/3, 1]\)
  3. Remove middle third of intervals that are left.
  4. Lather, Rinse, Repeat.

- The Cantor Set \(C\) is what’s left after you performed step 4 and infinite number of times.

```
0 1

C     __ __ __ __ __ __ __
```
Cobwebbing

- Using the computer to make a picture helps a lot.

Figure: A cobwebbing diagram graphically illustrating the iterative procedure. The point $x_0$ is in the escape set.