

L -Systems

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Resumo

Some rumblings...

1 Koch island

Axiom: $F - -F - -F$
Production rules: $F \rightarrow F + F - -F + F$
 $+ \rightarrow +$
 $- \rightarrow -$
Turn angle δ : 60°

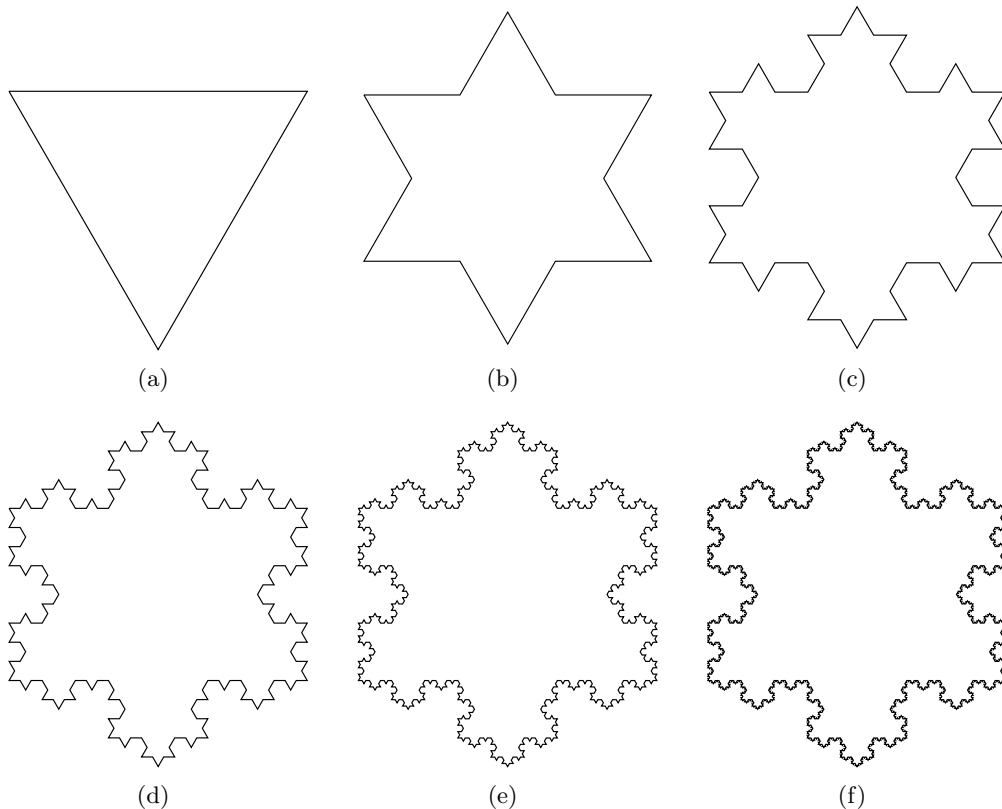


Figura 1: The axiom and the first five iterations of the Koch island curve.

2 Quadratic Koch island

Axiom: $F + F + F + F$
 Production rules: $F \rightarrow F + F - F - FF + F + F - F$
 $+ \rightarrow +$
 $- \rightarrow -$
 Turn angle δ : 90°

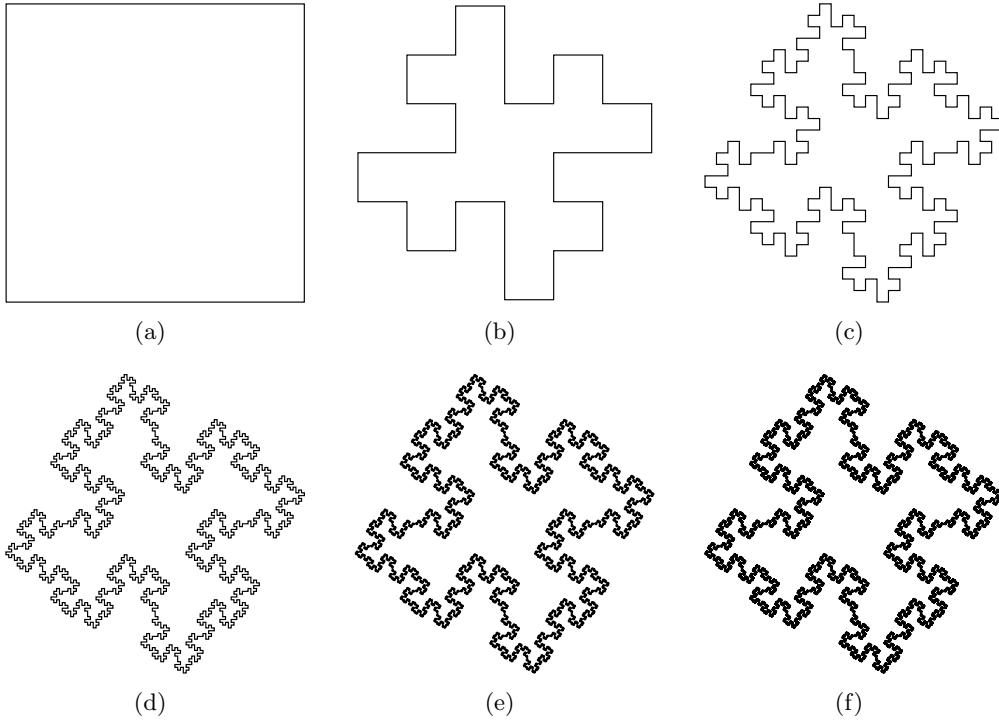


Figure 2: The axiom and the first five iterations of the quadratic Koch island.

3 Sierpinski arrowhead

Axiom: L
 Production rules: $L \rightarrow +R - L - R+$
 $R \rightarrow -L + R + L-$
 $+ \rightarrow +$
 $- \rightarrow -$
 Turn angle δ : 60°

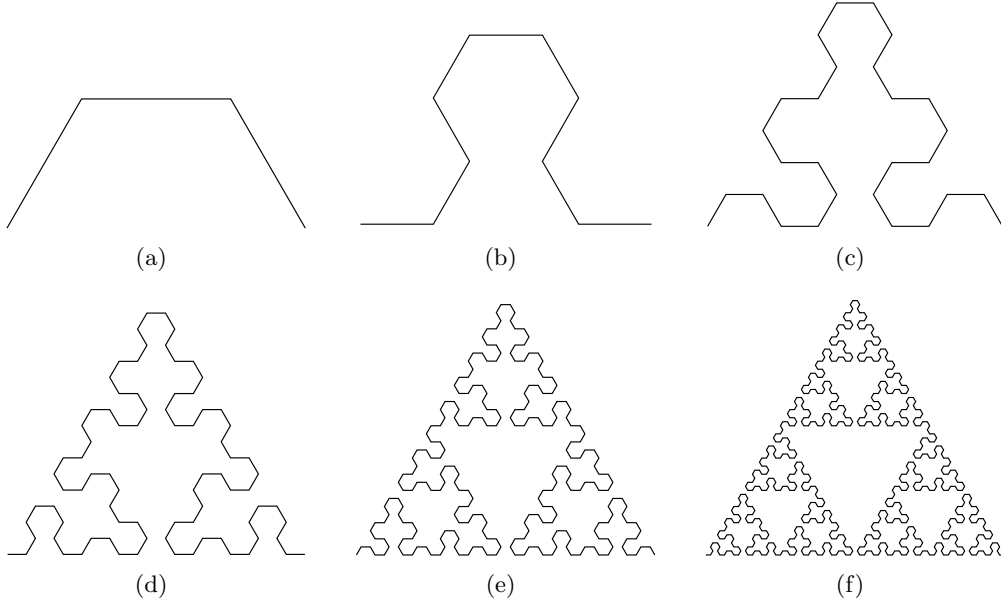


Figura 3: The axiom and the first five iterations of the Sierpinski arrowhead.

4 Hilbert curve

Axiom:	L
Production rules:	$F \rightarrow F$ $L \rightarrow +RF - LFL - FR+$ $R \rightarrow -LF + RFR + FL-$ $+ \rightarrow +$ $- \rightarrow -$
Turn angle δ :	90°

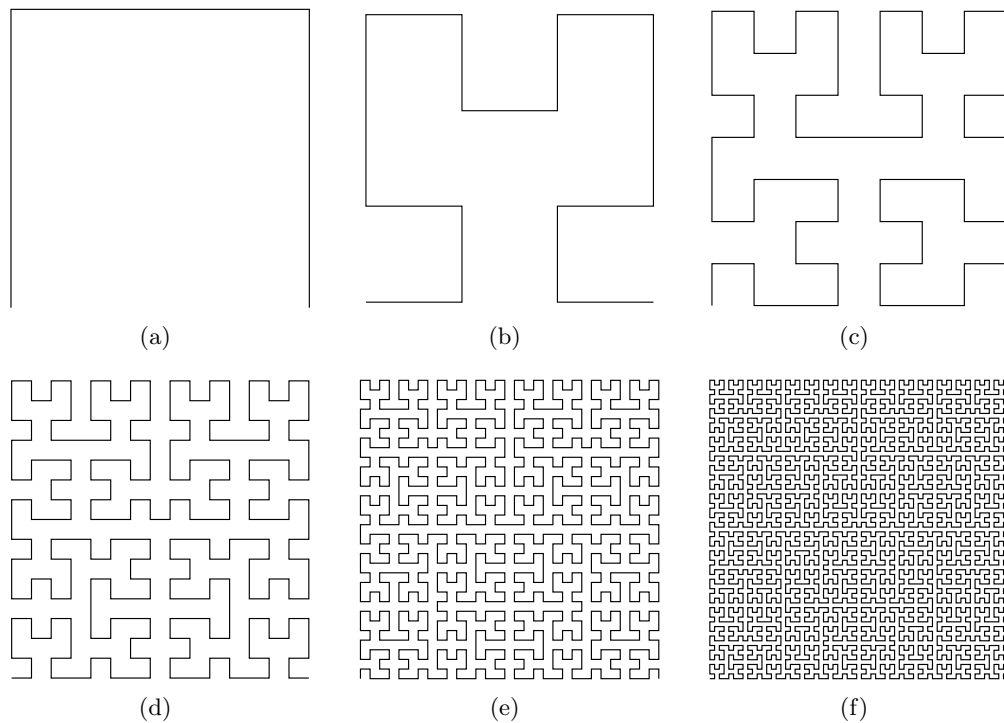


Figure 4: The axiom and the first five iterations of the Hilbert curve.

5 Dragon curve

Axiom: D
 Production rules: $D \rightarrow -D + +E$
 $E \rightarrow D - -E +$
 $+ \rightarrow +$
 $- \rightarrow -$
 Turn angle δ : 45°

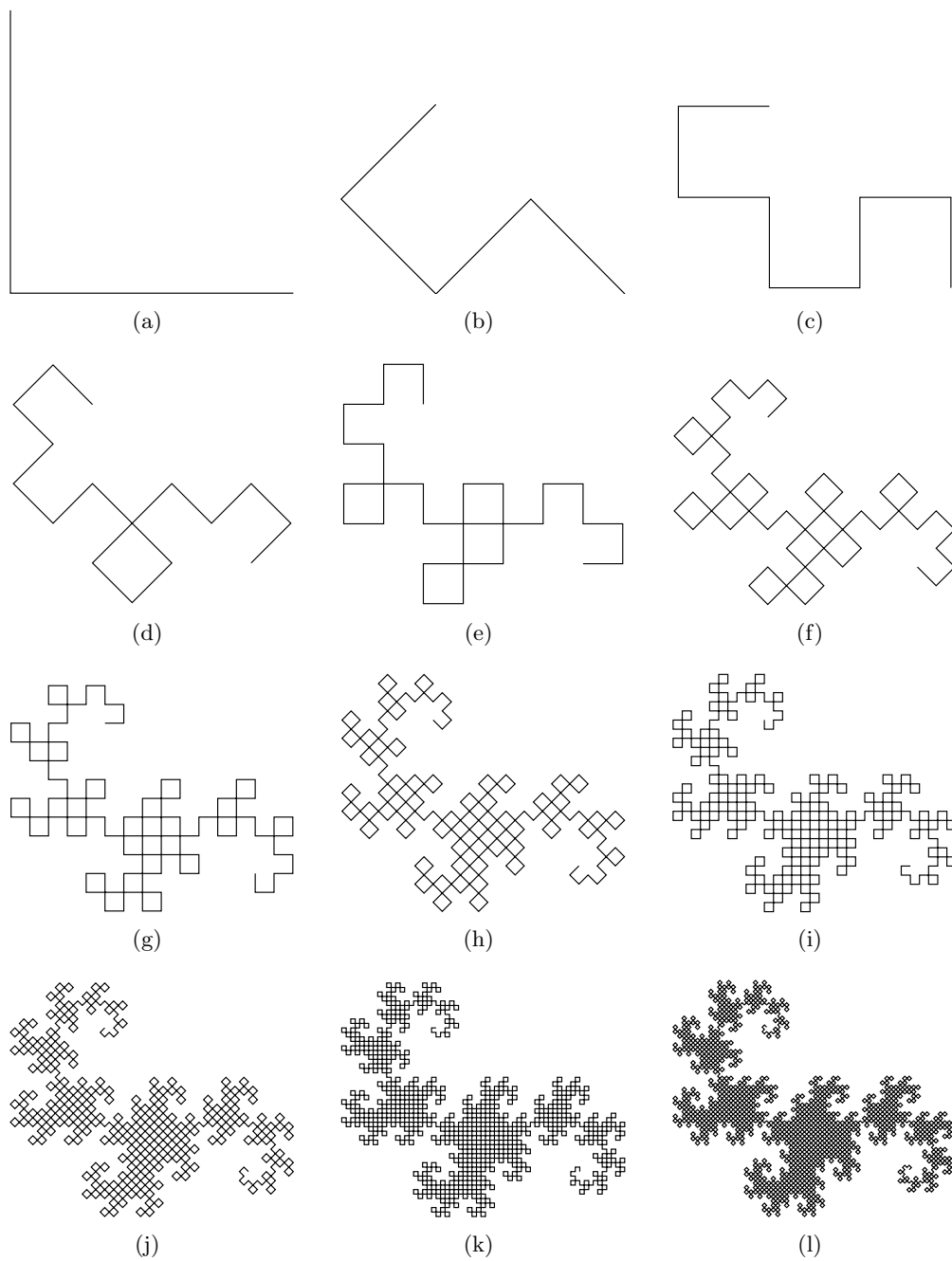


Figure 5: The axiom and the first eleven iterations of the dragon curve.