Exercises

Exercise 27.1 Approximate period tripling renormalization:

Implement an approximate renormalization for period-tripling sequence of figure 27.6, using the the approximate period-doubling renormalization scheme of example 26.2, applied to the complex polynomial

$$z_{n+1} = \lambda - z_n^2 \,.$$

The idea is to drop from $f_\lambda \circ f_\lambda \circ f_\lambda(z)$ all terms higher than z^2 in each period-tripling step. Evaluate numerically the complex coordinate and parameter rescaling universal constants $\alpha_{1/3}$ and $\delta_{1/3}$.

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