Conformal Dynamics Homework 5

Math 275 — Harvard University — Fall 2001

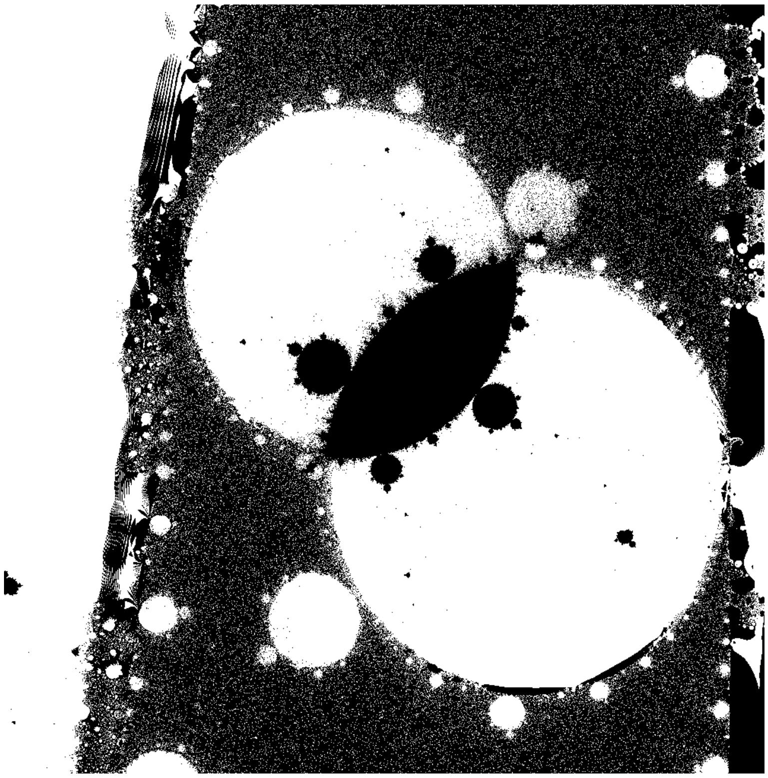

Figure 1. Bifurcations in a family $f_t(z)$ of rational maps of degree two. In the black region there are two attracting cycles; in the white region, just one. What is happening in the black lune? Why do we see overlapping Mandelbrot sets?

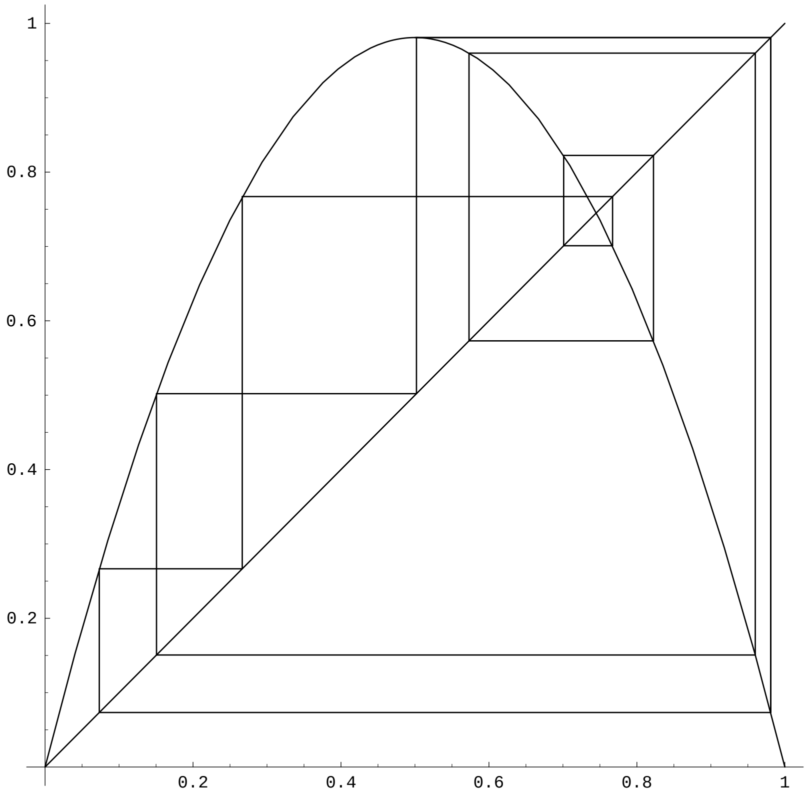

Figure 2. Find the value of t such that $f_t(x) = tx(1-x)$ is critically finite with the kneading sequence shown: $(2, 9, 3, 0, 7, 5, 4, 6, 8, 1)$.