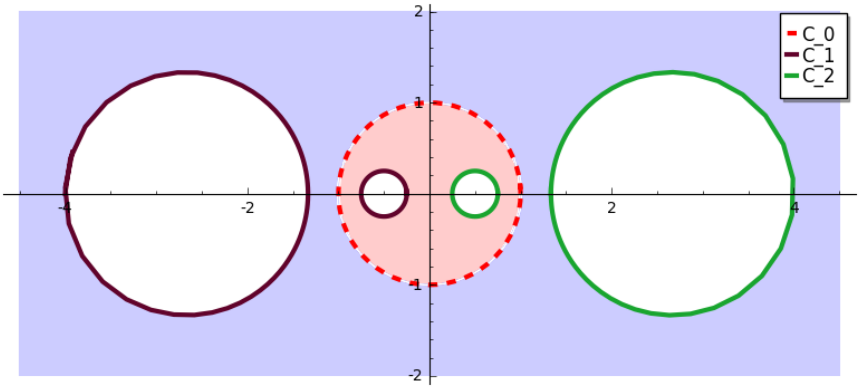
January 31, 2016

1 Setup

With the group data $\delta = [-1/2, 1/2], q = [1/4, 1/4]$ we get the following image of D_ζ and D'_ζ. The union of



the red shaded region and the purple shaded region is the fundamental domain, F.

2 Results

All current tests (15/1/31) passed in all cases of `product_threshold`

product_threshold	build ω time (s)	slitmap time (s)	abs((5.17))	approx branch pts
2	3.2	0.99	0.85	[(-3.549561, -1.002919), (1.003466, 6.763318)]
3	0.40	1.5	2.5	[(-1.036200, -1.002797), (1.003321, 1.048239)]
4	0.72	2.2	4.1	[(-1.036062, -1.002788), (1.003332, 1.048425)]
5	0.95	3.1	5.2	[(-1.035680, -1.002785), (1.003328, 1.047908)]
6	1.4	4.4	5.9	[(-1.035676, -1.002785), (1.003329, 1.047912)]
7	2.0	6.4	6.3	[(-1.035669, -1.002785), (1.003329, 1.047903)]
8	3.1	11.	6.5	[(-1.035669, -1.002785), (1.003329, 1.047903)]
9	5.5	30.	6.6	[(-1.035668, -1.002785), (1.003329, 1.047902)]
10	13.	110.	6.7	[(-1.035668, -1.002785), (1.003329, 1.047902)]
11	37.	310.	6.8	[(-1.035668, -1.002785), (1.003329, 1.047902)]

We get the following figures
These figures are clearly showing something bad. The circles should be collapsing to intervals. Look at more detail for product_threshold = 3 after using the control of product_threshold = 2 (which looks like I would expect.

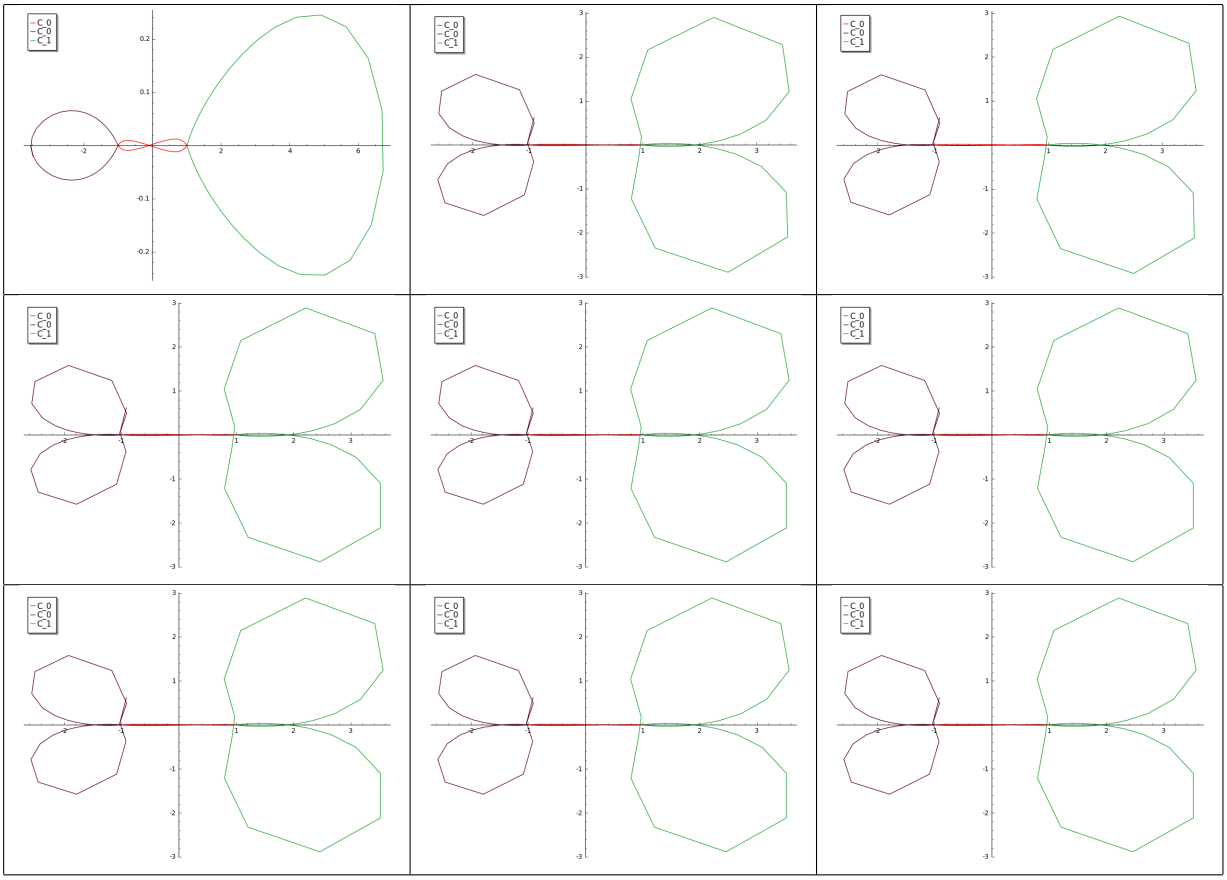
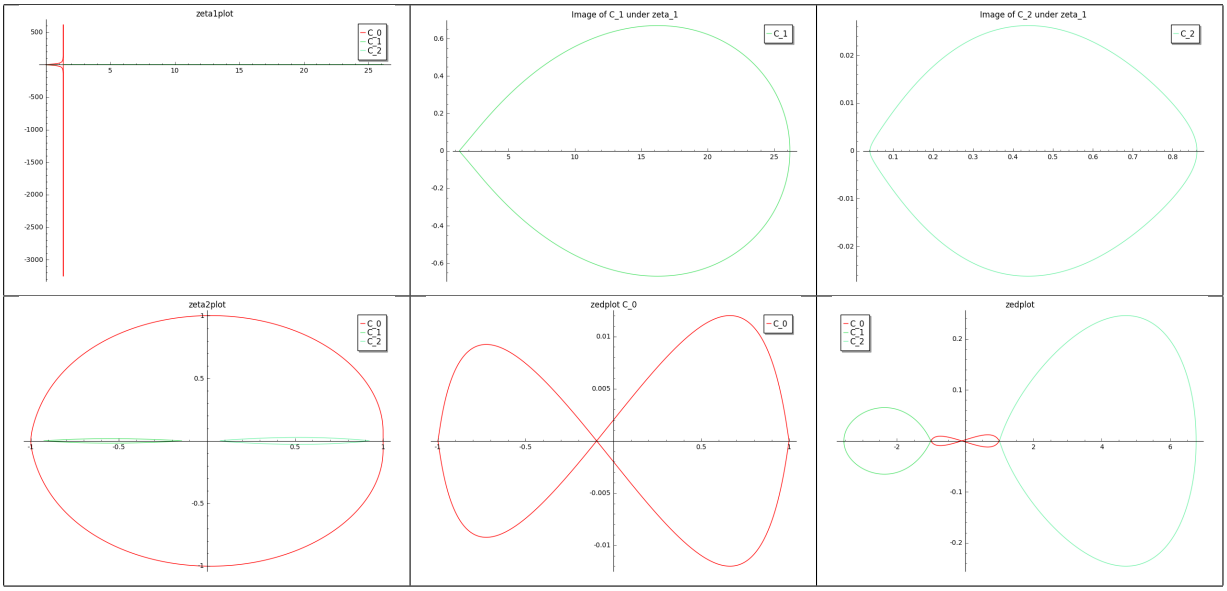


Table 1: For product_threshold = 2,...,10, left to right top to bottom.

2.1 Results - product_threshold=2

We get the following images:



2.2 Results - product_threshold=3

We get the following images: