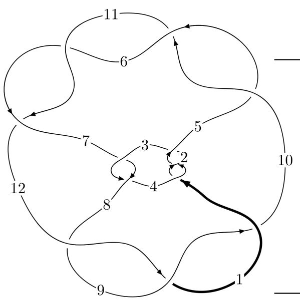
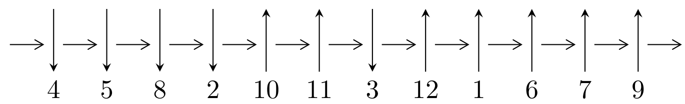
$12a_{0824}$ $(K12a_{0824})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$5,10 \xrightarrow[c_5]{} 6 \xrightarrow[c_{10}]{} 11 \xrightarrow[c_6]{} 3,7 \xrightarrow[c_7]{} 8 \xrightarrow[c_{11}]{} 12 \xrightarrow[c_2]{} 2 \xrightarrow[c_4]{} 4 \xrightarrow[c_1]{} 1 \xrightarrow[c_9]{} 9 \twoheadrightarrow c_3, c_8, c_{12}$$

Ideals for irreducible components[2] of $X_{\mathbf{par}}$

$$\begin{aligned}
I^u_1 = \langle & 2.98047 \times 10^{56} u^{61} - 7.28716 \times 10^{56} u^{60} + \cdots + 2.15534 \times 10^{55} b - 3.50669 \times 10^{57}, \\
& - 3.70578 \times 10^{56} u^{61} + 9.04815 \times 10^{56} u^{60} + \cdots + 2.15534 \times 10^{55} a + 4.10393 \times 10^{57}, \\
& u^{62} - 2u^{61} + \cdots - 12u - 4 \rangle \\
I^u_2 = \langle & b + 1,\ u^2 + a + u - 2,\ u^3 + u^2 - 2u - 1 \rangle \\
I^u_3 = \langle & au + b + 2a - 1,\ 2a^2 + au - 2a + 2u - 3,\ u^2 - 2 \rangle
\end{aligned}$$

$$I^v_1 = \langle a,\ b + v - 2,\ v^2 - 3v + 1 \rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 71 representations.

[1] The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2] All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u = \langle 2.98 \times 10^{56} u^{61} - 7.29 \times 10^{56} u^{60} + \cdots + 2.16 \times 10^{55} b - 3.51 \times 10^{57},\ -3.71 \times 10^{56} u^{61} + 9.05 \times 10^{56} u^{60} + \cdots + 2.16 \times 10^{55} a + 4.10 \times 10^{57},\ u^{62} - 2u^{61} + \cdots - 12u - 4\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 17.1935u^{61} - 41.9802u^{60} + \cdots - 59.0803u - 190.408 \\ -13.8283u^{61} + 33.8098u^{60} + \cdots + 35.7338u + 162.698 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1.21636u^{61} - 2.59080u^{60} + \cdots - 18.6035u - 0.834246 \\ -22.4729u^{61} + 50.9927u^{60} + \cdots + 34.3595u + 239.437 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^3 + 2u \\ u^5 - 3u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 3.36518u^{61} - 8.17039u^{60} + \cdots - 23.3465u - 27.7096 \\ -13.8283u^{61} + 33.8098u^{60} + \cdots + 35.7338u + 162.698 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 38.7754u^{61} - 92.5739u^{60} + \cdots - 86.8745u - 442.022 \\ 17.6227u^{61} - 43.4791u^{60} + \cdots - 45.7098u - 215.395 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 39.6334u^{61} - 94.3136u^{60} + \cdots - 95.8498u - 449.301 \\ 17.1297u^{61} - 42.0208u^{60} + \cdots - 39.9181u - 209.663 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -8.92692u^{61} + 20.4057u^{60} + \cdots - 0.725611u + 105.357 \\ -26.0460u^{61} + 58.7518u^{60} + \cdots + 38.2629u + 274.601 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.64973u^{61} + 4.67865u^{60} + \cdots - 82.0084u + 32.7971$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_4	$u^{62} - 7u^{61} + \cdots + 29u + 1$
c_3, c_7	$u^{62} - 2u^{61} + \cdots + 108u - 8$
c_5, c_6, c_{10} c_{11}	$u^{62} + 2u^{61} + \cdots + 12u - 4$
c_8, c_9, c_{12}	$u^{62} - 4u^{61} + \cdots + 81u - 9$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$y^{62} - 57y^{61} + \cdots - 427y + 1$
c_3, c_7	$y^{62} - 30y^{61} + \cdots - 4688y + 64$
c_5, c_6, c_{10} c_{11}	$y^{62} - 74y^{61} + \cdots - 624y + 16$
c_8, c_9, c_{12}	$y^{62} - 60y^{61} + \cdots - 3519y + 81$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.728927 + 0.693480I$ $a = 0.50031 - 1.40841I$ $b = 1.41056 + 0.37112I$	$-0.16183 - 11.03280I$	0
$u = -0.728927 - 0.693480I$ $a = 0.50031 + 1.40841I$ $b = 1.41056 - 0.37112I$	$-0.16183 + 11.03280I$	0
$u = 0.979023 + 0.319186I$ $a = 0.687788 + 0.612198I$ $b = 0.174252 - 0.593165I$	$6.85692 + 1.08905I$	0
$u = 0.979023 - 0.319186I$ $a = 0.687788 - 0.612198I$ $b = 0.174252 + 0.593165I$	$6.85692 - 1.08905I$	0
$u = -0.869463 + 0.382228I$ $a = -0.78515 - 1.20030I$ $b = 1.394320 + 0.085865I$	$-4.30575 - 1.13280I$	0
$u = -0.869463 - 0.382228I$ $a = -0.78515 + 1.20030I$ $b = 1.394320 - 0.085865I$	$-4.30575 + 1.13280I$	0
$u = 0.744058 + 0.573909I$ $a = 0.05054 + 1.60912I$ $b = 1.41065 - 0.23730I$	$-5.93385 + 6.46887I$	$0. - 6.93804I$
$u = 0.744058 - 0.573909I$ $a = 0.05054 - 1.60912I$ $b = 1.41065 + 0.23730I$	$-5.93385 - 6.46887I$	$0. + 6.93804I$
$u = -0.757731 + 0.545713I$ $a = -0.418942 + 0.852081I$ $b = -0.234673 - 0.886336I$	$5.04847 - 6.51467I$	$0. + 6.90536I$
$u = -0.757731 - 0.545713I$ $a = -0.418942 - 0.852081I$ $b = -0.234673 + 0.886336I$	$5.04847 + 6.51467I$	$0. - 6.90536I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.294207 + 0.839087I$ $a = 0.678495 - 0.208859I$ $b = 1.351380 - 0.291230I$	$-1.47807 + 5.97196I$	$0.82075 - 3.88105I$
$u = -0.294207 - 0.839087I$ $a = 0.678495 + 0.208859I$ $b = 1.351380 + 0.291230I$	$-1.47807 - 5.97196I$	$0.82075 + 3.88105I$
$u = 0.700864 + 0.454130I$ $a = -1.08574 - 1.35076I$ $b = -1.381210 + 0.269324I$	$1.85807 + 4.31924I$	$4.65831 - 4.87668I$
$u = 0.700864 - 0.454130I$ $a = -1.08574 + 1.35076I$ $b = -1.381210 - 0.269324I$	$1.85807 - 4.31924I$	$4.65831 + 4.87668I$
$u = -0.720139 + 0.323549I$ $a = -0.041734 - 0.370738I$ $b = -0.990063 + 0.574650I$	$2.74398 - 1.42912I$	$4.95658 + 3.06315I$
$u = -0.720139 - 0.323549I$ $a = -0.041734 + 0.370738I$ $b = -0.990063 - 0.574650I$	$2.74398 + 1.42912I$	$4.95658 - 3.06315I$
$u = 0.612514 + 0.397650I$ $a = -0.270980 - 1.353370I$ $b = -0.326776 + 0.647435I$	$-0.38950 + 3.27691I$	$2.40587 - 8.31237I$
$u = 0.612514 - 0.397650I$ $a = -0.270980 + 1.353370I$ $b = -0.326776 - 0.647435I$	$-0.38950 - 3.27691I$	$2.40587 + 8.31237I$
$u = -0.154333 + 0.690721I$ $a = 0.498196 + 0.076734I$ $b = -0.141589 + 0.700436I$	$3.24167 + 2.36306I$	$4.92638 - 2.57172I$
$u = -0.154333 - 0.690721I$ $a = 0.498196 - 0.076734I$ $b = -0.141589 - 0.700436I$	$3.24167 - 2.36306I$	$4.92638 + 2.57172I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.168802 + 0.683958I$ $a = 0.772109 + 0.104136I$ $b = 1.43972 + 0.11421I$	$-7.63058 - 2.23574I$	$-4.95663 + 1.98264I$
$u = 0.168802 - 0.683958I$ $a = 0.772109 - 0.104136I$ $b = 1.43972 - 0.11421I$	$-7.63058 + 2.23574I$	$-4.95663 - 1.98264I$
$u = -1.35461$ $a = -0.662234$ $b = 1.56599$	-3.74962	0
$u = -0.472149 + 0.408625I$ $a = -1.37617 + 1.82546I$ $b = -1.274780 - 0.089703I$	$-2.79224 - 1.47778I$	$-0.57816 + 4.38549I$
$u = -0.472149 - 0.408625I$ $a = -1.37617 - 1.82546I$ $b = -1.274780 + 0.089703I$	$-2.79224 + 1.47778I$	$-0.57816 - 4.38549I$
$u = 1.37684$ $a = 0.886850$ $b = -0.0476686$	6.50761	0
$u = 1.315790 + 0.425847I$ $a = -0.397092 + 0.322882I$ $b = 1.255370 + 0.180857I$	$3.54224 - 1.50691I$	0
$u = 1.315790 - 0.425847I$ $a = -0.397092 - 0.322882I$ $b = 1.255370 - 0.180857I$	$3.54224 + 1.50691I$	0
$u = -1.43056$ $a = 8.65850$ $b = -0.979198$	4.96917	0
$u = 0.150519 + 0.505903I$ $a = -3.05850 - 1.07646I$ $b = -1.166570 - 0.207757I$	$0.273379 - 0.971704I$	$0.08959 - 3.04439I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.150519 - 0.505903I$ $a = -3.05850 + 1.07646I$ $b = -1.166570 + 0.207757I$	$0.273379 + 0.971704I$	$0.08959 + 3.04439I$
$u = -0.523123 + 0.028134I$ $a = 1.13938 - 0.89193I$ $b = -0.084530 + 0.244571I$	$0.906568 - 0.098785I$	$10.73700 + 0.03939I$
$u = -0.523123 - 0.028134I$ $a = 1.13938 + 0.89193I$ $b = -0.084530 - 0.244571I$	$0.906568 + 0.098785I$	$10.73700 - 0.03939I$
$u = -1.51079 + 0.03677I$ $a = 1.03861 - 1.20593I$ $b = -0.962369 + 0.432397I$	$4.73047 - 0.55582I$	0
$u = -1.51079 - 0.03677I$ $a = 1.03861 + 1.20593I$ $b = -0.962369 - 0.432397I$	$4.73047 + 0.55582I$	0
$u = 0.280851 + 0.380725I$ $a = 0.583491 + 0.202281I$ $b = -0.543197 - 0.407436I$	$-1.335370 - 0.411278I$	$-3.93368 + 0.07785I$
$u = 0.280851 - 0.380725I$ $a = 0.583491 - 0.202281I$ $b = -0.543197 + 0.407436I$	$-1.335370 + 0.411278I$	$-3.93368 - 0.07785I$
$u = 1.53718 + 0.08815I$ $a = 0.26347 - 1.53965I$ $b = -1.318230 + 0.251318I$	$3.97848 + 3.12179I$	0
$u = 1.53718 - 0.08815I$ $a = 0.26347 + 1.53965I$ $b = -1.318230 - 0.251318I$	$3.97848 - 3.12179I$	0
$u = 1.54676$ $a = -0.552532$ $b = 1.77372$	-0.257952	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.58047 + 0.01988I$ $a = 0.307453 - 1.365900I$ $b = 0.028298 + 0.630886I$	$8.23798 + 0.05802I$	0
$u = 1.58047 - 0.01988I$ $a = 0.307453 + 1.365900I$ $b = 0.028298 - 0.630886I$	$8.23798 - 0.05802I$	0
$u = -1.58423 + 0.10551I$ $a = 0.00098 + 1.59403I$ $b = -0.206251 - 0.827340I$	$7.10069 - 5.07913I$	0
$u = -1.58423 - 0.10551I$ $a = 0.00098 - 1.59403I$ $b = -0.206251 + 0.827340I$	$7.10069 + 5.07913I$	0
$u = -1.60674 + 0.13048I$ $a = 0.203247 + 1.201000I$ $b = -1.51444 - 0.32292I$	$9.71439 - 6.49643I$	0
$u = -1.60674 - 0.13048I$ $a = 0.203247 - 1.201000I$ $b = -1.51444 + 0.32292I$	$9.71439 + 6.49643I$	0
$u = 1.61104 + 0.09528I$ $a = 0.709620 + 0.974902I$ $b = -1.082630 - 0.771501I$	$10.73290 + 3.02061I$	0
$u = 1.61104 - 0.09528I$ $a = 0.709620 - 0.974902I$ $b = -1.082630 + 0.771501I$	$10.73290 - 3.02061I$	0
$u = -1.61936 + 0.17707I$ $a = -0.71301 - 1.47528I$ $b = 1.38942 + 0.34866I$	$2.05187 - 9.32176I$	0
$u = -1.61936 - 0.17707I$ $a = -0.71301 + 1.47528I$ $b = 1.38942 - 0.34866I$	$2.05187 + 9.32176I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.62558 + 0.16107I$ $a = -0.18148 - 1.48352I$ $b = -0.265871 + 1.040180I$	$13.1382 + 9.1870I$	0
$u = 1.62558 - 0.16107I$ $a = -0.18148 + 1.48352I$ $b = -0.265871 - 1.040180I$	$13.1382 - 9.1870I$	0
$u = 1.61953 + 0.21948I$ $a = -0.42080 + 1.54749I$ $b = 1.45736 - 0.44242I$	$7.6958 + 14.4824I$	0
$u = 1.61953 - 0.21948I$ $a = -0.42080 - 1.54749I$ $b = 1.45736 + 0.44242I$	$7.6958 - 14.4824I$	0
$u = -0.363008$ $a = 3.16745$ $b = -0.297973$	0.945431	16.1240
$u = -0.353073$ $a = 1.07459$ $b = 1.65773$	-6.97573	16.8660
$u = 1.65034 + 0.12971I$ $a = -0.97563 + 1.03708I$ $b = 1.278460 - 0.240889I$	$4.33770 + 3.20222I$	0
$u = 1.65034 - 0.12971I$ $a = -0.97563 - 1.03708I$ $b = 1.278460 + 0.240889I$	$4.33770 - 3.20222I$	0
$u = -1.67507 + 0.05882I$ $a = 0.039583 - 1.084640I$ $b = 0.468851 + 0.766491I$	$16.0964 - 2.4237I$	0
$u = -1.67507 - 0.05882I$ $a = 0.039583 + 1.084640I$ $b = 0.468851 - 0.766491I$	$16.0964 + 2.4237I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.284099$ $a = 2.60629$ $b = -0.896150$	-1.25065	-13.1380
$u = -1.82703$ $a = -0.674961$ $b = 1.09260$	15.7512	0

II. $I_2^u = \langle b+1,\ u^2+a+u-2,\ u^3+u^2-2u-1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ u^2-u-1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^2-u+2 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -u^2+1 \\ u^2-u-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2+1 \\ u^2-u-1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^2-1 \\ -u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^2-u+1 \\ -1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^2-u+2 \\ -1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^2-4u+12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^3$
c_3, c_7	u^3
c_4	$(u+1)^3$
c_5, c_6, c_8 c_9	u^3+u^2-2u-1
c_{10}, c_{11}, c_{12}	u^3-u^2-2u+1

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^3$
c_3, c_7	y^3
c_5, c_6, c_8 c_9, c_{10}, c_{11} c_{12}	$y^3 - 5y^2 + 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.24698$ $a = -0.801938$ $b = -1.00000$	4.69981	8.56700
$u = -0.445042$ $a = 2.24698$ $b = -1.00000$	-0.939962	13.9780
$u = -1.80194$ $a = 0.554958$ $b = -1.00000$	15.9794	22.4550

III. $I_3^u = \langle au + b + 2a - 1,\ 2a^2 + au - 2a + 2u - 3,\ u^2 - 2\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ -2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ -u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ -au - 2a + 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{1}{2}u \\ au + 2a - 2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -au - a + 1 \\ -au - 2a + 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} au + 2a - \frac{1}{2}u \\ au + 2a - 2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{1}{2}u \\ au + 2a - 2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -\frac{1}{2}u \\ au + 2a + u - 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7	$(u^2+u-1)^2$
c_3, c_4	$(u^2-u-1)^2$
c_5, c_6, c_{10} c_{11}	$(u^2-2)^2$
c_8, c_9	$(u-1)^4$
c_{12}	$(u+1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_7	$(y^2 - 3y + 1)^2$
c_5, c_6, c_{10} c_{11}	$(y-2)^4$
c_8, c_9, c_{12}	$(y-1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.41421$ $a = 0.473911$ $b = -0.618034$	5.59278	4.00000
$u = 1.41421$ $a = -0.181018$ $b = 1.61803$	−2.30291	4.00000
$u = -1.41421$ $a = -1.05505$ $b = 1.61803$	−2.30291	4.00000
$u = -1.41421$ $a = 2.76216$ $b = -0.618034$	5.59278	4.00000

IV. $I_1^v = \langle a,\ b+v-2,\ v^2-3v+1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0 \\ -v+2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ -v+3 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -v+2 \\ -v+2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} v-2 \\ v-3 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1 \\ v-3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} v+1 \\ -v+3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_3	$u^2 + u - 1$
c_4, c_7	$u^2 - u - 1$
c_5, c_6, c_{10} c_{11}	u^2
c_8, c_9	$(u+1)^2$
c_{12}	$(u-1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_7	$y^2 - 3y + 1$
c_5, c_6, c_{10} c_{11}	y^2
c_8, c_9, c_{12}	$(y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 0.381966$ $a = 0$ $b = 1.61803$	-7.23771	-14.0000
$v = 2.61803$ $a = 0$ $b = -0.618034$	0.657974	-14.0000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_2	$((u-1)^3)(u^2+u-1)^3(u^{62}-7u^{61}+\cdots+29u+1)$
c_3	$u^3(u^2-u-1)^2(u^2+u-1)(u^{62}-2u^{61}+\cdots+108u-8)$
c_4	$((u+1)^3)(u^2-u-1)^3(u^{62}-7u^{61}+\cdots+29u+1)$
c_5, c_6	$u^2(u^2-2)^2(u^3+u^2-2u-1)(u^{62}+2u^{61}+\cdots+12u-4)$
c_7	$u^3(u^2-u-1)(u^2+u-1)^2(u^{62}-2u^{61}+\cdots+108u-8)$
c_8, c_9	$((u-1)^4)(u+1)^2(u^3+u^2-2u-1)(u^{62}-4u^{61}+\cdots+81u-9)$
c_{10}, c_{11}	$u^2(u^2-2)^2(u^3-u^2-2u+1)(u^{62}+2u^{61}+\cdots+12u-4)$
c_{12}	$((u-1)^2)(u+1)^4(u^3-u^2-2u+1)(u^{62}-4u^{61}+\cdots+81u-9)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$((y-1)^3)(y^2-3y+1)^3(y^{62}-57y^{61}+\cdots-427y+1)$
c_3, c_7	$y^3(y^2-3y+1)^3(y^{62}-30y^{61}+\cdots-4688y+64)$
c_5, c_6, c_{10} c_{11}	$y^2(y-2)^4(y^3-5y^2+6y-1)(y^{62}-74y^{61}+\cdots-624y+16)$
c_8, c_9, c_{12}	$((y-1)^6)(y^3-5y^2+6y-1)(y^{62}-60y^{61}+\cdots-3519y+81)$