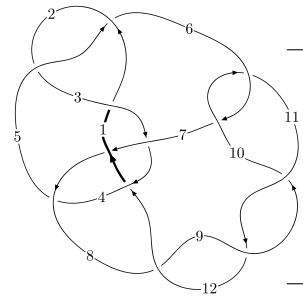
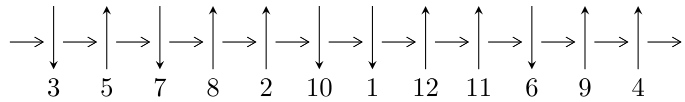
$12a_{0068}$ $(K12a_{0068})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 1.25458 \times 10^{127} u^{95} + 1.26518 \times 10^{128} u^{94} + \cdots + 9.52869 \times 10^{127} b + 1.50191 \times 10^{127}, \\
& - 9.57034 \times 10^{127} u^{95} - 2.86258 \times 10^{128} u^{94} + \cdots + 9.52869 \times 10^{127} a - 2.12222 \times 10^{128}, \\
& u^{96} + 3u^{95} + \cdots + 12u + 1 \rangle \\
I_2^u = \langle & b + u - 1,\ a + u + 2,\ u^2 - u + 1 \rangle \\
I_3^u = \langle & b - u,\ a + 1,\ u^2 - u + 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 100 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. $\boldsymbol{I_1^u = \langle 1.25 \times 10^{127}u^{95} + 1.27 \times 10^{128}u^{94} + \cdots + 9.53 \times 10^{127}b + 1.50 \times 10^{127},\ -9.57 \times 10^{127}u^{95} - 2.86 \times 10^{128}u^{94} + \cdots + 9.53 \times 10^{127}a - 2.12 \times 10^{128},\ u^{96} + 3u^{95} + \cdots + 12u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1.00437u^{95} + 3.00416u^{94} + \cdots + 57.6273u + 2.22719 \\ -0.131664u^{95} - 1.32776u^{94} + \cdots + 1.94631u - 0.157620 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.872707u^{95} + 1.67640u^{94} + \cdots + 59.5736u + 2.06957 \\ -0.131664u^{95} - 1.32776u^{94} + \cdots + 1.94631u - 0.157620 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1.95072u^{95} + 4.88246u^{94} + \cdots - 40.0809u - 3.74504 \\ 0.869545u^{95} + 3.48417u^{94} + \cdots + 12.2237u + 0.518555 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.309695u^{95} + 1.02345u^{94} + \cdots + 66.7347u + 5.22501 \\ 0.403210u^{95} + 1.10905u^{94} + \cdots + 7.08302u + 0.778016 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.687164u^{95} - 1.47942u^{94} + \cdots - 74.5773u - 6.69637 \\ 2.39982u^{95} + 8.28580u^{94} + \cdots + 30.7068u + 2.07039 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.720528u^{95} - 2.13313u^{94} + \cdots + 43.6793u + 3.49267 \\ 0.168650u^{95} - 0.178593u^{94} + \cdots + 0.999858u + 0.256902 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.248630u^{95} - 1.76800u^{94} + \cdots - 10.1284u - 1.85496 \\ 0.900641u^{95} + 2.78697u^{94} + \cdots + 16.1924u + 1.08286 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4.65162u^{95} - 10.5791u^{94} + \cdots - 96.8246u - 7.50867$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{96} + 43u^{95} + \cdots + 80u + 1$
c_2, c_5	$u^{96} + 3u^{95} + \cdots + 12u + 1$
c_3	$u^{96} + 42u^{94} + \cdots + 1035u + 643$
c_4	$u^{96} - 2u^{95} + \cdots + 13621u + 1921$
c_6, c_{10}	$u^{96} + 3u^{95} + \cdots - 2u + 1$
c_7	$u^{96} - 7u^{95} + \cdots + 4u^2 + 1$
c_8, c_9, c_{11}	$u^{96} - 23u^{95} + \cdots - 8u + 1$
c_{12}	$u^{96} + 9u^{95} + \cdots - 16u + 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{96} + 23y^{95} + \cdots - 1248y + 1$
c_2, c_5	$y^{96} + 43y^{95} + \cdots + 80y + 1$
c_3	$y^{96} + 84y^{95} + \cdots - 13909363y + 413449$
c_4	$y^{96} + 116y^{95} + \cdots + 95698917y + 3690241$
c_6, c_{10}	$y^{96} + 23y^{95} + \cdots + 8y + 1$
c_7	$y^{96} + 11y^{95} + \cdots + 8y + 1$
c_8, c_9, c_{11}	$y^{96} + 103y^{95} + \cdots - 48y + 1$
c_{12}	$y^{96} + 25y^{95} + \cdots + 2944y + 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.944130 + 0.380710I$ $a = 0.747578 + 0.125727I$ $b = -0.899713 - 0.842502I$	$-6.40890 + 5.50823I$	0
$u = -0.944130 - 0.380710I$ $a = 0.747578 - 0.125727I$ $b = -0.899713 + 0.842502I$	$-6.40890 - 5.50823I$	0
$u = 0.443410 + 0.868939I$ $a = 1.09874 + 3.16937I$ $b = -0.391123 - 0.642425I$	$-0.163424 + 0.651132I$	0
$u = 0.443410 - 0.868939I$ $a = 1.09874 - 3.16937I$ $b = -0.391123 + 0.642425I$	$-0.163424 - 0.651132I$	0
$u = -0.857554 + 0.459267I$ $a = -0.544829 - 1.001310I$ $b = 0.425826 - 0.982792I$	$2.25759 + 7.89368I$	0
$u = -0.857554 - 0.459267I$ $a = -0.544829 + 1.001310I$ $b = 0.425826 + 0.982792I$	$2.25759 - 7.89368I$	0
$u = 1.027200 + 0.030408I$ $a = 1.251760 + 0.113225I$ $b = -0.821562 - 0.901812I$	$-2.85315 - 3.06998I$	0
$u = 1.027200 - 0.030408I$ $a = 1.251760 - 0.113225I$ $b = -0.821562 + 0.901812I$	$-2.85315 + 3.06998I$	0
$u = 0.511371 + 0.891488I$ $a = 4.81043 + 2.73170I$ $b = -0.366736 + 0.764497I$	$0.22700 + 3.68030I$	0
$u = 0.511371 - 0.891488I$ $a = 4.81043 - 2.73170I$ $b = -0.366736 - 0.764497I$	$0.22700 - 3.68030I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.954773 + 0.399875I$ $a = 1.114810 + 0.371359I$ $b = -0.838711 + 0.981826I$	$-5.96628 + 11.93610I$	0
$u = -0.954773 - 0.399875I$ $a = 1.114810 - 0.371359I$ $b = -0.838711 - 0.981826I$	$-5.96628 - 11.93610I$	0
$u = 0.495783 + 0.817895I$ $a = 0.47218 - 3.80289I$ $b = -0.304347 - 0.764185I$	$0.474880 + 0.427443I$	0
$u = 0.495783 - 0.817895I$ $a = 0.47218 + 3.80289I$ $b = -0.304347 + 0.764185I$	$0.474880 - 0.427443I$	0
$u = 0.442328 + 0.966095I$ $a = -0.188046 - 0.726355I$ $b = -0.206747 + 0.360314I$	$-0.42331 + 2.75224I$	0
$u = 0.442328 - 0.966095I$ $a = -0.188046 + 0.726355I$ $b = -0.206747 - 0.360314I$	$-0.42331 - 2.75224I$	0
$u = -0.435286 + 0.975110I$ $a = 1.84603 - 0.96584I$ $b = -0.378271 - 1.055990I$	$-0.93138 - 4.78594I$	0
$u = -0.435286 - 0.975110I$ $a = 1.84603 + 0.96584I$ $b = -0.378271 + 1.055990I$	$-0.93138 + 4.78594I$	0
$u = -0.335424 + 1.022430I$ $a = 0.633874 - 0.863645I$ $b = -0.714957 + 0.191046I$	$-3.72797 - 0.83654I$	0
$u = -0.335424 - 1.022430I$ $a = 0.633874 + 0.863645I$ $b = -0.714957 - 0.191046I$	$-3.72797 + 0.83654I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.885662 + 0.616135I$ $a = -0.792115 - 1.026420I$ $b = 0.302376 - 0.842845I$	$2.96137 + 3.75608I$	0
$u = 0.885662 - 0.616135I$ $a = -0.792115 + 1.026420I$ $b = 0.302376 + 0.842845I$	$2.96137 - 3.75608I$	0
$u = 0.481557 + 0.972545I$ $a = -0.28450 - 3.24363I$ $b = 0.858693 + 0.897946I$	$-7.09470 - 0.51155I$	0
$u = 0.481557 - 0.972545I$ $a = -0.28450 + 3.24363I$ $b = 0.858693 - 0.897946I$	$-7.09470 + 0.51155I$	0
$u = 0.848669 + 0.330833I$ $a = -0.869068 + 0.875953I$ $b = 0.249847 + 0.830961I$	$3.22915 - 0.49581I$	0
$u = 0.848669 - 0.330833I$ $a = -0.869068 - 0.875953I$ $b = 0.249847 - 0.830961I$	$3.22915 + 0.49581I$	0
$u = 0.496910 + 0.969309I$ $a = -4.30112 - 0.91811I$ $b = 0.847726 - 0.924734I$	$-7.00971 + 5.82431I$	0
$u = 0.496910 - 0.969309I$ $a = -4.30112 + 0.91811I$ $b = 0.847726 + 0.924734I$	$-7.00971 - 5.82431I$	0
$u = -0.307628 + 1.048570I$ $a = -1.38854 + 1.25263I$ $b = 0.882149 - 0.968150I$	$-10.51930 + 2.73208I$	0
$u = -0.307628 - 1.048570I$ $a = -1.38854 - 1.25263I$ $b = 0.882149 + 0.968150I$	$-10.51930 - 2.73208I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.501616 + 0.982193I$ $a = 0.352505 - 0.078570I$ $b = -0.538847 + 1.044320I$	$-0.517012 - 0.811673I$	0
$u = -0.501616 - 0.982193I$ $a = 0.352505 + 0.078570I$ $b = -0.538847 - 1.044320I$	$-0.517012 + 0.811673I$	0
$u = -0.716350 + 0.537726I$ $a = -0.74398 + 1.45731I$ $b = 0.067086 + 0.995847I$	$4.33816 + 2.12439I$	0
$u = -0.716350 - 0.537726I$ $a = -0.74398 - 1.45731I$ $b = 0.067086 - 0.995847I$	$4.33816 - 2.12439I$	0
$u = -0.336126 + 1.063530I$ $a = -2.21471 - 0.40695I$ $b = 0.921333 + 0.890200I$	$-10.77110 - 3.90533I$	0
$u = -0.336126 - 1.063530I$ $a = -2.21471 + 0.40695I$ $b = 0.921333 - 0.890200I$	$-10.77110 + 3.90533I$	0
$u = -0.786461 + 0.400210I$ $a = -0.453433 + 0.190964I$ $b = 0.683514 + 0.292441I$	$0.06293 + 3.86040I$	0
$u = -0.786461 - 0.400210I$ $a = -0.453433 - 0.190964I$ $b = 0.683514 - 0.292441I$	$0.06293 - 3.86040I$	0
$u = -0.248408 + 0.815682I$ $a = -0.620667 + 0.770716I$ $b = -0.215599 + 0.978033I$	$0.03402 + 1.62772I$	$0. - 5.83773I$
$u = -0.248408 - 0.815682I$ $a = -0.620667 - 0.770716I$ $b = -0.215599 - 0.978033I$	$0.03402 - 1.62772I$	$0. + 5.83773I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.131774 + 1.152770I$ $a = -1.45241 - 0.17244I$ $b = 0.652615 + 0.482184I$	$-5.04933 + 1.45448I$	0
$u = -0.131774 - 1.152770I$ $a = -1.45241 + 0.17244I$ $b = 0.652615 - 0.482184I$	$-5.04933 - 1.45448I$	0
$u = 0.618669 + 0.564064I$ $a = -0.731160 + 0.168587I$ $b = 0.337857 + 0.044079I$	$1.11274 + 1.43343I$	0
$u = 0.618669 - 0.564064I$ $a = -0.731160 - 0.168587I$ $b = 0.337857 - 0.044079I$	$1.11274 - 1.43343I$	0
$u = -0.486797 + 0.675531I$ $a = 2.08735 - 1.12575I$ $b = -0.605434 - 0.973948I$	$0.48275 - 3.26120I$	0
$u = -0.486797 - 0.675531I$ $a = 2.08735 + 1.12575I$ $b = -0.605434 + 0.973948I$	$0.48275 + 3.26120I$	0
$u = -0.515401 + 1.049240I$ $a = 1.234010 - 0.202961I$ $b = -0.795511 - 0.414270I$	$-2.53671 - 5.70933I$	0
$u = -0.515401 - 1.049240I$ $a = 1.234010 + 0.202961I$ $b = -0.795511 + 0.414270I$	$-2.53671 + 5.70933I$	0
$u = 0.494599 + 0.643086I$ $a = -1.04179 + 1.56013I$ $b = 0.833613 + 0.904001I$	$-6.02813 - 1.72993I$	$-7.66096 + 0.I$
$u = 0.494599 - 0.643086I$ $a = -1.04179 - 1.56013I$ $b = 0.833613 - 0.904001I$	$-6.02813 + 1.72993I$	$-7.66096 + 0.I$

Solutions to I^u_1	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.520441 + 1.079590I$ $a = -2.50628 + 0.70243I$ $b = 0.833253 + 1.003160I$	$-9.09740 - 9.67597I$	0
$u = -0.520441 - 1.079590I$ $a = -2.50628 - 0.70243I$ $b = 0.833253 - 1.003160I$	$-9.09740 + 9.67597I$	0
$u = -0.497538 + 1.092080I$ $a = -0.40904 + 1.48452I$ $b = 0.914869 - 0.818882I$	$-9.68241 - 3.22210I$	0
$u = -0.497538 - 1.092080I$ $a = -0.40904 - 1.48452I$ $b = 0.914869 + 0.818882I$	$-9.68241 + 3.22210I$	0
$u = -0.603639 + 1.040350I$ $a = 0.712076 - 0.808224I$ $b = 0.024797 - 1.053490I$	$2.83612 - 7.19113I$	0
$u = -0.603639 - 1.040350I$ $a = 0.712076 + 0.808224I$ $b = 0.024797 + 1.053490I$	$2.83612 + 7.19113I$	0
$u = -0.008517 + 1.202810I$ $a = -1.171860 + 0.337612I$ $b = 0.495583 - 0.885320I$	$-3.75875 + 5.69385I$	0
$u = -0.008517 - 1.202810I$ $a = -1.171860 - 0.337612I$ $b = 0.495583 + 0.885320I$	$-3.75875 - 5.69385I$	0
$u = 0.521857 + 1.085650I$ $a = -0.694262 - 0.567269I$ $b = 0.362113 + 0.388664I$	$-0.46985 + 2.99535I$	0
$u = 0.521857 - 1.085650I$ $a = -0.694262 + 0.567269I$ $b = 0.362113 - 0.388664I$	$-0.46985 - 2.99535I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.724609 + 0.963903I$ $a = -0.147279 + 0.759365I$ $b = 0.177058 + 0.763394I$	$1.92331 + 2.16760I$	0
$u = 0.724609 - 0.963903I$ $a = -0.147279 - 0.759365I$ $b = 0.177058 - 0.763394I$	$1.92331 - 2.16760I$	0
$u = 0.466118 + 0.606924I$ $a = 0.376644 + 0.066273I$ $b = 0.831644 - 0.905874I$	$-6.02130 + 4.47862I$	$-6.84478 - 6.25873I$
$u = 0.466118 - 0.606924I$ $a = 0.376644 - 0.066273I$ $b = 0.831644 + 0.905874I$	$-6.02130 - 4.47862I$	$-6.84478 + 6.25873I$
$u = -0.600794 + 1.108700I$ $a = -0.615812 + 0.860511I$ $b = 0.763068 - 0.309131I$	$-2.02943 - 9.07322I$	0
$u = -0.600794 - 1.108700I$ $a = -0.615812 - 0.860511I$ $b = 0.763068 + 0.309131I$	$-2.02943 + 9.07322I$	0
$u = 0.981681 + 0.808812I$ $a = 1.44463 + 0.39076I$ $b = -0.824528 + 0.920065I$	$-3.67065 + 6.52415I$	0
$u = 0.981681 - 0.808812I$ $a = 1.44463 - 0.39076I$ $b = -0.824528 - 0.920065I$	$-3.67065 - 6.52415I$	0
$u = 0.962702 + 0.841959I$ $a = 0.705311 + 0.351305I$ $b = -0.834536 - 0.886420I$	$-3.77486 + 0.33567I$	0
$u = 0.962702 - 0.841959I$ $a = 0.705311 - 0.351305I$ $b = -0.834536 + 0.886420I$	$-3.77486 - 0.33567I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.642079+1.111450I$ $a=-1.86968+0.86375I$ $b=\ \ 0.452310+1.017020I$	$0.28760-13.45100I$	0
$u=-0.642079-1.111450I$ $a=-1.86968-0.86375I$ $b=\ \ 0.452310-1.017020I$	$0.28760+13.45100I$	0
$u=\ \ 0.653023+1.146890I$ $a=-1.71130-0.69568I$ $b=\ \ 0.377764-0.847444I$	$0.84141+6.09074I$	0
$u=\ \ 0.653023-1.146890I$ $a=-1.71130+0.69568I$ $b=\ \ 0.377764+0.847444I$	$0.84141-6.09074I$	0
$u=-0.602288+0.306455I$ $a=-0.500477-0.775423I$ $b=\ \ 0.829104-0.966580I$	$-6.94884+5.24603I$	$-0.89797-3.65025I$
$u=-0.602288-0.306455I$ $a=-0.500477+0.775423I$ $b=\ \ 0.829104+0.966580I$	$-6.94884-5.24603I$	$-0.89797+3.65025I$
$u=-0.643378+1.170880I$ $a=\ \ 0.49879-1.47590I$ $b=-0.917934+0.838845I$	$-8.8221-11.2866I$	0
$u=-0.643378-1.170880I$ $a=\ \ 0.49879+1.47590I$ $b=-0.917934-0.838845I$	$-8.8221+11.2866I$	0
$u=-0.654680+1.169780I$ $a=\ \ 2.50773-0.59269I$ $b=-0.845297-0.994247I$	$-8.3247-17.7909I$	0
$u=-0.654680-1.169780I$ $a=\ \ 2.50773+0.59269I$ $b=-0.845297+0.994247I$	$-8.3247+17.7909I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.106772 + 1.336530I$ $a = 1.94764 + 0.93501I$ $b = -0.895094 - 0.877393I$	$-12.53720 + 2.14016I$	0
$u = -0.106772 - 1.336530I$ $a = 1.94764 - 0.93501I$ $b = -0.895094 + 0.877393I$	$-12.53720 - 2.14016I$	0
$u = -0.608796 + 0.241383I$ $a = -0.260844 + 0.431600I$ $b = 0.878462 + 0.850220I$	$-7.31889 - 1.08877I$	$-1.71710 + 1.55322I$
$u = -0.608796 - 0.241383I$ $a = -0.260844 - 0.431600I$ $b = 0.878462 - 0.850220I$	$-7.31889 + 1.08877I$	$-1.71710 - 1.55322I$
$u = -0.085403 + 1.345550I$ $a = 1.94973 - 0.89454I$ $b = -0.857458 + 0.959884I$	$-12.2733 + 8.6180I$	0
$u = -0.085403 - 1.345550I$ $a = 1.94973 + 0.89454I$ $b = -0.857458 - 0.959884I$	$-12.2733 - 8.6180I$	0
$u = 0.590589 + 1.280660I$ $a = 1.03845 + 1.35814I$ $b = -0.859053 - 0.878861I$	$-6.71027 + 2.59153I$	0
$u = 0.590589 - 1.280660I$ $a = 1.03845 - 1.35814I$ $b = -0.859053 + 0.878861I$	$-6.71027 - 2.59153I$	0
$u = 0.61589 + 1.27907I$ $a = 2.40565 + 0.04727I$ $b = -0.837169 + 0.937778I$	$-6.52555 + 8.89397I$	0
$u = 0.61589 - 1.27907I$ $a = 2.40565 - 0.04727I$ $b = -0.837169 - 0.937778I$	$-6.52555 - 8.89397I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.397629 + 0.335038I$ $a = -0.446115 - 0.890174I$ $b = -0.617980 + 0.502353I$	$-0.69586 + 1.56046I$	$-1.20236 - 4.38031I$
$u = -0.397629 - 0.335038I$ $a = -0.446115 + 0.890174I$ $b = -0.617980 - 0.502353I$	$-0.69586 - 1.56046I$	$-1.20236 + 4.38031I$
$u = -0.190813 + 0.456129I$ $a = -0.26886 - 1.66079I$ $b = -0.597450 + 0.605363I$	$-0.67284 + 1.56655I$	$-1.33932 - 5.04903I$
$u = -0.190813 - 0.456129I$ $a = -0.26886 + 1.66079I$ $b = -0.597450 - 0.605363I$	$-0.67284 - 1.56655I$	$-1.33932 + 5.04903I$
$u = -0.042138 + 0.164105I$ $a = -3.50773 + 1.29660I$ $b = -0.338604 + 0.829605I$	$0.35198 + 1.84473I$	$0.73666 - 4.91315I$
$u = -0.042138 - 0.164105I$ $a = -3.50773 - 1.29660I$ $b = -0.338604 - 0.829605I$	$0.35198 - 1.84473I$	$0.73666 + 4.91315I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -8u + 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.500000 + 0.866025I$ $a = -2.50000 - 0.86603I$ $b = \quad 0.500000 - 0.866025I$	$4.05977I$	$0. - 6.92820I$
$u = \quad 0.500000 - 0.866025I$ $a = -2.50000 + 0.86603I$ $b = \quad 0.500000 + 0.866025I$	$-4.05977I$	$0. + 6.92820I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.500000 + 0.866025I$ $a = -1.00000$ $b = 0.500000 + 0.866025I$	0	3.00000
$u = 0.500000 - 0.866025I$ $a = -1.00000$ $b = 0.500000 - 0.866025I$	0	3.00000

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^2)(u^{96}+43u^{95}+\cdots+80u+1)$
c_2	$((u^2+u+1)^2)(u^{96}+3u^{95}+\cdots+12u+1)$
c_3	$((u+1)^2)(u^2-u+1)(u^{96}+42u^{94}+\cdots+1035u+643)$
c_4	$((u+1)^2)(u^2-u+1)(u^{96}-2u^{95}+\cdots+13621u+1921)$
c_5	$((u^2-u+1)^2)(u^{96}+3u^{95}+\cdots+12u+1)$
c_6	$((u^2-u+1)^2)(u^{96}+3u^{95}+\cdots-2u+1)$
c_7	$((u^2+u+1)^2)(u^{96}-7u^{95}+\cdots+4u^2+1)$
c_8, c_9	$((u^2+u+1)^2)(u^{96}-23u^{95}+\cdots-8u+1)$
c_{10}	$((u^2+u+1)^2)(u^{96}+3u^{95}+\cdots-2u+1)$
c_{11}	$((u^2-u+1)^2)(u^{96}-23u^{95}+\cdots-8u+1)$
c_{12}	$u^4(u^{96}+9u^{95}+\cdots-16u+16)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^2)(y^{96}+23y^{95}+\cdots-1248y+1)$
c_2, c_5	$((y^2+y+1)^2)(y^{96}+43y^{95}+\cdots+80y+1)$
c_3	$((y-1)^2)(y^2+y+1)(y^{96}+84y^{95}+\cdots-1.39094\times10^7y+413449)$
c_4	$((y-1)^2)(y^2+y+1)(y^{96}+116y^{95}+\cdots+9.56989\times10^7y+3690241)$
c_6, c_{10}	$((y^2+y+1)^2)(y^{96}+23y^{95}+\cdots+8y+1)$
c_7	$((y^2+y+1)^2)(y^{96}+11y^{95}+\cdots+8y+1)$
c_8, c_9, c_{11}	$((y^2+y+1)^2)(y^{96}+103y^{95}+\cdots-48y+1)$
c_{12}	$y^4(y^{96}+25y^{95}+\cdots+2944y+256)$