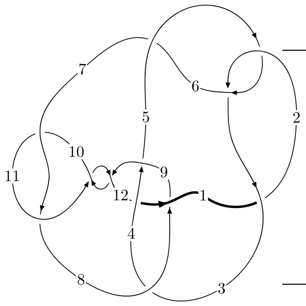
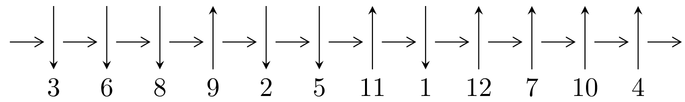
$12a_{0273}$ ($K12a_{0273}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 4.11782 \times 10^{111} u^{107} - 1.72896 \times 10^{112} u^{106} + \cdots + 2.70657 \times 10^{109} b + 5.15017 \times 10^{111}, \\
& - 9.18604 \times 10^{110} u^{107} + 3.85195 \times 10^{111} u^{106} + \cdots + 1.35329 \times 10^{109} a - 1.19005 \times 10^{111}, \\
& u^{108} - 5u^{107} + \cdots - 4u - 1 \rangle \\
I_2^u = \langle & b^3 - b^2 + 2b - 1,\ a,\ u - 1 \rangle \\
I_3^u = \langle & b,\ a - u - 1,\ u^3 + u^2 - 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 114 representations.

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[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. $I_1^u = \langle 4.12\times10^{111}u^{107} - 1.73\times10^{112}u^{106} + \cdots + 2.71\times10^{109}b + 5.15\times10^{111},\ -9.19\times10^{110}u^{107} + 3.85\times10^{111}u^{106} + \cdots + 1.35\times10^{109}a - 1.19\times10^{111},\ u^{108} - 5u^{107} + \cdots - 4u - 1\rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 67.8795u^{107} - 284.637u^{106} + \cdots + 399.400u + 87.9382 \\ -152.142u^{107} + 638.802u^{106} + \cdots - 1002.39u - 190.284 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 6.01771u^{107} - 24.3208u^{106} + \cdots + 36.1965u + 2.67705 \\ -5.22248u^{107} + 26.6576u^{106} + \cdots - 58.8780u - 11.2402 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -48.5904u^{107} + 202.556u^{106} + \cdots - 350.712u - 55.3704 \\ -190.876u^{107} + 800.455u^{106} + \cdots - 1255.40u - 238.436 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^4 - u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -48.3647u^{107} + 201.869u^{106} + \cdots - 350.353u - 54.7783 \\ -216.521u^{107} + 905.574u^{106} + \cdots - 1403.65u - 267.141 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 16.3787u^{107} - 67.4197u^{106} + \cdots + 101.379u + 11.9449 \\ 46.8149u^{107} - 192.264u^{106} + \cdots + 275.135u + 52.5332 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -12.7836u^{107} + 52.3966u^{106} + \cdots - 69.4987u - 11.0363 \\ -42.8242u^{107} + 178.501u^{106} + \cdots - 268.820u - 51.4147 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -359.027u^{107} + 1549.26u^{106} + \cdots - 2737.10u - 515.927$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{108} + 35u^{107} + \cdots + 146u + 1$
c_2, c_5	$u^{108} + 5u^{107} + \cdots + 4u - 1$
c_3	$u^{108} + u^{107} + \cdots - 163u - 383$
c_4	$u^{108} - u^{107} + \cdots + 163u - 383$
c_7, c_{10}	$u^{108} - 5u^{107} + \cdots - 4u - 1$
c_8	$u^{108} - 10u^{107} + \cdots - 12u + 8$
c_9, c_{11}	$u^{108} - 35u^{107} + \cdots - 146u + 1$
c_{12}	$u^{108} + 10u^{107} + \cdots + 12u + 8$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_9 c_{11}	$y^{108} + 81y^{107} + \cdots - 19954y + 1$
c_2, c_5, c_7 c_{10}	$y^{108} - 35y^{107} + \cdots - 146y + 1$
c_3, c_4	$y^{108} + 123y^{107} + \cdots - 3629833y + 146689$
c_8, c_{12}	$y^{108} + 18y^{107} + \cdots + 1904y + 64$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.979728 + 0.166940I$ $a = -1.038070 + 0.480900I$ $b = 0.136075 + 0.665202I$	$3.19306 - 3.71797I$	0
$u = -0.979728 - 0.166940I$ $a = -1.038070 - 0.480900I$ $b = 0.136075 - 0.665202I$	$3.19306 + 3.71797I$	0
$u = -0.605005 + 0.787681I$ $a = 0.845635 - 0.095086I$ $b = 0.962946 + 0.612440I$	$-2.14715 - 1.03507I$	0
$u = -0.605005 - 0.787681I$ $a = 0.845635 + 0.095086I$ $b = 0.962946 - 0.612440I$	$-2.14715 + 1.03507I$	0
$u = 0.715108 + 0.670386I$ $a = 0.771317 + 0.384628I$ $b = 0.157147 - 1.104620I$	$2.14715 + 1.03507I$	0
$u = 0.715108 - 0.670386I$ $a = 0.771317 - 0.384628I$ $b = 0.157147 + 1.104620I$	$2.14715 - 1.03507I$	0
$u = -0.973353 + 0.047519I$ $a = -1.02470 - 1.12942I$ $b = -0.075717 - 1.064180I$	$7.14796 + 0.81738I$	0
$u = -0.973353 - 0.047519I$ $a = -1.02470 + 1.12942I$ $b = -0.075717 + 1.064180I$	$7.14796 - 0.81738I$	0
$u = -0.956601 + 0.099212I$ $a = 0.99426 + 1.23398I$ $b = 0.124520 + 1.135330I$	$6.35502 - 5.36585I$	0
$u = -0.956601 - 0.099212I$ $a = 0.99426 - 1.23398I$ $b = 0.124520 - 1.135330I$	$6.35502 + 5.36585I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.745810 + 0.744346I$ $a = -1.027490 - 0.410866I$ $b = -0.451934 + 1.247910I$	$0.82383 - 4.62628I$	0
$u = 0.745810 - 0.744346I$ $a = -1.027490 + 0.410866I$ $b = -0.451934 - 1.247910I$	$0.82383 + 4.62628I$	0
$u = 0.850637 + 0.406962I$ $a = 0.080872 + 0.341351I$ $b = -0.238152 - 0.726384I$	$1.82900 + 1.35958I$	0
$u = 0.850637 - 0.406962I$ $a = 0.080872 - 0.341351I$ $b = -0.238152 + 0.726384I$	$1.82900 - 1.35958I$	0
$u = -1.019000 + 0.284607I$ $a = 0.769824 - 0.155699I$ $b = -0.374588 - 0.510091I$	$-7.09355I$	0
$u = -1.019000 - 0.284607I$ $a = 0.769824 + 0.155699I$ $b = -0.374588 + 0.510091I$	$7.09355I$	0
$u = 0.862762 + 0.622752I$ $a = -1.58251 - 1.51375I$ $b = -2.86284 + 0.83647I$	$3.75903 - 0.77126I$	0
$u = 0.862762 - 0.622752I$ $a = -1.58251 + 1.51375I$ $b = -2.86284 - 0.83647I$	$3.75903 + 0.77126I$	0
$u = -0.616674 + 0.874327I$ $a = -0.865658 + 0.308655I$ $b = -1.042850 - 0.462236I$	$-2.85537 + 4.21466I$	0
$u = -0.616674 - 0.874327I$ $a = -0.865658 - 0.308655I$ $b = -1.042850 + 0.462236I$	$-2.85537 - 4.21466I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.814404 + 0.714383I$ $a = 1.00553 + 2.14684I$ $b = -0.52002 + 1.34231I$	$-4.57359I$	0
$u = -0.814404 - 0.714383I$ $a = 1.00553 - 2.14684I$ $b = -0.52002 - 1.34231I$	$4.57359I$	0
$u = 0.744550 + 0.799387I$ $a = -1.43674 - 1.59030I$ $b = -2.50978 - 0.05086I$	$-3.11037 - 2.87230I$	0
$u = 0.744550 - 0.799387I$ $a = -1.43674 + 1.59030I$ $b = -2.50978 + 0.05086I$	$-3.11037 + 2.87230I$	0
$u = 0.907254 + 0.638959I$ $a = 1.66458 + 1.44541I$ $b = 2.94097 - 0.92211I$	$3.93257 + 5.67737I$	0
$u = 0.907254 - 0.638959I$ $a = 1.66458 - 1.44541I$ $b = 2.94097 + 0.92211I$	$3.93257 - 5.67737I$	0
$u = -0.821570 + 0.746772I$ $a = -1.20102 - 2.36279I$ $b = 0.40213 - 1.66223I$	$-0.298325 + 0.873313I$	0
$u = -0.821570 - 0.746772I$ $a = -1.20102 + 2.36279I$ $b = 0.40213 + 1.66223I$	$-0.298325 - 0.873313I$	0
$u = 0.693031 + 0.877224I$ $a = -1.53841 - 1.50089I$ $b = -2.30877 - 0.13072I$	$-6.29181I$	0
$u = 0.693031 - 0.877224I$ $a = -1.53841 + 1.50089I$ $b = -2.30877 + 0.13072I$	$6.29181I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.870551 + 0.703926I$ $a = -0.881042 + 0.605315I$ $b = 0.58910 + 2.04797I$	$-3.89287 + 2.70030I$	0
$u = 0.870551 - 0.703926I$ $a = -0.881042 - 0.605315I$ $b = 0.58910 - 2.04797I$	$-3.89287 - 2.70030I$	0
$u = -0.816700 + 0.769783I$ $a = 1.72760 - 0.26942I$ $b = 1.63286 + 0.89494I$	$-3.53829 - 1.78224I$	0
$u = -0.816700 - 0.769783I$ $a = 1.72760 + 0.26942I$ $b = 1.63286 - 0.89494I$	$-3.53829 + 1.78224I$	0
$u = 0.803722 + 0.787733I$ $a = 1.32736 + 1.65587I$ $b = 2.73483 + 0.18727I$	$-6.28442 + 1.49926I$	0
$u = 0.803722 - 0.787733I$ $a = 1.32736 - 1.65587I$ $b = 2.73483 - 0.18727I$	$-6.28442 - 1.49926I$	0
$u = 1.112550 + 0.201315I$ $a = 0.154894 - 0.326872I$ $b = 0.202520 + 0.144144I$	$0.629927 - 0.566671I$	0
$u = 1.112550 - 0.201315I$ $a = 0.154894 + 0.326872I$ $b = 0.202520 - 0.144144I$	$0.629927 + 0.566671I$	0
$u = 0.866946$ $a = 0.530489$ $b = -0.445872$	1.43135	0
$u = 0.700693 + 0.895805I$ $a = 1.54343 + 1.47096I$ $b = 2.30224 + 0.16065I$	$-1.06026 - 12.34350I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.700693 - 0.895805I$ $a = 1.54343 - 1.47096I$ $b = 2.30224 - 0.16065I$	$-1.06026 + 12.34350I$	0
$u = 0.752822 + 0.857130I$ $a = 1.43527 + 1.49045I$ $b = 2.41571 + 0.18143I$	$-7.40743 - 6.11835I$	0
$u = 0.752822 - 0.857130I$ $a = 1.43527 - 1.49045I$ $b = 2.41571 - 0.18143I$	$-7.40743 + 6.11835I$	0
$u = -1.126570 + 0.214725I$ $a = -0.564137 + 0.491665I$ $b = 0.450345 + 0.778573I$	$7.40743 - 6.11835I$	0
$u = -1.126570 - 0.214725I$ $a = -0.564137 - 0.491665I$ $b = 0.450345 - 0.778573I$	$7.40743 + 6.11835I$	0
$u = 0.107937 + 0.844817I$ $a = -0.365482 - 0.693695I$ $b = 0.131212 + 0.293224I$	$2.38418 + 8.65987I$	0
$u = 0.107937 - 0.844817I$ $a = -0.365482 + 0.693695I$ $b = 0.131212 - 0.293224I$	$2.38418 - 8.65987I$	0
$u = -0.912663 + 0.707599I$ $a = 2.08182 + 1.46268I$ $b = 0.95698 + 2.07662I$	$0.298325 - 0.873313I$	0
$u = -0.912663 - 0.707599I$ $a = 2.08182 - 1.46268I$ $b = 0.95698 - 2.07662I$	$0.298325 + 0.873313I$	0
$u = -0.878636 + 0.753546I$ $a = -2.34831 - 3.13274I$ $b = 0.00650 - 3.16279I$	$-4.37927 - 2.85474I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.878636 - 0.753546I$ $a = -2.34831 + 3.13274I$ $b = 0.00650 + 3.16279I$	$-4.37927 + 2.85474I$	0
$u = -0.752213 + 0.881864I$ $a = -1.149800 + 0.436361I$ $b = -1.329100 - 0.473314I$	$-7.14796 - 0.81738I$	0
$u = -0.752213 - 0.881864I$ $a = -1.149800 - 0.436361I$ $b = -1.329100 + 0.473314I$	$-7.14796 + 0.81738I$	0
$u = -1.140280 + 0.239475I$ $a = 0.499762 - 0.446388I$ $b = -0.505072 - 0.759246I$	$6.64063 - 12.17460I$	0
$u = -1.140280 - 0.239475I$ $a = 0.499762 + 0.446388I$ $b = -0.505072 + 0.759246I$	$6.64063 + 12.17460I$	0
$u = 0.829074 + 0.011014I$ $a = -0.07425 - 1.42512I$ $b = -0.16570 + 4.05652I$	$4.37927 + 2.85474I$	0
$u = 0.829074 - 0.011014I$ $a = -0.07425 + 1.42512I$ $b = -0.16570 - 4.05652I$	$4.37927 - 2.85474I$	0
$u = -0.918379 + 0.727605I$ $a = -2.14206 - 1.70389I$ $b = -0.85806 - 2.22807I$	$-\ 6.47878I$	0
$u = -0.918379 - 0.727605I$ $a = -2.14206 + 1.70389I$ $b = -0.85806 + 2.22807I$	$6.47878I$	0
$u = -0.819143 + 0.114490I$ $a = 1.78431 - 0.53842I$ $b = 0.292058 - 0.533870I$	$-0.629927 - 0.566671I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.819143 - 0.114490I$ $a = 1.78431 + 0.53842I$ $b = 0.292058 + 0.533870I$	$-0.629927 + 0.566671I$	0
$u = 0.958471 + 0.677586I$ $a = 0.012558 - 0.529487I$ $b = -1.14801 - 1.14971I$	$2.85537 + 4.21466I$	0
$u = 0.958471 - 0.677586I$ $a = 0.012558 + 0.529487I$ $b = -1.14801 + 1.14971I$	$2.85537 - 4.21466I$	0
$u = 0.146172 + 0.809684I$ $a = 0.429990 + 0.687130I$ $b = -0.097622 - 0.338027I$	$3.11037 + 2.87230I$	0
$u = 0.146172 - 0.809684I$ $a = 0.429990 - 0.687130I$ $b = -0.097622 + 0.338027I$	$3.11037 - 2.87230I$	0
$u = -0.935562 + 0.738376I$ $a = -0.74515 + 1.49429I$ $b = -1.68440 + 0.26171I$	$-3.16513 - 3.92976I$	0
$u = -0.935562 - 0.738376I$ $a = -0.74515 - 1.49429I$ $b = -1.68440 - 0.26171I$	$-3.16513 + 3.92976I$	0
$u = 0.963977 + 0.711243I$ $a = 0.112037 + 0.707021I$ $b = 1.39808 + 1.15135I$	$1.48137 + 10.17620I$	0
$u = 0.963977 - 0.711243I$ $a = 0.112037 - 0.707021I$ $b = 1.39808 - 1.15135I$	$1.48137 - 10.17620I$	0
$u = 0.943219 + 0.748695I$ $a = -1.91135 - 1.20561I$ $b = -2.71010 + 1.24978I$	$-5.85299 + 4.29300I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.943219 - 0.748695I$ $a = -1.91135 + 1.20561I$ $b = -2.71010 - 1.24978I$	$-5.85299 - 4.29300I$	0
$u = 1.138430 + 0.405967I$ $a = -0.245790 + 0.237091I$ $b = -0.558583 - 0.249422I$	$6.28442 + 1.49926I$	0
$u = 1.138430 - 0.405967I$ $a = -0.245790 - 0.237091I$ $b = -0.558583 + 0.249422I$	$6.28442 - 1.49926I$	0
$u = 1.165830 + 0.377480I$ $a = 0.253866 - 0.276152I$ $b = 0.523546 + 0.178040I$	$5.85299 - 4.29300I$	0
$u = 1.165830 - 0.377480I$ $a = 0.253866 + 0.276152I$ $b = 0.523546 - 0.178040I$	$5.85299 + 4.29300I$	0
$u = 0.982453 + 0.737148I$ $a = 1.81148 + 1.22461I$ $b = 2.71926 - 1.02344I$	$-2.38418 + 8.65987I$	0
$u = 0.982453 - 0.737148I$ $a = 1.81148 - 1.22461I$ $b = 2.71926 + 1.02344I$	$-2.38418 - 8.65987I$	0
$u = 1.228270 + 0.025249I$ $a = 0.023097 - 0.406949I$ $b = 0.0309378 - 0.0677333I$	$3.89287 + 2.70030I$	0
$u = 1.228270 - 0.025249I$ $a = 0.023097 + 0.406949I$ $b = 0.0309378 + 0.0677333I$	$3.89287 - 2.70030I$	0
$u = -0.873340 + 0.892543I$ $a = -1.209720 + 0.689510I$ $b = -1.55362 - 0.32280I$	$-3.93257 - 5.67737I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.873340-0.892543I$ $a=-1.209720-0.689510I$ $b=-1.55362+0.32280I$	$-3.93257+5.67737I$	0
$u=\ \ 1.000250+0.769183I$ $a=-1.78545-1.18517I$ $b=-2.58944+0.94144I$	$-6.64063+12.17460I$	0
$u=\ \ 1.000250-0.769183I$ $a=-1.78545+1.18517I$ $b=-2.58944-0.94144I$	$-6.64063-12.17460I$	0
$u=-1.052770+0.702532I$ $a=-0.448401+0.782629I$ $b=-1.317170-0.072692I$	$-0.82383-4.62628I$	0
$u=-1.052770-0.702532I$ $a=-0.448401-0.782629I$ $b=-1.317170+0.072692I$	$-0.82383+4.62628I$	0
$u=-0.926658+0.863457I$ $a=\ \ 1.15989-0.81420I$ $b=\ \ 1.62405+0.23900I$	$-3.75903-0.77126I$	0
$u=-0.926658-0.863457I$ $a=\ \ 1.15989+0.81420I$ $b=\ \ 1.62405-0.23900I$	$-3.75903+0.77126I$	0
$u=\ \ 0.728160+0.046370I$ $a=-0.66850-1.61942I$ $b=-0.14823+2.49858I$	$0.189074I$	$0.+28.3801I$
$u=\ \ 0.728160-0.046370I$ $a=-0.66850+1.61942I$ $b=-0.14823-2.49858I$	$-\ 0.189074I$	$0.-28.3801I$
$u=-0.040621+0.727326I$ $a=-0.307045-0.417238I$ $b=\ \ 0.282641+0.401543I$	$-3.19306+3.71797I$	$-7.99700-6.03379I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.040621 - 0.727326I$ $a = -0.307045 + 0.417238I$ $b = 0.282641 - 0.401543I$	$-3.19306 - 3.71797I$	$-7.99700 + 6.03379I$
$u = -1.008830 + 0.787104I$ $a = 0.809220 - 0.908283I$ $b = 1.53280 + 0.07933I$	$-6.35502 - 5.36585I$	0
$u = -1.008830 - 0.787104I$ $a = 0.809220 + 0.908283I$ $b = 1.53280 - 0.07933I$	$-6.35502 + 5.36585I$	0
$u = 1.036810 + 0.752906I$ $a = 1.76373 + 1.20388I$ $b = 2.68109 - 0.82580I$	$1.06026 + 12.34350I$	0
$u = 1.036810 - 0.752906I$ $a = 1.76373 - 1.20388I$ $b = 2.68109 + 0.82580I$	$1.06026 - 12.34350I$	0
$u = 1.042110 + 0.763618I$ $a = -1.76085 - 1.20027I$ $b = -2.65325 + 0.79823I$	$18.4856I$	0
$u = 1.042110 - 0.763618I$ $a = -1.76085 + 1.20027I$ $b = -2.65325 - 0.79823I$	$-18.4856I$	0
$u = -1.070750 + 0.729666I$ $a = 0.557130 - 0.725560I$ $b = 1.369710 + 0.123145I$	$-1.48137 - 10.17620I$	0
$u = -1.070750 - 0.729666I$ $a = 0.557130 + 0.725560I$ $b = 1.369710 - 0.123145I$	$-1.48137 + 10.17620I$	0
$u = -0.389762 + 0.419664I$ $a = -0.003557 + 0.670504I$ $b = 0.383901 + 0.766173I$	$-1.82900 - 1.35958I$	$-6.75012 + 4.20503I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.389762-0.419664I$ $a=-0.003557-0.670504I$ $b=0.383901-0.766173I$	$-1.82900+1.35958I$	$-6.75012-4.20503I$
$u=0.081768+0.490352I$ $a=0.807289+0.395788I$ $b=-0.204785-0.561810I$	$1.56023I$	$0.-4.13499I$
$u=0.081768-0.490352I$ $a=0.807289-0.395788I$ $b=-0.204785+0.561810I$	$-1.56023I$	$0.+4.13499I$
$u=0.289293+0.350302I$ $a=-1.33071-2.46775I$ $b=-1.131410+0.476487I$	$3.53829-1.78224I$	$0.68145+3.51053I$
$u=0.289293-0.350302I$ $a=-1.33071+2.46775I$ $b=-1.131410-0.476487I$	$3.53829+1.78224I$	$0.68145-3.51053I$
$u=0.156084+0.371239I$ $a=1.74465+2.65310I$ $b=1.025570-0.251004I$	$3.16513+3.92976I$	$-0.15289-2.12894I$
$u=0.156084-0.371239I$ $a=1.74465-2.65310I$ $b=1.025570+0.251004I$	$3.16513-3.92976I$	$-0.15289+2.12894I$
$u=-0.0841052$ $a=8.43911$ $b=0.504757$	-1.43135	-6.90500

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -7b^2 + 5b - 5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0$ $b = 0.215080 + 1.307140I$	$4.66906 - 2.82812I$	$7.71191 + 2.59975I$
$u = 1.00000$ $a = 0$ $b = 0.215080 - 1.307140I$	$4.66906 + 2.82812I$	$7.71191 - 2.59975I$
$u = 1.00000$ $a = 0$ $b = 0.569840$	0.531480	−4.42380

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

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ u^2 + u - 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u + 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 - u \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^2 + u \\ u^2 - u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ u^2 + u - 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^2 + u \\ u^2 - u \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 2u^2 + 7u - 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.877439 + 0.744862I$ $a = 0.122561 + 0.744862I$ $b = 0$	$-4.66906 - 2.82812I$	$-7.71191 + 2.59975I$
$u = -0.877439 - 0.744862I$ $a = 0.122561 - 0.744862I$ $b = 0$	$-4.66906 + 2.82812I$	$-7.71191 - 2.59975I$
$u = 0.754878$ $a = 1.75488$ $b = 0$	-0.531480	4.42380

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^3)(u^3-u^2+2u-1)(u^{108}+35u^{107}+\cdots+146u+1)$
c_2	$((u-1)^3)(u^3+u^2-1)(u^{108}+5u^{107}+\cdots+4u-1)$
c_3	$(u^3-u^2+2u-1)(u^3+u^2+2u+1)(u^{108}+u^{107}+\cdots-163u-383)$
c_4	$(u^3-u^2+2u-1)(u^3+u^2+2u+1)(u^{108}-u^{107}+\cdots+163u-383)$
c_5	$((u+1)^3)(u^3-u^2+1)(u^{108}+5u^{107}+\cdots+4u-1)$
c_6	$((u+1)^3)(u^3+u^2+2u+1)(u^{108}+35u^{107}+\cdots+146u+1)$
c_7	$((u+1)^3)(u^3-u^2+1)(u^{108}-5u^{107}+\cdots-4u-1)$
c_8	$u^3(u+1)^3(u^{108}-10u^{107}+\cdots-12u+8)$
c_9	$((u+1)^3)(u^3+u^2+2u+1)(u^{108}-35u^{107}+\cdots-146u+1)$
c_{10}	$((u-1)^3)(u^3+u^2-1)(u^{108}-5u^{107}+\cdots-4u-1)$
c_{11}	$((u-1)^3)(u^3-u^2+2u-1)(u^{108}-35u^{107}+\cdots-146u+1)$
c_{12}	$u^3(u-1)^3(u^{108}+10u^{107}+\cdots+12u+8)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_9 c_{11}	$((y-1)^3)(y^3+3y^2+2y-1)(y^{108}+81y^{107}+\cdots-19954y+1)$
c_2, c_5, c_7 c_{10}	$((y-1)^3)(y^3-y^2+2y-1)(y^{108}-35y^{107}+\cdots-146y+1)$
c_3, c_4	$((y^3+3y^2+2y-1)^2)(y^{108}+123y^{107}+\cdots-3629833y+146689)$
c_8, c_{12}	$y^3(y-1)^3(y^{108}+18y^{107}+\cdots+1904y+64)$