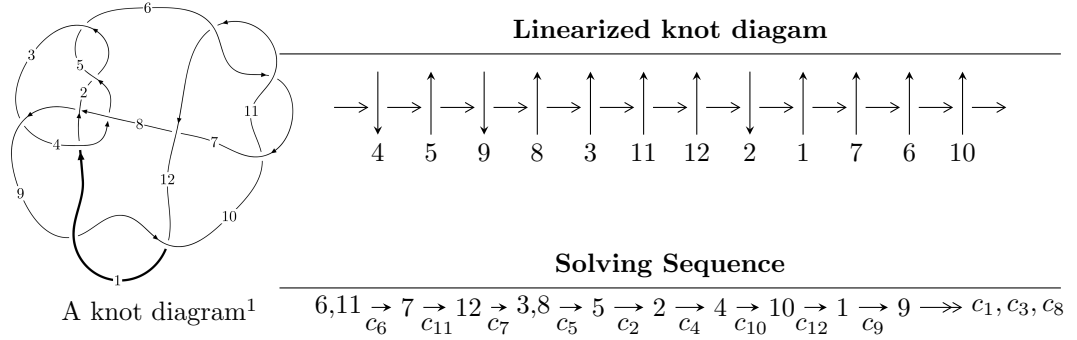


12a₀₈₄₉ (K12a₀₈₄₉)



Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 1.32931 \times 10^{30} u^{95} + 1.20412 \times 10^{30} u^{94} + \dots + 7.27256 \times 10^{30} b + 8.60188 \times 10^{30}, \\ - 5.06565 \times 10^{31} u^{95} - 6.53663 \times 10^{31} u^{94} + \dots + 7.27256 \times 10^{30} a - 1.00027 \times 10^{32}, u^{96} + 2u^{95} + \dots + 7u + 1 \rangle$$

$$I_2^u = \langle b - 1, 2u^2 + a + 2u + 4, u^3 + u^2 + 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 99 representations.

¹The 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>).

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

I.

$$I_1^u = \langle 1.33 \times 10^{30} u^{95} + 1.20 \times 10^{30} u^{94} + \dots + 7.27 \times 10^{30} b + 8.60 \times 10^{30}, -5.07 \times 10^{31} u^{95} - 6.54 \times 10^{31} u^{94} + \dots + 7.27 \times 10^{30} a - 1.00 \times 10^{32}, u^{96} + 2u^{95} + \dots + 7u + 1 \rangle$$

(i) Arc colorings

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

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

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

$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 6.96543u^{95} + 8.98808u^{94} + \dots + 78.9927u + 13.7540 \\ -0.182784u^{95} - 0.165570u^{94} + \dots - 1.10810u - 1.18279 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^4 - u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -6.95549u^{95} - 8.88213u^{94} + \dots - 78.9211u - 12.8011 \\ 0.268862u^{95} + 0.337722u^{94} + \dots + 1.56759u + 1.26886 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.202655u^{95} + 0.622541u^{94} + \dots + 0.748795u + 0.911274 \\ 0.827844u^{95} + 1.65570u^{94} + \dots + 5.08103u + 0.827852 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -5.15923u^{95} - 6.25695u^{94} + \dots - 50.6792u - 7.80846 \\ -1.49853u^{95} - 1.59703u^{94} + \dots - 10.8403u - 1.49850 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^5 + 2u^3 + u \\ -u^7 - 3u^5 - 2u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^9 - 4u^7 - 5u^5 - 2u^3 - u \\ u^{11} + 5u^9 + 8u^7 + 3u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-44.5807u^{95} - 59.4013u^{94} + \dots - 458.070u - 89.9807$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{96} - 15u^{95} + \dots + 20u + 8$
c_2, c_5	$u^{96} + 4u^{95} + \dots + 10u - 1$
c_3	$u^{96} - u^{95} + \dots - 3474u - 1117$
c_4	$u^{96} - 3u^{95} + \dots - 2u + 1$
c_6, c_{10}, c_{11}	$u^{96} - 2u^{95} + \dots - 7u + 1$
c_7	$u^{96} + 2u^{95} + \dots - 38535u + 4113$
c_8	$u^{96} + 4u^{95} + \dots - u - 1$
c_9, c_{12}	$u^{96} + 14u^{95} + \dots + 1779u + 99$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{96} - 21y^{95} + \dots - 1360y + 64$
c_2, c_5	$y^{96} - 56y^{95} + \dots - 94y + 1$
c_3	$y^{96} - 99y^{95} + \dots - 48978824y + 1247689$
c_4	$y^{96} - 87y^{95} + \dots - 252y + 1$
c_6, c_{10}, c_{11}	$y^{96} + 90y^{95} + \dots - y + 1$
c_7	$y^{96} + 34y^{95} + \dots + 341340939y + 16916769$
c_8	$y^{96} + 14y^{95} + \dots - y + 1$
c_9, c_{12}	$y^{96} + 82y^{95} + \dots + 834363y + 9801$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.153003 + 1.008460I$ $a = -0.271535 + 0.072599I$ $b = 1.206140 - 0.396842I$	$1.96795 - 5.00766I$	0
$u = 0.153003 - 1.008460I$ $a = -0.271535 - 0.072599I$ $b = 1.206140 + 0.396842I$	$1.96795 + 5.00766I$	0
$u = -0.703444 + 0.408687I$ $a = -0.91970 - 2.11043I$ $b = 1.31214 - 0.62793I$	$-1.73503 - 13.84140I$	$0. + 9.67099I$
$u = -0.703444 - 0.408687I$ $a = -0.91970 + 2.11043I$ $b = 1.31214 + 0.62793I$	$-1.73503 + 13.84140I$	$0. - 9.67099I$
$u = 0.632884 + 0.499159I$ $a = -0.268709 + 0.706768I$ $b = 0.518532 + 0.413160I$	$-4.70766 + 1.90436I$	0
$u = 0.632884 - 0.499159I$ $a = -0.268709 - 0.706768I$ $b = 0.518532 - 0.413160I$	$-4.70766 - 1.90436I$	0
$u = -0.587460 + 0.551315I$ $a = 0.372753 + 0.400441I$ $b = 1.28577 + 0.62488I$	$-2.27074 + 9.51260I$	0
$u = -0.587460 - 0.551315I$ $a = 0.372753 - 0.400441I$ $b = 1.28577 - 0.62488I$	$-2.27074 - 9.51260I$	0
$u = 0.668900 + 0.448574I$ $a = 0.236104 - 0.000583I$ $b = 0.415949 - 0.413487I$	$-4.52666 + 2.41894I$	0
$u = 0.668900 - 0.448574I$ $a = 0.236104 + 0.000583I$ $b = 0.415949 + 0.413487I$	$-4.52666 - 2.41894I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.702362 + 0.390466I$ $a = -1.03144 + 1.45734I$ $b = 0.973713 + 0.422095I$	$-3.01891 + 6.06655I$	$6.00000 - 8.45994I$
$u = 0.702362 - 0.390466I$ $a = -1.03144 - 1.45734I$ $b = 0.973713 - 0.422095I$	$-3.01891 - 6.06655I$	$6.00000 + 8.45994I$
$u = -0.204748 + 0.773490I$ $a = -0.174383 - 0.537365I$ $b = 1.142260 - 0.379821I$	$1.82630 - 5.03644I$	$6.00000 + 7.08141I$
$u = -0.204748 - 0.773490I$ $a = -0.174383 + 0.537365I$ $b = 1.142260 + 0.379821I$	$1.82630 + 5.03644I$	$6.00000 - 7.08141I$
$u = -0.673350 + 0.420505I$ $a = 1.196640 + 0.660554I$ $b = 0.196897 + 1.192440I$	$-5.26476 - 7.49346I$	$0. + 8.18355I$
$u = -0.673350 - 0.420505I$ $a = 1.196640 - 0.660554I$ $b = 0.196897 - 1.192440I$	$-5.26476 + 7.49346I$	$0. - 8.18355I$
$u = 0.555761 + 0.553665I$ $a = -0.120119 - 0.231294I$ $b = 0.904225 - 0.440262I$	$-3.65768 - 1.83252I$	$1.49951 + 2.23282I$
$u = 0.555761 - 0.553665I$ $a = -0.120119 + 0.231294I$ $b = 0.904225 + 0.440262I$	$-3.65768 + 1.83252I$	$1.49951 - 2.23282I$
$u = -0.595789 + 0.504630I$ $a = -0.597624 - 1.232220I$ $b = 0.234156 - 1.154180I$	$-5.60324 + 3.28204I$	$1.63591 - 1.83238I$
$u = -0.595789 - 0.504630I$ $a = -0.597624 + 1.232220I$ $b = 0.234156 + 1.154180I$	$-5.60324 - 3.28204I$	$1.63591 + 1.83238I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.024677 + 1.240660I$ $a = -1.063710 + 0.371465I$ $b = -0.402686 + 0.659868I$	$-2.09706 - 1.50142I$	0
$u = 0.024677 - 1.240660I$ $a = -1.063710 - 0.371465I$ $b = -0.402686 - 0.659868I$	$-2.09706 + 1.50142I$	0
$u = 0.628440 + 0.422747I$ $a = 0.70391 - 3.17518I$ $b = -0.978081 - 0.185709I$	$-1.52279 + 2.67235I$	$2.38465 + 7.06877I$
$u = 0.628440 - 0.422747I$ $a = 0.70391 + 3.17518I$ $b = -0.978081 + 0.185709I$	$-1.52279 - 2.67235I$	$2.38465 - 7.06877I$
$u = -0.641923 + 0.400628I$ $a = 0.68898 + 2.25835I$ $b = -1.18079 + 0.83093I$	$0.09155 - 5.48475I$	$8.75594 + 9.17307I$
$u = -0.641923 - 0.400628I$ $a = 0.68898 - 2.25835I$ $b = -1.18079 - 0.83093I$	$0.09155 + 5.48475I$	$8.75594 - 9.17307I$
$u = 0.126353 + 1.244880I$ $a = 0.007578 - 0.630595I$ $b = -1.44171 + 0.35254I$	$0.877763 + 0.830502I$	0
$u = 0.126353 - 1.244880I$ $a = 0.007578 + 0.630595I$ $b = -1.44171 - 0.35254I$	$0.877763 - 0.830502I$	0
$u = 0.600345 + 0.445280I$ $a = -0.07428 + 1.54911I$ $b = -0.932084 + 0.194970I$	$-1.63276 + 1.32893I$	$3.90509 - 12.70354I$
$u = 0.600345 - 0.445280I$ $a = -0.07428 - 1.54911I$ $b = -0.932084 - 0.194970I$	$-1.63276 - 1.32893I$	$3.90509 + 12.70354I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.256255 + 1.232760I$ $a = -0.695900 - 0.825623I$ $b = 0.840998 - 0.142886I$	$-1.81624 - 3.46446I$	0
$u = -0.256255 - 1.232760I$ $a = -0.695900 + 0.825623I$ $b = 0.840998 + 0.142886I$	$-1.81624 + 3.46446I$	0
$u = -0.565635 + 0.455915I$ $a = -1.076150 - 0.472763I$ $b = -1.092730 - 0.817335I$	$-0.19466 + 1.54393I$	$7.56354 - 2.53910I$
$u = -0.565635 - 0.455915I$ $a = -1.076150 + 0.472763I$ $b = -1.092730 + 0.817335I$	$-0.19466 - 1.54393I$	$7.56354 + 2.53910I$
$u = -0.697603 + 0.194178I$ $a = -0.968545 - 1.013010I$ $b = 1.096860 + 0.277903I$	$3.87528 + 1.50507I$	$10.52753 - 4.31904I$
$u = -0.697603 - 0.194178I$ $a = -0.968545 + 1.013010I$ $b = 1.096860 - 0.277903I$	$3.87528 - 1.50507I$	$10.52753 + 4.31904I$
$u = -0.595029 + 0.396930I$ $a = -0.08683 + 1.50601I$ $b = -1.58195 - 0.06129I$	$1.52959 - 1.86728I$	$10.94638 + 3.68908I$
$u = -0.595029 - 0.396930I$ $a = -0.08683 - 1.50601I$ $b = -1.58195 + 0.06129I$	$1.52959 + 1.86728I$	$10.94638 - 3.68908I$
$u = 0.167705 + 1.274520I$ $a = 0.53562 - 2.04164I$ $b = -1.32435 - 0.59778I$	$0.41925 + 4.34629I$	0
$u = 0.167705 - 1.274520I$ $a = 0.53562 + 2.04164I$ $b = -1.32435 + 0.59778I$	$0.41925 - 4.34629I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.133842 + 1.293040I$ $a = 3.29894 + 3.32621I$ $b = -1.038190 + 0.051286I$	$-1.42201 - 2.22010I$	0
$u = -0.133842 - 1.293040I$ $a = 3.29894 - 3.32621I$ $b = -1.038190 - 0.051286I$	$-1.42201 + 2.22010I$	0
$u = -0.072444 + 1.299150I$ $a = -1.72774 - 0.95900I$ $b = -0.628389 + 0.021669I$	$-2.36624 - 1.57306I$	0
$u = -0.072444 - 1.299150I$ $a = -1.72774 + 0.95900I$ $b = -0.628389 - 0.021669I$	$-2.36624 + 1.57306I$	0
$u = 0.684163 + 0.124406I$ $a = -1.98358 + 0.70879I$ $b = 1.260670 + 0.460630I$	$4.61639 + 8.36713I$	$11.15155 - 8.05320I$
$u = 0.684163 - 0.124406I$ $a = -1.98358 - 0.70879I$ $b = 1.260670 - 0.460630I$	$4.61639 - 8.36713I$	$11.15155 + 8.05320I$
$u = -0.695074$ $a = -1.61590$ $b = 0.785601$	1.96527	-0.636190
$u = 0.254305 + 1.300410I$ $a = -0.57383 + 1.87834I$ $b = 1.292740 + 0.501209I$	$0.18064 + 11.76790I$	0
$u = 0.254305 - 1.300410I$ $a = -0.57383 - 1.87834I$ $b = 1.292740 - 0.501209I$	$0.18064 - 11.76790I$	0
$u = 0.198121 + 1.315590I$ $a = 0.758091 - 0.936718I$ $b = -0.028658 - 1.022200I$	$-3.87109 + 6.49061I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.198121 - 1.315590I$ $a = 0.758091 + 0.936718I$ $b = -0.028658 + 1.022200I$	$-3.87109 - 6.49061I$	0
$u = -0.152128 + 1.326590I$ $a = -0.628567 + 0.511251I$ $b = -0.056517 + 0.160373I$	$-3.38330 - 2.54068I$	0
$u = -0.152128 - 1.326590I$ $a = -0.628567 - 0.511251I$ $b = -0.056517 - 0.160373I$	$-3.38330 + 2.54068I$	0
$u = -0.275376 + 1.354110I$ $a = 0.312578 - 0.885221I$ $b = 1.047910 + 0.215453I$	$-1.00281 - 2.01992I$	0
$u = -0.275376 - 1.354110I$ $a = 0.312578 + 0.885221I$ $b = 1.047910 - 0.215453I$	$-1.00281 + 2.01992I$	0
$u = 0.029052 + 1.401310I$ $a = -0.16252 + 1.51915I$ $b = 0.405032 + 0.751976I$	$-6.87743 - 0.86326I$	0
$u = 0.029052 - 1.401310I$ $a = -0.16252 - 1.51915I$ $b = 0.405032 - 0.751976I$	$-6.87743 + 0.86326I$	0
$u = 0.580873 + 0.136352I$ $a = 0.375506 + 0.481129I$ $b = -0.073272 - 0.878443I$	$0.64889 + 3.65142I$	$8.61986 - 8.48689I$
$u = 0.580873 - 0.136352I$ $a = 0.375506 - 0.481129I$ $b = -0.073272 + 0.878443I$	$0.64889 - 3.65142I$	$8.61986 + 8.48689I$
$u = 0.568402 + 0.038675I$ $a = 2.43556 - 0.29965I$ $b = -1.33753 - 0.46810I$	$4.43426 + 1.67256I$	$17.8731 - 4.5521I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.568402 - 0.038675I$ $a = 2.43556 + 0.29965I$ $b = -1.33753 + 0.46810I$	$4.43426 - 1.67256I$	$17.8731 + 4.5521I$
$u = -0.02900 + 1.45074I$ $a = 1.07846 - 1.03937I$ $b = 1.062590 - 0.502423I$	$-4.91037 - 5.54307I$	0
$u = -0.02900 - 1.45074I$ $a = 1.07846 + 1.03937I$ $b = 1.062590 + 0.502423I$	$-4.91037 + 5.54307I$	0
$u = -0.22522 + 1.45170I$ $a = -1.55520 + 1.27952I$ $b = -1.65329 - 0.07886I$	$-4.41641 - 4.89650I$	0
$u = -0.22522 - 1.45170I$ $a = -1.55520 - 1.27952I$ $b = -1.65329 + 0.07886I$	$-4.41641 + 4.89650I$	0
$u = -0.20875 + 1.46039I$ $a = -1.96107 - 1.24412I$ $b = -1.057840 - 0.893839I$	$-6.33820 - 1.30367I$	0
$u = -0.20875 - 1.46039I$ $a = -1.96107 + 1.24412I$ $b = -1.057840 + 0.893839I$	$-6.33820 + 1.30367I$	0
$u = -0.23879 + 1.45754I$ $a = -0.41795 + 2.92896I$ $b = -1.20627 + 0.87760I$	$-5.89231 - 8.71118I$	0
$u = -0.23879 - 1.45754I$ $a = -0.41795 - 2.92896I$ $b = -1.20627 - 0.87760I$	$-5.89231 + 8.71118I$	0
$u = 0.23154 + 1.46290I$ $a = -0.09303 - 3.06392I$ $b = -1.000560 - 0.207535I$	$-7.59739 + 5.82441I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.23154 - 1.46290I$ $a = -0.09303 + 3.06392I$ $b = -1.000560 + 0.207535I$	$-7.59739 - 5.82441I$	0
$u = 0.21930 + 1.46489I$ $a = -0.93533 + 1.57380I$ $b = -0.923370 + 0.234801I$	$-7.78037 + 4.33496I$	0
$u = 0.21930 - 1.46489I$ $a = -0.93533 - 1.57380I$ $b = -0.923370 - 0.234801I$	$-7.78037 - 4.33496I$	0
$u = 0.26337 + 1.46180I$ $a = -0.08090 + 1.89803I$ $b = 1.013180 + 0.443017I$	$-8.98436 + 9.59140I$	0
$u = 0.26337 - 1.46180I$ $a = -0.08090 - 1.89803I$ $b = 1.013180 - 0.443017I$	$-8.98436 - 9.59140I$	0
$u = -0.24762 + 1.46872I$ $a = 1.35498 + 1.75823I$ $b = 0.199257 + 1.230140I$	$-11.3587 - 10.8582I$	0
$u = -0.24762 - 1.46872I$ $a = 1.35498 - 1.75823I$ $b = 0.199257 - 1.230140I$	$-11.3587 + 10.8582I$	0
$u = -0.26124 + 1.46868I$ $a = 0.27524 - 2.66960I$ $b = 1.32483 - 0.64154I$	$-7.7879 - 17.3619I$	0
$u = -0.26124 - 1.46868I$ $a = 0.27524 + 2.66960I$ $b = 1.32483 + 0.64154I$	$-7.7879 + 17.3619I$	0
$u = 0.18051 + 1.48247I$ $a = 0.684881 - 0.803652I$ $b = 0.896873 - 0.524411I$	$-10.21980 + 0.79261I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.18051 - 1.48247I$ $a = 0.684881 + 0.803652I$ $b = 0.896873 + 0.524411I$	$-10.21980 - 0.79261I$	0
$u = -0.498147 + 0.084357I$ $a = -0.922503 + 0.449112I$ $b = -0.1228490 - 0.0174975I$	$1.036470 - 0.221761I$	$10.33273 + 1.22450I$
$u = -0.498147 - 0.084357I$ $a = -0.922503 - 0.449112I$ $b = -0.1228490 + 0.0174975I$	$1.036470 + 0.221761I$	$10.33273 - 1.22450I$
$u = -0.20394 + 1.48090I$ $a = -0.30491 - 2.23737I$ $b = 0.285293 - 1.169340I$	$-12.01600 + 0.38311I$	0
$u = -0.20394 - 1.48090I$ $a = -0.30491 + 2.23737I$ $b = 0.285293 + 1.169340I$	$-12.01600 - 0.38311I$	0
$u = 0.24153 + 1.47727I$ $a = 0.594461 - 0.519857I$ $b = 0.376061 - 0.477072I$	$-10.74700 + 5.74113I$	0
$u = 0.24153 - 1.47727I$ $a = 0.594461 + 0.519857I$ $b = 0.376061 + 0.477072I$	$-10.74700 - 5.74113I$	0
$u = -0.18777 + 1.49201I$ $a = 1.45593 + 1.03077I$ $b = 1.26730 + 0.64972I$	$-8.89539 + 6.74030I$	0
$u = -0.18777 - 1.49201I$ $a = 1.45593 - 1.03077I$ $b = 1.26730 - 0.64972I$	$-8.89539 - 6.74030I$	0
$u = 0.21507 + 1.48897I$ $a = 0.237376 + 1.173370I$ $b = 0.558315 + 0.491708I$	$-11.15570 + 4.98077I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.21507 - 1.48897I$ $a = 0.237376 - 1.173370I$ $b = 0.558315 - 0.491708I$	$-11.15570 - 4.98077I$	0
$u = -0.489115$ $a = 9.11251$ $b = -1.02527$	2.57974	-70.0420
$u = 0.090702 + 0.464486I$ $a = -0.940114 + 0.704675I$ $b = 0.127855 + 0.589477I$	$-1.16399 - 1.31134I$	$-0.45702 + 1.99910I$
$u = 0.090702 - 0.464486I$ $a = -0.940114 - 0.704675I$ $b = 0.127855 - 0.589477I$	$-1.16399 + 1.31134I$	$-0.45702 - 1.99910I$
$u = -0.169777 + 0.224629I$ $a = -2.71570 + 0.78496I$ $b = -1.064590 + 0.184749I$	$1.94664 - 0.71724I$	$4.81639 - 0.29168I$
$u = -0.169777 - 0.224629I$ $a = -2.71570 - 0.78496I$ $b = -1.064590 - 0.184749I$	$1.94664 + 0.71724I$	$4.81639 + 0.29168I$

$$\text{II. } I_2^u = \langle b - 1, 2u^2 + a + 2u + 4, u^3 + u^2 + 2u + 1 \rangle$$

(i) Arc colorings

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

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

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

$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2u^2 - 2u - 4 \\ 1 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -2u^2 - 2u - 3 \\ 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^2 - u - 2 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ -u^2 - u - 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

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

(ii) Obstruction class = 1

(iii) Cusp Shapes = $7u^2 + 5u + 17$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.215080 + 1.307140I$ $a = -0.24512 - 1.48972I$ $b = 1.00000$	$-1.37919 - 2.82812I$	$4.28809 + 2.59975I$
$u = -0.215080 - 1.307140I$ $a = -0.24512 + 1.48972I$ $b = 1.00000$	$-1.37919 + 2.82812I$	$4.28809 - 2.59975I$
$u = -0.569840$ $a = -3.50976$ $b = 1.00000$	2.75839	16.4240

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^3(u^{96} - 15u^{95} + \dots + 20u + 8)$
c_2	$((u + 1)^3)(u^{96} + 4u^{95} + \dots + 10u - 1)$
c_3	$(u^3 - u - 1)(u^{96} - u^{95} + \dots - 3474u - 1117)$
c_4	$(u^3 - u - 1)(u^{96} - 3u^{95} + \dots - 2u + 1)$
c_5	$((u - 1)^3)(u^{96} + 4u^{95} + \dots + 10u - 1)$
c_6	$(u^3 + u^2 + 2u + 1)(u^{96} - 2u^{95} + \dots - 7u + 1)$
c_7	$(u^3 - u^2 + 1)(u^{96} + 2u^{95} + \dots - 38535u + 4113)$
c_8	$(u^3 - u^2 + 1)(u^{96} + 4u^{95} + \dots - u - 1)$
c_9	$(u^3 - u^2 + 1)(u^{96} + 14u^{95} + \dots + 1779u + 99)$
c_{10}, c_{11}	$(u^3 - u^2 + 2u - 1)(u^{96} - 2u^{95} + \dots - 7u + 1)$
c_{12}	$(u^3 + u^2 - 1)(u^{96} + 14u^{95} + \dots + 1779u + 99)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^3(y^{96} - 21y^{95} + \dots - 1360y + 64)$
c_2, c_5	$((y - 1)^3)(y^{96} - 56y^{95} + \dots - 94y + 1)$
c_3	$(y^3 - 2y^2 + y - 1)(y^{96} - 99y^{95} + \dots - 4.89788 \times 10^7 y + 1247689)$
c_4	$(y^3 - 2y^2 + y - 1)(y^{96} - 87y^{95} + \dots - 252y + 1)$
c_6, c_{10}, c_{11}	$(y^3 + 3y^2 + 2y - 1)(y^{96} + 90y^{95} + \dots - y + 1)$
c_7	$(y^3 - y^2 + 2y - 1)(y^{96} + 34y^{95} + \dots + 3.41341 \times 10^8 y + 1.69168 \times 10^7)$
c_8	$(y^3 - y^2 + 2y - 1)(y^{96} + 14y^{95} + \dots - y + 1)$
c_9, c_{12}	$(y^3 - y^2 + 2y - 1)(y^{96} + 82y^{95} + \dots + 834363y + 9801)$