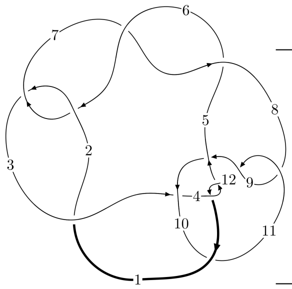
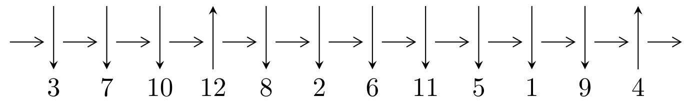
$12a_{0654}$ $(K12a_{0654})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.44776 \times 10^{45} u^{82} + 1.88228 \times 10^{45} u^{81} + \cdots + 4.67106 \times 10^{45} b - 4.92257 \times 10^{45},$$
$$4.56361 \times 10^{45} u^{82} + 3.89164 \times 10^{45} u^{81} + \cdots + 4.67106 \times 10^{45} a + 4.38504 \times 10^{45},\ u^{83} + 2u^{82} + \cdots + 2u - 1$$
$$I_2^u = \langle 2b + 1,\ 2a + 1,\ u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 84 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.

$\boldsymbol{I_1^u = \langle 1.45 \times 10^{45} u^{82} + 1.88 \times 10^{45} u^{81} + \cdots + 4.67 \times 10^{45} b - 4.92 \times 10^{45},\ 4.56 \times 10^{45} u^{82} + 3.89 \times 10^{45} u^{81} + \cdots + 4.67 \times 10^{45} a + 4.39 \times 10^{45},\ u^{83} + 2u^{82} + \cdots + 2u - 1 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.976996u^{82} - 0.833138u^{81} + \cdots - 1.67953u - 0.938767 \\ -0.309942u^{82} - 0.402967u^{81} + \cdots - 0.857176u + 1.05384 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.490538u^{82} + 0.276265u^{81} + \cdots + 1.57387u - 1.06664 \\ 0.136027u^{82} + 0.165051u^{81} + \cdots + 0.892769u - 0.223335 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1.04749u^{82} - 0.897950u^{81} + \cdots - 1.23217u - 1.87684 \\ -1.54527u^{82} - 1.66408u^{81} + \cdots - 1.87786u + 1.38750 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^5 + u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.921584u^{82} - 0.763915u^{81} + \cdots + 0.687349u - 1.85196 \\ -1.37611u^{82} - 1.44172u^{81} + \cdots - 0.552013u + 1.27476 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.374473u^{82} + 0.269946u^{81} + \cdots + 3.53516u + 0.0915879 \\ 0.597808u^{82} + 0.580589u^{81} + \cdots + 1.55233u - 0.354511 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.68031u^{82} - 1.52488u^{81} + \cdots - 2.18584u - 10.4378$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_7	$u^{83} + 20u^{82} + \cdots + 12u + 1$
c_2, c_6	$u^{83} - 2u^{82} + \cdots + 2u + 1$
c_3	$u^{83} + u^{82} + \cdots - 62u + 8$
c_4, c_{12}	$u^{83} + 4u^{82} + \cdots + 4u + 1$
c_8, c_{11}	$u^{83} - 2u^{82} + \cdots - 35u + 4$
c_9	$2(2u^{83} + 13u^{82} + \cdots - 65101u + 15173)$
c_{10}	$2(2u^{83} + 35u^{82} + \cdots + 62u - 4)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_7	$y^{83} + 88y^{82} + \cdots - 40y - 1$
c_2, c_6	$y^{83} - 20y^{82} + \cdots + 12y - 1$
c_3	$y^{83} + 9y^{82} + \cdots - 2956y - 64$
c_4, c_{12}	$y^{83} + 60y^{82} + \cdots + 12y - 1$
c_8, c_{11}	$y^{83} - 52y^{82} + \cdots + 1569y - 16$
c_9	$4(4y^{83} + 507y^{82} + \cdots + 8.37318 \times 10^9 y - 2.30220 \times 10^8)$
c_{10}	$4(4y^{83} - 677y^{82} + \cdots + 156y - 16)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.903364 + 0.424677I$ $a = 1.53894 - 1.55609I$ $b = 0.888909 - 0.865193I$	$-1.93320 - 6.97812I$	0
$u = 0.903364 - 0.424677I$ $a = 1.53894 + 1.55609I$ $b = 0.888909 + 0.865193I$	$-1.93320 + 6.97812I$	0
$u = -0.867473 + 0.468864I$ $a = -1.15941 - 0.99435I$ $b = -0.875451 - 0.381159I$	$1.31046 + 3.33552I$	0
$u = -0.867473 - 0.468864I$ $a = -1.15941 + 0.99435I$ $b = -0.875451 + 0.381159I$	$1.31046 - 3.33552I$	0
$u = -1.042220 + 0.035267I$ $a = -0.793950 - 0.624964I$ $b = 0.087591 + 0.119886I$	$-8.94189 - 6.52162I$	0
$u = -1.042220 - 0.035267I$ $a = -0.793950 + 0.624964I$ $b = 0.087591 - 0.119886I$	$-8.94189 + 6.52162I$	0
$u = -0.878924 + 0.323578I$ $a = 0.58100 - 1.29209I$ $b = 1.053830 - 0.003673I$	$-6.40049 + 4.26517I$	$-17.4265 - 8.0576I$
$u = -0.878924 - 0.323578I$ $a = 0.58100 + 1.29209I$ $b = 1.053830 + 0.003673I$	$-6.40049 - 4.26517I$	$-17.4265 + 8.0576I$
$u = 0.813017 + 0.384092I$ $a = -0.00859 - 1.76199I$ $b = 0.676319 - 0.764949I$	$-2.07969 - 1.17143I$	$-10.66001 + 4.16977I$
$u = 0.813017 - 0.384092I$ $a = -0.00859 + 1.76199I$ $b = 0.676319 + 0.764949I$	$-2.07969 + 1.17143I$	$-10.66001 - 4.16977I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.420879 + 0.791590I$ $a = -0.598628 - 0.823093I$ $b = 0.147354 - 0.727487I$	$-3.58940 - 5.15177I$	$-8.49512 + 7.35556I$
$u = 0.420879 - 0.791590I$ $a = -0.598628 + 0.823093I$ $b = 0.147354 + 0.727487I$	$-3.58940 + 5.15177I$	$-8.49512 - 7.35556I$
$u = 1.013160 + 0.441729I$ $a = -1.39941 + 1.30714I$ $b = -1.24596 + 0.86067I$	$-6.5398 - 12.7131I$	0
$u = 1.013160 - 0.441729I$ $a = -1.39941 - 1.30714I$ $b = -1.24596 - 0.86067I$	$-6.5398 + 12.7131I$	0
$u = 0.823581 + 0.346061I$ $a = 0.938555 - 0.307109I$ $b = 0.017949 + 0.810468I$	$-2.23914 - 2.76864I$	$-10.20780 + 5.54130I$
$u = 0.823581 - 0.346061I$ $a = 0.938555 + 0.307109I$ $b = 0.017949 - 0.810468I$	$-2.23914 + 2.76864I$	$-10.20780 - 5.54130I$
$u = -1.027830 + 0.414105I$ $a = 1.072000 + 0.556379I$ $b = 0.807846 + 0.347687I$	$-1.47818 + 7.11634I$	0
$u = -1.027830 - 0.414105I$ $a = 1.072000 - 0.556379I$ $b = 0.807846 - 0.347687I$	$-1.47818 - 7.11634I$	0
$u = 0.849599 + 0.221125I$ $a = -2.26382 + 0.89058I$ $b = -1.08261 + 1.27189I$	$-6.96103 - 0.26061I$	$-19.4591 + 2.1398I$
$u = 0.849599 - 0.221125I$ $a = -2.26382 - 0.89058I$ $b = -1.08261 - 1.27189I$	$-6.96103 + 0.26061I$	$-19.4591 - 2.1398I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.119060 + 0.149420I$ $a = 0.014858 - 0.335944I$ $b = -0.0823966 - 0.0099121I$	$-3.26358 + 0.42527I$	0
$u = 1.119060 - 0.149420I$ $a = 0.014858 + 0.335944I$ $b = -0.0823966 + 0.0099121I$	$-3.26358 - 0.42527I$	0
$u = 1.040690 + 0.521910I$ $a = 0.526785 + 0.646610I$ $b = 0.404797 + 0.655754I$	$-5.61244 + 0.29360I$	0
$u = 1.040690 - 0.521910I$ $a = 0.526785 - 0.646610I$ $b = 0.404797 - 0.655754I$	$-5.61244 - 0.29360I$	0
$u = -0.821548 + 0.039013I$ $a = 1.29461 + 1.50651I$ $b = -0.177155 + 0.529657I$	$-3.92182 - 2.53293I$	$-15.8807 + 3.5355I$
$u = -0.821548 - 0.039013I$ $a = 1.29461 - 1.50651I$ $b = -0.177155 - 0.529657I$	$-3.92182 + 2.53293I$	$-15.8807 - 3.5355I$
$u = -0.766501 + 0.262948I$ $a = 1.81596 + 2.07437I$ $b = 1.52642 + 0.91294I$	$-2.76379 + 0.97508I$	$-6.89224 - 7.86392I$
$u = -0.766501 - 0.262948I$ $a = 1.81596 - 2.07437I$ $b = 1.52642 - 0.91294I$	$-2.76379 - 0.97508I$	$-6.89224 + 7.86392I$
$u = -0.790665 + 0.889461I$ $a = -0.244409 - 0.580618I$ $b = -1.047370 - 0.292537I$	$4.25321 + 0.83445I$	0
$u = -0.790665 - 0.889461I$ $a = -0.244409 + 0.580618I$ $b = -1.047370 + 0.292537I$	$4.25321 - 0.83445I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.296784 + 0.751744I$ $a = -0.88271 + 1.11039I$ $b = -1.005420 + 0.061637I$	$-4.20156 + 8.41815I$	$-8.07283 - 5.37219I$
$u = 0.296784 - 0.751744I$ $a = -0.88271 - 1.11039I$ $b = -1.005420 - 0.061637I$	$-4.20156 - 8.41815I$	$-8.07283 + 5.37219I$
$u = 0.866584 + 0.838849I$ $a = -1.30726 - 2.03836I$ $b = 0.96612 - 2.73538I$	$0.67550 + 1.26886I$	0
$u = 0.866584 - 0.838849I$ $a = -1.30726 + 2.03836I$ $b = 0.96612 + 2.73538I$	$0.67550 - 1.26886I$	0
$u = -0.493053 + 0.620271I$ $a = -0.475062 - 0.907891I$ $b = -0.726019 - 0.454031I$	$2.51378 + 0.71207I$	$0.10130 - 2.82742I$
$u = -0.493053 - 0.620271I$ $a = -0.475062 + 0.907891I$ $b = -0.726019 + 0.454031I$	$2.51378 - 0.71207I$	$0.10130 + 2.82742I$
$u = -0.898784 + 0.810830I$ $a = -1.43432 - 2.91147I$ $b = -4.36479 - 0.47405I$	$-1.15186 + 3.03659I$	0
$u = -0.898784 - 0.810830I$ $a = -1.43432 + 2.91147I$ $b = -4.36479 + 0.47405I$	$-1.15186 - 3.03659I$	0
$u = -0.883489 + 0.847983I$ $a = -0.011561 - 1.025510I$ $b = -0.483243 - 0.384493I$	$4.93081 + 0.82823I$	0
$u = -0.883489 - 0.847983I$ $a = -0.011561 + 1.025510I$ $b = -0.483243 + 0.384493I$	$4.93081 - 0.82823I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.827619 + 0.907540I$ $a = 0.582232 - 1.120590I$ $b = 2.28595 - 0.07765I$	$7.28825 + 5.19382I$	0
$u = 0.827619 - 0.907540I$ $a = 0.582232 + 1.120590I$ $b = 2.28595 + 0.07765I$	$7.28825 - 5.19382I$	0
$u = 0.905252 + 0.834445I$ $a = 0.56959 - 2.38412I$ $b = 3.65243 - 0.24771I$	$3.60788 - 3.10972I$	0
$u = 0.905252 - 0.834445I$ $a = 0.56959 + 2.38412I$ $b = 3.65243 + 0.24771I$	$3.60788 + 3.10972I$	0
$u = -0.222378 + 0.734119I$ $a = 0.232483 + 0.795201I$ $b = 0.494757 + 0.344126I$	$1.10470 - 3.00500I$	$-2.57507 + 5.88232I$
$u = -0.222378 - 0.734119I$ $a = 0.232483 - 0.795201I$ $b = 0.494757 - 0.344126I$	$1.10470 + 3.00500I$	$-2.57507 - 5.88232I$
$u = -0.863508 + 0.881824I$ $a = 1.50552 + 1.41822I$ $b = 3.28866 - 0.82542I$	$6.32523 - 3.87244I$	0
$u = -0.863508 - 0.881824I$ $a = 1.50552 - 1.41822I$ $b = 3.28866 + 0.82542I$	$6.32523 + 3.87244I$	0
$u = -0.835831 + 0.913585I$ $a = -1.01212 - 1.38557I$ $b = -3.02573 + 0.47246I$	$2.43889 - 10.57610I$	0
$u = -0.835831 - 0.913585I$ $a = -1.01212 + 1.38557I$ $b = -3.02573 - 0.47246I$	$2.43889 + 10.57610I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.908266 + 0.846421I$ $a = 1.38371 - 6.19520I$ $b = 9.62883 + 1.19468I$	$3.44640 - 3.14601I$	0
$u = 0.908266 - 0.846421I$ $a = 1.38371 + 6.19520I$ $b = 9.62883 - 1.19468I$	$3.44640 + 3.14601I$	0
$u = 0.935118 + 0.817982I$ $a = 2.22383 + 0.50064I$ $b = 1.64728 + 2.62555I$	$0.46358 - 7.44816I$	0
$u = 0.935118 - 0.817982I$ $a = 2.22383 - 0.50064I$ $b = 1.64728 - 2.62555I$	$0.46358 + 7.44816I$	0
$u = -0.649711 + 0.386534I$ $a = 2.43843 - 5.61901I$ $b = -2.45848 - 3.04171I$	$-3.47334 + 1.58146I$	$-6.1784 + 18.4226I$
$u = -0.649711 - 0.386534I$ $a = 2.43843 + 5.61901I$ $b = -2.45848 + 3.04171I$	$-3.47334 - 1.58146I$	$-6.1784 - 18.4226I$
$u = -0.928311 + 0.832518I$ $a = -0.390054 + 0.231412I$ $b = -0.745951 + 0.234709I$	$4.79099 + 5.42555I$	0
$u = -0.928311 - 0.832518I$ $a = -0.390054 - 0.231412I$ $b = -0.745951 - 0.234709I$	$4.79099 - 5.42555I$	0
$u = 0.875426 + 0.888713I$ $a = -0.73965 + 1.34238I$ $b = -2.64419 + 0.03636I$	$9.82410 - 0.21205I$	0
$u = 0.875426 - 0.888713I$ $a = -0.73965 - 1.34238I$ $b = -2.64419 - 0.03636I$	$9.82410 + 0.21205I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.921428 + 0.867054I$ $a = 0.233396 + 1.108810I$ $b = 1.72705 + 0.10982I$	$5.30400 + 3.21764I$	0
$u = -0.921428 - 0.867054I$ $a = 0.233396 - 1.108810I$ $b = 1.72705 - 0.10982I$	$5.30400 - 3.21764I$	0
$u = -0.959778 + 0.841390I$ $a = 0.44151 + 2.72265I$ $b = 3.23040 + 1.37772I$	$6.02022 + 10.25640I$	0
$u = -0.959778 - 0.841390I$ $a = 0.44151 - 2.72265I$ $b = 3.23040 - 1.37772I$	$6.02022 - 10.25640I$	0
$u = 0.956814 + 0.852374I$ $a = -0.73520 + 1.93512I$ $b = -2.65902 + 0.36412I$	$9.56432 - 6.22932I$	0
$u = 0.956814 - 0.852374I$ $a = -0.73520 - 1.93512I$ $b = -2.65902 - 0.36412I$	$9.56432 + 6.22932I$	0
$u = -1.009220 + 0.810934I$ $a = -0.492591 - 0.806285I$ $b = -1.105860 - 0.130163I$	$3.57288 + 5.47366I$	0
$u = -1.009220 - 0.810934I$ $a = -0.492591 + 0.806285I$ $b = -1.105860 + 0.130163I$	$3.57288 - 5.47366I$	0
$u = 0.993763 + 0.834217I$ $a = 0.77742 - 1.75218I$ $b = 2.38361 - 0.31041I$	$6.76065 - 11.62870I$	0
$u = 0.993763 - 0.834217I$ $a = 0.77742 + 1.75218I$ $b = 2.38361 + 0.31041I$	$6.76065 + 11.62870I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.992985 + 0.841418I$ $a = -0.62638 - 2.41784I$ $b = -3.11949 - 0.89147I$	$1.9371 + 17.0537I$	0
$u = -0.992985 - 0.841418I$ $a = -0.62638 + 2.41784I$ $b = -3.11949 + 0.89147I$	$1.9371 - 17.0537I$	0
$u = -0.928501 + 0.915660I$ $a = 0.247842 + 0.800769I$ $b = 1.336460 + 0.203273I$	$5.15115 + 3.35326I$	0
$u = -0.928501 - 0.915660I$ $a = 0.247842 - 0.800769I$ $b = 1.336460 - 0.203273I$	$5.15115 - 3.35326I$	0
$u = 0.383689 + 0.567939I$ $a = 1.32258 - 0.75641I$ $b = 1.035080 - 0.296380I$	$-0.32611 + 3.23888I$	$-4.94711 - 3.26188I$
$u = 0.383689 - 0.567939I$ $a = 1.32258 + 0.75641I$ $b = 1.035080 + 0.296380I$	$-0.32611 - 3.23888I$	$-4.94711 + 3.26188I$
$u = 0.634371$ $a = -0.995682$ $b = 0.139931$	-0.981408	-9.34690
$u = 0.287381 + 0.485540I$ $a = 0.669167 + 0.138109I$ $b = 0.346077 + 0.799642I$	$-0.62428 - 1.90033I$	$-3.73781 + 3.12702I$
$u = 0.287381 - 0.485540I$ $a = 0.669167 - 0.138109I$ $b = 0.346077 - 0.799642I$	$-0.62428 + 1.90033I$	$-3.73781 - 3.12702I$
$u = 0.396872 + 0.223911I$ $a = -1.42774 + 0.52691I$ $b = 0.365573 - 0.125160I$	$-1.062230 + 0.044566I$	$-7.83480 + 1.17242I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.396872 - 0.223911I$ $a = -1.42774 - 0.52691I$ $b = 0.365573 + 0.125160I$	$-1.062230 - 0.044566I$	$-7.83480 - 1.17242I$
$u = -0.151974 + 0.394423I$ $a = -0.65974 + 3.24267I$ $b = -0.470123 + 0.500944I$	$-4.49038 - 1.51025I$	$-9.82603 + 1.41859I$
$u = -0.151974 - 0.394423I$ $a = -0.65974 - 3.24267I$ $b = -0.470123 - 0.500944I$	$-4.49038 + 1.51025I$	$-9.82603 - 1.41859I$

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

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.5 \\ -0.5 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.5 \\ -1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1.5 \\ -1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -9.75$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -0.500000$ $b = -0.500000$	-3.28987	-9.75000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u-1)(u^{83}+20u^{82}+\cdots+12u+1)$
c_2	$(u-1)(u^{83}-2u^{82}+\cdots+2u+1)$
c_3	$u(u^{83}+u^{82}+\cdots-62u+8)$
c_4	$(u+1)(u^{83}+4u^{82}+\cdots+4u+1)$
c_6	$(u+1)(u^{83}-2u^{82}+\cdots+2u+1)$
c_7	$(u+1)(u^{83}+20u^{82}+\cdots+12u+1)$
c_8	$(u-1)(u^{83}-2u^{82}+\cdots-35u+4)$
c_9	$4(2u-1)(2u^{83}+13u^{82}+\cdots-65101u+15173)$
c_{10}	$4(2u-1)(2u^{83}+35u^{82}+\cdots+62u-4)$
c_{11}	$(u+1)(u^{83}-2u^{82}+\cdots-35u+4)$
c_{12}	$(u-1)(u^{83}+4u^{82}+\cdots+4u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_7	$(y-1)(y^{83}+88y^{82}+\cdots-40y-1)$
c_2, c_6	$(y-1)(y^{83}-20y^{82}+\cdots+12y-1)$
c_3	$y(y^{83}+9y^{82}+\cdots-2956y-64)$
c_4, c_{12}	$(y-1)(y^{83}+60y^{82}+\cdots+12y-1)$
c_8, c_{11}	$(y-1)(y^{83}-52y^{82}+\cdots+1569y-16)$
c_9	$16(4y-1)(4y^{83}+507y^{82}+\cdots+8.37318\times10^9y-2.30220\times10^8)$
c_{10}	$16(4y-1)(4y^{83}-677y^{82}+\cdots+156y-16)$