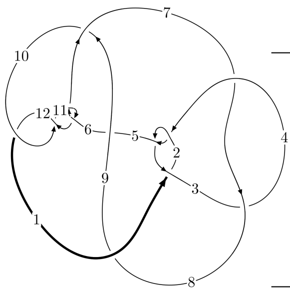
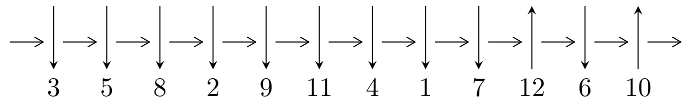
$12a_{0083}$ ($K12a_{0083}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^{109} + u^{108} + \cdots + b - 2u,\ u^{109} - u^{108} + \cdots + a + 1,\ u^{111} - 2u^{110} + \cdots + 2u - 1\rangle$$
$$I_2^u = \langle -u^5 - u^3 + b - u + 1,\ u^7 + u^6 + 2u^5 + u^4 + 2u^3 + u^2 + a + u,\ u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u -$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 120 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. $I_1^u =$
$$\langle -u^{109}+u^{108}+\cdots+b-2u,\ u^{109}-u^{108}+\cdots+a+1,\ u^{111}-2u^{110}+\cdots+2u-1\rangle$$

(i) Arc colorings

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

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

$$a_4 = \begin{pmatrix} -u^{109}+u^{108}+\cdots+4u^3-1 \\ u^{109}-u^{108}+\cdots-2u^2+2u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} u^{17}+2u^{15}+5u^{13}+6u^{11}+7u^9+6u^7+4u^5+2u^3+u \\ -u^{17}-3u^{15}-7u^{13}-10u^{11}-11u^9-8u^7-4u^5+u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u^{109}-u^{108}+\cdots+u-2 \\ u^{109}-u^{108}+\cdots+3u^3+u \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} u^5+u \\ u^7+u^5+2u^3+u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{12}-u^{10}-3u^8-2u^6-2u^4-u^2+1 \\ -u^{14}-2u^{12}-5u^{10}-6u^8-6u^6-4u^4-u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{107}-u^{106}+\cdots+u-1 \\ u^{109}-u^{108}+\cdots-2u^2+2u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{110}-2u^{109}+\cdots-8u-6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{111} + 52u^{110} + \cdots + 26u + 1$
c_2, c_4	$u^{111} - 10u^{110} + \cdots - 6u + 1$
c_3, c_7	$u^{111} + u^{110} + \cdots + 1024u + 512$
c_5	$u^{111} + 2u^{110} + \cdots + 71974u + 7769$
c_6, c_{11}	$u^{111} + 2u^{110} + \cdots + 2u + 1$
c_8	$u^{111} - 8u^{110} + \cdots - 4116076u + 591991$
c_9	$u^{111} - 10u^{110} + \cdots - 688u + 64$
c_{10}, c_{12}	$u^{111} - 36u^{110} + \cdots + 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{111} + 24y^{110} + \cdots + 326y - 1$
c_2, c_4	$y^{111} - 52y^{110} + \cdots + 26y - 1$
c_3, c_7	$y^{111} + 57y^{110} + \cdots - 6291456y - 262144$
c_5	$y^{111} - 28y^{110} + \cdots + 4384850918y - 60357361$
c_6, c_{11}	$y^{111} + 36y^{110} + \cdots + 6y - 1$
c_8	$y^{111} + 32y^{110} + \cdots - 6104529362122y - 350453344081$
c_9	$y^{111} + 4y^{110} + \cdots - 290688y - 4096$
c_{10}, c_{12}	$y^{111} + 80y^{110} + \cdots + 34y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.192632 + 0.990436I$ $a = 1.008050 - 0.604735I$ $b = -0.482149 + 0.126128I$	$0.929563 - 0.936585I$	0
$u = 0.192632 - 0.990436I$ $a = 1.008050 + 0.604735I$ $b = -0.482149 - 0.126128I$	$0.929563 + 0.936585I$	0
$u = 0.768909 + 0.662619I$ $a = -0.240296 - 0.802359I$ $b = 0.66998 - 1.65382I$	$2.38224 + 2.26869I$	0
$u = 0.768909 - 0.662619I$ $a = -0.240296 + 0.802359I$ $b = 0.66998 + 1.65382I$	$2.38224 - 2.26869I$	0
$u = 0.736461 + 0.649245I$ $a = -0.073525 + 0.729912I$ $b = -0.323443 + 1.257520I$	$1.40760 - 3.27569I$	0
$u = 0.736461 - 0.649245I$ $a = -0.073525 - 0.729912I$ $b = -0.323443 - 1.257520I$	$1.40760 + 3.27569I$	0
$u = 0.099843 + 1.021210I$ $a = -1.23478 - 0.86398I$ $b = 0.494409 + 0.608915I$	$3.03959 - 1.31482I$	0
$u = 0.099843 - 1.021210I$ $a = -1.23478 + 0.86398I$ $b = 0.494409 - 0.608915I$	$3.03959 + 1.31482I$	0
$u = -0.125044 + 1.022840I$ $a = -1.03086 - 3.37868I$ $b = 0.43919 + 2.85055I$	$1.10607 + 3.24001I$	0
$u = -0.125044 - 1.022840I$ $a = -1.03086 + 3.37868I$ $b = 0.43919 - 2.85055I$	$1.10607 - 3.24001I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.254566 + 0.926058I$ $a = -0.663304 + 1.129570I$ $b = 0.355086 - 0.268387I$	$0.41586 - 4.48947I$	0
$u = 0.254566 - 0.926058I$ $a = -0.663304 - 1.129570I$ $b = 0.355086 + 0.268387I$	$0.41586 + 4.48947I$	0
$u = 0.132035 + 1.037550I$ $a = 1.54187 + 0.38063I$ $b = -0.697523 - 0.360085I$	$2.17831 - 5.68318I$	0
$u = 0.132035 - 1.037550I$ $a = 1.54187 - 0.38063I$ $b = -0.697523 + 0.360085I$	$2.17831 + 5.68318I$	0
$u = -0.780211 + 0.699337I$ $a = -0.629537 + 0.324564I$ $b = 1.213950 + 0.649893I$	$-2.92578 - 1.14947I$	0
$u = -0.780211 - 0.699337I$ $a = -0.629537 - 0.324564I$ $b = 1.213950 - 0.649893I$	$-2.92578 + 1.14947I$	0
$u = 0.530855 + 0.908540I$ $a = 0.283621 + 0.961919I$ $b = -0.0916763 + 0.0351119I$	$0.0533926 - 0.0055215I$	0
$u = 0.530855 - 0.908540I$ $a = 0.283621 - 0.961919I$ $b = -0.0916763 - 0.0351119I$	$0.0533926 + 0.0055215I$	0
$u = -0.059280 + 1.051760I$ $a = -1.04895 - 2.98448I$ $b = 0.33302 + 2.14606I$	$7.04699 - 3.67038I$	0
$u = -0.059280 - 1.051760I$ $a = -1.04895 + 2.98448I$ $b = 0.33302 - 2.14606I$	$7.04699 + 3.67038I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.474575 + 0.941264I$ $a = \quad 0.75085 + 1.50277I$ $b = \quad 1.44748 - 0.42754I$	$3.04019 - 5.75313I$	0
$u = -0.474575 - 0.941264I$ $a = \quad 0.75085 - 1.50277I$ $b = \quad 1.44748 + 0.42754I$	$3.04019 + 5.75313I$	0
$u = -0.082911 + 1.051710I$ $a = \quad 0.97495 + 3.16678I$ $b = -0.33502 - 2.34474I$	$8.29038 + 2.01687I$	0
$u = -0.082911 - 1.051710I$ $a = \quad 0.97495 - 3.16678I$ $b = -0.33502 + 2.34474I$	$8.29038 - 2.01687I$	0
$u = \quad 0.811413 + 0.683140I$ $a = -1.085650 - 0.723933I$ $b = \quad 1.08660 - 2.57993I$	$0.67183 + 6.15549I$	0
$u = \quad 0.811413 - 0.683140I$ $a = -1.085650 + 0.723933I$ $b = \quad 1.08660 + 2.57993I$	$0.67183 - 6.15549I$	0
$u = \quad 0.797576 + 0.700033I$ $a = \quad 1.10758 + 1.37941I$ $b = -1.70256 + 2.35602I$	$-5.10535 + 3.01862I$	0
$u = \quad 0.797576 - 0.700033I$ $a = \quad 1.10758 - 1.37941I$ $b = -1.70256 - 2.35602I$	$-5.10535 - 3.01862I$	0
$u = -0.805066 + 0.693292I$ $a = \quad 0.597661 - 0.490927I$ $b = -1.49235 - 0.31506I$	$-4.14766 - 5.56202I$	0
$u = -0.805066 - 0.693292I$ $a = \quad 0.597661 + 0.490927I$ $b = -1.49235 + 0.31506I$	$-4.14766 + 5.56202I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.132451+1.054970I$ $a=\ 0.90434+3.23113I$ $b=-0.53870-2.53237I$	$7.07789+6.12746I$	0
$u=-0.132451-1.054970I$ $a=\ 0.90434-3.23113I$ $b=-0.53870+2.53237I$	$7.07789-6.12746I$	0
$u=-0.146614+1.057970I$ $a=-0.83912-3.15269I$ $b=\ 0.59773+2.48167I$	$4.91151+11.83360I$	0
$u=-0.146614-1.057970I$ $a=-0.83912+3.15269I$ $b=\ 0.59773-2.48167I$	$4.91151-11.83360I$	0
$u=\ 0.096016+0.926261I$ $a=-0.046350-1.080040I$ $b=-0.233565+0.499204I$	$1.90349-1.53560I$	0
$u=\ 0.096016-0.926261I$ $a=-0.046350+1.080040I$ $b=-0.233565-0.499204I$	$1.90349+1.53560I$	0
$u=-0.764877+0.747204I$ $a=-0.782753-0.110036I$ $b=\ 0.560754+1.224240I$	$-3.69681-0.59851I$	0
$u=-0.764877-0.747204I$ $a=-0.782753+0.110036I$ $b=\ 0.560754-1.224240I$	$-3.69681+0.59851I$	0
$u=-0.568939+0.906736I$ $a=\ 0.47634+2.73143I$ $b=\ 2.65902-1.01527I$	$-1.20931+2.19749I$	0
$u=-0.568939-0.906736I$ $a=\ 0.47634-2.73143I$ $b=\ 2.65902+1.01527I$	$-1.20931-2.19749I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.820991 + 0.687464I$ $a = 1.30100 + 0.59172I$ $b = -1.08489 + 2.81057I$	$-1.63250 + 11.81960I$	0
$u = 0.820991 - 0.687464I$ $a = 1.30100 - 0.59172I$ $b = -1.08489 - 2.81057I$	$-1.63250 - 11.81960I$	0
$u = -0.507517 + 0.943536I$ $a = -0.81181 - 1.85142I$ $b = -1.63254 + 0.69181I$	$4.96384 - 0.11752I$	0
$u = -0.507517 - 0.943536I$ $a = -0.81181 + 1.85142I$ $b = -1.63254 - 0.69181I$	$4.96384 + 0.11752I$	0
$u = 0.772006 + 0.772780I$ $a = 1.58909 - 0.90180I$ $b = 0.576947 + 1.122740I$	$-6.36063 - 0.71203I$	0
$u = 0.772006 - 0.772780I$ $a = 1.58909 + 0.90180I$ $b = 0.576947 - 1.122740I$	$-6.36063 + 0.71203I$	0
$u = 0.662337 + 0.870835I$ $a = -0.397275 + 0.149125I$ $b = -0.0950051 + 0.0447575I$	$-1.01013 - 2.56602I$	0
$u = 0.662337 - 0.870835I$ $a = -0.397275 - 0.149125I$ $b = -0.0950051 - 0.0447575I$	$-1.01013 + 2.56602I$	0
$u = -0.815391 + 0.729941I$ $a = 0.142260 - 0.616883I$ $b = -1.009020 + 0.511024I$	$-5.63875 - 0.21059I$	0
$u = -0.815391 - 0.729941I$ $a = 0.142260 + 0.616883I$ $b = -1.009020 - 0.511024I$	$-5.63875 + 0.21059I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.770455 + 0.789444I$ $a = 1.106370 + 0.534564I$ $b = -0.27456 - 1.87357I$	$-5.82240 + 3.12989I$	0
$u = -0.770455 - 0.789444I$ $a = 1.106370 - 0.534564I$ $b = -0.27456 + 1.87357I$	$-5.82240 - 3.12989I$	0
$u = 0.581600 + 0.937909I$ $a = -0.659104 - 0.661539I$ $b = 0.100577 - 0.196830I$	$0.34882 - 4.22670I$	0
$u = 0.581600 - 0.937909I$ $a = -0.659104 + 0.661539I$ $b = 0.100577 + 0.196830I$	$0.34882 + 4.22670I$	0
$u = -0.808577 + 0.760102I$ $a = 0.420874 + 0.731250I$ $b = 0.507807 - 1.307110I$	$-6.15982 - 3.10465I$	0
$u = -0.808577 - 0.760102I$ $a = 0.420874 - 0.731250I$ $b = 0.507807 + 1.307110I$	$-6.15982 + 3.10465I$	0
$u = 0.767617 + 0.814930I$ $a = -1.341450 + 0.226399I$ $b = 0.254417 - 0.631786I$	$-1.58344 - 3.65437I$	0
$u = 0.767617 - 0.814930I$ $a = -1.341450 - 0.226399I$ $b = 0.254417 + 0.631786I$	$-1.58344 + 3.65437I$	0
$u = -0.573335 + 0.970305I$ $a = -1.17424 - 2.43459I$ $b = -1.72069 + 1.50758I$	$5.43993 + 3.94383I$	0
$u = -0.573335 - 0.970305I$ $a = -1.17424 + 2.43459I$ $b = -1.72069 - 1.50758I$	$5.43993 - 3.94383I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.789834 + 0.812667I$ $a = 1.64616 - 0.11664I$ $b = -0.543734 + 0.979094I$	$-3.81432 - 8.80179I$	0
$u = 0.789834 - 0.812667I$ $a = 1.64616 + 0.11664I$ $b = -0.543734 - 0.979094I$	$-3.81432 + 8.80179I$	0
$u = -0.592860 + 0.980993I$ $a = 1.24435 + 2.51142I$ $b = 1.64111 - 1.71076I$	$3.89569 + 9.64082I$	0
$u = -0.592860 - 0.980993I$ $a = 1.24435 - 2.51142I$ $b = 1.64111 + 1.71076I$	$3.89569 - 9.64082I$	0
$u = 0.734585 + 0.916006I$ $a = -0.239524 - 0.207158I$ $b = -0.060534 + 0.753628I$	$-1.26885 - 2.02626I$	0
$u = 0.734585 - 0.916006I$ $a = -0.239524 + 0.207158I$ $b = -0.060534 - 0.753628I$	$-1.26885 + 2.02626I$	0
$u = -0.729555 + 0.940810I$ $a = -1.65103 - 0.88700I$ $b = 0.22575 + 2.04696I$	$-5.35605 + 2.54553I$	0
$u = -0.729555 - 0.940810I$ $a = -1.65103 + 0.88700I$ $b = 0.22575 - 2.04696I$	$-5.35605 - 2.54553I$	0
$u = -0.080571 + 0.801768I$ $a = -0.68517 + 1.41490I$ $b = 1.165590 - 0.301891I$	$-0.875710 + 0.948469I$	$-8.68611 + 0.I$
$u = -0.080571 - 0.801768I$ $a = -0.68517 - 1.41490I$ $b = 1.165590 + 0.301891I$	$-0.875710 - 0.948469I$	$-8.68611 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.754108 + 0.928714I$ $a = 0.020894 + 0.559672I$ $b = -0.170032 - 1.257680I$	$-3.45583 + 2.99333I$	0
$u = 0.754108 - 0.928714I$ $a = 0.020894 - 0.559672I$ $b = -0.170032 + 1.257680I$	$-3.45583 - 2.99333I$	0
$u = 0.726683 + 0.953612I$ $a = -0.404649 - 0.333661I$ $b = 1.15069 - 1.19096I$	$-5.80570 - 4.95975I$	0
$u = 0.726683 - 0.953612I$ $a = -0.404649 + 0.333661I$ $b = 1.15069 + 1.19096I$	$-5.80570 + 4.95975I$	0
$u = -0.716470 + 0.968399I$ $a = 1.009940 + 0.983135I$ $b = 0.24035 - 1.43149I$	$-3.02213 + 6.21900I$	0
$u = -0.716470 - 0.968399I$ $a = 1.009940 - 0.983135I$ $b = 0.24035 + 1.43149I$	$-3.02213 - 6.21900I$	0
$u = 0.682596 + 1.003720I$ $a = -1.72286 + 0.90870I$ $b = -0.69420 - 1.57701I$	$2.44885 - 2.15395I$	0
$u = 0.682596 - 1.003720I$ $a = -1.72286 - 0.90870I$ $b = -0.69420 + 1.57701I$	$2.44885 + 2.15395I$	0
$u = -0.710907 + 0.998558I$ $a = 0.08358 + 1.50967I$ $b = 1.13414 - 0.92782I$	$-2.02005 + 6.79446I$	0
$u = -0.710907 - 0.998558I$ $a = 0.08358 - 1.50967I$ $b = 1.13414 + 0.92782I$	$-2.02005 - 6.79446I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.696196 + 1.008940I$ $a = 1.91104 - 1.30509I$ $b = 0.92895 + 2.06413I$	$3.41635 - 7.82906I$	0
$u = 0.696196 - 1.008940I$ $a = 1.91104 + 1.30509I$ $b = 0.92895 - 2.06413I$	$3.41635 + 7.82906I$	0
$u = -0.746068 + 0.973664I$ $a = -1.42525 - 0.12220I$ $b = 0.82226 + 1.25984I$	$-5.50452 + 8.94364I$	0
$u = -0.746068 - 0.973664I$ $a = -1.42525 + 0.12220I$ $b = 0.82226 - 1.25984I$	$-5.50452 - 8.94364I$	0
$u = 0.718823 + 1.003060I$ $a = -2.07659 + 2.17491I$ $b = -1.80915 - 3.12071I$	$-4.18525 - 8.73612I$	0
$u = 0.718823 - 1.003060I$ $a = -2.07659 - 2.17491I$ $b = -1.80915 + 3.12071I$	$-4.18525 + 8.73612I$	0
$u = -0.738208 + 0.993906I$ $a = 0.927077 - 0.659401I$ $b = -1.101950 - 0.318264I$	$-4.83099 + 6.04293I$	0
$u = -0.738208 - 0.993906I$ $a = 0.927077 + 0.659401I$ $b = -1.101950 + 0.318264I$	$-4.83099 - 6.04293I$	0
$u = -0.720095 + 1.008540I$ $a = 0.41204 - 1.59057I$ $b = -1.45541 + 0.62359I$	$-3.19045 + 11.30350I$	0
$u = -0.720095 - 1.008540I$ $a = 0.41204 + 1.59057I$ $b = -1.45541 - 0.62359I$	$-3.19045 - 11.30350I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.719408 + 1.015160I$ $a = 2.36088 - 1.88696I$ $b = 1.04853 + 3.16425I$	$1.67951 - 11.91070I$	0
$u = 0.719408 - 1.015160I$ $a = 2.36088 + 1.88696I$ $b = 1.04853 - 3.16425I$	$1.67951 + 11.91070I$	0
$u = 0.725093 + 1.016800I$ $a = -2.46825 + 1.95770I$ $b = -0.94944 - 3.40309I$	$-0.6299 - 17.6207I$	0
$u = 0.725093 - 1.016800I$ $a = -2.46825 - 1.95770I$ $b = -0.94944 + 3.40309I$	$-0.6299 + 17.6207I$	0
$u = -0.574352 + 0.418607I$ $a = 0.135427 + 0.714012I$ $b = 0.86196 + 1.26612I$	$2.54612 - 5.10023I$	$-7.16882 + 3.19715I$
$u = -0.574352 - 0.418607I$ $a = 0.135427 - 0.714012I$ $b = 0.86196 - 1.26612I$	$2.54612 + 5.10023I$	$-7.16882 - 3.19715I$
$u = -0.631566 + 0.179431I$ $a = 1.55073 + 0.65579I$ $b = 0.078384 + 1.100650I$	$0.93401 + 9.47471I$	$-10.17613 - 7.65520I$
$u = -0.631566 - 0.179431I$ $a = 1.55073 - 0.65579I$ $b = 0.078384 - 1.100650I$	$0.93401 - 9.47471I$	$-10.17613 + 7.65520I$
$u = -0.560215 + 0.341895I$ $a = -0.456081 - 0.838719I$ $b = -0.630414 - 1.220460I$	$3.99504 + 0.35322I$	$-5.03327 - 2.38344I$
$u = -0.560215 - 0.341895I$ $a = -0.456081 + 0.838719I$ $b = -0.630414 + 1.220460I$	$3.99504 - 0.35322I$	$-5.03327 + 2.38344I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.607988 + 0.205302I$ $a = -1.32956 - 0.79282I$ $b = -0.205681 - 1.140070I$	$3.06262 + 3.92490I$	$-6.94599 - 3.74176I$
$u = -0.607988 - 0.205302I$ $a = -1.32956 + 0.79282I$ $b = -0.205681 + 1.140070I$	$3.06262 - 3.92490I$	$-6.94599 + 3.74176I$
$u = 0.606436 + 0.043814I$ $a = 0.197367 - 0.784558I$ $b = -0.207695 + 0.574254I$	$-2.33432 + 1.63935I$	$-11.54858 - 4.00697I$
$u = 0.606436 - 0.043814I$ $a = 0.197367 + 0.784558I$ $b = -0.207695 - 0.574254I$	$-2.33432 - 1.63935I$	$-11.54858 + 4.00697I$
$u = 0.570119 + 0.177210I$ $a = 0.626226 - 0.746167I$ $b = -0.639347 + 0.300541I$	$-1.64918 - 3.56067I$	$-12.02219 + 5.47193I$
$u = 0.570119 - 0.177210I$ $a = 0.626226 + 0.746167I$ $b = -0.639347 - 0.300541I$	$-1.64918 + 3.56067I$	$-12.02219 - 5.47193I$
$u = -0.525944 + 0.152741I$ $a = 1.48425 + 1.60870I$ $b = 0.338855 + 0.955316I$	$-2.56426 + 1.24826I$	$-11.02453 - 5.32858I$
$u = -0.525944 - 0.152741I$ $a = 1.48425 - 1.60870I$ $b = 0.338855 - 0.955316I$	$-2.56426 - 1.24826I$	$-11.02453 + 5.32858I$
$u = 0.413113 + 0.265236I$ $a = -0.828742 + 0.732041I$ $b = 0.558168 + 0.007894I$	$-0.745453 + 0.267249I$	$-9.83522 + 0.75496I$
$u = 0.413113 - 0.265236I$ $a = -0.828742 - 0.732041I$ $b = 0.558168 - 0.007894I$	$-0.745453 - 0.267249I$	$-9.83522 - 0.75496I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.376387$ $a = -0.936204$ $b = \quad 0.379146$	-0.758702	-12.9630

II. $\boldsymbol{I_2^u = \langle -u^5 - u^3 + b - u + 1,\ u^7 + u^6 + 2u^5 + u^4 + 2u^3 + u^2 + a + u,\ u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-u^7 - u^6 - 2u^5 - u^4 - 2u^3 - u^2 - u\\ u^5 + u^3 + u - 1\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^7 - u^6 - 2u^5 - u^4 - 2u^3 - u^2 - u\\ u^5 + u^3 + u - 1\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u^3\\u^3 + u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^5 - u\\u^5 + u^3 + u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u^5 + u\\u^7 + u^5 + 2u^3 + u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}u^5 + u\\-u^5 - u^3 - u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-u^7 - u^6 - 3u^5 - u^4 - 2u^3 - u^2 - 2u\\ 2u^5 + 2u^3 + 2u - 1\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4u^7 - 4u^6 - 3u^5 - 3u^4 - 6u^3 - 3u^2 + u - 13$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_7	u^9
c_4	$(u+1)^9$
c_5, c_8	$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1$
c_6	$u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1$
c_9	$u^9 + 5u^8 + 12u^7 + 15u^6 + 9u^5 - u^4 - 4u^3 - 2u^2 + u + 1$
c_{10}	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$
c_{11}	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$
c_{12}	$u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_7	y^9
c_5, c_8	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_6, c_{11}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_9	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_{10}, c_{12}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.140343 + 0.966856I$ $a = 0.900982 - 0.594909I$ $b = -0.663053 + 0.788921I$	$0.13850 - 2.09337I$	$-6.69021 + 3.87975I$
$u = 0.140343 - 0.966856I$ $a = 0.900982 + 0.594909I$ $b = -0.663053 - 0.788921I$	$0.13850 + 2.09337I$	$-6.69021 - 3.87975I$
$u = 0.628449 + 0.875112I$ $a = 0.249476 + 1.304240I$ $b = -1.52709 - 0.20930I$	$-2.26187 - 2.45442I$	$-12.49381 + 3.35442I$
$u = 0.628449 - 0.875112I$ $a = 0.249476 - 1.304240I$ $b = -1.52709 + 0.20930I$	$-2.26187 + 2.45442I$	$-12.49381 - 3.35442I$
$u = -0.796005 + 0.733148I$ $a = -0.766570 + 0.255687I$ $b = 0.224752 + 0.919301I$	$-6.01628 - 1.33617I$	$-13.53709 + 1.22905I$
$u = -0.796005 - 0.733148I$ $a = -0.766570 - 0.255687I$ $b = 0.224752 - 0.919301I$	$-6.01628 + 1.33617I$	$-13.53709 - 1.22905I$
$u = -0.728966 + 0.986295I$ $a = 0.721488 + 0.307914I$ $b = 0.124310 - 1.173370I$	$-5.24306 + 7.08493I$	$-12.02676 - 6.64241I$
$u = -0.728966 - 0.986295I$ $a = 0.721488 - 0.307914I$ $b = 0.124310 + 1.173370I$	$-5.24306 - 7.08493I$	$-12.02676 + 6.64241I$
$u = 0.512358$ $a = -1.21075$ $b = -0.317835$	-2.84338	-14.5040

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^{111}+52u^{110}+\cdots+26u+1)$
c_2	$((u-1)^9)(u^{111}-10u^{110}+\cdots-6u+1)$
c_3, c_7	$u^9(u^{111}+u^{110}+\cdots+1024u+512)$
c_4	$((u+1)^9)(u^{111}-10u^{110}+\cdots-6u+1)$
c_5	$(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{111}+2u^{110}+\cdots+71974u+7769)$
c_6	$(u^9+u^8+\cdots+u-1)(u^{111}+2u^{110}+\cdots+2u+1)$
c_8	$(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{111}-8u^{110}+\cdots-4116076u+591991)$
c_9	$(u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1)$ $\cdot(u^{111}-10u^{110}+\cdots-688u+64)$
c_{10}	$(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{111}-36u^{110}+\cdots+6u+1)$
c_{11}	$(u^9-u^8+\cdots+u+1)(u^{111}+2u^{110}+\cdots+2u+1)$
c_{12}	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{111}-36u^{110}+\cdots+6u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^{111}+24y^{110}+\cdots+326y-1)$
c_2, c_4	$((y-1)^9)(y^{111}-52y^{110}+\cdots+26y-1)$
c_3, c_7	$y^9(y^{111}+57y^{110}+\cdots-6291456y-262144)$
c_5	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{111}-28y^{110}+\cdots+4384850918y-60357361)$
c_6, c_{11}	$(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{111}+36y^{110}+\cdots+6y-1)$
c_8	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{111}+32y^{110}+\cdots-6104529362122y-350453344081)$
c_9	$(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{111}+4y^{110}+\cdots-290688y-4096)$
c_{10}, c_{12}	$(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{111}+80y^{110}+\cdots+34y-1)$