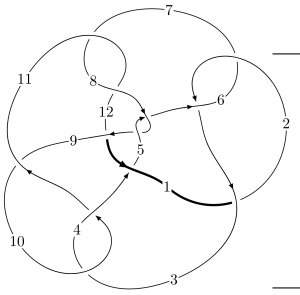
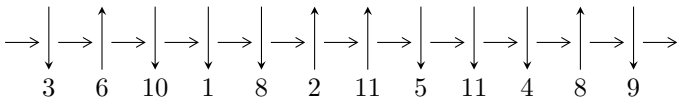
$12n_{0529}$ $(K12n_{0529})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 8.62257 \times 10^{140} u^{80} - 6.47276 \times 10^{140} u^{79} + \cdots + 2.66122 \times 10^{142} b - 8.68171 \times 10^{142},$$
$$3.03432 \times 10^{143} u^{80} - 2.26585 \times 10^{143} u^{79} + \cdots + 6.25386 \times 10^{144} a - 4.22144 \times 10^{145},\ u^{81} - u^{80} + \cdots + 13u$$
$$I_2^u = \langle -5u^{23} + u^{22} + \cdots + b - 1,\ 16u^{23} - 14u^{22} + \cdots + a + 33,\ u^{24} - 7u^{22} + \cdots + 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 105 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. $\boldsymbol{I_1^u = \langle 8.62 \times 10^{140} u^{80} - 6.47 \times 10^{140} u^{79} + \cdots + 2.66 \times 10^{142} b - 8.68 \times 10^{142},\ 3.03 \times 10^{143} u^{80} - 2.27 \times 10^{143} u^{79} + \cdots + 6.25 \times 10^{144} a - 4.22 \times 10^{145},\ u^{81} - u^{80} + \cdots + 13u + 47 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0485191u^{80} + 0.0362312u^{79} + \cdots + 15.1878u + 6.75014 \\ -0.0324008u^{80} + 0.0243225u^{79} + \cdots + 6.35687u + 3.26231 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.145918u^{80} - 0.00189727u^{79} + \cdots - 15.4510u - 12.1681 \\ -0.0187396u^{80} - 0.0319668u^{79} + \cdots - 1.63055u + 2.79062 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0764253u^{80} - 0.0146344u^{79} + \cdots - 6.83981u - 7.33819 \\ 0.0574398u^{80} - 0.0642603u^{79} + \cdots - 8.20882u - 3.09289 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.169348u^{80} - 0.0360227u^{79} + \cdots - 13.2694u - 11.0124 \\ 0.0617316u^{80} - 0.0482530u^{79} + \cdots - 7.07660u - 2.78079 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.127178u^{80} - 0.0338641u^{79} + \cdots - 17.0815u - 9.37752 \\ -0.0187396u^{80} - 0.0319668u^{79} + \cdots - 1.63055u + 2.79062 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0973705u^{80} + 0.0318201u^{79} + \cdots - 1.32449u - 4.48371 \\ 0.0209631u^{80} + 0.0149658u^{79} + \cdots + 2.54446u - 2.31091 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} 0.0533183u^{80} - 0.0156877u^{79} + \cdots - 12.0825u - 6.28809 \\ -0.0819438u^{80} - 0.00309381u^{79} + \cdots + 5.06453u + 6.74036 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.574685u^{80} - 0.0343111u^{79} + \cdots - 42.1791u - 39.7887$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{81}+47u^{80}+\cdots-12u-1$
c_2, c_6	$u^{81}-u^{80}+\cdots+6u^2+1$
c_3, c_{10}	$u^{81}-u^{80}+\cdots+13u+47$
c_4	$u^{81}-3u^{80}+\cdots+1837u+347$
c_5, c_8	$u^{81}-3u^{80}+\cdots-35u-49$
c_7, c_{11}	$u^{81}+5u^{80}+\cdots-11394u+9307$
c_9	$u^{81}+43u^{80}+\cdots+30249u+2209$
c_{12}	$u^{81}-u^{80}+\cdots-251686u+41753$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{81} - 9y^{80} + \cdots - 28y - 1$
c_2, c_6	$y^{81} + 47y^{80} + \cdots - 12y - 1$
c_3, c_{10}	$y^{81} - 43y^{80} + \cdots + 30249y - 2209$
c_4	$y^{81} + 37y^{80} + \cdots - 3637607y - 120409$
c_5, c_8	$y^{81} + 27y^{80} + \cdots - 50323y - 2401$
c_7, c_{11}	$y^{81} + 63y^{80} + \cdots + 678266132y - 86620249$
c_9	$y^{81} + 5y^{80} + \cdots - 223295699y - 4879681$
c_{12}	$y^{81} - 37y^{80} + \cdots + 94686312444y - 1743313009$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.159420 + 0.995305I$ $a = 0.935421 + 0.685407I$ $b = -0.578486 - 1.135720I$	$-2.78412 + 4.09191I$	0
$u = 0.159420 - 0.995305I$ $a = 0.935421 - 0.685407I$ $b = -0.578486 + 1.135720I$	$-2.78412 - 4.09191I$	0
$u = 0.376854 + 0.905642I$ $a = -0.252327 + 0.170325I$ $b = 0.413913 - 0.717629I$	$4.18971 - 1.89813I$	$6.48835 + 0.I$
$u = 0.376854 - 0.905642I$ $a = -0.252327 - 0.170325I$ $b = 0.413913 + 0.717629I$	$4.18971 + 1.89813I$	$6.48835 + 0.I$
$u = -0.661263 + 0.704542I$ $a = 0.839577 - 0.272761I$ $b = -0.476366 + 1.005480I$	$1.42827 - 2.25830I$	$-4.00000 + 5.30334I$
$u = -0.661263 - 0.704542I$ $a = 0.839577 + 0.272761I$ $b = -0.476366 - 1.005480I$	$1.42827 + 2.25830I$	$-4.00000 - 5.30334I$
$u = -1.000680 + 0.339594I$ $a = -0.64504 + 1.66330I$ $b = 0.332392 + 1.158070I$	$0.71275 + 3.59108I$	0
$u = -1.000680 - 0.339594I$ $a = -0.64504 - 1.66330I$ $b = 0.332392 - 1.158070I$	$0.71275 - 3.59108I$	0
$u = -0.571724 + 0.894004I$ $a = -0.351532 + 0.151292I$ $b = 0.436363 - 0.928482I$	$1.58675 + 1.13569I$	0
$u = -0.571724 - 0.894004I$ $a = -0.351532 - 0.151292I$ $b = 0.436363 + 0.928482I$	$1.58675 - 1.13569I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.934622$ $a=-0.202474$ $b=\ \ 0.471310$	-1.70013	-4.55780
$u=\ \ 0.883279+0.595878I$ $a=\ \ 0.630805-0.530733I$ $b=-0.525868+0.421987I$	$3.21313-3.83074I$	0
$u=\ \ 0.883279-0.595878I$ $a=\ \ 0.630805+0.530733I$ $b=-0.525868-0.421987I$	$3.21313+3.83074I$	0
$u=-0.408368+0.839079I$ $a=-1.46418+0.42247I$ $b=\ \ 0.924562+0.331227I$	$0.85878-5.06052I$	$0.+2.81038I$
$u=-0.408368-0.839079I$ $a=-1.46418-0.42247I$ $b=\ \ 0.924562-0.331227I$	$0.85878+5.06052I$	$0.-2.81038I$
$u=-0.979097+0.487895I$ $a=\ \ 0.105613-0.719977I$ $b=-0.931801+0.774121I$	$3.71023+0.03758I$	0
$u=-0.979097-0.487895I$ $a=\ \ 0.105613+0.719977I$ $b=-0.931801-0.774121I$	$3.71023-0.03758I$	0
$u=\ \ 0.322513+1.061320I$ $a=-0.810462-0.694013I$ $b=\ \ 0.599928+1.189190I$	$-1.78824+10.62680I$	0
$u=\ \ 0.322513-1.061320I$ $a=-0.810462+0.694013I$ $b=\ \ 0.599928-1.189190I$	$-1.78824-10.62680I$	0
$u=\ \ 0.823612+0.751253I$ $a=\ \ 0.811016-0.029992I$ $b=-0.409599+0.082280I$	$3.40007-1.49524I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.823612 - 0.751253I$ $a = 0.811016 + 0.029992I$ $b = -0.409599 - 0.082280I$	$3.40007 + 1.49524I$	0
$u = 0.864023 + 0.185989I$ $a = 1.90280 + 2.54662I$ $b = -0.066643 + 0.845765I$	$-2.91161 + 2.49317I$	$-8.76964 - 0.67821I$
$u = 0.864023 - 0.185989I$ $a = 1.90280 - 2.54662I$ $b = -0.066643 - 0.845765I$	$-2.91161 - 2.49317I$	$-8.76964 + 0.67821I$
$u = 1.100390 + 0.201043I$ $a = 1.00477 + 1.01305I$ $b = -0.740363 - 0.292523I$	$-4.23067 + 2.70934I$	0
$u = 1.100390 - 0.201043I$ $a = 1.00477 - 1.01305I$ $b = -0.740363 + 0.292523I$	$-4.23067 - 2.70934I$	0
$u = 0.871403 + 0.717699I$ $a = 0.976706 - 0.631023I$ $b = -0.042020 + 0.535241I$	$3.36043 - 1.33032I$	0
$u = 0.871403 - 0.717699I$ $a = 0.976706 + 0.631023I$ $b = -0.042020 - 0.535241I$	$3.36043 + 1.33032I$	0
$u = 1.122290 + 0.197548I$ $a = -1.04175 - 1.25015I$ $b = 0.313035 - 0.963622I$	$-4.22930 - 2.75874I$	0
$u = 1.122290 - 0.197548I$ $a = -1.04175 + 1.25015I$ $b = 0.313035 + 0.963622I$	$-4.22930 + 2.75874I$	0
$u = 1.081310 + 0.429427I$ $a = -0.239516 - 0.185534I$ $b = -0.32431 - 1.54232I$	$-7.39105 - 5.07513I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.081310 - 0.429427I$ $a = -0.239516 + 0.185534I$ $b = -0.32431 + 1.54232I$	$-7.39105 + 5.07513I$	0
$u = -0.353227 + 0.757360I$ $a = 1.13050 - 1.44697I$ $b = -0.309577 + 1.131200I$	$-4.70079 - 3.78323I$	$-5.54818 + 3.30856I$
$u = -0.353227 - 0.757360I$ $a = 1.13050 + 1.44697I$ $b = -0.309577 - 1.131200I$	$-4.70079 + 3.78323I$	$-5.54818 - 3.30856I$
$u = 1.116360 + 0.351305I$ $a = -1.05780 - 0.95057I$ $b = 0.666696 + 0.237202I$	$-4.33281 - 4.26606I$	0
$u = 1.116360 - 0.351305I$ $a = -1.05780 + 0.95057I$ $b = 0.666696 - 0.237202I$	$-4.33281 + 4.26606I$	0
$u = 1.097800 + 0.427856I$ $a = 1.57748 + 0.94414I$ $b = -0.811505 + 1.002040I$	$2.99739 - 6.42104I$	0
$u = 1.097800 - 0.427856I$ $a = 1.57748 - 0.94414I$ $b = -0.811505 - 1.002040I$	$2.99739 + 6.42104I$	0
$u = 0.922762 + 0.740121I$ $a = -0.415168 - 0.652065I$ $b = 0.271496 + 0.211929I$	$3.08566 - 4.17180I$	0
$u = 0.922762 - 0.740121I$ $a = -0.415168 + 0.652065I$ $b = 0.271496 - 0.211929I$	$3.08566 + 4.17180I$	0
$u = -0.991780 + 0.652953I$ $a = -1.84179 + 0.76782I$ $b = 0.394401 + 1.134090I$	$0.43873 + 7.49699I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.991780-0.652953I$ $a=-1.84179-0.76782I$ $b=\ \ 0.394401-1.134090I$	$0.43873-7.49699I$	0
$u=\ \ 1.162730+0.284953I$ $a=-0.009432+0.485623I$ $b=\ \ 0.27944+1.42871I$	$-9.09751+0.85503I$	0
$u=\ \ 1.162730-0.284953I$ $a=-0.009432-0.485623I$ $b=\ \ 0.27944-1.42871I$	$-9.09751-0.85503I$	0
$u=-0.743234+0.302673I$ $a=\ \ 1.265020+0.224679I$ $b=-0.598633+1.007620I$	$1.64504-0.79136I$	$-7.66851-3.15531I$
$u=-0.743234-0.302673I$ $a=\ \ 1.265020-0.224679I$ $b=-0.598633-1.007620I$	$1.64504+0.79136I$	$-7.66851+3.15531I$
$u=-1.118710+0.488890I$ $a=\ \ 1.89475-0.05980I$ $b=-0.542651-1.179660I$	$-6.90163+2.26075I$	0
$u=-1.118710-0.488890I$ $a=\ \ 1.89475+0.05980I$ $b=-0.542651+1.179660I$	$-6.90163-2.26075I$	0
$u=-1.145040+0.505621I$ $a=-0.597188+0.555247I$ $b=\ \ 1.028760-0.304158I$	$-3.26600+3.64539I$	0
$u=-1.145040-0.505621I$ $a=-0.597188-0.555247I$ $b=\ \ 1.028760+0.304158I$	$-3.26600-3.64539I$	0
$u=-0.183670+0.715881I$ $a=\ \ 1.45549-0.28504I$ $b=-0.716431-0.354969I$	$-0.514533+0.940856I$	$-1.24894-2.13001I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.183670-0.715881I$ $a=\ \ 1.45549+0.28504I$ $b=-0.716431+0.354969I$	$-0.514533-0.940856I$	$-1.24894+2.13001I$
$u=-1.139740+0.579388I$ $a=-1.94101+0.08618I$ $b=\ \ 0.512467+1.158430I$	$-7.02831+8.88570I$	0
$u=-1.139740-0.579388I$ $a=-1.94101-0.08618I$ $b=\ \ 0.512467-1.158430I$	$-7.02831-8.88570I$	0
$u=-0.634187+0.341977I$ $a=-1.90217+0.43344I$ $b=\ \ 0.915109+0.975916I$	$4.92844+3.68094I$	$-2.52917-1.30807I$
$u=-0.634187-0.341977I$ $a=-1.90217-0.43344I$ $b=\ \ 0.915109-0.975916I$	$4.92844-3.68094I$	$-2.52917+1.30807I$
$u=-1.136150+0.610179I$ $a=\ \ 0.747989-0.641986I$ $b=-1.136880+0.243931I$	$-1.34866+10.46180I$	0
$u=-1.136150-0.610179I$ $a=\ \ 0.747989+0.641986I$ $b=-1.136880-0.243931I$	$-1.34866-10.46180I$	0
$u=-1.070200+0.734551I$ $a=\ \ 1.296960-0.360784I$ $b=-0.378710-1.178060I$	$0.09459+4.85619I$	0
$u=-1.070200-0.734551I$ $a=\ \ 1.296960+0.360784I$ $b=-0.378710+1.178060I$	$0.09459-4.85619I$	0
$u=\ \ 0.637063+0.218185I$ $a=-1.32663-1.92334I$ $b=\ \ 0.03800-1.49521I$	$-5.48699+1.94976I$	$2.72009+1.05128I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.637063 - 0.218185I$ $a = -1.32663 + 1.92334I$ $b = 0.03800 + 1.49521I$	$-5.48699 - 1.94976I$	$2.72009 - 1.05128I$
$u = -0.311386 + 0.591390I$ $a = -0.80934 + 2.32791I$ $b = 0.226255 - 1.139810I$	$-4.49439 + 2.07707I$	$-5.39720 - 3.30118I$
$u = -0.311386 - 0.591390I$ $a = -0.80934 - 2.32791I$ $b = 0.226255 + 1.139810I$	$-4.49439 - 2.07707I$	$-5.39720 + 3.30118I$
$u = 0.985820 + 0.912507I$ $a = -0.636717 + 0.039730I$ $b = 0.201679 - 0.628086I$	$2.79450 - 4.44773I$	0
$u = 0.985820 - 0.912507I$ $a = -0.636717 - 0.039730I$ $b = 0.201679 + 0.628086I$	$2.79450 + 4.44773I$	0
$u = 1.359520 + 0.164573I$ $a = -0.399737 - 1.222220I$ $b = 0.068318 - 0.573572I$	$-4.98357 - 3.68959I$	0
$u = 1.359520 - 0.164573I$ $a = -0.399737 + 1.222220I$ $b = 0.068318 + 0.573572I$	$-4.98357 + 3.68959I$	0
$u = 1.258050 + 0.575219I$ $a = -1.49315 - 0.54735I$ $b = 0.651128 - 1.243060I$	$-6.14816 - 9.70514I$	0
$u = 1.258050 - 0.575219I$ $a = -1.49315 + 0.54735I$ $b = 0.651128 + 1.243060I$	$-6.14816 + 9.70514I$	0
$u = -1.290740 + 0.507998I$ $a = 0.736660 - 0.702992I$ $b = -0.356631 - 1.170940I$	$-0.49084 + 6.69889I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.290740-0.507998I$ $a=\ 0.736660+0.702992I$ $b=-0.356631+1.170940I$	$-0.49084-6.69889I$	0
$u=\ 1.240140+0.660502I$ $a=\ 1.56088+0.45637I$ $b=-0.65000+1.29438I$	$-4.6334-16.7910I$	0
$u=\ 1.240140-0.660502I$ $a=\ 1.56088-0.45637I$ $b=-0.65000-1.29438I$	$-4.6334+16.7910I$	0
$u=-1.38465+0.37974I$ $a=\ 0.139313-0.158138I$ $b=\ 0.414696-1.149390I$	$-7.77183+0.76959I$	0
$u=-1.38465-0.37974I$ $a=\ 0.139313+0.158138I$ $b=\ 0.414696+1.149390I$	$-7.77183-0.76959I$	0
$u=\ 0.417926+0.357171I$ $a=-0.87838-1.58477I$ $b=\ 0.857230+0.892954I$	$5.13693+2.84021I$	$1.05922-6.16779I$
$u=\ 0.417926-0.357171I$ $a=-0.87838+1.58477I$ $b=\ 0.857230-0.892954I$	$5.13693-2.84021I$	$1.05922+6.16779I$
$u=-1.47404+0.21229I$ $a=-0.048590+0.308635I$ $b=-0.384894+1.161020I$	$-8.06565-6.08851I$	0
$u=-1.47404-0.21229I$ $a=-0.048590-0.308635I$ $b=-0.384894-1.161020I$	$-8.06565+6.08851I$	0
$u=-0.238068+0.402940I$ $a=\ 1.102460-0.088285I$ $b=-0.300155-0.543538I$	$-0.171294+1.043260I$	$-3.00612-6.15581I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.238068 - 0.402940I$		
$a = \quad 1.102460 + 0.088285I$	$-0.171294 - 1.043260I$	$-3.00612 + 6.15581I$
$b = -0.300155 + 0.543538I$		

II. $I_2^u =$
$\langle -5u^{23}+u^{22}+\cdots+b-1,\ 16u^{23}-14u^{22}+\cdots+a+33,\ u^{24}-7u^{22}+\cdots+2u+1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -16u^{23} + 14u^{22} + \cdots - 24u - 33 \\ 5u^{23} - u^{22} + \cdots - 7u + 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 8u^{23} - u^{22} + \cdots - 16u + 10 \\ u^{23} - 7u^{21} + \cdots - 2u - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -15u^{23} + 6u^{22} + \cdots - 4u - 20 \\ 3u^{23} - 4u^{22} + \cdots + 13u + 8 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -18u^{23} + 6u^{22} + \cdots + u - 21 \\ 4u^{23} - 4u^{22} + \cdots + 11u + 9 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 9u^{23} - u^{22} + \cdots - 18u + 9 \\ u^{23} - 7u^{21} + \cdots - 2u - 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -8u^{23} + 7u^{22} + \cdots - 18u - 26 \\ u^{23} + u^{22} + \cdots - 5u + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 8u^{23} - u^{22} + \cdots - 16u + 9 \\ -u^{19} + 6u^{17} + \cdots + 2u - 2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 25u^{23} - 22u^{22} - 171u^{21} + 195u^{20} + 576u^{19} - 827u^{18} - 1216u^{17} + 2202u^{16} + 1672u^{15} - 4057u^{14} - 1435u^{13} + 5422u^{12} + 575u^{11} - 5408u^{10} + 259u^9 + 4100u^8 - 511u^7 - 2403u^6 + 358u^5 + 1038u^4 - 121u^3 - 324u^2 + 10u + 45$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{24} - 16u^{23} + \cdots - 21u + 1$
c_2	$u^{24} + 8u^{22} + \cdots + u + 1$
c_3	$u^{24} - 7u^{22} + \cdots + 2u + 1$
c_4	$u^{24} + 2u^{23} + \cdots - 2u^2 + 1$
c_5	$u^{24} - 4u^{23} + \cdots - 4u + 1$
c_6	$u^{24} + 8u^{22} + \cdots - u + 1$
c_7	$u^{24} + 2u^{22} + \cdots + u + 1$
c_8	$u^{24} + 4u^{23} + \cdots + 4u + 1$
c_9	$u^{24} - 14u^{23} + \cdots - 16u + 1$
c_{10}	$u^{24} - 7u^{22} + \cdots - 2u + 1$
c_{11}	$u^{24} + 2u^{22} + \cdots - u + 1$
c_{12}	$u^{24} + 8u^{23} + \cdots - 203u + 103$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{24} - 32y^{22} + \cdots - 23y + 1$
c_2, c_6	$y^{24} + 16y^{23} + \cdots + 21y + 1$
c_3, c_{10}	$y^{24} - 14y^{23} + \cdots - 16y + 1$
c_4	$y^{24} + 18y^{23} + \cdots - 4y + 1$
c_5, c_8	$y^{24} + 16y^{23} + \cdots + 20y + 1$
c_7, c_{11}	$y^{24} + 4y^{23} + \cdots - 11y + 1$
c_9	$y^{24} + 6y^{23} + \cdots - 8y + 1$
c_{12}	$y^{24} - 8y^{23} + \cdots + 12145y + 10609$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.760804 + 0.607035I$ $a = -1.49179 + 0.04895I$ $b = 0.887524 - 0.776961I$	$5.70049 - 4.53187I$	$3.10527 + 6.80987I$
$u = 0.760804 - 0.607035I$ $a = -1.49179 - 0.04895I$ $b = 0.887524 + 0.776961I$	$5.70049 + 4.53187I$	$3.10527 - 6.80987I$
$u = 0.692071 + 0.781521I$ $a = 0.611885 - 0.793457I$ $b = -0.339703 + 0.732138I$	$3.33432 - 2.30280I$	$-2.18873 + 5.34734I$
$u = 0.692071 - 0.781521I$ $a = 0.611885 + 0.793457I$ $b = -0.339703 - 0.732138I$	$3.33432 + 2.30280I$	$-2.18873 - 5.34734I$
$u = -0.716982 + 0.459544I$ $a = -0.680089 + 0.749202I$ $b = 0.874697 - 1.033040I$	$4.95705 - 1.97528I$	$-0.77501 - 2.33256I$
$u = -0.716982 - 0.459544I$ $a = -0.680089 - 0.749202I$ $b = 0.874697 + 1.033040I$	$4.95705 + 1.97528I$	$-0.77501 + 2.33256I$
$u = -1.044620 + 0.486468I$ $a = 1.50313 - 1.01455I$ $b = -0.707939 - 1.076430I$	$3.79667 + 5.88099I$	$0.70835 - 4.51294I$
$u = -1.044620 - 0.486468I$ $a = 1.50313 + 1.01455I$ $b = -0.707939 + 1.076430I$	$3.79667 - 5.88099I$	$0.70835 + 4.51294I$
$u = 0.982224 + 0.632402I$ $a = 0.066377 + 0.727471I$ $b = -0.725173 - 0.698599I$	$4.98117 - 0.35208I$	$2.23151 + 0.17854I$
$u = 0.982224 - 0.632402I$ $a = 0.066377 - 0.727471I$ $b = -0.725173 + 0.698599I$	$4.98117 + 0.35208I$	$2.23151 - 0.17854I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.210080 + 0.127545I$ $a = 0.196543 + 0.090225I$ $b = 0.070686 + 1.309280I$	$-7.87423 - 3.04176I$	$-7.80879 + 2.61074I$
$u = 1.210080 - 0.127545I$ $a = 0.196543 - 0.090225I$ $b = 0.070686 - 1.309280I$	$-7.87423 + 3.04176I$	$-7.80879 - 2.61074I$
$u = -0.568852 + 0.486026I$ $a = 0.778900 + 0.647406I$ $b = -0.474721 + 1.003620I$	$2.29472 - 1.15093I$	$2.64163 + 1.71093I$
$u = -0.568852 - 0.486026I$ $a = 0.778900 - 0.647406I$ $b = -0.474721 - 1.003620I$	$2.29472 + 1.15093I$	$2.64163 - 1.71093I$
$u = 0.732837 + 0.096465I$ $a = 1.22326 + 2.46457I$ $b = -0.04279 + 1.41632I$	$-5.93011 + 2.08072I$	$-15.0441 - 4.1088I$
$u = 0.732837 - 0.096465I$ $a = 1.22326 - 2.46457I$ $b = -0.04279 - 1.41632I$	$-5.93011 - 2.08072I$	$-15.0441 + 4.1088I$
$u = 0.970626 + 0.826369I$ $a = 0.040532 - 0.461280I$ $b = 0.152881 + 0.624525I$	$2.52482 - 3.79144I$	$-6.34052 - 1.00053I$
$u = 0.970626 - 0.826369I$ $a = 0.040532 + 0.461280I$ $b = 0.152881 - 0.624525I$	$2.52482 + 3.79144I$	$-6.34052 + 1.00053I$
$u = -1.133250 + 0.654883I$ $a = -1.105590 + 0.663064I$ $b = 0.306177 + 1.173280I$	$0.26786 + 5.91058I$	$-1.36806 - 6.09267I$
$u = -1.133250 - 0.654883I$ $a = -1.105590 - 0.663064I$ $b = 0.306177 - 1.173280I$	$0.26786 - 5.91058I$	$-1.36806 + 6.09267I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.310450+0.138714I$ $a=-0.42360+1.66109I$ $b=\ \ 0.128205+0.671742I$	$-5.27306+3.87856I$	$-18.3514-11.3041I$
$u=-1.310450-0.138714I$ $a=-0.42360-1.66109I$ $b=\ \ 0.128205-0.671742I$	$-5.27306-3.87856I$	$-18.3514+11.3041I$
$u=-0.574501+0.081525I$ $a=\ \ 1.78044-3.44622I$ $b=-0.129839+0.528164I$	$-2.19997-2.85560I$	$0.68983+4.72031I$
$u=-0.574501-0.081525I$ $a=\ \ 1.78044+3.44622I$ $b=-0.129839-0.528164I$	$-2.19997+2.85560I$	$0.68983-4.72031I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{24}-16u^{23}+\cdots-21u+1)(u^{81}+47u^{80}+\cdots-12u-1)$
c_2	$(u^{24}+8u^{22}+\cdots+u+1)(u^{81}-u^{80}+\cdots+6u^2+1)$
c_3	$(u^{24}-7u^{22}+\cdots+2u+1)(u^{81}-u^{80}+\cdots+13u+47)$
c_4	$(u^{24}+2u^{23}+\cdots-2u^2+1)(u^{81}-3u^{80}+\cdots+1837u+347)$
c_5	$(u^{24}-4u^{23}+\cdots-4u+1)(u^{81}-3u^{80}+\cdots-35u-49)$
c_6	$(u^{24}+8u^{22}+\cdots-u+1)(u^{81}-u^{80}+\cdots+6u^2+1)$
c_7	$(u^{24}+2u^{22}+\cdots+u+1)(u^{81}+5u^{80}+\cdots-11394u+9307)$
c_8	$(u^{24}+4u^{23}+\cdots+4u+1)(u^{81}-3u^{80}+\cdots-35u-49)$
c_9	$(u^{24}-14u^{23}+\cdots-16u+1)(u^{81}+43u^{80}+\cdots+30249u+2209)$
c_{10}	$(u^{24}-7u^{22}+\cdots-2u+1)(u^{81}-u^{80}+\cdots+13u+47)$
c_{11}	$(u^{24}+2u^{22}+\cdots-u+1)(u^{81}+5u^{80}+\cdots-11394u+9307)$
c_{12}	$(u^{24}+8u^{23}+\cdots-203u+103)(u^{81}-u^{80}+\cdots-251686u+41753)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{24} - 32y^{22} + \cdots - 23y + 1)(y^{81} - 9y^{80} + \cdots - 28y - 1)$
c_2, c_6	$(y^{24} + 16y^{23} + \cdots + 21y + 1)(y^{81} + 47y^{80} + \cdots - 12y - 1)$
c_3, c_{10}	$(y^{24} - 14y^{23} + \cdots - 16y + 1)(y^{81} - 43y^{80} + \cdots + 30249y - 2209)$
c_4	$(y^{24} + 18y^{23} + \cdots - 4y + 1)(y^{81} + 37y^{80} + \cdots - 3637607y - 120409)$
c_5, c_8	$(y^{24} + 16y^{23} + \cdots + 20y + 1)(y^{81} + 27y^{80} + \cdots - 50323y - 2401)$
c_7, c_{11}	$(y^{24} + 4y^{23} + \cdots - 11y + 1)$ $\cdot (y^{81} + 63y^{80} + \cdots + 678266132y - 86620249)$
c_9	$(y^{24} + 6y^{23} + \cdots - 8y + 1)$ $\cdot (y^{81} + 5y^{80} + \cdots - 223295699y - 4879681)$
c_{12}	$(y^{24} - 8y^{23} + \cdots + 12145y + 10609)$ $\cdot (y^{81} - 37y^{80} + \cdots + 94686312444y - 1743313009)$