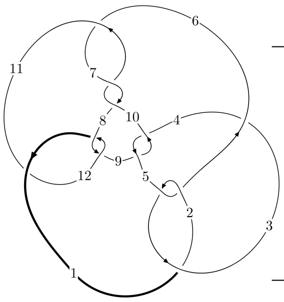
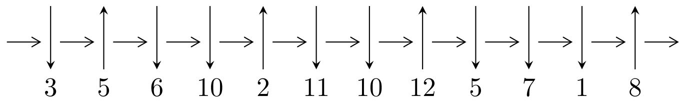
$12n_{0050}$ $(K12n_{0050})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 1.86448 \times 10^{23} u^{41} - 4.54607 \times 10^{23} u^{40} + \cdots + 2.14051 \times 10^{24} b - 1.33994 \times 10^{24}, \\ & 1.55777 \times 10^{24} u^{41} - 3.49226 \times 10^{24} u^{40} + \cdots + 4.28103 \times 10^{24} a - 8.66921 \times 10^{24},\ u^{42} - 3u^{41} + \cdots - 4u + 1 \\ I_2^u = \langle & u^2 a - au + u^2 + b - u,\ 2u^3 a - 4u^2 a - 5u^3 + 4a^2 + 6au + 6u^2 - 2a - 13u + 15,\ u^4 - u^3 + 3u^2 - 2u + 1 \rangle \\ I_3^u = \langle & -u^6 - 2u^4 - 2u^3 - u^2 + b - 2u,\ -u^6 - 3u^4 - 2u^3 - 2u^2 + a - 4u - 1, \\ & u^{15} + 5u^{13} + 5u^{12} + 10u^{11} + 20u^{10} + 18u^9 + 30u^8 + 29u^7 + 23u^6 + 25u^5 + 11u^4 + 7u^3 + 3u^2 - u + 1 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 65 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.

$$I_1^u = \langle 1.86\times10^{23}u^{41} - 4.55\times10^{23}u^{40} + \cdots + 2.14\times10^{24}b - 1.34\times10^{24},\ 1.56\times10^{24}u^{41} - 3.49\times10^{24}u^{40} + \cdots + 4.28\times10^{24}a - 8.67\times10^{24},\ u^{42} - 3u^{41} + \cdots - 4u + 1\rangle$$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} -0.363877u^{41} + 0.815753u^{40} + \cdots - 0.334201u + 2.02503 \\ -0.0871043u^{41} + 0.212382u^{40} + \cdots - 0.482611u + 0.625989 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -0.659564u^{41} + 1.39975u^{40} + \cdots + 0.0845241u + 0.435332 \\ -0.0702325u^{41} + 0.143960u^{40} + \cdots - 0.391861u - 0.363693 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.574443u^{41} + 1.03501u^{40} + \cdots + 1.04901u - 0.509224 \\ 0.0313582u^{41} - 0.169378u^{40} + \cdots + 0.191274u - 0.637085 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.545703u^{41} - 1.87495u^{40} + \cdots + 6.14055u - 3.12407 \\ 0.0705453u^{41} - 0.437164u^{40} + \cdots + 2.10999u - 0.698937 \end{pmatrix}$$

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

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

$$a_4 = \begin{pmatrix} -0.605801u^{41} + 1.20439u^{40} + \cdots + 0.857736u + 0.127861 \\ 0.0313582u^{41} - 0.169378u^{40} + \cdots + 0.191274u - 0.637085 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.112025u^{41} - 0.738600u^{40} + \cdots + 1.78402u - 2.01029 \\ -0.179156u^{41} + 0.123997u^{40} + \cdots + 1.38787u - 0.296413 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.711251u^{41} - 1.94978u^{40} + \cdots + 4.85792u - 0.210599 \\ -0.0109483u^{41} + 0.102515u^{40} + \cdots + 0.549153u + 0.291182 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{8819869146154630149250287}{8562054330498891123064064}u^{41} - \frac{6951105346810345728611581}{2140513582624722780766016}u^{40} + \cdots - \frac{9809601898657334062772699}{8562054330498891123064064}u - \frac{7787881357598305710093741 7}{8562054330498891123064064}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{42} + 22u^{41} + \cdots + 383u + 16$
c_2, c_5	$u^{42} + 2u^{41} + \cdots - 3u + 4$
c_3	$u^{42} - 2u^{41} + \cdots - 23400u + 3104$
c_4, c_9	$u^{42} + 2u^{41} + \cdots + 3584u + 2048$
c_6, c_7, c_{10}	$u^{42} - 3u^{41} + \cdots - 4u + 1$
c_8, c_{12}	$u^{42} - 3u^{41} + \cdots - 2u + 1$
c_{11}	$u^{42} + 23u^{41} + \cdots + 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{42} - 2y^{41} + \cdots + 33759y + 256$
c_2, c_5	$y^{42} + 22y^{41} + \cdots + 383y + 16$
c_3	$y^{42} - 26y^{41} + \cdots + 359975104y + 9634816$
c_4, c_9	$y^{42} - 30y^{41} + \cdots - 36438016y + 4194304$
c_6, c_7, c_{10}	$y^{42} + 35y^{41} + \cdots + 6y + 1$
c_8, c_{12}	$y^{42} + 23y^{41} + \cdots + 6y + 1$
c_{11}	$y^{42} - 5y^{41} + \cdots - 54y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.027970 + 0.100105I$ $a = 0.24960 + 1.85629I$ $b = -0.546190 + 1.233220I$	$-9.37503 - 10.09150I$	$-8.44713 + 6.42657I$
$u = 1.027970 - 0.100105I$ $a = 0.24960 - 1.85629I$ $b = -0.546190 - 1.233220I$	$-9.37503 + 10.09150I$	$-8.44713 - 6.42657I$
$u = 0.929724 + 0.138462I$ $a = 0.54776 + 2.00727I$ $b = -0.357906 + 1.293250I$	$-10.74190 + 0.44052I$	$-10.40215 + 0.18999I$
$u = 0.929724 - 0.138462I$ $a = 0.54776 - 2.00727I$ $b = -0.357906 - 1.293250I$	$-10.74190 - 0.44052I$	$-10.40215 - 0.18999I$
$u = 0.914941 + 0.045259I$ $a = -0.416878 - 0.222543I$ $b = -0.915244 - 0.158700I$	$-6.11647 - 4.80305I$	$-6.31453 + 3.22976I$
$u = 0.914941 - 0.045259I$ $a = -0.416878 + 0.222543I$ $b = -0.915244 + 0.158700I$	$-6.11647 + 4.80305I$	$-6.31453 - 3.22976I$
$u = 0.176790 + 1.089910I$ $a = -1.33651 - 1.33318I$ $b = 0.552991 - 1.072730I$	$1.83107 - 3.60410I$	$1.23384 + 2.84738I$
$u = 0.176790 - 1.089910I$ $a = -1.33651 + 1.33318I$ $b = 0.552991 + 1.072730I$	$1.83107 + 3.60410I$	$1.23384 - 2.84738I$
$u = -0.638546 + 0.536386I$ $a = 1.17338 - 1.37011I$ $b = -0.089750 - 0.808861I$	$-1.04750 + 2.07664I$	$-7.01132 - 2.89392I$
$u = -0.638546 - 0.536386I$ $a = 1.17338 + 1.37011I$ $b = -0.089750 + 0.808861I$	$-1.04750 - 2.07664I$	$-7.01132 + 2.89392I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.257246+1.141800I$ $a=-0.74697+1.25063I$ $b=\ \ 0.48378+1.32908I$	$-0.81918+6.49392I$	$-4.00000-8.90623I$
$u=-0.257246-1.141800I$ $a=-0.74697-1.25063I$ $b=\ \ 0.48378-1.32908I$	$-0.81918-6.49392I$	$-4.00000+8.90623I$
$u=-0.051623+1.181420I$ $a=-0.529834-0.226212I$ $b=\ \ 0.820994+0.618988I$	$3.71536+1.69010I$	$3.26218-1.55976I$
$u=-0.051623-1.181420I$ $a=-0.529834+0.226212I$ $b=\ \ 0.820994-0.618988I$	$3.71536-1.69010I$	$3.26218+1.55976I$
$u=\ \ 0.118844+1.181270I$ $a=-0.851838-0.430624I$ $b=\ \ 0.891940-0.979743I$	$2.63448-4.63960I$	$0.+8.16254I$
$u=\ \ 0.118844-1.181270I$ $a=-0.851838+0.430624I$ $b=\ \ 0.891940+0.979743I$	$2.63448+4.63960I$	$0.-8.16254I$
$u=-0.023170+1.204780I$ $a=-0.160324-0.092419I$ $b=\ \ 0.914501+0.286896I$	$3.99481+1.55693I$	$4.40114-3.96530I$
$u=-0.023170-1.204780I$ $a=-0.160324+0.092419I$ $b=\ \ 0.914501-0.286896I$	$3.99481-1.55693I$	$4.40114+3.96530I$
$u=\ \ 0.487771+1.186180I$ $a=-0.360345-1.006100I$ $b=-0.229714-1.369840I$	$-7.52698-5.48459I$	0
$u=\ \ 0.487771-1.186180I$ $a=-0.360345+1.006100I$ $b=-0.229714+1.369840I$	$-7.52698+5.48459I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.579810 + 1.160310I$ $a = -0.178403 + 0.945878I$ $b = -0.304232 + 1.178570I$	$-2.78929 + 1.17087I$	0
$u = -0.579810 - 1.160310I$ $a = -0.178403 - 0.945878I$ $b = -0.304232 - 1.178570I$	$-2.78929 - 1.17087I$	0
$u = -0.404098 + 1.316080I$ $a = 0.296578 - 0.436654I$ $b = -0.825719 + 0.274258I$	$1.73633 + 4.52361I$	0
$u = -0.404098 - 1.316080I$ $a = 0.296578 + 0.436654I$ $b = -0.825719 - 0.274258I$	$1.73633 - 4.52361I$	0
$u = 0.438573 + 1.326070I$ $a = 0.146351 + 0.500553I$ $b = -0.991101 - 0.284626I$	$-1.83637 - 9.65354I$	0
$u = 0.438573 - 1.326070I$ $a = 0.146351 - 0.500553I$ $b = -0.991101 + 0.284626I$	$-1.83637 + 9.65354I$	0
$u = 0.48276 + 1.38315I$ $a = 1.29723 + 1.22335I$ $b = -0.619520 + 1.226280I$	$-4.7316 - 15.4661I$	0
$u = 0.48276 - 1.38315I$ $a = 1.29723 - 1.22335I$ $b = -0.619520 - 1.226280I$	$-4.7316 + 15.4661I$	0
$u = -0.518309 + 0.081810I$ $a = 1.62251 - 2.04492I$ $b = 0.313840 - 1.152440I$	$-3.86435 - 3.51413I$	$-10.49218 + 3.82170I$
$u = -0.518309 - 0.081810I$ $a = 1.62251 + 2.04492I$ $b = 0.313840 + 1.152440I$	$-3.86435 + 3.51413I$	$-10.49218 - 3.82170I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.46833+1.40959I$ $a=\quad 1.28786-1.10744I$ $b=-0.562936-1.175720I$	$-0.96374+9.68671I$	0
$u=-0.46833-1.40959I$ $a=\quad 1.28786+1.10744I$ $b=-0.562936+1.175720I$	$-0.96374-9.68671I$	0
$u=-0.256255+0.421847I$ $a=\quad 1.193230+0.520583I$ $b=\quad 0.123371+0.236807I$	$-0.427988+1.171450I$	$-4.97387-5.79413I$
$u=-0.256255-0.421847I$ $a=\quad 1.193230-0.520583I$ $b=\quad 0.123371-0.236807I$	$-0.427988-1.171450I$	$-4.97387+5.79413I$
$u=-0.05066+1.56885I$ $a=\quad 0.821923+0.217869I$ $b=-0.377724+0.762011I$	$6.69834+1.66397I$	0
$u=-0.05066-1.56885I$ $a=\quad 0.821923-0.217869I$ $b=-0.377724-0.762011I$	$6.69834-1.66397I$	0
$u=\quad 0.040527+0.421390I$ $a=\quad 2.04288+1.54331I$ $b=\quad 0.455512+0.708227I$	$-0.32690+1.38361I$	$-5.63624-5.27111I$
$u=\quad 0.040527-0.421390I$ $a=\quad 2.04288-1.54331I$ $b=\quad 0.455512-0.708227I$	$-0.32690-1.38361I$	$-5.63624+5.27111I$
$u=-0.14166+1.59539I$ $a=\quad 1.013790-0.413700I$ $b=-0.360591-0.879206I$	$6.34972+4.89959I$	0
$u=-0.14166-1.59539I$ $a=\quad 1.013790+0.413700I$ $b=-0.360591+0.879206I$	$6.34972-4.89959I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.271803 + 0.171548I$		
$a =$	$2.13801 - 1.84885I$	$-1.06689 - 3.17946I$	$-11.00684 + 2.84027I$
$b =$	$0.623695 - 0.921062I$		
$u =$	$0.271803 - 0.171548I$		
$a =$	$2.13801 + 1.84885I$	$-1.06689 + 3.17946I$	$-11.00684 - 2.84027I$
$b =$	$0.623695 + 0.921062I$		

II.

$$I_2^u = \langle u^2a - au + u^2 + b - u,\ 2u^3a - 5u^3 + \cdots - 2a + 15,\ u^4 - u^3 + 3u^2 - 2u + 1\rangle$$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} a \\ -u^2a + au - u^2 + u \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} u^2a + \frac{1}{2}u^3 - au + a + \frac{1}{2}u - \frac{1}{2} \\ -u^2a + au - u^2 + u - 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} \frac{1}{2}u^3 - u^2 + a + \frac{3}{2}u - \frac{3}{2} \\ -u^2a + au - u^2 + u - 1 \end{pmatrix}$$

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

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

$$a_8 = \begin{pmatrix} u^2 + 1 \\ u^3 - u^2 + 2u - 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^2a + \frac{1}{2}u^3 - au + a + \frac{1}{2}u - \frac{1}{2} \\ -u^2a + au - u^2 + u - 1 \end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{3}{2}u^3a + 11u^2a + \frac{7}{2}u^3 - \frac{15}{2}au + 5u^2 + \frac{5}{2}a + \frac{11}{2}u - \frac{7}{2}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5	$(y^2 + y + 1)^4$
c_4, c_9	y^8
c_6, c_7, c_{10} c_{11}	$(y^4 + 5y^3 + 7y^2 + 2y + 1)^2$
c_8, c_{12}	$(y^4 + y^3 + 3y^2 + 2y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.395123+0.506844I$ $a = 0.32193+1.46300I$ $b = 0.500000+0.866025I$	$-0.211005+0.614778I$	$-3.71851+3.54153I$
$u = 0.395123+0.506844I$ $a = -0.39397-1.87632I$ $b = 0.500000-0.866025I$	$-0.21101-3.44499I$	$-1.37216+7.25656I$
$u = 0.395123-0.506844I$ $a = 0.32193-1.46300I$ $b = 0.500000-0.866025I$	$-0.211005-0.614778I$	$-3.71851-3.54153I$
$u = 0.395123-0.506844I$ $a = -0.39397+1.87632I$ $b = 0.500000+0.866025I$	$-0.21101+3.44499I$	$-1.37216-7.25656I$
$u = 0.10488+1.55249I$ $a = -0.975620-0.357786I$ $b = 0.500000-0.866025I$	$6.79074-5.19385I$	$4.49529+8.13693I$
$u = 0.10488+1.55249I$ $a = -0.702338+0.200007I$ $b = 0.500000+0.866025I$	$6.79074-1.13408I$	$-0.52961-5.68505I$
$u = 0.10488-1.55249I$ $a = -0.975620+0.357786I$ $b = 0.500000+0.866025I$	$6.79074+5.19385I$	$4.49529-8.13693I$
$u = 0.10488-1.55249I$ $a = -0.702338-0.200007I$ $b = 0.500000-0.866025I$	$6.79074+1.13408I$	$-0.52961+5.68505I$

III. $\boldsymbol{I^u_3 = \langle -u^6 - 2u^4 - 2u^3 - u^2 + b - 2u,\ -u^6 - 3u^4 - 2u^3 - 2u^2 + a - 4u - 1,\ u^{15} + 5u^{13} + \cdots - u + 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^6 + 3u^4 + 2u^3 + 2u^2 + 4u + 1 \\ u^6 + 2u^4 + 2u^3 + u^2 + 2u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{12} + 5u^{10} + \cdots + 2u + 1 \\ u^{12} + 4u^{10} + 4u^9 + 6u^8 + 12u^7 + 8u^6 + 12u^5 + 9u^4 + 4u^3 + 4u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{13} + 4u^{11} + \cdots + 6u^2 + 5u \\ -u^{12} - 4u^{10} - 3u^9 - 6u^8 - 9u^7 - 5u^6 - 9u^5 - 3u^4 - u^3 - u^2 + 2u - 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^2 + 1 \\ u^4 + 2u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{13} + u^{12} + \cdots + 3u + 1 \\ -u^{12} - 4u^{10} - 3u^9 - 6u^8 - 9u^7 - 5u^6 - 9u^5 - 3u^4 - u^3 - u^2 + 2u - 1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u^3 \\ -u^5 - u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^6 + 2u^4 + u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^9 - 12u^7 - 12u^6 - 12u^5 - 24u^4 - 12u^3 - 12u^2 - 8u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^5 + 3u^4 + 4u^3 + u^2 - u - 1)^3$
c_2, c_5	$(u^5 + u^4 + 2u^3 + u^2 + u + 1)^3$
c_3, c_4, c_9	$(u^5 - u^4 - 2u^3 + u^2 + u + 1)^3$
c_6, c_7, c_8 c_{10}, c_{12}	$u^{15} + 5u^{13} + \cdots - u + 1$
c_{11}	$u^{15} + 10u^{14} + \cdots - 5u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^3$
c_2, c_5	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^3$
c_3, c_4, c_9	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)^3$
c_6, c_7, c_8 c_{10}, c_{12}	$y^{15} + 10y^{14} + \cdots - 5y - 1$
c_{11}	$y^{15} - 10y^{14} + \cdots - 65y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.009180+0.154259I$ $a=\ \ 0.41296-1.82234I$ $b=-0.455697-1.200150I$	$-5.87256+4.40083I$	$-6.74431-3.49859I$
$u=-1.009180-0.154259I$ $a=\ \ 0.41296+1.82234I$ $b=-0.455697+1.200150I$	$-5.87256-4.40083I$	$-6.74431+3.49859I$
$u=-0.191814+0.839165I$ $a=\ \ 0.62987+2.60849I$ $b=\ \ 0.339110+0.822375I$	$-0.32910+1.53058I$	$-2.51511-4.43065I$
$u=-0.191814-0.839165I$ $a=\ \ 0.62987-2.60849I$ $b=\ \ 0.339110-0.822375I$	$-0.32910-1.53058I$	$-2.51511+4.43065I$
$u=-0.855893$ $a=-0.209424$ $b=-0.766826$	-2.40108	-3.48110
$u=-0.070375+1.145600I$ $a=\ \ 1.57432+1.72920I$ $b=\ \ 0.339110-0.822375I$	$-0.32910-1.53058I$	$-2.51511+4.43065I$
$u=-0.070375-1.145600I$ $a=\ \ 1.57432-1.72920I$ $b=\ \ 0.339110+0.822375I$	$-0.32910+1.53058I$	$-2.51511-4.43065I$
$u=\ \ 0.427947+1.244760I$ $a=\ \ 0.454474+0.643686I$ $b=-0.766826$	-2.40108	$-3.48114+0.I$
$u=\ \ 0.427947-1.244760I$ $a=\ \ 0.454474-0.643686I$ $b=-0.766826$	-2.40108	$-3.48114+0.I$
$u=\ \ 0.592752+1.247160I$ $a=-0.210506-0.787763I$ $b=-0.455697-1.200150I$	$-5.87256+4.40083I$	$-6.74431-3.49859I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.592752 - 1.247160I$ $a = -0.210506 + 0.787763I$ $b = -0.455697 + 1.200150I$	$-5.87256 - 4.40083I$	$-6.74431 + 3.49859I$
$u = 0.41642 + 1.40142I$ $a = 1.43045 + 0.99035I$ $b = -0.455697 + 1.200150I$	$-5.87256 - 4.40083I$	$-6.74431 + 3.49859I$
$u = 0.41642 - 1.40142I$ $a = 1.43045 - 0.99035I$ $b = -0.455697 - 1.200150I$	$-5.87256 + 4.40083I$	$-6.74431 - 3.49859I$
$u = 0.262189 + 0.306431I$ $a = 1.81314 + 1.58784I$ $b = 0.339110 + 0.822375I$	$-0.32910 + 1.53058I$	$-2.51511 - 4.43065I$
$u = 0.262189 - 0.306431I$ $a = 1.81314 - 1.58784I$ $b = 0.339110 - 0.822375I$	$-0.32910 - 1.53058I$	$-2.51511 + 4.43065I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2-u+1)^4(u^5+3u^4+4u^3+u^2-u-1)^3$ $\cdot(u^{42}+22u^{41}+\cdots+383u+16)$
c_2	$((u^2+u+1)^4)(u^5+u^4+\cdots+u+1)^3(u^{42}+2u^{41}+\cdots-3u+4)$
c_3	$(u^2-u+1)^4(u^5-u^4-2u^3+u^2+u+1)^3$ $\cdot(u^{42}-2u^{41}+\cdots-23400u+3104)$
c_4, c_9	$u^8(u^5-u^4+\cdots+u+1)^3(u^{42}+2u^{41}+\cdots+3584u+2048)$
c_5	$((u^2-u+1)^4)(u^5+u^4+\cdots+u+1)^3(u^{42}+2u^{41}+\cdots-3u+4)$
c_6, c_7	$((u^4-u^3+3u^2-2u+1)^2)(u^{15}+5u^{13}+\cdots-u+1)$ $\cdot(u^{42}-3u^{41}+\cdots-4u+1)$
c_8	$((u^4-u^3+u^2+1)^2)(u^{15}+5u^{13}+\cdots-u+1)(u^{42}-3u^{41}+\cdots-2u+1)$
c_{10}	$((u^4+u^3+3u^2+2u+1)^2)(u^{15}+5u^{13}+\cdots-u+1)$ $\cdot(u^{42}-3u^{41}+\cdots-4u+1)$
c_{11}	$((u^4-u^3+3u^2-2u+1)^2)(u^{15}+10u^{14}+\cdots-5u-1)$ $\cdot(u^{42}+23u^{41}+\cdots+6u+1)$
c_{12}	$((u^4+u^3+u^2+1)^2)(u^{15}+5u^{13}+\cdots-u+1)(u^{42}-3u^{41}+\cdots-2u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2+y+1)^4(y^5-y^4+8y^3-3y^2+3y-1)^3$ $\cdot(y^{42}-2y^{41}+\cdots+33759y+256)$
c_2, c_5	$(y^2+y+1)^4(y^5+3y^4+4y^3+y^2-y-1)^3$ $\cdot(y^{42}+22y^{41}+\cdots+383y+16)$
c_3	$(y^2+y+1)^4(y^5-5y^4+8y^3-3y^2-y-1)^3$ $\cdot(y^{42}-26y^{41}+\cdots+359975104y+9634816)$
c_4, c_9	$y^8(y^5-5y^4+8y^3-3y^2-y-1)^3$ $\cdot(y^{42}-30y^{41}+\cdots-36438016y+4194304)$
c_6, c_7, c_{10}	$((y^4+5y^3+7y^2+2y+1)^2)(y^{15}+10y^{14}+\cdots-5y-1)$ $\cdot(y^{42}+35y^{41}+\cdots+6y+1)$
c_8, c_{12}	$((y^4+y^3+3y^2+2y+1)^2)(y^{15}+10y^{14}+\cdots-5y-1)$ $\cdot(y^{42}+23y^{41}+\cdots+6y+1)$
c_{11}	$((y^4+5y^3+7y^2+2y+1)^2)(y^{15}-10y^{14}+\cdots-65y-1)$ $\cdot(y^{42}-5y^{41}+\cdots-54y+1)$