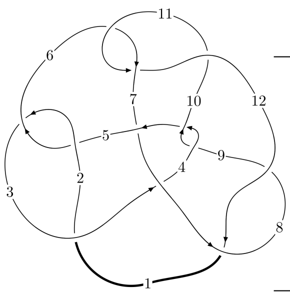
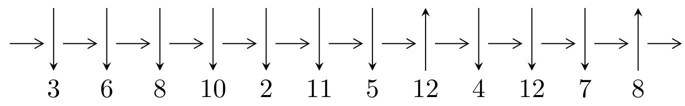
$12n_{0373}$ ($K12n_{0373}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -20u^{23} + 115u^{22} + \cdots + 8b - 400,\ 113u^{23} - 773u^{22} + \cdots + 16a + 440,\ u^{24} - 9u^{23} + \cdots - 144u + 32\rangle$$
$$I_2^u = \langle -6u^{15} + 21u^{14} + \cdots + b + 10,\ u^{15} - 6u^{14} + \cdots + a + 1,\ u^{16} - 4u^{15} + \cdots - 3u + 1\rangle$$
$$I_3^u = \langle 2.19606 \times 10^{33} a^9 u^2 - 2.28616 \times 10^{35} a^8 u^2 + \cdots + 1.69568 \times 10^{37} a - 5.01516 \times 10^{36},$$
$$- 6a^8 u^2 + 14a^7 u^2 + \cdots + 668a - 417,\ u^3 + u^2 - 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 70 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. $\boldsymbol{I_1^u = \langle -20u^{23} + 115u^{22} + \cdots + 8b - 400,\ 113u^{23} - 773u^{22} + \cdots + 16a + 440,\ u^{24} - 9u^{23} + \cdots - 144u + 32\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -7.06250u^{23} + 48.3125u^{22} + \cdots - 47.5000u - 27.5000 \\ \frac{5}{2}u^{23} - \frac{115}{8}u^{22} + \cdots - \frac{255}{2}u + 50 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -\frac{73}{16}u^{23} + \frac{543}{16}u^{22} + \cdots - 175u + \frac{45}{2} \\ \frac{5}{2}u^{23} - \frac{115}{8}u^{22} + \cdots - \frac{255}{2}u + 50 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{17}{8}u^{23} + \frac{141}{8}u^{22} + \cdots - \frac{783}{4}u + 46 \\ \frac{5}{2}u^{23} - \frac{75}{4}u^{22} + \cdots + 113u - 20 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -\frac{45}{32}u^{23} + \frac{511}{32}u^{22} + \cdots - 324u + \frac{183}{2} \\ \frac{169}{16}u^{23} - \frac{1237}{16}u^{22} + \cdots + 601u - 133 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{1}{8}u^{23} - \frac{7}{8}u^{22} + \cdots + 2u + \frac{1}{2} \\ -\frac{1}{4}u^{22} + \frac{7}{4}u^{21} + \cdots + \frac{27}{2}u - 4 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{3}{8}u^{23} - \frac{21}{8}u^{22} + \cdots + 6u + \frac{1}{2} \\ \frac{1}{4}u^{23} - 3u^{22} + \cdots + \frac{147}{2}u - 20 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} \frac{595}{32}u^{23} - \frac{4705}{32}u^{22} + \cdots + 1560u - \frac{761}{2} \\ -\frac{47}{16}u^{23} + \frac{79}{16}u^{22} + \cdots + 831u - 267 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{17}{4}u^{23} + \frac{127}{4}u^{22} + \cdots - 152u + 18$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{24} + 7u^{23} + \cdots + 352u + 64$
c_2, c_5	$u^{24} + 7u^{23} + \cdots - 40u - 8$
c_3	$u^{24} + u^{23} + \cdots + 4u + 1$
c_4, c_7, c_9	$u^{24} - u^{23} + \cdots + 5u^2 - 1$
c_6, c_{11}	$u^{24} - 9u^{23} + \cdots - 144u + 32$
c_8, c_{12}	$u^{24} + 5u^{23} + \cdots + 21u + 1$
c_{10}	$u^{24} + 9u^{23} + \cdots + 9984u + 1024$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{24} + 21y^{23} + \cdots - 45568y + 4096$
c_2, c_5	$y^{24} - 7y^{23} + \cdots - 352y + 64$
c_3	$y^{24} + 49y^{23} + \cdots + 36y^2 + 1$
c_4, c_7, c_9	$y^{24} + y^{23} + \cdots - 10y + 1$
c_6, c_{11}	$y^{24} - 9y^{23} + \cdots - 9984y + 1024$
c_8, c_{12}	$y^{24} - 45y^{23} + \cdots - 81y + 1$
c_{10}	$y^{24} + 23y^{23} + \cdots - 52625408y + 1048576$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.358950 + 0.915726I$ $a = -0.281055 + 0.691430I$ $b = 0.969760 - 0.428409I$	$1.06715 + 3.63668I$	$-7.18463 - 6.28452I$
$u = 0.358950 - 0.915726I$ $a = -0.281055 - 0.691430I$ $b = 0.969760 + 0.428409I$	$1.06715 - 3.63668I$	$-7.18463 + 6.28452I$
$u = 0.971229 + 0.342277I$ $a = -0.827201 + 0.300439I$ $b = -1.194730 + 0.185573I$	$-3.31191 - 1.22688I$	$-3.32734 + 6.48080I$
$u = 0.971229 - 0.342277I$ $a = -0.827201 - 0.300439I$ $b = -1.194730 - 0.185573I$	$-3.31191 + 1.22688I$	$-3.32734 - 6.48080I$
$u = 0.599488 + 0.713660I$ $a = 0.192159 - 1.348680I$ $b = 0.420693 + 0.742906I$	$2.96075 - 0.65298I$	$-2.76291 + 1.36989I$
$u = 0.599488 - 0.713660I$ $a = 0.192159 + 1.348680I$ $b = 0.420693 - 0.742906I$	$2.96075 + 0.65298I$	$-2.76291 - 1.36989I$
$u = -1.013520 + 0.559120I$ $a = 0.612654 + 0.784722I$ $b = -0.650003 - 0.671485I$	$-0.262441 + 0.570709I$	$-9.39335 + 1.17121I$
$u = -1.013520 - 0.559120I$ $a = 0.612654 - 0.784722I$ $b = -0.650003 + 0.671485I$	$-0.262441 - 0.570709I$	$-9.39335 - 1.17121I$
$u = 1.015720 + 0.612901I$ $a = -0.703890 + 0.704696I$ $b = 0.240215 - 0.895769I$	$1.70127 - 4.44241I$	$-4.62824 + 5.23976I$
$u = 1.015720 - 0.612901I$ $a = -0.703890 - 0.704696I$ $b = 0.240215 + 0.895769I$	$1.70127 + 4.44241I$	$-4.62824 - 5.23976I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.677310 + 1.062590I$ $a = 0.57929 + 1.84135I$ $b = -0.833778 - 0.933127I$	$10.12360 + 1.49333I$	$-5.20253 - 0.24126I$
$u = 0.677310 - 1.062590I$ $a = 0.57929 - 1.84135I$ $b = -0.833778 + 0.933127I$	$10.12360 - 1.49333I$	$-5.20253 + 0.24126I$
$u = 0.668113 + 1.109120I$ $a = 0.78027 - 1.56151I$ $b = -1.008260 + 0.845621I$	$9.55770 + 8.04939I$	$-6.22396 - 5.15641I$
$u = 0.668113 - 1.109120I$ $a = 0.78027 + 1.56151I$ $b = -1.008260 - 0.845621I$	$9.55770 - 8.04939I$	$-6.22396 + 5.15641I$
$u = 1.159060 + 0.639780I$ $a = 0.61767 - 1.49231I$ $b = 1.139350 + 0.458160I$	$-1.32139 - 9.31339I$	$-10.43226 + 9.48781I$
$u = 1.159060 - 0.639780I$ $a = 0.61767 + 1.49231I$ $b = 1.139350 - 0.458160I$	$-1.32139 + 9.31339I$	$-10.43226 - 9.48781I$
$u = 1.122650 + 0.803919I$ $a = 1.28271 - 0.73294I$ $b = -0.826847 + 0.971617I$	$8.67010 - 8.22857I$	$-6.89988 + 3.89573I$
$u = 1.122650 - 0.803919I$ $a = 1.28271 + 0.73294I$ $b = -0.826847 - 0.971617I$	$8.67010 + 8.22857I$	$-6.89988 - 3.89573I$
$u = -1.39743$ $a = 0.800635$ $b = 1.04024$	-5.27800	-20.1480
$u = 1.144620 + 0.817338I$ $a = -0.33093 + 2.27568I$ $b = -1.034060 - 0.861926I$	$7.9963 - 14.9529I$	$-7.95884 + 8.20619I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.144620 - 0.817338I$ $a = -0.33093 - 2.27568I$ $b = -1.034060 + 0.861926I$	$7.9963 + 14.9529I$	$-7.95884 - 8.20619I$
$u = -1.32133 + 0.60253I$ $a = -0.32353 - 1.55196I$ $b = -0.992690 + 0.658211I$	$-1.26748 + 5.76484I$	$-12.40197 - 1.93041I$
$u = -1.32133 - 0.60253I$ $a = -0.32353 + 1.55196I$ $b = -0.992690 - 0.658211I$	$-1.26748 - 5.76484I$	$-12.40197 + 1.93041I$
$u = -0.367172$ $a = 1.00307$ $b = -0.499556$	-0.751981	-13.0200

II.

$\boldsymbol{I_2^u = \langle -6u^{15}+21u^{14}+\cdots+b+10,\ u^{15}-6u^{14}+\cdots+a+1,\ u^{16}-4u^{15}+\cdots-3u+1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^{15}+6u^{14}+\cdots+11u-1\\6u^{15}-21u^{14}+\cdots+12u-10\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}5u^{15}-15u^{14}+\cdots+23u-11\\6u^{15}-21u^{14}+\cdots+12u-10\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-8u^{15}+30u^{14}+\cdots-6u+16\\-3u^{15}+11u^{14}+\cdots-5u+10\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-17u^{15}+59u^{14}+\cdots-40u+35\\-10u^{15}+35u^{14}+\cdots-20u+20\end{pmatrix}$$
$$a_8 = \begin{pmatrix}2u^{15}-7u^{14}+\cdots+9u-9\\u^{15}-4u^{14}+\cdots-2u-3\end{pmatrix}$$
$$a_9 = \begin{pmatrix}2u^{15}-7u^{14}+\cdots+9u-10\\u^{15}-4u^{14}+\cdots-2u-2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u^3\\u^5-u^3+u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-16u^{15}+56u^{14}+\cdots-37u+33\\-8u^{15}+28u^{14}+\cdots-14u+15\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 24u^{15}-81u^{14}+50u^{13}+205u^{12}-308u^{11}-190u^{10}+653u^9-51u^8-732u^7+325u^6+487u^5-327u^4-186u^3+183u^2+37u-37$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16}-6u^{15}+\cdots-10u+1$
c_2	$u^{16}-3u^{14}+\cdots-5u^2+1$
c_3	$u^{16}+u^{15}+\cdots-u-1$
c_4, c_7	$u^{16}+u^{15}+\cdots+u-1$
c_5	$u^{16}-3u^{14}+\cdots-5u^2+1$
c_6	$u^{16}-4u^{15}+\cdots-3u+1$
c_8	$u^{16}-u^{15}+\cdots-8u-1$
c_9	$u^{16}-u^{15}+\cdots-u-1$
c_{10}	$u^{16}-8u^{15}+\cdots-15u+1$
c_{11}	$u^{16}+4u^{15}+\cdots+3u+1$
c_{12}	$u^{16}+u^{15}+\cdots+8u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{16} + 14y^{15} + \cdots - 6y + 1$
c_2, c_5	$y^{16} - 6y^{15} + \cdots - 10y + 1$
c_3	$y^{16} - 13y^{15} + \cdots + 25y + 1$
c_4, c_7, c_9	$y^{16} - 13y^{15} + \cdots - 9y + 1$
c_6, c_{11}	$y^{16} - 8y^{15} + \cdots - 15y + 1$
c_8, c_{12}	$y^{16} + 9y^{15} + \cdots - 88y + 1$
c_{10}	$y^{16} + 20y^{15} + \cdots - 31y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.709766+0.705344I$ $a = -0.887882+0.353548I$ $b = -0.601245-0.326299I$	$-2.08950-3.52175I$	$-8.50730+9.07031I$
$u = 0.709766-0.705344I$ $a = -0.887882-0.353548I$ $b = -0.601245+0.326299I$	$-2.08950+3.52175I$	$-8.50730-9.07031I$
$u = -1.05256$ $a = 2.33736$ $b = 0.930995$	-8.18293	-21.4460
$u = -0.953259+0.474374I$ $a = -0.62204-2.51263I$ $b = -0.964515+0.707349I$	$-3.82901+4.66397I$	$-11.36785-5.44923I$
$u = -0.953259-0.474374I$ $a = -0.62204+2.51263I$ $b = -0.964515-0.707349I$	$-3.82901-4.66397I$	$-11.36785+5.44923I$
$u = 1.023350+0.406048I$ $a = -0.813062+0.284492I$ $b = -1.053970+0.235975I$	$-3.87328-1.04203I$	$-17.8883+0.9825I$
$u = 1.023350-0.406048I$ $a = -0.813062-0.284492I$ $b = -1.053970-0.235975I$	$-3.87328+1.04203I$	$-17.8883-0.9825I$
$u = -0.780571+0.429913I$ $a = 1.97567+0.68038I$ $b = -0.759833-0.760705I$	$-3.18956-0.91432I$	$-8.94555-0.72822I$
$u = -0.780571-0.429913I$ $a = 1.97567-0.68038I$ $b = -0.759833+0.760705I$	$-3.18956+0.91432I$	$-8.94555+0.72822I$
$u = -0.656018$ $a = -4.43206$ $b = 0.525031$	-6.47624	-0.995250

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.08165 + 0.99947I$ $a = -0.608758 + 1.080850I$ $b = 0.755790 - 0.644213I$	$-0.62149 - 1.50137I$	$-13.1344 + 5.7705I$
$u = 1.08165 - 0.99947I$ $a = -0.608758 - 1.080850I$ $b = 0.755790 + 0.644213I$	$-0.62149 + 1.50137I$	$-13.1344 - 5.7705I$
$u = 0.498658 + 0.050338I$ $a = 1.333420 - 0.022372I$ $b = 0.939536 + 0.925652I$	$5.74280 - 3.39525I$	$-1.03709 + 3.22174I$
$u = 0.498658 - 0.050338I$ $a = 1.333420 + 0.022372I$ $b = 0.939536 - 0.925652I$	$5.74280 + 3.39525I$	$-1.03709 - 3.22174I$
$u = 1.27470 + 0.89882I$ $a = 0.17000 - 1.67912I$ $b = 0.956222 + 0.637553I$	$-1.25971 - 6.51826I$	$-12.8990 + 11.7858I$
$u = 1.27470 - 0.89882I$ $a = 0.17000 + 1.67912I$ $b = 0.956222 - 0.637553I$	$-1.25971 + 6.51826I$	$-12.8990 - 11.7858I$

III. $\boldsymbol{I_3^u = \langle 2.20\times 10^{33}a^9u^2 - 2.29\times 10^{35}a^8u^2 + \cdots + 1.70\times 10^{37}a - 5.02\times 10^{36},\ -6a^8u^2 + 14a^7u^2 + \cdots + 668a - 417,\ u^3 + u^2 - 1\rangle}$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} a \\ -0.0000462419a^9u^2 + 0.00481392a^8u^2 + \cdots - 0.357057a + 0.105603 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u \\ u^2 + u - 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0000462419a^9u^2 + 0.00481392a^8u^2 + \cdots + 0.642943a + 0.105603 \\ -0.0000462419a^9u^2 + 0.00481392a^8u^2 + \cdots - 0.357057a + 0.105603 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.00475440a^9u^2 + 0.00480716a^8u^2 + \cdots + 0.0172392a - 0.130341 \\ -0.00112922a^9u^2 + 0.00379948a^8u^2 + \cdots - 0.0267617a + 0.417054 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.00191453a^9u^2 + 0.00196977a^8u^2 + \cdots + 0.241462a + 0.176462 \\ -0.00155225a^9u^2 + 0.00591527a^8u^2 + \cdots + 0.265525a - 0.949030 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.000908415a^9u^2 - 0.00637770a^8u^2 + \cdots - 0.765719a + 0.776006 \\ 0.00239576a^9u^2 - 0.000899242a^8u^2 + \cdots - 1.10079a + 0.879248 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.00243411a^9u^2 - 0.0183142a^8u^2 + \cdots - 1.55079a + 0.788681 \\ -0.00291032a^9u^2 + 0.00645185a^8u^2 + \cdots - 1.78599a + 0.677141 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -0.00229203a^9u^2 - 0.0113418a^8u^2 + \cdots + 1.51032a - 0.111646 \\ -0.00770163a^9u^2 + 0.0107723a^8u^2 + \cdots - 1.51618a - 0.830861 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.00101199a^9u^2 - 0.0550471a^8u^2 + \cdots - 0.470919a - 12.5272$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^5 + u^4 + 4u^3 + 3u^2 + 3u + 1)^6$
c_2, c_5	$(u^5 - u^4 + u^2 + u - 1)^6$
c_3	$u^{30} + u^{29} + \cdots + 269958u - 26963$
c_4, c_7, c_9	$u^{30} + u^{29} + \cdots - 10u - 11$
c_6, c_{11}	$(u^3 + u^2 - 1)^{10}$
c_8, c_{12}	$u^{30} + 3u^{29} + \cdots + 4930u - 289$
c_{10}	$(u^3 + u^2 + 2u + 1)^{10}$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^5+7y^4+16y^3+13y^2+3y-1)^6$
c_2, c_5	$(y^5-y^4+4y^3-3y^2+3y-1)^6$
c_3	$y^{30}+27y^{29}+\cdots-29765426100y+727003369$
c_4, c_7, c_9	$y^{30}-9y^{29}+\cdots+516y+121$
c_6, c_{11}	$(y^3-y^2+2y-1)^{10}$
c_8, c_{12}	$y^{30}-21y^{29}+\cdots-50794640y+83521$
c_{10}	$(y^3+3y^2+2y-1)^{10}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.877439+0.744862I$ $a=\ \ 0.283563+0.915777I$ $b=-0.758138-0.584034I$	$-0.090868+0.614153I$	$-7.60456+1.24344I$
$u=-0.877439+0.744862I$ $a=\ \ 1.019500+0.839116I$ $b=-0.758138-0.584034I$	$-0.090868+0.614153I$	$-7.60456+1.24344I$
$u=-0.877439+0.744862I$ $a=\ \ 0.038650-1.390540I$ $b=-0.758138+0.584034I$	$-0.09087+5.04209I$	$-7.60456-7.20234I$
$u=-0.877439+0.744862I$ $a=\ \ 0.073356-0.330206I$ $b=\ \ 0.645200$	$-2.79286+2.82812I$	$-16.0991-2.9794I$
$u=-0.877439+0.744862I$ $a=\ \ 1.24901+1.29138I$ $b=\ \ 0.645200$	$-2.79286+2.82812I$	$-16.0991-2.9794I$
$u=-0.877439+0.744862I$ $a=-1.00422-1.60730I$ $b=\ \ 0.935538+0.903908I$	$9.04762-0.50362I$	$-6.57151-0.61717I$
$u=-0.877439+0.744862I$ $a=-1.81399-0.55743I$ $b=\ \ 0.935538+0.903908I$	$9.04762-0.50362I$	$-6.57151-0.61717I$
$u=-0.877439+0.744862I$ $a=-0.58303+2.03306I$ $b=\ \ 0.935538-0.903908I$	$9.04762+6.15987I$	$-6.57151-5.34173I$
$u=-0.877439+0.744862I$ $a=-0.47568-2.62318I$ $b=-0.758138+0.584034I$	$-0.09087+5.04209I$	$-7.60456-7.20234I$
$u=-0.877439+0.744862I$ $a=\ \ 0.45796+2.91906I$ $b=\ \ 0.935538-0.903908I$	$9.04762+6.15987I$	$-6.57151-5.34173I$

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.877439 - 0.744862I$ $a = \ \ 0.283563 - 0.915777I$ $b = -0.758138 + 0.584034I$	$-0.090868 - 0.614153I$	$-7.60456 - 1.24344I$
$u = -0.877439 - 0.744862I$ $a = \ \ 1.019500 - 0.839116I$ $b = -0.758138 + 0.584034I$	$-0.090868 - 0.614153I$	$-7.60456 - 1.24344I$
$u = -0.877439 - 0.744862I$ $a = \ \ 0.038650 + 1.390540I$ $b = -0.758138 - 0.584034I$	$-0.09087 - 5.04209I$	$-7.60456 + 7.20234I$
$u = -0.877439 - 0.744862I$ $a = \ \ 0.073356 + 0.330206I$ $b = \ \ 0.645200$	$-2.79286 - 2.82812I$	$-16.0991 + 2.9794I$
$u = -0.877439 - 0.744862I$ $a = \ \ 1.24901 - 1.29138I$ $b = \ \ 0.645200$	$-2.79286 - 2.82812I$	$-16.0991 + 2.9794I$
$u = -0.877439 - 0.744862I$ $a = -1.00422 + 1.60730I$ $b = \ \ 0.935538 - 0.903908I$	$9.04762 + 0.50362I$	$-6.57151 + 0.61717I$
$u = -0.877439 - 0.744862I$ $a = -1.81399 + 0.55743I$ $b = \ \ 0.935538 - 0.903908I$	$9.04762 + 0.50362I$	$-6.57151 + 0.61717I$
$u = -0.877439 - 0.744862I$ $a = -0.58303 - 2.03306I$ $b = \ \ 0.935538 + 0.903908I$	$9.04762 - 6.15987I$	$-6.57151 + 5.34173I$
$u = -0.877439 - 0.744862I$ $a = -0.47568 + 2.62318I$ $b = -0.758138 - 0.584034I$	$-0.09087 - 5.04209I$	$-7.60456 + 7.20234I$
$u = -0.877439 - 0.744862I$ $a = \ \ 0.45796 - 2.91906I$ $b = \ \ 0.935538 + 0.903908I$	$9.04762 - 6.15987I$	$-6.57151 + 5.34173I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.754878$ $a = -0.152878 + 1.046890I$ $b = 0.935538 - 0.903908I$	$4.91003 + 3.33174I$	$-13.10077 - 2.36228I$
$u = 0.754878$ $a = -0.152878 - 1.046890I$ $b = 0.935538 + 0.903908I$	$4.91003 - 3.33174I$	$-13.10077 + 2.36228I$
$u = 0.754878$ $a = 0.997843 + 0.652805I$ $b = -0.758138 + 0.584034I$	$-4.22845 + 2.21397I$	$-14.1338 - 4.2229I$
$u = 0.754878$ $a = 0.997843 - 0.652805I$ $b = -0.758138 - 0.584034I$	$-4.22845 - 2.21397I$	$-14.1338 + 4.2229I$
$u = 0.754878$ $a = 1.73543 + 0.43939I$ $b = 0.935538 + 0.903908I$	$4.91003 - 3.33174I$	$-13.10077 + 2.36228I$
$u = 0.754878$ $a = 1.73543 - 0.43939I$ $b = 0.935538 - 0.903908I$	$4.91003 + 3.33174I$	$-13.10077 - 2.36228I$
$u = 0.754878$ $a = -2.59655$ $b = 0.645200$	-6.93044	-22.6280
$u = 0.754878$ $a = -3.03987 + 1.63046I$ $b = -0.758138 - 0.584034I$	$-4.22845 - 2.21397I$	$-14.1338 + 4.2229I$
$u = 0.754878$ $a = -3.03987 - 1.63046I$ $b = -0.758138 + 0.584034I$	$-4.22845 + 2.21397I$	$-14.1338 - 4.2229I$
$u = 0.754878$ $a = 6.02526$ $b = 0.645200$	-6.93044	-22.6280

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^5+u^4+4u^3+3u^2+3u+1)^6)(u^{16}-6u^{15}+\cdots-10u+1)$ $\cdot(u^{24}+7u^{23}+\cdots+352u+64)$
c_2	$((u^5-u^4+u^2+u-1)^6)(u^{16}-3u^{14}+\cdots-5u^2+1)$ $\cdot(u^{24}+7u^{23}+\cdots-40u-8)$
c_3	$(u^{16}+u^{15}+\cdots-u-1)(u^{24}+u^{23}+\cdots+4u+1)$ $\cdot(u^{30}+u^{29}+\cdots+269958u-26963)$
c_4, c_7	$(u^{16}+u^{15}+\cdots+u-1)(u^{24}-u^{23}+\cdots+5u^2-1)$ $\cdot(u^{30}+u^{29}+\cdots-10u-11)$
c_5	$((u^5-u^4+u^2+u-1)^6)(u^{16}-3u^{14}+\cdots-5u^2+1)$ $\cdot(u^{24}+7u^{23}+\cdots-40u-8)$
c_6	$((u^3+u^2-1)^{10})(u^{16}-4u^{15}+\cdots-3u+1)(u^{24}-9u^{23}+\cdots-144u+32)$
c_8	$(u^{16}-u^{15}+\cdots-8u-1)(u^{24}+5u^{23}+\cdots+21u+1)$ $\cdot(u^{30}+3u^{29}+\cdots+4930u-289)$
c_9	$(u^{16}-u^{15}+\cdots-u-1)(u^{24}-u^{23}+\cdots+5u^2-1)$ $\cdot(u^{30}+u^{29}+\cdots-10u-11)$
c_{10}	$((u^3+u^2+2u+1)^{10})(u^{16}-8u^{15}+\cdots-15u+1)$ $\cdot(u^{24}+9u^{23}+\cdots+9984u+1024)$
c_{11}	$((u^3+u^2-1)^{10})(u^{16}+4u^{15}+\cdots+3u+1)(u^{24}-9u^{23}+\cdots-144u+32)$
c_{12}	$(u^{16}+u^{15}+\cdots+8u-1)(u^{24}+5u^{23}+\cdots+21u+1)$ $\cdot(u^{30}+3u^{29}+\cdots+4930u-289)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^5+7y^4+16y^3+13y^2+3y-1)^6)(y^{16}+14y^{15}+\cdots-6y+1)$ $\cdot\,(y^{24}+21y^{23}+\cdots-45568y+4096)$
c_2, c_5	$((y^5-y^4+4y^3-3y^2+3y-1)^6)(y^{16}-6y^{15}+\cdots-10y+1)$ $\cdot\,(y^{24}-7y^{23}+\cdots-352y+64)$
c_3	$(y^{16}-13y^{15}+\cdots+25y+1)(y^{24}+49y^{23}+\cdots+36y^2+1)$ $\cdot\,(y^{30}+27y^{29}+\cdots-29765426100y+727003369)$
c_4, c_7, c_9	$(y^{16}-13y^{15}+\cdots-9y+1)(y^{24}+y^{23}+\cdots-10y+1)$ $\cdot\,(y^{30}-9y^{29}+\cdots+516y+121)$
c_6, c_{11}	$((y^3-y^2+2y-1)^{10})(y^{16}-8y^{15}+\cdots-15y+1)$ $\cdot\,(y^{24}-9y^{23}+\cdots-9984y+1024)$
c_8, c_{12}	$(y^{16}+9y^{15}+\cdots-88y+1)(y^{24}-45y^{23}+\cdots-81y+1)$ $\cdot\,(y^{30}-21y^{29}+\cdots-50794640y+83521)$
c_{10}	$((y^3+3y^2+2y-1)^{10})(y^{16}+20y^{15}+\cdots-31y+1)$ $\cdot\,(y^{24}+23y^{23}+\cdots-52625408y+1048576)$