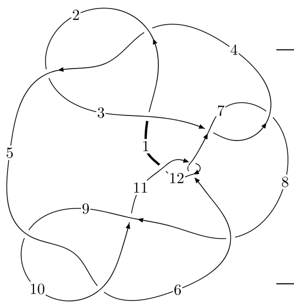
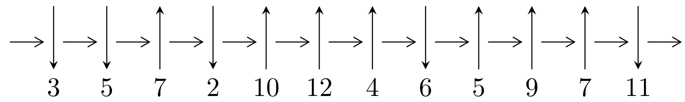
$12n_{0184}$ ($K12n_{0184}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -4.91771 \times 10^{36} u^{41} - 1.79820 \times 10^{38} u^{40} + \cdots + 2.88772 \times 10^{39} b + 4.22720 \times 10^{39}, \\
& 9.16076 \times 10^{39} u^{41} - 6.73128 \times 10^{39} u^{40} + \cdots + 4.90913 \times 10^{40} a + 8.21058 \times 10^{40},\ u^{42} - 2u^{41} + \cdots + 16u -
\end{aligned}$$

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

$$\begin{aligned}
I_3^u = \langle & 33u^3a^2 - 5a^2u^2 - 4u^3a - 30a^2u + 106u^2a + 89u^3 - 19a^2 + 7au + 28u^2 + 185b - 19a - 54u - 160, \\
& -a^2u^2 - 5u^3a + a^3 + 3a^2u + 4u^2a - a^2 + 4au + 6u^2 - a - u + 1,\ u^4 - u^2 + 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 63 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. $\boldsymbol{I_1^u = \langle -4.92\times10^{36}u^{41} - 1.80\times10^{38}u^{40} + \cdots + 2.89\times10^{39}b + 4.23\times10^{39},\ 9.16\times10^{39}u^{41} - 6.73\times10^{39}u^{40} + \cdots + 4.91\times10^{40}a + 8.21\times10^{40},\ u^{42} - 2u^{41} + \cdots + 16u - 17\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_3 = \begin{pmatrix}-0.186607u^{41} + 0.137118u^{40} + \cdots + 5.29366u - 1.67251\\0.00170297u^{41} + 0.0622705u^{40} + \cdots - 0.201147u - 1.46385\end{pmatrix}$$

$$a_6 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

$$a_2 = \begin{pmatrix}-0.184904u^{41} + 0.199388u^{40} + \cdots + 5.09252u - 3.13636\\0.00170297u^{41} + 0.0622705u^{40} + \cdots - 0.201147u - 1.46385\end{pmatrix}$$

$$a_1 = \begin{pmatrix}0.0588482u^{41} - 0.261568u^{40} + \cdots + 3.71273u + 4.22681\\0.266107u^{41} - 0.115441u^{40} + \cdots - 1.21463u + 2.00517\end{pmatrix}$$

$$a_4 = \begin{pmatrix}0.0875371u^{41} - 0.115951u^{40} + \cdots + 5.83351u + 3.00873\\0.0353514u^{41} - 0.0574630u^{40} + \cdots - 0.374380u - 0.0632026\end{pmatrix}$$

$$a_9 = \begin{pmatrix}-u\\u\end{pmatrix}$$

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

$$a_8 = \begin{pmatrix}-u^3\\u^5 - u^3 + u\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-0.596514u^{41} + 0.435647u^{40} + \cdots + 2.54867u - 8.20884\\0.687055u^{41} - 0.666732u^{40} + \cdots - 0.496210u + 10.8635\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}0.589024u^{41} - 0.658891u^{40} + \cdots + 2.42549u + 11.2674\\0.0500035u^{41} + 0.0678910u^{40} + \cdots - 1.20598u - 1.53919\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.57605u^{41} - 2.80061u^{40} + \cdots + 23.4107u + 46.2988$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{42}+2u^{41}+\cdots+24u+1$
c_2, c_4	$u^{42}-14u^{41}+\cdots+12u-1$
c_3, c_7	$u^{42}-u^{41}+\cdots+5632u+512$
c_5, c_9	$u^{42}-2u^{41}+\cdots+16u-17$
c_6, c_{11}	$u^{42}-2u^{41}+\cdots-70u-49$
c_8	$u^{42}-6u^{41}+\cdots-2688u+2567$
c_{10}	$u^{42}-28u^{41}+\cdots+1206u+289$
c_{12}	$u^{42}+6u^{41}+\cdots+26460u+2401$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{42} + 90y^{41} + \cdots + 1420y + 1$
c_2, c_4	$y^{42} - 2y^{41} + \cdots - 24y + 1$
c_3, c_7	$y^{42} - 69y^{41} + \cdots - 17301504y + 262144$
c_5, c_9	$y^{42} - 28y^{41} + \cdots + 1206y + 289$
c_6, c_{11}	$y^{42} + 6y^{41} + \cdots + 26460y + 2401$
c_8	$y^{42} + 68y^{41} + \cdots + 1240622y + 6589489$
c_{10}	$y^{42} - 20y^{41} + \cdots - 5069826y + 83521$
c_{12}	$y^{42} + 74y^{41} + \cdots - 29647548y + 5764801$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.961799 + 0.311389I$ $a = 2.02690 - 2.18124I$ $b = -0.464784 + 0.408421I$	$-1.72797 - 1.37637I$	$4.55612 - 0.38965I$
$u = -0.961799 - 0.311389I$ $a = 2.02690 + 2.18124I$ $b = -0.464784 - 0.408421I$	$-1.72797 + 1.37637I$	$4.55612 + 0.38965I$
$u = -0.829534 + 0.589200I$ $a = 0.947623 + 0.399065I$ $b = -0.343165 - 0.102736I$	$-1.74074 - 2.33828I$	$4.84594 + 5.31700I$
$u = -0.829534 - 0.589200I$ $a = 0.947623 - 0.399065I$ $b = -0.343165 + 0.102736I$	$-1.74074 + 2.33828I$	$4.84594 - 5.31700I$
$u = 0.944203 + 0.228207I$ $a = -0.16949 + 2.29855I$ $b = 0.993256 - 0.666835I$	$2.48881 + 3.70265I$	$6.29949 - 2.05838I$
$u = 0.944203 - 0.228207I$ $a = -0.16949 - 2.29855I$ $b = 0.993256 + 0.666835I$	$2.48881 - 3.70265I$	$6.29949 + 2.05838I$
$u = 0.835994 + 0.489683I$ $a = -3.35442 + 8.86991I$ $b = -1.016890 + 0.004699I$	$-3.34089 + 2.03680I$	$95.8127 + 26.5459I$
$u = 0.835994 - 0.489683I$ $a = -3.35442 - 8.86991I$ $b = -1.016890 - 0.004699I$	$-3.34089 - 2.03680I$	$95.8127 - 26.5459I$
$u = 0.965269 + 0.439008I$ $a = -0.983823 - 0.359781I$ $b = 0.899894 + 0.651256I$	$2.81421 - 1.00795I$	$8.57321 + 1.27913I$
$u = 0.965269 - 0.439008I$ $a = -0.983823 + 0.359781I$ $b = 0.899894 - 0.651256I$	$2.81421 + 1.00795I$	$8.57321 - 1.27913I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.726987+0.560951I$ $a=\ \ 0.802280+0.067898I$ $b=\ \ 0.101623+0.134205I$	$-1.85016-2.19168I$	$2.73443+3.94919I$
$u=-0.726987-0.560951I$ $a=\ \ 0.802280-0.067898I$ $b=\ \ 0.101623-0.134205I$	$-1.85016+2.19168I$	$2.73443-3.94919I$
$u=\ \ 0.205294+1.093670I$ $a=-0.50667-1.38304I$ $b=\ \ 1.23869+1.08212I$	$11.4259-8.4418I$	$2.24860+3.75985I$
$u=\ \ 0.205294-1.093670I$ $a=-0.50667+1.38304I$ $b=\ \ 1.23869-1.08212I$	$11.4259+8.4418I$	$2.24860-3.75985I$
$u=\ \ 0.053594+1.137510I$ $a=-0.59511+1.46169I$ $b=\ \ 1.05760-1.28040I$	$12.15940+0.20639I$	$3.10494-0.07106I$
$u=\ \ 0.053594-1.137510I$ $a=-0.59511-1.46169I$ $b=\ \ 1.05760+1.28040I$	$12.15940-0.20639I$	$3.10494+0.07106I$
$u=\ \ 0.232942+0.816588I$ $a=\ \ 0.184697-0.861641I$ $b=\ \ 0.151638+0.884654I$	$1.95152+0.96411I$	$4.49813-1.84965I$
$u=\ \ 0.232942-0.816588I$ $a=\ \ 0.184697+0.861641I$ $b=\ \ 0.151638-0.884654I$	$1.95152-0.96411I$	$4.49813+1.84965I$
$u=-1.18461$ $a=\ \ 1.51253$ $b=-1.40973$	0.934538	7.24150
$u=-1.126130+0.490429I$ $a=-0.039913-1.285050I$ $b=\ \ 0.828323+0.354167I$	$2.33209-7.91667I$	$6.88839+11.06602I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.126130 - 0.490429I$ $a = -0.039913 + 1.285050I$ $b = 0.828323 - 0.354167I$	$2.33209 + 7.91667I$	$6.88839 - 11.06602I$
$u = 1.259460 + 0.006196I$ $a = -0.97423 - 2.37844I$ $b = 0.506833 + 1.138780I$	$4.47907 - 1.92884I$	$6.47929 + 1.71581I$
$u = 1.259460 - 0.006196I$ $a = -0.97423 + 2.37844I$ $b = 0.506833 - 1.138780I$	$4.47907 + 1.92884I$	$6.47929 - 1.71581I$
$u = 1.072950 + 0.670917I$ $a = 0.45051 + 1.91983I$ $b = 0.590513 - 1.035150I$	$4.15910 + 4.29767I$	$6.40450 - 3.97494I$
$u = 1.072950 - 0.670917I$ $a = 0.45051 - 1.91983I$ $b = 0.590513 + 1.035150I$	$4.15910 - 4.29767I$	$6.40450 + 3.97494I$
$u = 1.254550 + 0.204489I$ $a = 1.39168 - 2.27514I$ $b = -1.145780 + 0.655072I$	$2.23820 + 2.99548I$	$5.68648 - 2.96480I$
$u = 1.254550 - 0.204489I$ $a = 1.39168 + 2.27514I$ $b = -1.145780 - 0.655072I$	$2.23820 - 2.99548I$	$5.68648 + 2.96480I$
$u = -0.274846 + 0.651125I$ $a = 0.435590 + 0.051488I$ $b = 0.661252 - 0.443712I$	$-0.15519 + 3.49196I$	$2.75035 - 5.76254I$
$u = -0.274846 - 0.651125I$ $a = 0.435590 - 0.051488I$ $b = 0.661252 + 0.443712I$	$-0.15519 - 3.49196I$	$2.75035 + 5.76254I$
$u = 0.698771$ $a = 0.544644$ $b = 0.196513$	0.929263	11.4390

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.360000+0.378690I$ $a=-0.10332+2.56500I$ $b=-0.202310-1.252300I$	$6.81382-5.26231I$	0
$u=-1.360000-0.378690I$ $a=-0.10332-2.56500I$ $b=-0.202310+1.252300I$	$6.81382+5.26231I$	0
$u=1.29496+0.63382I$ $a=-0.59935+2.83045I$ $b=1.31294-0.99932I$	$14.7912+14.5915I$	0
$u=1.29496-0.63382I$ $a=-0.59935-2.83045I$ $b=1.31294+0.99932I$	$14.7912-14.5915I$	0
$u=1.38494+0.58465I$ $a=-1.93831-1.93197I$ $b=0.92670+1.41166I$	$16.3124+5.9260I$	0
$u=1.38494-0.58465I$ $a=-1.93831+1.93197I$ $b=0.92670-1.41166I$	$16.3124-5.9260I$	0
$u=-1.42037+0.52003I$ $a=-0.95320-2.91761I$ $b=1.24919+1.24050I$	$16.8335-6.1018I$	0
$u=-1.42037-0.52003I$ $a=-0.95320+2.91761I$ $b=1.24919-1.24050I$	$16.8335+6.1018I$	0
$u=-1.46489+0.38079I$ $a=-2.05057+2.08335I$ $b=1.22965-1.27108I$	$16.9282+3.1689I$	0
$u=-1.46489-0.38079I$ $a=-2.05057-2.08335I$ $b=1.22965+1.27108I$	$16.9282-3.1689I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.096688 + 0.349533I$ $a = -0.82299 + 1.83040I$ $b = -0.968549 - 0.219170I$	$-1.74611 - 0.73385I$	$-3.54446 + 0.56735I$
$u = -0.096688 - 0.349533I$ $a = -0.82299 - 1.83040I$ $b = -0.968549 + 0.219170I$	$-1.74611 + 0.73385I$	$-3.54446 - 0.56735I$

II.

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

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 2u^8 - u^7 - 5u^6 + 3u^5 + 4u^4 - 3u^3 + 2u^2 - 2 \\ -1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2u^8 - u^7 - 5u^6 + 3u^5 + 4u^4 - 3u^3 + 2u^2 - 3 \\ -1 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 2u^8 - u^7 - 5u^6 + 3u^5 + 4u^4 - 3u^3 + 2u^2 - 2 \\ -1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^6 + u^4 - 1 \\ u^6 - 2u^4 + u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -6u^8 - 5u^7 + 10u^6 + 8u^5 - 10u^4 - 8u^3 - 4u^2 - 8u - 2$

(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	$u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1$
c_6	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$
c_8, c_{12}	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$
c_9	$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1$
c_{10}	$u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1$
c_{11}	$u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1$

(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_9	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_6, c_{11}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_8, c_{12}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_{10}	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.772920 + 0.510351I$ $a = -1.67861 + 2.31573I$ $b = -1.00000$	$-3.42837 + 2.09337I$	$-12.6725 - 14.2088I$
$u = 0.772920 - 0.510351I$ $a = -1.67861 - 2.31573I$ $b = -1.00000$	$-3.42837 - 2.09337I$	$-12.6725 + 14.2088I$
$u = -0.825933$ $a = 0.871015$ $b = -1.00000$	-0.446489	1.84400
$u = -1.173910 + 0.391555I$ $a = 0.893484 + 0.630694I$ $b = -1.00000$	$2.72642 - 1.33617I$	$6.61905 + 0.64999I$
$u = -1.173910 - 0.391555I$ $a = 0.893484 - 0.630694I$ $b = -1.00000$	$2.72642 + 1.33617I$	$6.61905 - 0.64999I$
$u = 0.141484 + 0.739668I$ $a = -0.309843 + 0.043204I$ $b = -1.00000$	$-1.02799 - 2.45442I$	$-0.10038 + 1.90984I$
$u = 0.141484 - 0.739668I$ $a = -0.309843 - 0.043204I$ $b = -1.00000$	$-1.02799 + 2.45442I$	$-0.10038 - 1.90984I$
$u = 1.172470 + 0.500383I$ $a = 0.659464 - 0.874093I$ $b = -1.00000$	$1.95319 + 7.08493I$	$3.23178 - 2.93209I$
$u = 1.172470 - 0.500383I$ $a = 0.659464 + 0.874093I$ $b = -1.00000$	$1.95319 - 7.08493I$	$3.23178 + 2.93209I$

III.

$$I^u_3 = \langle 33u^3a^2 - 4u^3a + \cdots - 19a - 160,\ -a^2u^2 - 5u^3a + \cdots - a + 1,\ u^4 - u^2 + 1\rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} a \\ -0.178378a^2u^3 + 0.0216216au^3 + \cdots + 0.102703a + 0.864865 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.178378a^2u^3 + 0.0216216au^3 + \cdots + 1.10270a + 0.864865 \\ -0.178378a^2u^3 + 0.0216216au^3 + \cdots + 0.102703a + 0.864865 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.156757a^2u^3 - 0.0432432au^3 + \cdots - 0.00540541a - 1.32973 \\ -0.232432a^2u^3 - 0.632432au^3 + \cdots - 0.0540541a + 2.10270 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} \frac{1}{5}u^3a^2 - \frac{3}{5}u^3a + \cdots - \frac{3}{5}a + 1 \\ -0.0540541a^2u^3 - 0.654054au^3 + \cdots - 0.156757a + 0.237838 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -u^3 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.340541a^2u^3 - 0.0594595au^3 + \cdots - 0.632432a + 0.421622 \\ -0.194595a^2u^3 + 0.00540541au^3 + \cdots + 0.675676a + 1.01622 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.156757a^2u^3 - 0.0432432au^3 + \cdots - 0.00540541a - 1.32973 \\ -0.232432a^2u^3 - 0.632432au^3 + \cdots - 0.0540541a + 2.10270 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{132}{185}u^3a^2 + \frac{4}{37}a^2u^2 + \frac{16}{185}u^3a + \frac{24}{37}a^2u - \frac{424}{185}u^2a - \frac{356}{185}u^3 + \frac{76}{185}a^2 - \frac{28}{185}au - \frac{852}{185}u^2 + \frac{76}{185}a + \frac{216}{185}u + \frac{128}{37}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^3+3y^2+2y-1)^4$
c_2, c_4	$(y^3-y^2+2y-1)^4$
c_3, c_7	$(y^3-3y^2+2y+1)^4$
c_5, c_8, c_9	$(y^2-y+1)^6$
c_6, c_{11}	$(y+1)^{12}$
c_{10}	$(y^2+y+1)^6$
c_{12}	$(y-1)^{12}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.866025 + 0.500000I$ $a = -0.972493 - 1.013180I$ $b = 0.877439 + 0.744862I$	$1.37919 - 0.79824I$	$1.50976 - 0.48465I$
$u = 0.866025 + 0.500000I$ $a = 0.11905 - 1.81610I$ $b = -0.754878$	$-2.75839 + 2.02988I$	$-5.01951 - 3.46410I$
$u = 0.866025 + 0.500000I$ $a = -0.24463 + 2.19530I$ $b = 0.877439 - 0.744862I$	$1.37919 + 4.85801I$	$1.50976 - 6.44355I$
$u = 0.866025 - 0.500000I$ $a = -0.972493 + 1.013180I$ $b = 0.877439 - 0.744862I$	$1.37919 + 0.79824I$	$1.50976 + 0.48465I$
$u = 0.866025 - 0.500000I$ $a = 0.11905 + 1.81610I$ $b = -0.754878$	$-2.75839 - 2.02988I$	$-5.01951 + 3.46410I$
$u = 0.866025 - 0.500000I$ $a = -0.24463 - 2.19530I$ $b = 0.877439 + 0.744862I$	$1.37919 - 4.85801I$	$1.50976 + 6.44355I$
$u = -0.866025 + 0.500000I$ $a = -0.949962 - 0.298361I$ $b = 0.877439 - 0.744862I$	$1.37919 + 0.79824I$	$1.50976 + 0.48465I$
$u = -0.866025 + 0.500000I$ $a = 0.90246 - 1.55905I$ $b = 0.877439 + 0.744862I$	$1.37919 - 4.85801I$	$1.50976 + 6.44355I$
$u = -0.866025 + 0.500000I$ $a = 4.14558 - 0.50862I$ $b = -0.754878$	$-2.75839 - 2.02988I$	$-5.01951 + 3.46410I$
$u = -0.866025 - 0.500000I$ $a = -0.949962 + 0.298361I$ $b = 0.877439 + 0.744862I$	$1.37919 - 0.79824I$	$1.50976 - 0.48465I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.866025 - 0.500000I$ $a = \quad 0.90246 + 1.55905I$ $b = \quad 0.877439 - 0.744862I$	$1.37919 + 4.85801I$	$1.50976 - 6.44355I$
$u = -0.866025 - 0.500000I$ $a = \quad 4.14558 + 0.50862I$ $b = -0.754878$	$-2.75839 + 2.02988I$	$-5.01951 - 3.46410I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^3-u^2+2u-1)^4(u^{42}+2u^{41}+\cdots+24u+1)$
c_2	$((u-1)^9)(u^3+u^2-1)^4(u^{42}-14u^{41}+\cdots+12u-1)$
c_3, c_7	$u^9(u^6-3u^4+2u^2+1)^2(u^{42}-u^{41}+\cdots+5632u+512)$
c_4	$((u+1)^9)(u^3-u^2+1)^4(u^{42}-14u^{41}+\cdots+12u-1)$
c_5	$(u^4-u^2+1)^3(u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1)$ $\cdot(u^{42}-2u^{41}+\cdots+16u-17)$
c_6	$(u^2+1)^6(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{42}-2u^{41}+\cdots-70u-49)$
c_8	$(u^4-u^2+1)^3$ $\cdot(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{42}-6u^{41}+\cdots-2688u+2567)$
c_9	$(u^4-u^2+1)^3(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{42}-2u^{41}+\cdots+16u-17)$
c_{10}	$((u^2-u+1)^6)(u^9-5u^8+\cdots+u-1)$ $\cdot(u^{42}-28u^{41}+\cdots+1206u+289)$
c_{11}	$(u^2+1)^6(u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1)$ $\cdot(u^{42}-2u^{41}+\cdots-70u-49)$
c_{12}	$((u+1)^{12})(u^9+3u^8+\cdots+u-1)$ $\cdot(u^{42}+6u^{41}+\cdots+26460u+2401)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^3+3y^2+2y-1)^4(y^{42}+90y^{41}+\cdots+1420y+1)$
c_2, c_4	$((y-1)^9)(y^3-y^2+2y-1)^4(y^{42}-2y^{41}+\cdots-24y+1)$
c_3, c_7	$y^9(y^3-3y^2+2y+1)^4(y^{42}-69y^{41}+\cdots-1.73015\times10^7y+262144)$
c_5, c_9	$((y^2-y+1)^6)(y^9-5y^8+\cdots+y-1)$ $\cdot(y^{42}-28y^{41}+\cdots+1206y+289)$
c_6, c_{11}	$((y+1)^{12})(y^9+3y^8+\cdots+y-1)$ $\cdot(y^{42}+6y^{41}+\cdots+26460y+2401)$
c_8	$((y^2-y+1)^6)(y^9+7y^8+\cdots+13y-1)$ $\cdot(y^{42}+68y^{41}+\cdots+1240622y+6589489)$
c_{10}	$(y^2+y+1)^6(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{42}-20y^{41}+\cdots-5069826y+83521)$
c_{12}	$(y-1)^{12}(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{42}+74y^{41}+\cdots-29647548y+5764801)$