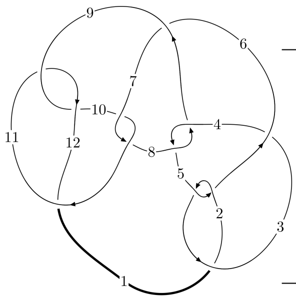
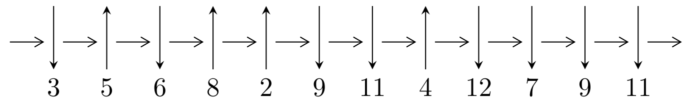
$12n_{0006}$ ($K12n_{0006}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-1.91035 \times 10^{42} u^{35} - 5.59036 \times 10^{42} u^{34} + \cdots + 5.65992 \times 10^{43} b - 1.39033 \times 10^{44}, \\
&- 3.14927 \times 10^{42} u^{35} - 2.52651 \times 10^{43} u^{34} + \cdots + 9.05587 \times 10^{44} a - 2.23223 \times 10^{44}, \\
&u^{36} + 2u^{35} + \cdots - 80u + 16\rangle \\
I_2^u = \langle &u^3 + b + u + 1,\ a,\ u^4 + u^2 + u + 1\rangle \\
I_3^u = \langle &u^5 - u^4 + 2u^3 - 2u^2 + b + 2u - 2,\ a,\ u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1\rangle
\end{aligned}$$

$$I_1^v = \langle a,\ 5v^3 + 16v^2 + 8b + 40v + 15,\ v^4 + 3v^3 + 8v^2 + 3v + 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 50 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. $\boldsymbol{I_1^u = \langle -1.91 \times 10^{42}u^{35} - 5.59 \times 10^{42}u^{34} + \cdots + 5.66 \times 10^{43}b - 1.39 \times 10^{44},\ -3.15 \times 10^{42}u^{35} - 2.53 \times 10^{43}u^{34} + \cdots + 9.06 \times 10^{44}a - 2.23 \times 10^{44},\ u^{36} + 2u^{35} + \cdots - 80u + 16\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.00347761u^{35} + 0.0278991u^{34} + \cdots - 5.05646u + 0.246496 \\ 0.0337523u^{35} + 0.0987710u^{34} + \cdots - 8.01212u + 2.45644 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.0174509u^{35} + 0.0681602u^{34} + \cdots - 5.53487u + 0.386666 \\ 0.0549946u^{35} + 0.150360u^{34} + \cdots - 7.72896u + 2.39958 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.0689309u^{35} - 0.141959u^{34} + \cdots - 11.1126u + 2.81049 \\ 0.0411861u^{35} + 0.104236u^{34} + \cdots - 0.312163u + 0.732592 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.0905615u^{35} - 0.196881u^{34} + \cdots - 11.3120u + 2.51944 \\ 0.0271025u^{35} + 0.0698189u^{34} + \cdots - 1.09845u + 0.628132 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.0217183u^{35} - 0.0278113u^{34} + \cdots - 4.98975u + 2.48305 \\ 0.0154821u^{35} + 0.0215115u^{34} + \cdots + 5.72787u - 0.965440 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0372004u^{35} - 0.0493228u^{34} + \cdots - 10.7176u + 3.44849 \\ 0.0154821u^{35} + 0.0215115u^{34} + \cdots + 5.72787u - 0.965440 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.103417u^{35} - 0.225024u^{34} + \cdots - 10.0253u + 2.14344 \\ -0.0128556u^{35} - 0.0281432u^{34} + \cdots + 1.28677u - 0.376001 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.0909240u^{35} + 0.190594u^{34} + \cdots + 8.47685u - 2.12683 \\ -0.0276885u^{35} - 0.0503355u^{34} + \cdots - 10.4945u + 2.31821 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.512287u^{35} - 1.02092u^{34} + \cdots - 70.5736u - 4.04563$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{36} + 20u^{35} + \cdots - 86u + 1$
c_2, c_5	$u^{36} + 4u^{35} + \cdots - 6u + 1$
c_3	$u^{36} - 4u^{35} + \cdots - 276u + 36$
c_4, c_8	$u^{36} - 2u^{35} + \cdots + 80u + 16$
c_6	$u^{36} - 4u^{35} + \cdots - 4u + 1$
c_7, c_{10}	$u^{36} + 3u^{35} + \cdots + 2048u - 1024$
c_9, c_{11}	$u^{36} - 13u^{35} + \cdots + 17u - 1$
c_{12}	$u^{36} + 59u^{35} + \cdots + 9u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{36} - 4y^{35} + \cdots - 8550y + 1$
c_2, c_5	$y^{36} + 20y^{35} + \cdots - 86y + 1$
c_3	$y^{36} - 28y^{35} + \cdots - 99144y + 1296$
c_4, c_8	$y^{36} + 30y^{35} + \cdots + 1408y + 256$
c_6	$y^{36} - 80y^{35} + \cdots - 26y + 1$
c_7, c_{10}	$y^{36} - 69y^{35} + \cdots + 7864320y + 1048576$
c_9, c_{11}	$y^{36} - 59y^{35} + \cdots - 9y + 1$
c_{12}	$y^{36} - 151y^{35} + \cdots - 6173y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.386520 + 1.057590I$ $a = -0.503327 + 0.379742I$ $b = 0.690277 + 0.591486I$	$-0.77161 - 2.27001I$	$-1.34133 + 2.22423I$
$u = -0.386520 - 1.057590I$ $a = -0.503327 - 0.379742I$ $b = 0.690277 - 0.591486I$	$-0.77161 + 2.27001I$	$-1.34133 - 2.22423I$
$u = -0.807607 + 0.285041I$ $a = 0.827740 - 0.668125I$ $b = -0.25011 - 2.14554I$	$-2.91712 - 2.06171I$	$-8.82963 + 1.43740I$
$u = -0.807607 - 0.285041I$ $a = 0.827740 + 0.668125I$ $b = -0.25011 + 2.14554I$	$-2.91712 + 2.06171I$	$-8.82963 - 1.43740I$
$u = 0.583843 + 0.511757I$ $a = -0.884356 + 0.778254I$ $b = -0.381315 + 0.236790I$	$-1.74932 - 0.04789I$	$-9.54847 + 0.41128I$
$u = 0.583843 - 0.511757I$ $a = -0.884356 - 0.778254I$ $b = -0.381315 - 0.236790I$	$-1.74932 + 0.04789I$	$-9.54847 - 0.41128I$
$u = -0.502707 + 0.522986I$ $a = -0.379878 + 0.383729I$ $b = -0.011979 + 0.723756I$	$0.74759 - 1.37712I$	$2.57358 + 4.27221I$
$u = -0.502707 - 0.522986I$ $a = -0.379878 - 0.383729I$ $b = -0.011979 - 0.723756I$	$0.74759 + 1.37712I$	$2.57358 - 4.27221I$
$u = 0.127839 + 1.278020I$ $a = 0.646852 + 0.410189I$ $b = -1.053190 + 0.114026I$	$-4.72217 - 1.11094I$	$-8.05050 + 1.28077I$
$u = 0.127839 - 1.278020I$ $a = 0.646852 - 0.410189I$ $b = -1.053190 - 0.114026I$	$-4.72217 + 1.11094I$	$-8.05050 - 1.28077I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.499062 + 1.208100I$ $a = 0.516361 + 0.301634I$ $b = -0.886666 + 0.792695I$	$-3.38469 + 7.01546I$	$-4.45254 - 4.63795I$
$u = 0.499062 - 1.208100I$ $a = 0.516361 - 0.301634I$ $b = -0.886666 - 0.792695I$	$-3.38469 - 7.01546I$	$-4.45254 + 4.63795I$
$u = 0.625800 + 0.176987I$ $a = 0.515428 + 0.332782I$ $b = 0.664166 + 0.803195I$	$-0.30087 - 2.59940I$	$0.94853 + 4.22855I$
$u = 0.625800 - 0.176987I$ $a = 0.515428 - 0.332782I$ $b = 0.664166 - 0.803195I$	$-0.30087 + 2.59940I$	$0.94853 - 4.22855I$
$u = 1.35690$ $a = 1.66154$ $b = 3.31123$	-12.0538	-5.89580
$u = 0.10948 + 1.41069I$ $a = -0.05528 + 1.62617I$ $b = -0.522174 - 0.242877I$	$-12.85970 + 3.05068I$	$-8.36572 - 2.61847I$
$u = 0.10948 - 1.41069I$ $a = -0.05528 - 1.62617I$ $b = -0.522174 + 0.242877I$	$-12.85970 - 3.05068I$	$-8.36572 + 2.61847I$
$u = 0.13985 + 1.42281I$ $a = 0.715759 - 0.915325I$ $b = -0.770423 + 0.258625I$	$-5.54338 + 1.88156I$	$-7.87001 - 1.20785I$
$u = 0.13985 - 1.42281I$ $a = 0.715759 + 0.915325I$ $b = -0.770423 - 0.258625I$	$-5.54338 - 1.88156I$	$-7.87001 + 1.20785I$
$u = 0.253629 + 0.486794I$ $a = 1.45456 - 2.43782I$ $b = 0.399439 + 0.873101I$	$-9.11143 - 1.69402I$	$-16.0216 - 6.5848I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.253629 - 0.486794I$ $a = 1.45456 + 2.43782I$ $b = 0.399439 - 0.873101I$	$-9.11143 + 1.69402I$	$-16.0216 + 6.5848I$
$u = -1.54854 + 0.24882I$ $a = -1.54790 - 0.09130I$ $b = -3.97196 + 1.02080I$	$-15.7283 + 4.6602I$	0
$u = -1.54854 - 0.24882I$ $a = -1.54790 + 0.09130I$ $b = -3.97196 - 1.02080I$	$-15.7283 - 4.6602I$	0
$u = 0.016490 + 0.425398I$ $a = 0.317088 - 1.129550I$ $b = 0.15143 - 2.98728I$	$-1.27554 + 2.18577I$	$-31.5174 - 1.0818I$
$u = 0.016490 - 0.425398I$ $a = 0.317088 + 1.129550I$ $b = 0.15143 + 2.98728I$	$-1.27554 - 2.18577I$	$-31.5174 + 1.0818I$
$u = 0.11625 + 1.61362I$ $a = -0.740706 - 0.914136I$ $b = 2.00964 + 0.28151I$	$-9.56302 + 2.68337I$	0
$u = 0.11625 - 1.61362I$ $a = -0.740706 + 0.914136I$ $b = 2.00964 - 0.28151I$	$-9.56302 - 2.68337I$	0
$u = -0.36830 + 1.57756I$ $a = -0.709122 - 0.932633I$ $b = 0.246782 + 1.199400I$	$-9.08039 - 6.82329I$	0
$u = -0.36830 - 1.57756I$ $a = -0.709122 + 0.932633I$ $b = 0.246782 - 1.199400I$	$-9.08039 + 6.82329I$	0
$u = 0.67064 + 1.51850I$ $a = -0.19618 + 1.43098I$ $b = -3.05517 - 0.48149I$	$-16.7576 + 7.1899I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.67064 - 1.51850I$ $a = -0.19618 - 1.43098I$ $b = -3.05517 + 0.48149I$	$-16.7576 - 7.1899I$	0
$u = 0.324270$ $a = -1.75817$ $b = 0.383485$	-1.11333	-8.97030
$u = -0.82187 + 1.51160I$ $a = 0.206115 + 1.375210I$ $b = 3.63575 - 0.26624I$	$-19.6617 - 12.9119I$	0
$u = -0.82187 - 1.51160I$ $a = 0.206115 - 1.375210I$ $b = 3.63575 + 0.26624I$	$-19.6617 + 12.9119I$	0
$u = -0.54791 + 1.74851I$ $a = 0.11518 + 1.43966I$ $b = 2.75814 - 1.63321I$	$17.2769 - 3.0755I$	0
$u = -0.54791 - 1.74851I$ $a = 0.11518 - 1.43966I$ $b = 2.75814 + 1.63321I$	$17.2769 + 3.0755I$	0

II. $I_2^u = \langle u^3 + b + u + 1,\ a,\ u^4 + u^2 + u + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3u^3 - 5u^2 - u - 9$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.547424 + 0.585652I$ $a = 0$ $b = -0.851808 - 0.911292I$	$-0.66484 - 1.39709I$	$-7.03830 + 3.59727I$
$u = -0.547424 - 0.585652I$ $a = 0$ $b = -0.851808 + 0.911292I$	$-0.66484 + 1.39709I$	$-7.03830 - 3.59727I$
$u = 0.547424 + 1.120870I$ $a = 0$ $b = 0.351808 - 0.720342I$	$-4.26996 + 7.64338I$	$-10.46170 - 8.45840I$
$u = 0.547424 - 1.120870I$ $a = 0$ $b = 0.351808 + 0.720342I$	$-4.26996 - 7.64338I$	$-10.46170 + 8.45840I$

III.

$\boldsymbol{I_3^u = \langle u^5 - u^4 + 2u^3 - 2u^2 + b + 2u - 2,\ a,\ u^6 - u^5 + 2u^4 - 2u^3 + 2u^2 - 2u + 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^5 + u^4 + u^2 + u - 8$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.498832 + 1.001300I$ $a = 0$ $b = -0.398606 - 0.800120I$	$-1.91067 - 2.82812I$	$-7.09522 + 3.87141I$
$u = -0.498832 - 1.001300I$ $a = 0$ $b = -0.398606 + 0.800120I$	$-1.91067 + 2.82812I$	$-7.09522 - 3.87141I$
$u = 0.284920 + 1.115140I$ $a = 0$ $b = 0.215080 - 0.841795I$	-6.04826	$-11.76463 - 0.99756I$
$u = 0.284920 - 1.115140I$ $a = 0$ $b = 0.215080 + 0.841795I$	-6.04826	$-11.76463 + 0.99756I$
$u = 0.713912 + 0.305839I$ $a = 0$ $b = 1.183530 - 0.507021I$	$-1.91067 - 2.82812I$	$-6.64015 + 0.59776I$
$u = 0.713912 - 0.305839I$ $a = 0$ $b = 1.183530 + 0.507021I$	$-1.91067 + 2.82812I$	$-6.64015 - 0.59776I$

IV. $I_1^v = \langle a,\ 5v^3+16v^2+8b+40v+15,\ v^4+3v^3+8v^2+3v+1\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -\frac{5}{8}v^3 - 2v^2 - 5v - \frac{15}{8} \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -\frac{3}{8}v^3 - v^2 - v - \frac{1}{8} \\ -\frac{5}{8}v^3 - 2v^2 - 5v - \frac{15}{8} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} v \\ \frac{3}{8}v^3 + v^2 + 3v + \frac{9}{8} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{3}{8}v^3 + v^2 + v + \frac{1}{8} \\ \frac{3}{8}v^3 + v^2 + 3v + \frac{9}{8} \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{1}{4}v^3 + \frac{5}{4} \\ -\frac{3}{8}v^3 - v^2 - 3v - \frac{1}{8} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{8}v^3 + v^2 + 3v + \frac{11}{8} \\ -\frac{3}{8}v^3 - v^2 - 3v - \frac{1}{8} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{3}{8}v^3 - v^2 - v - \frac{1}{8} \\ -\frac{3}{8}v^3 - v^2 - 3v - \frac{9}{8} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{3}{8}v^3 + v^2 + v + \frac{1}{8} \\ -\frac{3}{8}v^3 - v^2 - 3v - \frac{9}{8} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{3}{2}v^3 - 5v^2 - 9v - \frac{13}{2}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = -0.190983 + 0.330792I$ $a = 0$ $b = -0.80902 - 1.40126I$	$-0.98696 - 2.02988I$	$-4.50000 - 2.34537I$
$v = -0.190983 - 0.330792I$ $a = 0$ $b = -0.80902 + 1.40126I$	$-0.98696 + 2.02988I$	$-4.50000 + 2.34537I$
$v = -1.30902 + 2.26728I$ $a = 0$ $b = 0.309017 + 0.535233I$	$-8.88264 - 2.02988I$	$-4.50000 + 9.27358I$
$v = -1.30902 - 2.26728I$ $a = 0$ $b = 0.309017 - 0.535233I$	$-8.88264 + 2.02988I$	$-4.50000 - 9.27358I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2-u+1)^2(u^4-2u^3+3u^2-u+1)(u^6-3u^5+4u^4-2u^3+1)$ $\cdot(u^{36}+20u^{35}+\cdots-86u+1)$
c_2	$(u^2+u+1)^2(u^4+u^2+u+1)(u^6-u^5+2u^4-2u^3+2u^2-2u+1)$ $\cdot(u^{36}+4u^{35}+\cdots-6u+1)$
c_3	$(u^2-u+1)^2(u^3-u^2+1)^2(u^4+3u^3+4u^2+3u+2)$ $\cdot(u^{36}-4u^{35}+\cdots-276u+36)$
c_4	$u^4(u^4+u^2+u+1)(u^6-u^5+2u^4-2u^3+2u^2-2u+1)$ $\cdot(u^{36}-2u^{35}+\cdots+80u+16)$
c_5	$(u^2-u+1)^2(u^4+u^2-u+1)(u^6+u^5+2u^4+2u^3+2u^2+2u+1)$ $\cdot(u^{36}+4u^{35}+\cdots-6u+1)$
c_6	$(u^2-3u+1)^2(u^4-2u^3+3u^2-u+1)(u^6-3u^5+4u^4-2u^3+1)$ $\cdot(u^{36}-4u^{35}+\cdots-4u+1)$
c_7	$u^{10}(u^2+u-1)^2(u^{36}+3u^{35}+\cdots+2048u-1024)$
c_8	$u^4(u^4+u^2-u+1)(u^6+u^5+2u^4+2u^3+2u^2+2u+1)$ $\cdot(u^{36}-2u^{35}+\cdots+80u+16)$
c_9	$((u-1)^{10})(u^2+u-1)^2(u^{36}-13u^{35}+\cdots+17u-1)$
c_{10}	$u^{10}(u^2-u-1)^2(u^{36}+3u^{35}+\cdots+2048u-1024)$
c_{11}	$((u+1)^{10})(u^2-u-1)^2(u^{36}-13u^{35}+\cdots+17u-1)$
c_{12}	$((u+1)^{10})(u^2+3u+1)^2(u^{36}+59u^{35}+\cdots+9u+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^2)(y^4+2y^3+\cdots+5y+1)(y^6-y^5+\cdots+8y^2+1)$ $\cdot(y^{36}-4y^{35}+\cdots-8550y+1)$
c_2, c_5	$(y^2+y+1)^2(y^4+2y^3+3y^2+y+1)(y^6+3y^5+4y^4+2y^3+1)$ $\cdot(y^{36}+20y^{35}+\cdots-86y+1)$
c_3	$(y^2+y+1)^2(y^3-y^2+2y-1)^2(y^4-y^3+2y^2+7y+4)$ $\cdot(y^{36}-28y^{35}+\cdots-99144y+1296)$
c_4, c_8	$y^4(y^4+2y^3+3y^2+y+1)(y^6+3y^5+4y^4+2y^3+1)$ $\cdot(y^{36}+30y^{35}+\cdots+1408y+256)$
c_6	$((y^2-7y+1)^2)(y^4+2y^3+\cdots+5y+1)(y^6-y^5+\cdots+8y^2+1)$ $\cdot(y^{36}-80y^{35}+\cdots-26y+1)$
c_7, c_{10}	$y^{10}(y^2-3y+1)^2(y^{36}-69y^{35}+\cdots+7864320y+1048576)$
c_9, c_{11}	$((y-1)^{10})(y^2-3y+1)^2(y^{36}-59y^{35}+\cdots-9y+1)$
c_{12}	$((y-1)^{10})(y^2-7y+1)^2(y^{36}-151y^{35}+\cdots-6173y+1)$