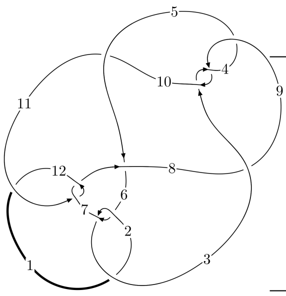
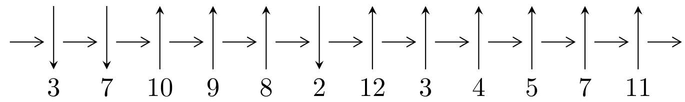
$12n_{0572}$ ($K12n_{0572}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 2u^{30} + 2u^{29} + \cdots + 4b + 2,\ -2u^{30} - u^{29} + \cdots + 4a - 6,\ u^{31} + 2u^{30} + \cdots + 2u + 2\rangle$$
$$I_2^u = \langle b - 1,\ 2u^3 - 3u^2 + 3a + 3u - 3,\ u^4 + 3u^2 + 3\rangle$$
$$I_3^u = \langle -a^2u^2 + u^2a - 2au + b + 2a - 2u,\ -2a^2u^2 + a^3 + 2u^2a - 2a^2 - 3au + 5a - u + 1,\ u^3 - u^2 + 2u - 1\rangle$$
$$I_4^u = \langle b + 1,\ -u^2 + a + u - 1,\ u^4 + u^2 - 1\rangle$$

$$I_1^v = \langle a,\ b - 1,\ v - 1\rangle$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 49 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.

$$I^u_1 = \langle 2u^{30}+2u^{29}+\cdots+4b+2,\ -2u^{30}-u^{29}+\cdots+4a-6,\ u^{31}+2u^{30}+\cdots+2u+2\rangle$$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_7 = \begin{pmatrix}\frac{1}{2}u^{30}+\frac{1}{4}u^{29}+\cdots+2u+\frac{3}{2}\\-\frac{1}{2}u^{30}-\frac{1}{2}u^{29}+\cdots-u-\frac{1}{2}\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-\frac{1}{4}u^{27}-3u^{25}+\cdots+\frac{1}{2}u+1\\\frac{1}{4}u^{27}+\frac{11}{4}u^{25}+\cdots-\frac{1}{2}u^2+\frac{1}{2}u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-\frac{1}{4}u^{25}-\frac{5}{2}u^{23}+\cdots+u+1\\\frac{1}{4}u^{27}+\frac{11}{4}u^{25}+\cdots-\frac{1}{2}u^2+\frac{1}{2}u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u^{10}-5u^8-8u^6-3u^4+3u^2+1\\u^{10}+4u^8+5u^6-3u^2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}u^2+1\\-u^4-2u^2\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}u^5+2u^3+u\\-u^7-3u^5-2u^3+u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-u^3-2u\\u^3+u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}\frac{1}{2}u^{30}+u^{29}+\cdots+\frac{3}{2}u+\frac{5}{2}\\-\frac{1}{4}u^{28}-\frac{1}{4}u^{27}+\cdots+\frac{3}{2}u-1\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$= 2u^{30}+4u^{29}+30u^{28}+48u^{27}+192u^{26}+248u^{25}+682u^{24}+702u^{23}+1432u^{22}+1112u^{21}+1656u^{20}+764u^{19}+556u^{18}-384u^{17}-1002u^{16}-1040u^{15}-1088u^{14}-344u^{13}+216u^{12}+568u^{11}+830u^{10}+454u^9+206u^8-108u^7-284u^6-180u^5-122u^4-6u^3+30u^2+4u+12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{31} + 44u^{30} + \cdots + 119u + 1$
c_2, c_6	$u^{31} - 2u^{30} + \cdots + 3u - 1$
c_3, c_4, c_9	$u^{31} + 2u^{30} + \cdots + 2u + 2$
c_5	$u^{31} + 7u^{30} + \cdots - 88514u + 28438$
c_7, c_{11}	$u^{31} + 2u^{30} + \cdots - u - 1$
c_8, c_{10}	$u^{31} - 2u^{30} + \cdots - 88u + 16$
c_{12}	$u^{31} - 4u^{30} + \cdots + 39u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{31} - 104y^{30} + \cdots + 10991y - 1$
c_2, c_6	$y^{31} - 44y^{30} + \cdots + 119y - 1$
c_3, c_4, c_9	$y^{31} + 26y^{30} + \cdots + 8y - 4$
c_5	$y^{31} + 55y^{30} + \cdots + 4648364048y - 808719844$
c_7, c_{11}	$y^{31} - 4y^{30} + \cdots + 39y - 1$
c_8, c_{10}	$y^{31} - 14y^{30} + \cdots + 448y - 256$
c_{12}	$y^{31} + 56y^{30} + \cdots + 479y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.422005 + 0.970388I$ $a = 0.780023 - 0.122330I$ $b = -1.63363 - 0.20014I$	$-8.77509 - 4.02062I$	$3.17327 + 1.29124I$
$u = 0.422005 - 0.970388I$ $a = 0.780023 + 0.122330I$ $b = -1.63363 + 0.20014I$	$-8.77509 + 4.02062I$	$3.17327 - 1.29124I$
$u = -0.438452 + 0.819465I$ $a = 0.612911 + 0.875111I$ $b = -1.66514 - 0.05832I$	$-9.30026 - 3.06037I$	$2.53545 + 3.57264I$
$u = -0.438452 - 0.819465I$ $a = 0.612911 - 0.875111I$ $b = -1.66514 + 0.05832I$	$-9.30026 + 3.06037I$	$2.53545 - 3.57264I$
$u = -0.151148 + 1.120390I$ $a = -0.774438 + 0.936580I$ $b = 0.430006 - 0.577254I$	$-1.40117 + 1.17674I$	$6.48562 - 3.33148I$
$u = -0.151148 - 1.120390I$ $a = -0.774438 - 0.936580I$ $b = 0.430006 + 0.577254I$	$-1.40117 - 1.17674I$	$6.48562 + 3.33148I$
$u = 0.822269 + 0.212623I$ $a = -1.60479 + 1.78111I$ $b = 1.64313 - 0.27195I$	$-6.42043 + 8.50954I$	$6.05681 - 5.42341I$
$u = 0.822269 - 0.212623I$ $a = -1.60479 - 1.78111I$ $b = 1.64313 + 0.27195I$	$-6.42043 - 8.50954I$	$6.05681 + 5.42341I$
$u = -0.769464 + 0.275211I$ $a = -1.58833 - 1.20476I$ $b = 1.68783 + 0.04109I$	$-7.55262 - 1.26507I$	$4.68154 + 1.47900I$
$u = -0.769464 - 0.275211I$ $a = -1.58833 + 1.20476I$ $b = 1.68783 - 0.04109I$	$-7.55262 + 1.26507I$	$4.68154 - 1.47900I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.801134$ $a = 1.76838$ $b = -1.08175$	2.34779	4.38740
$u = -0.777905$ $a = -0.722824$ $b = -0.0906547$	5.57117	16.4750
$u = -0.709050 + 0.173396I$ $a = 0.38023 + 2.22913I$ $b = -0.614830 - 0.764424I$	$1.18939 - 4.50976I$	$8.37255 + 6.79420I$
$u = -0.709050 - 0.173396I$ $a = 0.38023 - 2.22913I$ $b = -0.614830 + 0.764424I$	$1.18939 + 4.50976I$	$8.37255 - 6.79420I$
$u = -0.332218 + 1.265660I$ $a = 0.704768 + 0.124425I$ $b = 0.095778 - 0.113924I$	$1.64712 - 4.00353I$	$11.89002 + 3.58978I$
$u = -0.332218 - 1.265660I$ $a = 0.704768 - 0.124425I$ $b = 0.095778 + 0.113924I$	$1.64712 + 4.00353I$	$11.89002 - 3.58978I$
$u = 0.355714 + 1.276500I$ $a = -0.665256 + 0.850651I$ $b = 1.105160 + 0.056084I$	$-1.62439 + 4.16232I$	$0.18076 - 3.51312I$
$u = 0.355714 - 1.276500I$ $a = -0.665256 - 0.850651I$ $b = 1.105160 - 0.056084I$	$-1.62439 - 4.16232I$	$0.18076 + 3.51312I$
$u = -0.054498 + 1.374780I$ $a = -0.492915 - 0.029751I$ $b = -0.992043 + 0.551725I$	$-6.79962 + 0.91660I$	$-1.89239 - 1.83526I$
$u = -0.054498 - 1.374780I$ $a = -0.492915 + 0.029751I$ $b = -0.992043 - 0.551725I$	$-6.79962 - 0.91660I$	$-1.89239 + 1.83526I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.292248 + 1.364020I$ $a = 0.75119 - 1.48738I$ $b = 0.689770 + 0.858986I$	$-3.67517 - 8.15180I$	$3.05070 + 7.43504I$
$u = -0.292248 - 1.364020I$ $a = 0.75119 + 1.48738I$ $b = 0.689770 - 0.858986I$	$-3.67517 + 8.15180I$	$3.05070 - 7.43504I$
$u = 0.34385 + 1.39505I$ $a = -0.22148 - 2.07364I$ $b = -1.66852 + 0.31356I$	$-11.5166 + 12.7194I$	$2.07160 - 6.66192I$
$u = 0.34385 - 1.39505I$ $a = -0.22148 + 2.07364I$ $b = -1.66852 - 0.31356I$	$-11.5166 - 12.7194I$	$2.07160 + 6.66192I$
$u = -0.30540 + 1.41307I$ $a = -0.24753 + 1.59262I$ $b = -1.74843 - 0.08810I$	$-12.92960 - 5.15155I$	$0.52455 + 2.55322I$
$u = -0.30540 - 1.41307I$ $a = -0.24753 - 1.59262I$ $b = -1.74843 + 0.08810I$	$-12.92960 + 5.15155I$	$0.52455 - 2.55322I$
$u = -0.047932 + 0.529217I$ $a = -0.316164 + 0.652908I$ $b = 0.693120 - 0.435687I$	$-1.07809 + 1.45065I$	$1.68946 - 3.85910I$
$u = -0.047932 - 0.529217I$ $a = -0.316164 - 0.652908I$ $b = 0.693120 + 0.435687I$	$-1.07809 - 1.45065I$	$1.68946 + 3.85910I$
$u = -0.02824 + 1.47075I$ $a = 1.096690 - 0.319605I$ $b = 1.77899 + 0.14272I$	$-16.7493 - 3.9918I$	$-1.06457 + 2.30903I$
$u = -0.02824 - 1.47075I$ $a = 1.096690 + 0.319605I$ $b = 1.77899 - 0.14272I$	$-16.7493 + 3.9918I$	$-1.06457 - 2.30903I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.346395$ $a = 2.12463$ $b = -0.429962$	0.849256	13.6270

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.340625 + 1.271230I$ $a = 0.233945 + 0.669365I$ $b = 1.00000$	$4.05977I$	$6.00000 - 3.46410I$
$u = 0.340625 - 1.271230I$ $a = 0.233945 - 0.669365I$ $b = 1.00000$	$-4.05977I$	$6.00000 + 3.46410I$
$u = -0.340625 + 1.271230I$ $a = -1.23394 - 1.06269I$ $b = 1.00000$	$-4.05977I$	$6.00000 + 3.46410I$
$u = -0.340625 - 1.271230I$ $a = -1.23394 + 1.06269I$ $b = 1.00000$	$4.05977I$	$6.00000 - 3.46410I$

III. $\boldsymbol{I_3^u =}$
$\boldsymbol{\langle -a^2u^2+u^2a-2au+b+2a-2u,\ -2a^2u^2+2u^2a+\cdots+5a+1,\ u^3-u^2+2u-1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^2 - 4u + 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^9+6u^8+15u^7+21u^6+19u^5+12u^4+7u^3+5u^2+2u+1$
c_2, c_6, c_7 c_{11}	$u^9-3u^7-u^6+3u^5+2u^4-u^3-u^2+1$
c_3, c_4, c_9	$(u^3-u^2+2u-1)^3$
c_5	u^9
c_8, c_{10}	$(u^3+u^2-1)^3$
c_{12}	$u^9-6u^8+15u^7-21u^6+19u^5-12u^4+7u^3-5u^2+2u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{12}	$y^9 - 6y^8 + 11y^7 - y^6 + 11y^5 - 40y^4 - 37y^3 - 21y^2 - 6y - 1$
c_2, c_6, c_7 c_{11}	$y^9 - 6y^8 + 15y^7 - 21y^6 + 19y^5 - 12y^4 + 7y^3 - 5y^2 + 2y - 1$
c_3, c_4, c_9	$(y^3 + 3y^2 + 2y - 1)^3$
c_5	y^9
c_8, c_{10}	$(y^3 - y^2 + 2y - 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.215080 + 1.307140I$ $a = -1.110710 - 0.304480I$ $b = -1.324820 - 0.175904I$	$-3.02413 + 2.82812I$	$2.49024 - 2.97945I$
$u = 0.215080 + 1.307140I$ $a = -0.633796 - 0.350292I$ $b = 0.376870 + 0.700062I$	$-3.02413 + 2.82812I$	$2.49024 - 2.97945I$
$u = 0.215080 + 1.307140I$ $a = 0.41979 + 1.77933I$ $b = 0.947946 - 0.524157I$	$-3.02413 + 2.82812I$	$2.49024 - 2.97945I$
$u = 0.215080 - 1.307140I$ $a = -1.110710 + 0.304480I$ $b = -1.324820 + 0.175904I$	$-3.02413 - 2.82812I$	$2.49024 + 2.97945I$
$u = 0.215080 - 1.307140I$ $a = -0.633796 + 0.350292I$ $b = 0.376870 - 0.700062I$	$-3.02413 - 2.82812I$	$2.49024 + 2.97945I$
$u = 0.215080 - 1.307140I$ $a = 0.41979 - 1.77933I$ $b = 0.947946 + 0.524157I$	$-3.02413 - 2.82812I$	$2.49024 + 2.97945I$
$u = 0.569840$ $a = -0.101925$ $b = 1.26384$	1.11345	9.01950
$u = 0.569840$ $a = 1.37568 + 1.52573I$ $b = -0.631920 - 0.444935I$	1.11345	9.01950
$u = 0.569840$ $a = 1.37568 - 1.52573I$ $b = -0.631920 + 0.444935I$	1.11345	9.01950

IV. $I_4^u = \langle b+1,\ -u^2+a+u-1,\ u^4+u^2-1 \rangle$

(i) Arc colorings

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

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

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

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

$$a_2 = \begin{pmatrix} u^2-u+2 \\ -1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^2-u+1 \\ -1 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} u^2+1 \\ -u^2-1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^3+2u \\ -u^3-u \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} u^3+u^2+u+1 \\ -u^3-u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.786151$ $a = 0.831883$ $b = -1.00000$	3.94784	10.4720
$u = -0.786151$ $a = 2.40419$ $b = -1.00000$	3.94784	10.4720
$u = 1.272020I$ $a = -0.618030 - 1.272020I$ $b = -1.00000$	−3.94784	1.52790
$u = -1.272020I$ $a = -0.618030 + 1.272020I$ $b = -1.00000$	−3.94784	1.52790

V. $I_1^v = \langle a,\ b-1,\ v-1 \rangle$

(i) Arc colorings

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

$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_7 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

$a_2 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

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

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

$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

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

$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_{12} = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_7, c_{11}, c_{12}	$y-1$
c_3, c_4, c_5 c_8, c_9, c_{10}	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I^v_1		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v =$	1.00000		
$a =$	0	0	0
$b =$	1.00000		

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^9+6u^8+\cdots+2u+1)$ $\cdot(u^{31}+44u^{30}+\cdots+119u+1)$
c_2	$(u-1)^5(u+1)^4(u^9-3u^7-u^6+3u^5+2u^4-u^3-u^2+1)$ $\cdot(u^{31}-2u^{30}+\cdots+3u-1)$
c_3, c_4, c_9	$u(u^3-u^2+2u-1)^3(u^4+u^2-1)(u^4+3u^2+3)(u^{31}+2u^{30}+\cdots+2u+2)$
c_5	$u^{10}(u^4-3u^2+3)(u^4-u^2-1)(u^{31}+7u^{30}+\cdots-88514u+28438)$
c_6	$(u-1)^4(u+1)^5(u^9-3u^7-u^6+3u^5+2u^4-u^3-u^2+1)$ $\cdot(u^{31}-2u^{30}+\cdots+3u-1)$
c_7	$(u-1)^4(u+1)^5(u^9-3u^7-u^6+3u^5+2u^4-u^3-u^2+1)$ $\cdot(u^{31}+2u^{30}+\cdots-u-1)$
c_8, c_{10}	$u(u^3+u^2-1)^3(u^4-3u^2+3)(u^4-u^2-1)(u^{31}-2u^{30}+\cdots-88u+16)$
c_{11}	$(u-1)^5(u+1)^4(u^9-3u^7-u^6+3u^5+2u^4-u^3-u^2+1)$ $\cdot(u^{31}+2u^{30}+\cdots-u-1)$
c_{12}	$((u-1)^9)(u^9-6u^8+\cdots+2u-1)$ $\cdot(u^{31}-4u^{30}+\cdots+39u-1)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^9-6y^8+\cdots-6y-1)$ $\cdot(y^{31}-104y^{30}+\cdots+10991y-1)$
c_2, c_6	$((y-1)^9)(y^9-6y^8+\cdots+2y-1)$ $\cdot(y^{31}-44y^{30}+\cdots+119y-1)$
c_3, c_4, c_9	$y(y^2+y-1)^2(y^2+3y+3)^2(y^3+3y^2+2y-1)^3$ $\cdot(y^{31}+26y^{30}+\cdots+8y-4)$
c_5	$y^{10}(y^2-3y+3)^2(y^2-y-1)^2$ $\cdot(y^{31}+55y^{30}+\cdots+4648364048y-808719844)$
c_7, c_{11}	$((y-1)^9)(y^9-6y^8+\cdots+2y-1)$ $\cdot(y^{31}-4y^{30}+\cdots+39y-1)$
c_8, c_{10}	$y(y^2-3y+3)^2(y^2-y-1)^2(y^3-y^2+2y-1)^3$ $\cdot(y^{31}-14y^{30}+\cdots+448y-256)$
c_{12}	$((y-1)^9)(y^9-6y^8+\cdots-6y-1)$ $\cdot(y^{31}+56y^{30}+\cdots+479y-1)$