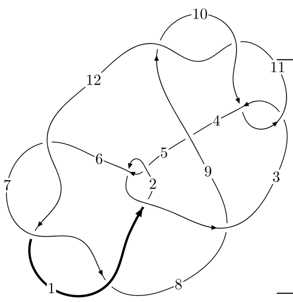
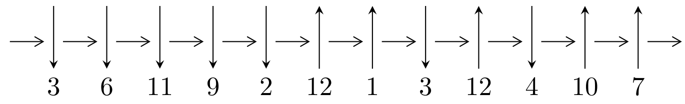
$12n_{0388}$ ($K12n_{0388}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I^u_1 = \langle -u^{25} + u^{24} + \cdots + 4b - 4,\ -2u^{26} + 3u^{25} + \cdots + 4a - 2,\ u^{27} - 2u^{26} + \cdots - 2u^2 + 2\rangle$$
$$I^u_2 = \langle -u^2 + b - u - 1,\ -u^3 - 2u^2 + 2a - u,\ u^4 + u^2 + 2\rangle$$
$$I^u_3 = \langle -a^2u - a^2 - au + b + a - 2,\ a^3 + 2a^2u - 3au + u,\ u^2 + u + 1\rangle$$
$$I^u_4 = \langle b + u,\ a + u - 1,\ u^2 + 1\rangle$$
$$I^u_5 = \langle u^3 + u^2 + b - 1,\ a - u - 1,\ u^4 + 1\rangle$$

$$I^v_1 = \langle a,\ b - 1,\ v - 1\rangle$$

* 6 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 44 representations.

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[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. $I^u_1 = \langle -u^{25}+u^{24}+\cdots+4b-4,\ -2u^{26}+3u^{25}+\cdots+4a-2,\ u^{27}-2u^{26}+\cdots-2u^2+2\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}\frac{1}{2}u^{26}-\frac{3}{4}u^{25}+\cdots-\frac{1}{2}u+\frac{1}{2}\\ \frac{1}{4}u^{25}-\frac{1}{4}u^{24}+\cdots+\frac{1}{2}u+1\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-\frac{1}{4}u^{22}-u^{20}+\cdots-\frac{1}{2}u+\frac{1}{2}\\ \frac{1}{2}u^{17}+\frac{3}{2}u^{15}+\cdots-u^2+u\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-\frac{1}{4}u^{24}-\frac{5}{4}u^{22}+\cdots+\frac{1}{2}u+\frac{1}{2}\\ \frac{1}{4}u^{26}+u^{24}+\cdots-u^2+u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}u^{10}+u^8+2u^6+u^4+u^2+1\\ u^{10}+2u^8+3u^6+2u^4+u^2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}u^3\\u^3+u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-\frac{1}{4}u^{22}-u^{20}+\cdots-\frac{3}{2}u+\frac{1}{2}\\ \frac{1}{4}u^{24}+u^{22}+\cdots+\frac{1}{2}u^2-u\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-u^7-2u^5-2u^3-2u\\ u^9+u^7+u^5-u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u^5+u\\u^5+u^3+u\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2u^{26}-4u^{25}+10u^{24}-16u^{23}+28u^{22}-46u^{21}+58u^{20}-88u^{19}+86u^{18}-130u^{17}+114u^{16}-168u^{15}+124u^{14}-168u^{13}+116u^{12}-166u^{11}+96u^{10}-118u^9+40u^8-68u^7+20u^6-44u^5-6u^4+8u^3-20u^2+2u-8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{27} - 2u^{26} + \cdots - 1367u + 256$
c_2, c_5	$u^{27} + 2u^{26} + \cdots - 13u + 16$
c_3, c_{10}	$u^{27} - 2u^{26} + \cdots - 2u^2 + 2$
c_4	$u^{27} - 5u^{26} + \cdots + 4404u + 1706$
c_6, c_7, c_{12}	$u^{27} - 2u^{26} + \cdots + 19u + 16$
c_8	$u^{27} + 4u^{26} + \cdots - 358556u + 54322$
c_9, c_{11}	$u^{27} - 10u^{26} + \cdots + 8u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{27} + 74y^{26} + \cdots + 1160081y - 65536$
c_2, c_5	$y^{27} + 2y^{26} + \cdots - 1367y - 256$
c_3, c_{10}	$y^{27} + 10y^{26} + \cdots + 8y - 4$
c_4	$y^{27} + 49y^{26} + \cdots - 17215544y - 2910436$
c_6, c_7, c_{12}	$y^{27} - 46y^{26} + \cdots - 2839y - 256$
c_8	$y^{27} + 82y^{26} + \cdots + 70277723880y - 2950879684$
c_9, c_{11}	$y^{27} + 14y^{26} + \cdots + 1024y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.697654 + 0.748808I$ $a = 1.026780 + 0.002420I$ $b = 1.06126 - 1.23166I$	$-3.52813 + 0.07338I$	$-9.79527 - 0.84081I$
$u = 0.697654 - 0.748808I$ $a = 1.026780 - 0.002420I$ $b = 1.06126 + 1.23166I$	$-3.52813 - 0.07338I$	$-9.79527 + 0.84081I$
$u = 0.864921 + 0.447342I$ $a = -0.587169 + 0.347747I$ $b = -0.479795 - 0.989527I$	$12.22120 - 2.26521I$	$-0.78342 + 1.87468I$
$u = 0.864921 - 0.447342I$ $a = -0.587169 - 0.347747I$ $b = -0.479795 + 0.989527I$	$12.22120 + 2.26521I$	$-0.78342 - 1.87468I$
$u = -0.770627 + 0.681378I$ $a = 0.728531 - 0.074268I$ $b = 0.086141 + 1.355080I$	$0.458304 - 0.114158I$	$0.422197 - 0.454382I$
$u = -0.770627 - 0.681378I$ $a = 0.728531 + 0.074268I$ $b = 0.086141 - 1.355080I$	$0.458304 + 0.114158I$	$0.422197 + 0.454382I$
$u = -0.878083 + 0.542301I$ $a = -0.606653 + 0.267104I$ $b = -1.19080 - 1.81606I$	$11.64340 - 6.38697I$	$-1.19981 + 2.11434I$
$u = -0.878083 - 0.542301I$ $a = -0.606653 - 0.267104I$ $b = -1.19080 + 1.81606I$	$11.64340 + 6.38697I$	$-1.19981 - 2.11434I$
$u = 0.100635 + 1.097690I$ $a = -0.85192 + 1.71040I$ $b = -0.550049 + 1.253330I$	$6.60434 + 0.15878I$	$5.87983 + 0.02677I$
$u = 0.100635 - 1.097690I$ $a = -0.85192 - 1.71040I$ $b = -0.550049 - 1.253330I$	$6.60434 - 0.15878I$	$5.87983 - 0.02677I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.669390 + 0.942059I$ $a = -0.88412 + 1.56066I$ $b = 0.57563 + 1.56765I$	$-2.93763 - 5.34360I$	$-7.41989 + 6.92820I$
$u = 0.669390 - 0.942059I$ $a = -0.88412 - 1.56066I$ $b = 0.57563 - 1.56765I$	$-2.93763 + 5.34360I$	$-7.41989 - 6.92820I$
$u = 0.686168 + 0.447957I$ $a = 0.405997 - 0.432049I$ $b = -0.812403 + 0.706687I$	$1.78018 + 2.00372I$	$-0.59189 - 2.09997I$
$u = 0.686168 - 0.447957I$ $a = 0.405997 + 0.432049I$ $b = -0.812403 - 0.706687I$	$1.78018 - 2.00372I$	$-0.59189 + 2.09997I$
$u = 0.040008 + 1.207920I$ $a = -0.99416 - 2.11968I$ $b = -0.43164 - 1.73930I$	$18.1739 - 4.5997I$	$4.36505 + 2.18290I$
$u = 0.040008 - 1.207920I$ $a = -0.99416 + 2.11968I$ $b = -0.43164 + 1.73930I$	$18.1739 + 4.5997I$	$4.36505 - 2.18290I$
$u = 0.601091 + 1.054470I$ $a = 0.61079 - 1.66086I$ $b = -1.15984 - 0.98023I$	$3.48901 - 6.97695I$	$1.70016 + 6.49908I$
$u = 0.601091 - 1.054470I$ $a = 0.61079 + 1.66086I$ $b = -1.15984 + 0.98023I$	$3.48901 + 6.97695I$	$1.70016 - 6.49908I$
$u = -0.710977 + 1.000460I$ $a = -1.42612 - 0.55763I$ $b = -0.14675 - 1.63948I$	$1.40487 + 5.73270I$	$1.73930 - 4.91111I$
$u = -0.710977 - 1.000460I$ $a = -1.42612 + 0.55763I$ $b = -0.14675 + 1.63948I$	$1.40487 - 5.73270I$	$1.73930 + 4.91111I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.074391 + 0.718228I$ $a = 0.98792 - 1.24993I$ $b = -0.006103 - 0.217922I$	$0.94642 + 1.42613I$	$1.85713 - 5.82586I$
$u = -0.074391 - 0.718228I$ $a = 0.98792 + 1.24993I$ $b = -0.006103 + 0.217922I$	$0.94642 - 1.42613I$	$1.85713 + 5.82586I$
$u = 0.638164 + 1.116710I$ $a = -1.48999 + 0.10418I$ $b = -0.054880 + 0.864766I$	$14.2506 - 3.2919I$	$1.72901 + 2.48936I$
$u = 0.638164 - 1.116710I$ $a = -1.48999 - 0.10418I$ $b = -0.054880 - 0.864766I$	$14.2506 + 3.2919I$	$1.72901 - 2.48936I$
$u = -0.688671 + 1.094800I$ $a = 1.11378 + 2.20355I$ $b = -1.22699 + 2.17626I$	$13.3230 + 12.1918I$	$0.72580 - 6.39342I$
$u = -0.688671 - 1.094800I$ $a = 1.11378 - 2.20355I$ $b = -1.22699 - 2.17626I$	$13.3230 - 12.1918I$	$0.72580 + 6.39342I$
$u = -0.350564$ $a = 0.932661$ $b = 0.672452$	-1.03514	-11.2560

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

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} \frac{1}{2}u^3 + u^2 + \frac{1}{2}u \\ u^2 + u + 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{1}{2}u^3 + u^2 + \frac{1}{2}u + 1 \\ u + 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{1}{2}u^3 + u^2 + \frac{1}{2}u \\ u^2 + u + 1 \end{pmatrix}$$

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

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

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

$$a_7 = \begin{pmatrix} -\frac{1}{2}u^3 + u^2 + \frac{1}{2}u \\ -u^3 + u^2 + 1 \end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.676097 + 0.978318I$ $a = -0.97807 + 2.01465I$ $b = \ \ 1.17610 + 2.30119I$	$-0.82247 - 5.33349I$	$-2.00000 + 5.29150I$
$u = \ \ 0.676097 - 0.978318I$ $a = -0.97807 - 2.01465I$ $b = \ \ 1.17610 - 2.30119I$	$-0.82247 + 5.33349I$	$-2.00000 - 5.29150I$
$u = -0.676097 + 0.978318I$ $a = -0.021927 - 0.631100I$ $b = -0.176097 - 0.344557I$	$-0.82247 + 5.33349I$	$-2.00000 - 5.29150I$
$u = -0.676097 - 0.978318I$ $a = -0.021927 + 0.631100I$ $b = -0.176097 + 0.344557I$	$-0.82247 - 5.33349I$	$-2.00000 + 5.29150I$

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

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 1 \\ u+1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} a \\ a^2u + a^2 + au - a + 2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -a^2u - a^2 - au + 2a - 2 \\ -2a^2u - a^2 + au + 4a - 2u - 4 \end{pmatrix}$$

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

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

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

$$a_7 = \begin{pmatrix} a^2u + a^2 - a + 2 \\ 2a^2u + a^2 - au - 3a + 2u + 4 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u \\ -u \end{pmatrix}$$

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

(ii) Obstruction class $= -1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = 0.741145 + 0.632163I$ $b = -0.395862 + 0.291743I$	$2.02988I$	$0. - 3.46410I$
$u = -0.500000 + 0.866025I$ $a = 0.439111 - 0.046276I$ $b = 1.51194 + 0.59451I$	$2.02988I$	$0. - 3.46410I$
$u = -0.500000 + 0.866025I$ $a = -0.18026 - 2.31794I$ $b = 0.883917 - 0.886250I$	$2.02988I$	$0. - 3.46410I$
$u = -0.500000 - 0.866025I$ $a = 0.741145 - 0.632163I$ $b = -0.395862 - 0.291743I$	$-2.02988I$	$0. + 3.46410I$
$u = -0.500000 - 0.866025I$ $a = 0.439111 + 0.046276I$ $b = 1.51194 - 0.59451I$	$-2.02988I$	$0. + 3.46410I$
$u = -0.500000 - 0.866025I$ $a = -0.18026 + 2.31794I$ $b = 0.883917 + 0.886250I$	$-2.02988I$	$0. + 3.46410I$

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

(i) Arc colorings

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

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

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

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

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

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

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

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

$$a_{12} = \begin{pmatrix} -u \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} 2u \\ u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.000000I$		
$a=$	$1.00000-1.00000I$	3.28987	4.00000
$b=$	$-1.000000I$		
$u=$	$-1.000000I$		
$a=$	$1.00000+1.00000I$	3.28987	4.00000
$b=$	$1.000000I$		

V. $I_5^u = \langle u^3 + u^2 + b - 1,\ a - u - 1,\ u^4 + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.707107 + 0.707107I$ $a = 1.70711 + 0.70711I$ $b = 1.70711 - 1.70711I$	-1.64493	-4.00000
$u = 0.707107 - 0.707107I$ $a = 1.70711 - 0.70711I$ $b = 1.70711 + 1.70711I$	-1.64493	-4.00000
$u = -0.707107 + 0.707107I$ $a = 0.292893 + 0.707107I$ $b = 0.292893 + 0.292893I$	-1.64493	-4.00000
$u = -0.707107 - 0.707107I$ $a = 0.292893 - 0.707107I$ $b = 0.292893 - 0.292893I$	-1.64493	-4.00000

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

(i) Arc colorings

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

(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_{12}	$u - 1$
c_3, c_4, c_8 c_9, c_{10}, c_{11}	u
c_5, c_6, c_7	$u + 1$

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v =$	1.00000		
$a =$	0	0	0
$b =$	1.00000		

VII. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^{11}(u^6+4u^5+6u^4+3u^3-u^2-u+1)$ $\cdot(u^{27}-2u^{26}+\cdots-1367u+256)$
c_2	$(u-1)^5(u+1)^6(u^6-2u^4+u^3+u^2-u+1)$ $\cdot(u^{27}+2u^{26}+\cdots-13u+16)$
c_3, c_{10}	$u(u^2+1)(u^2+u+1)^3(u^4+1)(u^4+u^2+2)(u^{27}-2u^{26}+\cdots-2u^2+2)$
c_4	$u^7(u^2+1)(u^4+1)(u^4+u^2+2)(u^{27}-5u^{26}+\cdots+4404u+1706)$
c_5	$(u-1)^6(u+1)^5(u^6-2u^4+u^3+u^2-u+1)$ $\cdot(u^{27}+2u^{26}+\cdots-13u+16)$
c_6, c_7	$(u-1)^6(u+1)^5(u^6-2u^4+u^3+u^2-u+1)$ $\cdot(u^{27}-2u^{26}+\cdots+19u+16)$
c_8	$u(u^2+1)(u^2-u+1)^3(u^4+1)(u^4+u^2+2)$ $\cdot(u^{27}+4u^{26}+\cdots-358556u+54322)$
c_9	$u(u+1)^2(u^2+1)^2(u^2-u+1)^3(u^2+u+2)^2$ $\cdot(u^{27}-10u^{26}+\cdots+8u+4)$
c_{11}	$u(u-1)^2(u^2+1)^2(u^2-u+1)^3(u^2-u+2)^2$ $\cdot(u^{27}-10u^{26}+\cdots+8u+4)$
c_{12}	$(u-1)^5(u+1)^6(u^6-2u^4+u^3+u^2-u+1)$ $\cdot(u^{27}-2u^{26}+\cdots+19u+16)$

VIII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^{11}(y^6-4y^5+10y^4-11y^3+19y^2-3y+1)$ $\cdot(y^{27}+74y^{26}+\cdots+1160081y-65536)$
c_2, c_5	$(y-1)^{11}(y^6-4y^5+6y^4-3y^3-y^2+y+1)$ $\cdot(y^{27}+2y^{26}+\cdots-1367y-256)$
c_3, c_{10}	$y(y+1)^2(y^2+1)^2(y^2+y+1)^3(y^2+y+2)^2$ $\cdot(y^{27}+10y^{26}+\cdots+8y-4)$
c_4	$y^7(y+1)^2(y^2+1)^2(y^2+y+2)^2$ $\cdot(y^{27}+49y^{26}+\cdots-17215544y-2910436)$
c_6, c_7, c_{12}	$(y-1)^{11}(y^6-4y^5+6y^4-3y^3-y^2+y+1)$ $\cdot(y^{27}-46y^{26}+\cdots-2839y-256)$
c_8	$y(y+1)^2(y^2+1)^2(y^2+y+1)^3(y^2+y+2)^2$ $\cdot(y^{27}+82y^{26}+\cdots+70277723880y-2950879684)$
c_9, c_{11}	$y(y-1)^2(y+1)^4(y^2+y+1)^3(y^2+3y+4)^2$ $\cdot(y^{27}+14y^{26}+\cdots+1024y-16)$