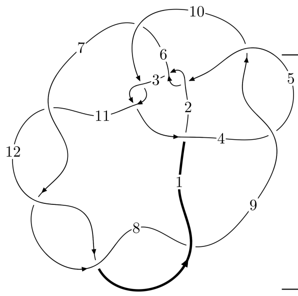
$12a_{0981}$ $(K12a_{0981})$



A knot diagram[1]

Linearized knot diagam

$\to\downarrow\to\downarrow\to\downarrow\to\uparrow\to\downarrow\to\uparrow\to\uparrow\to\uparrow\to\uparrow\to\downarrow\to\uparrow\to\uparrow\to$

4 6 11 9 2 10 12 1 5 3 7 8

Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-1747u^{50} + 78946u^{49} + \cdots + 1990656b - 43767094,\\
&-14055938u^{50} + 67741913u^{49} + \cdots + 279355392a - 5726762096,\\
&u^{51} - 6u^{50} + \cdots + 8662u - 842\rangle\\
I_2^u = \langle &-a^2 + b - a,\ a^3 + 2a^2 + a + 1,\ u + 1\rangle\\
I_3^u = \langle &b^4a^2 + 2b^3a - 2b^2a^2 - b^2a + b^2 - 2ba + a^2 - b + a - 1,\ u + 1\rangle
\end{aligned}$$

$$\begin{aligned}
I_1^v &= \langle a,\ b^6 - 2b^4 - b^3 + b^2 + b - 1,\ v - 1\rangle\\
I_2^v &= \langle a,\ b + 1,\ v - 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 61 representations.
* 1 irreducible components of $\dim_{\mathbb{C}} = 1$

[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.

$\boldsymbol{I_1^u = \langle -1747u^{50} + 7.89\times 10^4 u^{49} + \cdots + 1.99\times 10^6 b - 4.38\times 10^7,\ -1.41\times 10^7 u^{50} + 6.77\times 10^7 u^{49} + \cdots + 2.79\times 10^8 a - 5.73\times 10^9,\ u^{51} - 6u^{50} + \cdots + 8662u - 842\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.0503156u^{50} - 0.242494u^{49} + \cdots - 256.094u + 20.4999 \\ 0.000877600u^{50} - 0.0396583u^{49} + \cdots - 185.410u + 21.9863 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.0511932u^{50} - 0.282152u^{49} + \cdots - 441.504u + 42.4862 \\ 0.000877600u^{50} - 0.0396583u^{49} + \cdots - 185.410u + 21.9863 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.0185165u^{50} - 0.0729252u^{49} + \cdots - 12.3427u + 3.52550 \\ 0.0182020u^{50} - 0.0910577u^{49} + \cdots - 146.302u + 15.3639 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.0685537u^{50} + 0.309278u^{49} + \cdots + 380.668u - 44.0036 \\ 0.00243739u^{50} - 0.00644160u^{49} + \cdots - 7.88344u + 1.49815 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0211970u^{50} - 0.106355u^{49} + \cdots - 161.802u + 15.3309 \\ -0.00435384u^{50} + 0.0207994u^{49} + \cdots + 26.1973u - 2.31048 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.00426257u^{50} + 0.0286204u^{49} + \cdots + 70.7619u - 7.40462 \\ 0.0330833u^{50} - 0.152421u^{49} + \cdots - 177.572u + 18.3423 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.114056u^{50} - 0.513210u^{49} + \cdots - 473.287u + 40.8488 \\ 0.0646460u^{50} - 0.330940u^{49} + \cdots - 491.932u + 52.8520 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.0705646u^{50} - 0.342297u^{49} + \cdots - 486.734u + 50.5146 \\ 0.0477518u^{50} - 0.225647u^{49} + \cdots - 248.299u + 25.3200 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{383093}{1492992}u^{50} + \frac{3585271}{2985984}u^{49} + \cdots + \frac{86360671}{55296}u - \frac{228139061}{1492992}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$16(16u^{51} + 84u^{49} + \cdots - 138159u - 46107)$
c_2, c_5	$u^{51} - 6u^{50} + \cdots + 8662u - 842$
c_3, c_{10}	$9(9u^{51} - 18u^{50} + \cdots + 3u - 1)$
c_4, c_9	$9(9u^{51} + 18u^{50} + \cdots - u - 1)$
c_6	$16(16u^{51} - 16u^{50} + \cdots - 333u + 261)$
c_7, c_8, c_{11} c_{12}	$u^{51} - 4u^{50} + \cdots - 186u - 46$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$256(256y^{51} + 2688y^{50} + \cdots - 3.63961 \times 10^9 y - 2.12586 \times 10^9)$
c_2, c_5	$y^{51} - 34y^{50} + \cdots + 30048920y - 708964$
c_3, c_{10}	$81(81y^{51} - 2376y^{50} + \cdots + 27y - 1)$
c_4, c_9	$81(81y^{51} - 3024y^{50} + \cdots + 11y - 1)$
c_6	$256(256y^{51} - 3200y^{50} + \cdots - 3345273y - 68121)$
c_7, c_8, c_{11} c_{12}	$y^{51} - 60y^{50} + \cdots + 35976y - 2116$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.871937 + 0.599275I$ $a = -1.43039 - 0.76680I$ $b = 1.075950 - 0.106403I$	$1.61712 - 0.65965I$	$7.95896 - 0.68823I$
$u = 0.871937 - 0.599275I$ $a = -1.43039 + 0.76680I$ $b = 1.075950 + 0.106403I$	$1.61712 + 0.65965I$	$7.95896 + 0.68823I$
$u = -0.954975 + 0.488693I$ $a = 1.183620 + 0.097225I$ $b = 0.055327 - 0.421750I$	$4.92043 - 1.04343I$	$-60.500387 + 0.10I$
$u = -0.954975 - 0.488693I$ $a = 1.183620 - 0.097225I$ $b = 0.055327 + 0.421750I$	$4.92043 + 1.04343I$	$-60.500387 + 0.10I$
$u = 0.288710 + 0.865056I$ $a = 1.49117 + 0.44766I$ $b = -1.271070 - 0.230386I$	$6.15912 + 2.38142I$	$10.95071 - 1.99222I$
$u = 0.288710 - 0.865056I$ $a = 1.49117 - 0.44766I$ $b = -1.271070 + 0.230386I$	$6.15912 - 2.38142I$	$10.95071 + 1.99222I$
$u = 0.190005 + 0.889876I$ $a = -1.57561 - 0.59687I$ $b = 1.44689 + 0.33886I$	$15.4058 + 4.1385I$	$11.16132 - 1.35851I$
$u = 0.190005 - 0.889876I$ $a = -1.57561 + 0.59687I$ $b = 1.44689 - 0.33886I$	$15.4058 - 4.1385I$	$11.16132 + 1.35851I$
$u = -0.864821$ $a = -0.975469$ $b = -0.447949$	-1.39737	-9.01210
$u = 0.063386 + 1.145060I$ $a = -1.72917 + 0.07049I$ $b = 1.39200 - 0.36995I$	$12.5583 - 9.7853I$	$8.08488 + 5.85275I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.063386 - 1.145060I$ $a = -1.72917 - 0.07049I$ $b = 1.39200 + 0.36995I$	$12.5583 + 9.7853I$	$8.08488 - 5.85275I$
$u = 1.071180 + 0.478231I$ $a = 1.11714 + 1.01410I$ $b = -1.126820 + 0.397205I$	$0.37782 - 4.14573I$	$0. + 5.58002I$
$u = 1.071180 - 0.478231I$ $a = 1.11714 - 1.01410I$ $b = -1.126820 - 0.397205I$	$0.37782 + 4.14573I$	$0. - 5.58002I$
$u = -1.20895$ $a = 0.563495$ $b = 0.856182$	0.370489	11.3980
$u = 1.22486$ $a = 1.64302$ $b = 0.210756$	6.17402	-3.35810
$u = -0.133856 + 0.749902I$ $a = -0.218006 + 0.669940I$ $b = -0.279882 - 0.872377I$	$7.32400 + 5.35250I$	$5.78289 - 4.81378I$
$u = -0.133856 - 0.749902I$ $a = -0.218006 - 0.669940I$ $b = -0.279882 + 0.872377I$	$7.32400 - 5.35250I$	$5.78289 + 4.81378I$
$u = 1.151360 + 0.486900I$ $a = -1.031110 - 0.933045I$ $b = 1.33347 - 0.56033I$	$3.45393 - 7.28871I$	0
$u = 1.151360 - 0.486900I$ $a = -1.031110 + 0.933045I$ $b = 1.33347 + 0.56033I$	$3.45393 + 7.28871I$	0
$u = 0.116607 + 1.248630I$ $a = 1.55658 - 0.00466I$ $b = -1.258200 + 0.254835I$	$3.85227 - 6.56215I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.116607 - 1.248630I$ $a = 1.55658 + 0.00466I$ $b = -1.258200 - 0.254835I$	$3.85227 + 6.56215I$	0
$u = 0.721707$ $a = 3.42336$ $b = -0.761960$	8.07048	15.1420
$u = 1.185540 + 0.490657I$ $a = 1.035740 + 0.915650I$ $b = -1.51238 + 0.64262I$	$12.3415 - 9.1062I$	0
$u = 1.185540 - 0.490657I$ $a = 1.035740 - 0.915650I$ $b = -1.51238 - 0.64262I$	$12.3415 + 9.1062I$	0
$u = -0.222036 + 0.676897I$ $a = 0.395217 - 0.289769I$ $b = 0.196870 + 0.589331I$	$-0.49730 + 3.53349I$	$2.22017 - 7.44112I$
$u = -0.222036 - 0.676897I$ $a = 0.395217 + 0.289769I$ $b = 0.196870 - 0.589331I$	$-0.49730 - 3.53349I$	$2.22017 + 7.44112I$
$u = -0.489136 + 0.507443I$ $a = -0.863036 - 0.069456I$ $b = -0.124638 - 0.153724I$	$-1.58698 + 0.44085I$	$-4.04045 - 0.10164I$
$u = -0.489136 - 0.507443I$ $a = -0.863036 + 0.069456I$ $b = -0.124638 + 0.153724I$	$-1.58698 - 0.44085I$	$-4.04045 + 0.10164I$
$u = 1.284590 + 0.367030I$ $a = -0.415487 - 0.264559I$ $b = 0.160260 - 1.287920I$	$3.01762 - 9.37305I$	0
$u = 1.284590 - 0.367030I$ $a = -0.415487 + 0.264559I$ $b = 0.160260 + 1.287920I$	$3.01762 + 9.37305I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.301300 + 0.341701I$ $a = 0.201290 + 0.276131I$ $b = -0.027671 + 1.082990I$	$-5.08700 - 7.24377I$	0
$u = 1.301300 - 0.341701I$ $a = 0.201290 - 0.276131I$ $b = -0.027671 - 1.082990I$	$-5.08700 + 7.24377I$	0
$u = 1.337140 + 0.307386I$ $a = 0.068553 - 0.241472I$ $b = -0.132614 - 0.848734I$	$-6.92934 - 3.57492I$	0
$u = 1.337140 - 0.307386I$ $a = 0.068553 + 0.241472I$ $b = -0.132614 + 0.848734I$	$-6.92934 + 3.57492I$	0
$u = 1.40404 + 0.19556I$ $a = -0.500238 + 0.206535I$ $b = 0.226409 + 0.417307I$	$-3.34999 - 0.41537I$	0
$u = 1.40404 - 0.19556I$ $a = -0.500238 - 0.206535I$ $b = 0.226409 - 0.417307I$	$-3.34999 + 0.41537I$	0
$u = 0.52748 + 1.35639I$ $a = -1.345560 - 0.200993I$ $b = 1.163450 - 0.055837I$	$1.80797 - 1.23291I$	0
$u = 0.52748 - 1.35639I$ $a = -1.345560 + 0.200993I$ $b = 1.163450 + 0.055837I$	$1.80797 + 1.23291I$	0
$u = -1.38742 + 0.54293I$ $a = 1.15060 - 0.96574I$ $b = -1.44935 - 0.55020I$	$8.0411 + 15.7082I$	0
$u = -1.38742 - 0.54293I$ $a = 1.15060 + 0.96574I$ $b = -1.44935 + 0.55020I$	$8.0411 - 15.7082I$	0

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.40409 + 0.56693I$ $a = -1.121190 + 0.837048I$ $b = 1.34279 + 0.51016I$	$-0.81260 + 12.82570I$	0
$u = -1.40409 - 0.56693I$ $a = -1.121190 - 0.837048I$ $b = 1.34279 - 0.51016I$	$-0.81260 - 12.82570I$	0
$u = -1.54951 + 0.14699I$ $a = 0.172341 - 0.256428I$ $b = -1.170700 + 0.028166I$	$9.83449 - 0.04248I$	0
$u = -1.54951 - 0.14699I$ $a = 0.172341 + 0.256428I$ $b = -1.170700 - 0.028166I$	$9.83449 + 0.04248I$	0
$u = -1.43969 + 0.61276I$ $a = 1.067200 - 0.671303I$ $b = -1.214210 - 0.430814I$	$-3.57762 + 8.19895I$	0
$u = -1.43969 - 0.61276I$ $a = 1.067200 + 0.671303I$ $b = -1.214210 + 0.430814I$	$-3.57762 - 8.19895I$	0
$u = 1.37780 + 0.82539I$ $a = 0.906207 + 0.483019I$ $b = -1.213230 - 0.143156I$	$8.68259 + 3.09879I$	0
$u = 1.37780 - 0.82539I$ $a = 0.906207 - 0.483019I$ $b = -1.213230 + 0.143156I$	$8.68259 - 3.09879I$	0
$u = -1.60562 + 0.66191I$ $a = -0.900138 + 0.467041I$ $b = 1.127080 + 0.236987I$	$-0.72424 + 3.17343I$	0
$u = -1.60562 - 0.66191I$ $a = -0.900138 - 0.467041I$ $b = 1.127080 - 0.236987I$	$-0.72424 - 3.17343I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.157699$ $a = -4.50862$ $b = 0.663524$	0.907699	11.5760

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

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

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

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

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

$$a_9 = \begin{pmatrix} a \\ a^2 + a \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} a^2 + 2a \\ a^2 + a \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -a \\ -a^2 - a \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} a \\ a^2 + a \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} a \\ a^2 + a \end{pmatrix}$$

$$a_8 = \begin{pmatrix} a \\ a^2 + a \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} a \\ a^2 + a \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = -0.122561 + 0.744862I$ $b = -0.662359 + 0.562280I$	-1.64493	-6.00000
$u = -1.00000$ $a = -0.122561 - 0.744862I$ $b = -0.662359 - 0.562280I$	-1.64493	-6.00000
$u = -1.00000$ $a = -1.75488$ $b = 1.32472$	-1.64493	-6.00000

III. $I_3^u = \langle b^4a^2 + 2b^3a - 2b^2a^2 - b^2a + b^2 - 2ba + a^2 - b + a - 1,\ u + 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4$

(iv) u-Polynomials at the component : It cannot be defined for a positive dimension component.

(v) Riley Polynomials at the component : It cannot be defined for a positive dimension component.

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \cdots$ $a = \cdots$ $b = \cdots$	7.23771	4.00000

IV. $I_1^v = \langle a,\ b^6 - 2b^4 - b^3 + b^2 + b - 1,\ v - 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^6 - 4y^5 - 6y^4 + 13y^3 + 19y^2 + 5y + 1$
c_2, c_5	y^6
c_3, c_4, c_6 c_9, c_{10}	$y^6 - 4y^5 + 6y^4 - 7y^3 + 7y^2 - 3y + 1$
c_7, c_8, c_{11} c_{12}	$(y^2 - 3y + 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 1.00000$ $a = 0$ $b = -0.726823 + 0.764732I$	8.88264	10.0000
$v = 1.00000$ $a = 0$ $b = -0.726823 - 0.764732I$	8.88264	10.0000
$v = 1.00000$ $a = 0$ $b = -1.22636$	0.986960	10.0000
$v = 1.00000$ $a = 0$ $b = 0.613180 + 0.357727I$	0.986960	10.0000
$v = 1.00000$ $a = 0$ $b = 0.613180 - 0.357727I$	0.986960	10.0000
$v = 1.00000$ $a = 0$ $b = 1.45365$	8.88264	10.0000

V. $I_2^v = \langle a,\ b+1,\ v-1 \rangle$

(i) Arc colorings

$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

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

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

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

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

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

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

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

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

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

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

$a_{12} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^v	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 1.00000$ $a = 0$ $b = -1.00000$	0	0

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$16(u-1)(u^3-u-1)(u^6+4u^5+6u^4+7u^3+7u^2+3u+1)$ $\cdot(16u^{51}+84u^{49}+\cdots-138159u-46107)$
c_2, c_5	$u^7(u+1)^3(u^{51}-6u^{50}+\cdots+8662u-842)$
c_3	$9(u+1)(u^3-u-1)(u^6-2u^4-u^3+u^2+u-1)$ $\cdot(9u^{51}-18u^{50}+\cdots+3u-1)$
c_4	$9(u+1)(u^3-u-1)(u^6-2u^4+\cdots+u-1)(9u^{51}+18u^{50}+\cdots-u-1)$
c_6	$16(u+1)(u^3-2u^2+u-1)(u^6-2u^4-u^3+u^2+u-1)$ $\cdot(16u^{51}-16u^{50}+\cdots-333u+261)$
c_7, c_8, c_{11} c_{12}	$u^4(u^2+u-1)^3(u^{51}-4u^{50}+\cdots-186u-46)$
c_9	$9(u-1)(u^3-u-1)(u^6-2u^4+\cdots+u-1)(9u^{51}+18u^{50}+\cdots-u-1)$
c_{10}	$9(u-1)(u^3-u-1)(u^6-2u^4-u^3+u^2+u-1)$ $\cdot(9u^{51}-18u^{50}+\cdots+3u-1)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$256(y-1)(y^3-2y^2+y-1)(y^6-4y^5+\cdots+5y+1)$ $\cdot(256y^{51}+2688y^{50}+\cdots-3639614229y-2125855449)$
c_2, c_5	$y^7(y-1)^3(y^{51}-34y^{50}+\cdots+3.00489\times10^7y-708964)$
c_3, c_{10}	$81(y-1)(y^3-2y^2+y-1)(y^6-4y^5+6y^4-7y^3+7y^2-3y+1)$ $\cdot(81y^{51}-2376y^{50}+\cdots+27y-1)$
c_4, c_9	$81(y-1)(y^3-2y^2+y-1)(y^6-4y^5+6y^4-7y^3+7y^2-3y+1)$ $\cdot(81y^{51}-3024y^{50}+\cdots+11y-1)$
c_6	$256(y-1)(y^3-2y^2-3y-1)(y^6-4y^5+\cdots-3y+1)$ $\cdot(256y^{51}-3200y^{50}+\cdots-3345273y-68121)$
c_7, c_8, c_{11} c_{12}	$y^4(y^2-3y+1)^3(y^{51}-60y^{50}+\cdots+35976y-2116)$