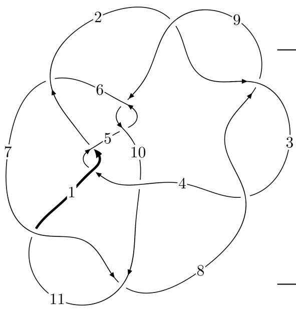
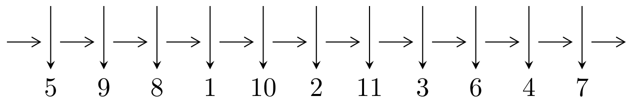
$11a_{354}$ $(K11a_{354})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$5{,}10 \underset{c_5}{\rightarrow} 2{,}6 \underset{c_6}{\longrightarrow} 7 \underset{c_1}{\longrightarrow} 1 \underset{c_4}{\longrightarrow} 4 \underset{c_{10}}{\longrightarrow} 11 \underset{c_9}{\longrightarrow} 9 \underset{c_2}{\longrightarrow} 3 \underset{c_8}{\longrightarrow} 8 \longrightarrow\!\!\!\!\rightarrow c_3, c_7, c_{11}$$

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

$$\begin{aligned}
I_1^u &= \langle -160922417u^{20} - 82767962u^{19} + \cdots + 26372740448b + 1724364181, \\
&\quad 1172455205u^{20} + 3315332618u^{19} + \cdots + 15823644288a - 17023392209,\ u^{21} + u^{20} + \cdots - u - 3\rangle \\
I_2^u &= \langle 3.10404 \times 10^{24}u^{33} - 6.92641 \times 10^{24}u^{32} + \cdots + 3.33278 \times 10^{25}b + 3.58251 \times 10^{25}, \\
&\quad 2.34878 \times 10^{26}u^{33} - 6.49522 \times 10^{26}u^{32} + \cdots + 9.99835 \times 10^{25}a - 2.61013 \times 10^{26},\ u^{34} - 3u^{33} + \cdots - 8u + 1 \\
I_3^u &= \langle b + 1,\ 2a + 1,\ u - 1\rangle \\
I_4^u &= \langle b - 1,\ 4a^2 - 4a + 3,\ u + 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 58 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.
$\boldsymbol{I_1^u = \langle -1.61 \times 10^8 u^{20} - 8.28 \times 10^7 u^{19} + \cdots + 2.64 \times 10^9 b + 1.72 \times 10^9,\ 1.17 \times 10^9 u^{20} + 3.32 \times 10^9 u^{19} + \cdots + 1.58 \times 10^{10} a - 1.70 \times 10^{10},\ u^{21} + u^{20} + \cdots - u - 3 \rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0740951u^{20} - 0.209518u^{19} + \cdots - 3.81221u + 1.07582 \\ 0.0610185u^{20} + 0.0313839u^{19} + \cdots + 1.11500u - 0.653843 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.197971u^{20} - 0.0494518u^{19} + \cdots + 0.314954u + 1.35005 \\ 0.165057u^{20} - 0.0143368u^{19} + \cdots - 0.408900u + 0.0392300 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.0130767u^{20} - 0.178134u^{19} + \cdots - 2.69722u + 0.421977 \\ 0.0610185u^{20} + 0.0313839u^{19} + \cdots + 1.11500u - 0.653843 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.0825253u^{20} - 0.112909u^{19} + \cdots - 0.258326u + 1.55523 \\ -0.208288u^{20} - 0.526602u^{19} + \cdots + 1.07412u + 0.824561 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.135443u^{20} - 0.0407053u^{19} + \cdots - 1.54514u - 0.171937 \\ -0.118375u^{20} - 0.208719u^{19} + \cdots + 1.31928u - 0.158672 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.00777699u^{20} - 0.204864u^{19} + \cdots - 4.09651u + 0.616331 \\ 0.242228u^{20} + 0.162054u^{19} + \cdots + 0.967988u - 1.29833 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.374119u^{20} - 0.144655u^{19} + \cdots + 0.278460u + 1.75638 \\ 0.0747139u^{20} + 0.125515u^{19} + \cdots - 0.685947u - 0.315896 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.374119u^{20} - 0.144655u^{19} + \cdots + 0.278460u + 1.75638 \\ 0.0747139u^{20} + 0.125515u^{19} + \cdots - 0.685947u - 0.315896 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{637817299}{659318512}u^{20} + \frac{458613173}{659318512}u^{19} + \cdots - \frac{13858087997}{659318512}u - \frac{901043607}{82414814}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{21} - 6u^{19} + \cdots + 57u + 24$
c_2, c_3, c_8	$u^{21} - 3u^{20} + \cdots - 24u + 8$
c_5, c_7, c_9 c_{11}	$u^{21} - u^{20} + \cdots - u + 3$
c_6, c_{10}	$8(8u^{21} - 4u^{20} + \cdots - 2u + 4)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{21} - 12y^{20} + \cdots + 13233y - 576$
c_2, c_3, c_8	$y^{21} + 23y^{20} + \cdots + 96y - 64$
c_5, c_7, c_9 c_{11}	$y^{21} + 11y^{20} + \cdots + 85y - 9$
c_6, c_{10}	$64(64y^{21} + 656y^{20} + \cdots + 60y - 16)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.090880 + 0.306968I$ $a = -0.388613 + 0.046984I$ $b = -1.011870 + 0.167863I$	$-3.50254 + 0.45372I$	$-13.2351 - 10.9889I$
$u = 1.090880 - 0.306968I$ $a = -0.388613 - 0.046984I$ $b = -1.011870 - 0.167863I$	$-3.50254 - 0.45372I$	$-13.2351 + 10.9889I$
$u = 0.300491 + 1.132360I$ $a = -0.48749 - 1.67733I$ $b = 1.27655 + 0.93600I$	$2.01539 - 5.30911I$	$-6.93058 + 7.06093I$
$u = 0.300491 - 1.132360I$ $a = -0.48749 + 1.67733I$ $b = 1.27655 - 0.93600I$	$2.01539 + 5.30911I$	$-6.93058 - 7.06093I$
$u = 0.059914 + 1.172390I$ $a = 1.13290 - 0.84676I$ $b = -1.89114 + 0.74167I$	$8.68556 - 1.36021I$	$3.27021 + 3.85751I$
$u = 0.059914 - 1.172390I$ $a = 1.13290 + 0.84676I$ $b = -1.89114 - 0.74167I$	$8.68556 + 1.36021I$	$3.27021 - 3.85751I$
$u = -0.173596 + 1.178810I$ $a = 0.45364 + 1.66491I$ $b = -0.33964 - 1.52106I$	$6.35701 + 3.86289I$	$-1.42698 - 7.24526I$
$u = -0.173596 - 1.178810I$ $a = 0.45364 - 1.66491I$ $b = -0.33964 + 1.52106I$	$6.35701 - 3.86289I$	$-1.42698 + 7.24526I$
$u = -0.533873 + 0.533126I$ $a = 0.131827 + 0.649526I$ $b = 1.259740 + 0.049663I$	$-2.36275 + 1.38248I$	$-10.93113 - 5.35701I$
$u = -0.533873 - 0.533126I$ $a = 0.131827 - 0.649526I$ $b = 1.259740 - 0.049663I$	$-2.36275 - 1.38248I$	$-10.93113 + 5.35701I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.485617 + 1.267790I$ $a = 0.17265 - 1.58270I$ $b = -1.29660 + 0.72895I$	$3.28365 + 11.20830I$	$-7.47113 - 8.56307I$
$u = -0.485617 - 1.267790I$ $a = 0.17265 + 1.58270I$ $b = -1.29660 - 0.72895I$	$3.28365 - 11.20830I$	$-7.47113 + 8.56307I$
$u = 0.37790 + 1.38499I$ $a = -0.392046 + 1.240810I$ $b = 0.173107 - 1.254650I$	$14.7040 - 8.5355I$	$-2.42060 + 4.78360I$
$u = 0.37790 - 1.38499I$ $a = -0.392046 - 1.240810I$ $b = 0.173107 + 1.254650I$	$14.7040 + 8.5355I$	$-2.42060 - 4.78360I$
$u = -0.409786 + 0.332736I$ $a = 1.34718 - 1.22922I$ $b = -0.508583 + 0.245922I$	$3.45120 + 1.15767I$	$-7.19855 - 5.90528I$
$u = -0.409786 - 0.332736I$ $a = 1.34718 + 1.22922I$ $b = -0.508583 - 0.245922I$	$3.45120 - 1.15767I$	$-7.19855 + 5.90528I$
$u = -1.44772 + 0.30988I$ $a = 0.380476 - 0.106586I$ $b = 0.868563 + 0.334615I$	$2.63271 - 1.46369I$	$-5.79825 + 4.59200I$
$u = -1.44772 - 0.30988I$ $a = 0.380476 + 0.106586I$ $b = 0.868563 - 0.334615I$	$2.63271 + 1.46369I$	$-5.79825 - 4.59200I$
$u = 0.57781 + 1.39987I$ $a = -0.00890 - 1.47507I$ $b = 1.33922 + 0.65997I$	$11.0553 - 15.1817I$	$-5.60482 + 7.58890I$
$u = 0.57781 - 1.39987I$ $a = -0.00890 + 1.47507I$ $b = 1.33922 - 0.65997I$	$11.0553 + 15.1817I$	$-5.60482 - 7.58890I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.287195$ $a = -0.849896$ $b = 0.261262$	-0.522581	-19.0060

II.

$\boldsymbol{I_2^u = \langle 3.10\times 10^{24}u^{33} - 6.93\times 10^{24}u^{32} + \cdots + 3.33\times 10^{25}b + 3.58\times 10^{25},\ 2.35\times 10^{26}u^{33} - 6.50\times 10^{26}u^{32} + \cdots + 1.00\times 10^{26}a - 2.61\times 10^{26},\ u^{34} - 3u^{33} + \cdots - 8u + 1\rangle}$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} -2.34917u^{33} + 6.49629u^{32} + \cdots - 50.6654u + 2.61056 \\ -0.0931366u^{33} + 0.207827u^{32} + \cdots - 1.02591u - 1.07493 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 1.80446u^{33} - 4.85974u^{32} + \cdots + 35.4986u + 5.80588 \\ -0.547249u^{33} + 1.50787u^{32} + \cdots - 10.1466u + 3.14923 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -2.44231u^{33} + 6.70412u^{32} + \cdots - 51.6914u + 1.53563 \\ -0.0931366u^{33} + 0.207827u^{32} + \cdots - 1.02591u - 1.07493 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.62724u^{33} + 4.23174u^{32} + \cdots - 36.5972u - 2.57013 \\ 0.387178u^{33} - 1.14075u^{32} + \cdots + 6.79493u - 2.47847 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -6.82156u^{33} + 19.3458u^{32} + \cdots - 168.898u + 23.4185 \\ -0.665031u^{33} + 1.70903u^{32} + \cdots - 14.3783u + 0.0625691 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -2.38071u^{33} + 6.62892u^{32} + \cdots - 52.8462u + 3.16664 \\ -0.184318u^{33} + 0.472228u^{32} + \cdots - 2.87104u - 0.556871 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 3.10781u^{33} - 9.19499u^{32} + \cdots + 80.6634u - 20.0540 \\ 0.711601u^{33} - 2.04963u^{32} + \cdots + 16.6163u - 2.48121 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 3.10781u^{33} - 9.19499u^{32} + \cdots + 80.6634u - 20.0540 \\ 0.711601u^{33} - 2.04963u^{32} + \cdots + 16.6163u - 2.48121 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{329386817640951833156384}{33327817435778056897064479}u^{33} - \frac{1321103863894582732541256}{33327817435778056897064479}u^{32} + \cdots + \frac{51178462521615883220395704}{33327817435778056897064479}u - \frac{330114933742480117666720250}{33327817435778056897064479}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$(u^{17} + u^{16} + \cdots + u + 1)^2$
c_2, c_3, c_8	$(u^{17} + u^{16} + \cdots + u - 1)^2$
c_5, c_7, c_9 c_{11}	$u^{34} + 3u^{33} + \cdots + 8u + 1$
c_6, c_{10}	$9(9u^{34} - 45u^{33} + \cdots + 5844u + 4123)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{17} - 9y^{16} + \cdots + y - 1)^2$
c_2, c_3, c_8	$(y^{17} + 19y^{16} + \cdots + y - 1)^2$
c_5, c_7, c_9 c_{11}	$y^{34} + 23y^{33} + \cdots - 16y + 1$
c_6, c_{10}	$81(81y^{34} + 1539y^{33} + \cdots + 2.18604 \times 10^8 y + 1.69991 \times 10^7)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.957129 + 0.297465I$ $a = 0.507777 + 0.193862I$ $b = 0.231761 - 0.782357I$	$9.44087 - 3.91820I$	$-4.40216 + 2.39256I$
$u = 0.957129 - 0.297465I$ $a = 0.507777 - 0.193862I$ $b = 0.231761 + 0.782357I$	$9.44087 + 3.91820I$	$-4.40216 - 2.39256I$
$u = 0.161699 + 1.038480I$ $a = -1.42815 - 2.19989I$ $b = 0.756727$	2.28510	$-14.8691 + 0.I$
$u = 0.161699 - 1.038480I$ $a = -1.42815 + 2.19989I$ $b = 0.756727$	2.28510	$-14.8691 + 0.I$
$u = -0.940515 + 0.104107I$ $a = -0.333927 + 0.063655I$ $b = -1.156820 - 0.481476I$	$-0.35577 - 6.09306I$	$-11.29297 + 6.87425I$
$u = -0.940515 - 0.104107I$ $a = -0.333927 - 0.063655I$ $b = -1.156820 + 0.481476I$	$-0.35577 + 6.09306I$	$-11.29297 - 6.87425I$
$u = -0.307123 + 1.022680I$ $a = -0.25597 + 1.53917I$ $b = 1.151920 - 0.412149I$	$-0.85249 + 2.05778I$	$-13.01930 - 0.37816I$
$u = -0.307123 - 1.022680I$ $a = -0.25597 - 1.53917I$ $b = 1.151920 + 0.412149I$	$-0.85249 - 2.05778I$	$-13.01930 + 0.37816I$
$u = -0.067078 + 1.070590I$ $a = 0.23390 + 1.62274I$ $b = -1.172060 - 0.309872I$	$5.15765 + 0.50801I$	$-9.57451 + 0.23246I$
$u = -0.067078 - 1.070590I$ $a = 0.23390 - 1.62274I$ $b = -1.172060 + 0.309872I$	$5.15765 - 0.50801I$	$-9.57451 - 0.23246I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.471546+1.054750I$ $a=-0.68713-1.28004I$ $b=-0.758174+0.422247I$	$4.41315+1.83062I$	$-4.40697-5.22267I$
$u=-0.471546-1.054750I$ $a=-0.68713+1.28004I$ $b=-0.758174-0.422247I$	$4.41315-1.83062I$	$-4.40697+5.22267I$
$u=0.159768+1.144820I$ $a=0.047737-1.065180I$ $b=-0.112463+0.679715I$	$2.59185-1.70542I$	$-8.10923+4.02096I$
$u=0.159768-1.144820I$ $a=0.047737+1.065180I$ $b=-0.112463-0.679715I$	$2.59185+1.70542I$	$-8.10923-4.02096I$
$u=1.242980+0.035364I$ $a=0.425094+0.265693I$ $b=1.162590-0.537552I$	$6.70220+8.83664I$	$-7.62632-5.87120I$
$u=1.242980-0.035364I$ $a=0.425094-0.265693I$ $b=1.162590+0.537552I$	$6.70220-8.83664I$	$-7.62632+5.87120I$
$u=-0.256339+1.285380I$ $a=0.744327+0.249553I$ $b=-0.758174-0.422247I$	$4.41315-1.83062I$	$-4.40697+5.22267I$
$u=-0.256339-1.285380I$ $a=0.744327-0.249553I$ $b=-0.758174+0.422247I$	$4.41315+1.83062I$	$-4.40697-5.22267I$
$u=0.527279+1.235790I$ $a=0.057533+1.306180I$ $b=-1.156820-0.481476I$	$-0.35577-6.09306I$	$-11.29297+6.87425I$
$u=0.527279-1.235790I$ $a=0.057533-1.306180I$ $b=-1.156820+0.481476I$	$-0.35577+6.09306I$	$-11.29297-6.87425I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.517554 + 0.135833I$ $a = -0.175022 - 0.661640I$ $b = 1.151920 - 0.412149I$	$-0.85249 + 2.05778I$	$-13.01930 - 0.37816I$
$u = 0.517554 - 0.135833I$ $a = -0.175022 + 0.661640I$ $b = 1.151920 + 0.412149I$	$-0.85249 - 2.05778I$	$-13.01930 + 0.37816I$
$u = -0.31225 + 1.43262I$ $a = -0.024272 - 0.935289I$ $b = 0.231761 + 0.782357I$	$9.44087 + 3.91820I$	$-4.40216 - 2.39256I$
$u = -0.31225 - 1.43262I$ $a = -0.024272 + 0.935289I$ $b = 0.231761 - 0.782357I$	$9.44087 - 3.91820I$	$-4.40216 + 2.39256I$
$u = 0.75838 + 1.29857I$ $a = 0.522896 - 0.887131I$ $b = 0.774885 + 0.615952I$	$12.06090 - 2.39923I$	$-3.13400 + 3.27109I$
$u = 0.75838 - 1.29857I$ $a = 0.522896 + 0.887131I$ $b = 0.774885 - 0.615952I$	$12.06090 + 2.39923I$	$-3.13400 - 3.27109I$
$u = -0.426686 + 0.176855I$ $a = -1.277270 - 0.237723I$ $b = -0.112463 - 0.679715I$	$2.59185 + 1.70542I$	$-8.10923 - 4.02096I$
$u = -0.426686 - 0.176855I$ $a = -1.277270 + 0.237723I$ $b = -0.112463 + 0.679715I$	$2.59185 - 1.70542I$	$-8.10923 + 4.02096I$
$u = -0.64393 + 1.45144I$ $a = 0.026307 + 1.133160I$ $b = 1.162590 - 0.537552I$	$6.70220 + 8.83664I$	$-7.62632 - 5.87120I$
$u = -0.64393 - 1.45144I$ $a = 0.026307 - 1.133160I$ $b = 1.162590 + 0.537552I$	$6.70220 - 8.83664I$	$-7.62632 + 5.87120I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.43320 + 1.55847I$ $a = -0.299894 + 0.393593I$ $b = 0.774885 - 0.615952I$	$12.06090 + 2.39923I$	$-3.13400 - 3.27109I$
$u = 0.43320 - 1.55847I$ $a = -0.299894 - 0.393593I$ $b = 0.774885 + 0.615952I$	$12.06090 - 2.39923I$	$-3.13400 + 3.27109I$
$u = 0.167479 + 0.133177I$ $a = -6.08394 - 4.32345I$ $b = -1.172060 + 0.309872I$	$5.15765 - 0.50801I$	$-9.57451 - 0.23246I$
$u = 0.167479 - 0.133177I$ $a = -6.08394 + 4.32345I$ $b = -1.172060 - 0.309872I$	$5.15765 + 0.50801I$	$-9.57451 + 0.23246I$

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

(i) Arc colorings

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

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

$a_2 = \begin{pmatrix} -0.5 \\ -1 \end{pmatrix}$

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

$a_7 = \begin{pmatrix} 1.25 \\ 1.5 \end{pmatrix}$

$a_1 = \begin{pmatrix} -1.5 \\ -1 \end{pmatrix}$

$a_4 = \begin{pmatrix} -0.5 \\ -1 \end{pmatrix}$

$a_{11} = \begin{pmatrix} -0.25 \\ 0.5 \end{pmatrix}$

$a_9 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$

$a_3 = \begin{pmatrix} -0.5 \\ -1 \end{pmatrix}$

$a_8 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$

$a_8 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -7.5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -0.500000$ $b = -1.00000$	-3.28987	-7.50000

IV. $I_4^u = \langle b-1,\ 4a^2-4a+3,\ u+1 \rangle$

(i) Arc colorings

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

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

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

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

$$a_7 = \begin{pmatrix} 1.75 \\ -a+2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} a+1 \\ 1 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} a-\frac{3}{4} \\ a-1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1 \\ -2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 3a-1 \\ 4a-1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -a+\frac{5}{2} \\ -2a+3 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -a+\frac{5}{2} \\ -2a+3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_5 c_7, c_9, c_{11}	$(y-1)^2$
c_2, c_3, c_8	$(y+2)^2$
c_6, c_{10}	$16(16y^2+8y+9)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = \ 0.500000 + 0.707107I$ $b = \ 1.00000$	1.64493	−12.0000
$u = -1.00000$ $a = \ 0.500000 - 0.707107I$ $b = \ 1.00000$	1.64493	−12.0000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u+1)^2(u^{17}+u^{16}+\cdots+u+1)^2(u^{21}-6u^{19}+\cdots+57u+24)$
c_2, c_3, c_8	$u(u^2+2)(u^{17}+u^{16}+\cdots+u-1)^2(u^{21}-3u^{20}+\cdots-24u+8)$
c_4	$((u-1)^2)(u+1)(u^{17}+u^{16}+\cdots+u+1)^2(u^{21}-6u^{19}+\cdots+57u+24)$
c_5, c_7	$(u-1)(u+1)^2(u^{21}-u^{20}+\cdots-u+3)(u^{34}+3u^{33}+\cdots+8u+1)$
c_6	$576(2u+1)(4u^2-4u+3)(8u^{21}-4u^{20}+\cdots-2u+4)$ $\cdot(9u^{34}-45u^{33}+\cdots+5844u+4123)$
c_9, c_{11}	$((u-1)^2)(u+1)(u^{21}-u^{20}+\cdots-u+3)(u^{34}+3u^{33}+\cdots+8u+1)$
c_{10}	$576(2u-1)(4u^2+4u+3)(8u^{21}-4u^{20}+\cdots-2u+4)$ $\cdot(9u^{34}-45u^{33}+\cdots+5844u+4123)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y-1)^3)(y^{17} - 9y^{16} + \cdots + y - 1)^2$ $\cdot (y^{21} - 12y^{20} + \cdots + 13233y - 576)$
c_2, c_3, c_8	$y(y+2)^2(y^{17} + 19y^{16} + \cdots + y - 1)^2(y^{21} + 23y^{20} + \cdots + 96y - 64)$
c_5, c_7, c_9 c_{11}	$((y-1)^3)(y^{21} + 11y^{20} + \cdots + 85y - 9)(y^{34} + 23y^{33} + \cdots - 16y + 1)$
c_6, c_{10}	$331776(4y-1)(16y^2 + 8y + 9)(64y^{21} + 656y^{20} + \cdots + 60y - 16)$ $\cdot (81y^{34} + 1539y^{33} + \cdots + 218604056y + 16999129)$