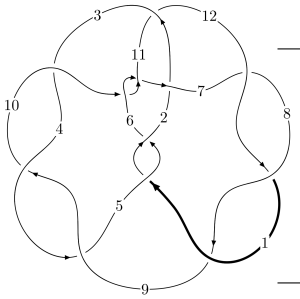
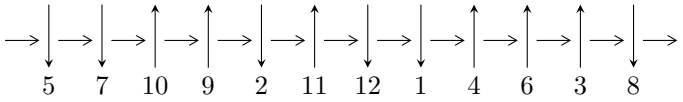
$12a_{1264}$ $(K12a_{1264})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 3.13949 \times 10^{171} u^{83} - 3.46511 \times 10^{171} u^{82} + \cdots + 5.32421 \times 10^{170} b - 1.19378 \times 10^{171}, \\ & - 2.38315 \times 10^{171} u^{83} + 3.77864 \times 10^{171} u^{82} + \cdots + 5.32421 \times 10^{170} a + 2.46920 \times 10^{171}, \\ & u^{84} - 25 u^{82} + \cdots + 13u - 1 \rangle \\ I_2^u = \langle & 309 u^{20} - 434 u^{19} + \cdots + 151 b + 4415, \ -1708 u^{20} + 524 u^{19} + \cdots + 453 a - 8666, \\ & u^{21} + u^{20} + \cdots - u + 3 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 105 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. $\boldsymbol{I_1^u = \langle 3.14 \times 10^{171} u^{83} - 3.47 \times 10^{171} u^{82} + \cdots + 5.32 \times 10^{170} b - 1.19 \times 10^{171},\ -2.38 \times 10^{171} u^{83} + 3.78 \times 10^{171} u^{82} + \cdots + 5.32 \times 10^{170} a + 2.47 \times 10^{171},\ u^{84} - 25 u^{82} + \cdots + 13u - 1 \rangle}$

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 4.47607u^{83} - 7.09709u^{82} + \cdots - 18.2333u - 4.63769 \\ -5.89664u^{83} + 6.50822u^{82} + \cdots - 44.1982u + 2.24218 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} -18.0492u^{83} + 8.20140u^{82} + \cdots - 415.778u + 31.3112 \\ 2.49929u^{83} + 3.57268u^{82} + \cdots + 164.885u - 10.6843 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 15.6145u^{83} - 5.52415u^{82} + \cdots + 412.476u - 26.8042 \\ 3.57130u^{83} - 8.28773u^{82} + \cdots - 88.3591u + 5.88454 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 6.88232u^{83} - 8.12828u^{82} + \cdots + 34.3068u - 9.49260 \\ -5.50421u^{83} + 5.02640u^{82} + \cdots - 60.0099u + 3.27337 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.92440u^{83} + 5.93603u^{82} + \cdots + 173.361u - 18.2079 \\ 5.97631u^{83} - 8.10078u^{82} + \cdots + 23.9453u - 3.48550 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 26.8430u^{83} - 12.5479u^{82} + \cdots + 615.839u - 42.1863 \\ -6.98242u^{83} - 1.49313u^{82} + \cdots - 279.352u + 19.5683 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 6.30294u^{83} - 9.23048u^{82} + \cdots - 11.9985u - 5.22657 \\ -7.72350u^{83} + 8.64161u^{82} + \cdots - 50.4330u + 2.83106 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 22.0425u^{83} - 15.6464u^{82} + \cdots + 372.604u - 29.2883 \\ -12.9310u^{83} + 6.98497u^{82} + \cdots - 273.072u + 18.8184 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 24.5986u^{83} - 13.3937u^{82} + \cdots + 525.497u - 43.0239$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{84} - 2u^{83} + \cdots + 19519u + 2263$
c_2	$u^{84} - 2u^{83} + \cdots + 160u + 47$
c_3, c_4, c_9	$u^{84} + u^{83} + \cdots - 657u - 23$
c_6, c_{10}	$u^{84} - 25u^{82} + \cdots + 13u - 1$
c_7, c_8, c_{12}	$u^{84} - 3u^{83} + \cdots - 1131u - 419$
c_{11}	$u^{84} - 7u^{83} + \cdots - 210u - 17$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{84} - 82y^{83} + \cdots - 175479279y + 5121169$
c_2	$y^{84} - 14y^{83} + \cdots - 96570y + 2209$
c_3, c_4, c_9	$y^{84} + 95y^{83} + \cdots - 296271y + 529$
c_6, c_{10}	$y^{84} - 50y^{83} + \cdots - 225y + 1$
c_7, c_8, c_{12}	$y^{84} - 101y^{83} + \cdots - 6461353y + 175561$
c_{11}	$y^{84} + 15y^{83} + \cdots - 33050y + 289$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.867430 + 0.455417I$ $a = -0.133628 - 0.434117I$ $b = 1.36054 + 1.69833I$	$-15.6766 + 6.1909I$	0
$u = 0.867430 - 0.455417I$ $a = -0.133628 + 0.434117I$ $b = 1.36054 - 1.69833I$	$-15.6766 - 6.1909I$	0
$u = -0.899889 + 0.359409I$ $a = -2.37851 - 0.18394I$ $b = 2.82048 - 1.30271I$	$-14.9740 + 2.0938I$	0
$u = -0.899889 - 0.359409I$ $a = -2.37851 + 0.18394I$ $b = 2.82048 + 1.30271I$	$-14.9740 - 2.0938I$	0
$u = -0.868335 + 0.427455I$ $a = -0.618033 + 0.133410I$ $b = 1.56081 - 1.45456I$	$-8.21292 - 3.78416I$	0
$u = -0.868335 - 0.427455I$ $a = -0.618033 - 0.133410I$ $b = 1.56081 + 1.45456I$	$-8.21292 + 3.78416I$	0
$u = 0.880746 + 0.388651I$ $a = -1.49482 + 0.18154I$ $b = 2.15146 + 1.22343I$	$-7.93559 + 0.21693I$	0
$u = 0.880746 - 0.388651I$ $a = -1.49482 - 0.18154I$ $b = 2.15146 - 1.22343I$	$-7.93559 - 0.21693I$	0
$u = 0.135631 + 0.948644I$ $a = -0.890436 - 0.904816I$ $b = 0.225715 + 0.006177I$	$-11.21050 - 5.58594I$	0
$u = 0.135631 - 0.948644I$ $a = -0.890436 + 0.904816I$ $b = 0.225715 - 0.006177I$	$-11.21050 + 5.58594I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.175758+1.060460I$ $a=-0.523782+0.447239I$ $b=\ \ 0.0765748-0.0455765I$	$-3.42384+2.62104I$	0
$u=-0.175758-1.060460I$ $a=-0.523782-0.447239I$ $b=\ \ 0.0765748+0.0455765I$	$-3.42384-2.62104I$	0
$u=\ \ 0.916786+0.121323I$ $a=\ \ 0.946036+0.576670I$ $b=-1.225690+0.365216I$	$1.335270+0.415812I$	0
$u=\ \ 0.916786-0.121323I$ $a=\ \ 0.946036-0.576670I$ $b=-1.225690-0.365216I$	$1.335270-0.415812I$	0
$u=\ \ 1.016070+0.378029I$ $a=\ \ 0.51715-1.40535I$ $b=-1.15430+0.94965I$	$-7.39753+2.82095I$	0
$u=\ \ 1.016070-0.378029I$ $a=\ \ 0.51715+1.40535I$ $b=-1.15430-0.94965I$	$-7.39753-2.82095I$	0
$u=\ \ 0.036897+0.913172I$ $a=-1.140940-0.311677I$ $b=-0.378045+0.235807I$	$-5.58935-1.48544I$	0
$u=\ \ 0.036897-0.913172I$ $a=-1.140940+0.311677I$ $b=-0.378045-0.235807I$	$-5.58935+1.48544I$	0
$u=-1.079560+0.274486I$ $a=\ \ 0.044313+0.682178I$ $b=-0.230708+0.000959I$	$-0.38051-2.58331I$	0
$u=-1.079560-0.274486I$ $a=\ \ 0.044313-0.682178I$ $b=-0.230708-0.000959I$	$-0.38051+2.58331I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.790280+0.392957I$ $a=\ \ 0.130900+0.658695I$ $b=\ \ 0.429648-0.708969I$	$-3.37846+0.48072I$	0
$u=-0.790280-0.392957I$ $a=\ \ 0.130900-0.658695I$ $b=\ \ 0.429648+0.708969I$	$-3.37846-0.48072I$	0
$u=-0.777768+0.402665I$ $a=\ \ 0.36633-1.49428I$ $b=\ \ 0.383311-0.248972I$	$-8.52352+0.24068I$	0
$u=-0.777768-0.402665I$ $a=\ \ 0.36633+1.49428I$ $b=\ \ 0.383311+0.248972I$	$-8.52352-0.24068I$	0
$u=\ \ 0.760770+0.430169I$ $a=\ \ 0.84316+1.22415I$ $b=-0.123856+0.735006I$	$-16.0312-2.4553I$	0
$u=\ \ 0.760770-0.430169I$ $a=\ \ 0.84316-1.22415I$ $b=-0.123856-0.735006I$	$-16.0312+2.4553I$	0
$u=-1.122160+0.152692I$ $a=\ \ 0.308819+0.442069I$ $b=-0.549309+0.368714I$	$-0.34832-2.60015I$	0
$u=-1.122160-0.152692I$ $a=\ \ 0.308819-0.442069I$ $b=-0.549309-0.368714I$	$-0.34832+2.60015I$	0
$u=\ \ 0.788981+0.357640I$ $a=-0.34705+2.19183I$ $b=\ \ 1.134540-0.534709I$	$-8.26520+3.03508I$	0
$u=\ \ 0.788981-0.357640I$ $a=-0.34705-2.19183I$ $b=\ \ 1.134540+0.534709I$	$-8.26520-3.03508I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.790536+0.317246I$ $a=-0.78228-3.05453I$ $b=\ 1.63787+1.34551I$	$-15.3846-5.0998I$	$-9.88739+7.81278I$
$u=-0.790536-0.317246I$ $a=-0.78228+3.05453I$ $b=\ 1.63787-1.34551I$	$-15.3846+5.0998I$	$-9.88739-7.81278I$
$u=-0.814117+0.247211I$ $a=\ 1.27667-0.87152I$ $b=-1.47451-0.25088I$	$-3.71295-3.36373I$	0
$u=-0.814117-0.247211I$ $a=\ 1.27667+0.87152I$ $b=-1.47451+0.25088I$	$-3.71295+3.36373I$	0
$u=\ 0.017616+0.849868I$ $a=-1.60776+0.49117I$ $b=-0.293808-0.510206I$	$-13.28140+3.22203I$	$-8.45909+0.I$
$u=\ 0.017616-0.849868I$ $a=-1.60776-0.49117I$ $b=-0.293808+0.510206I$	$-13.28140-3.22203I$	$-8.45909+0.I$
$u=\ 1.081380+0.400450I$ $a=-0.633082-0.597295I$ $b=\ 1.093700-0.167358I$	$-0.13372+3.12645I$	0
$u=\ 1.081380-0.400450I$ $a=-0.633082+0.597295I$ $b=\ 1.093700+0.167358I$	$-0.13372-3.12645I$	0
$u=\ 1.131450+0.237796I$ $a=-0.694414-0.201400I$ $b=\ 1.267510+0.153739I$	$2.34073+0.56455I$	0
$u=\ 1.131450-0.237796I$ $a=-0.694414+0.201400I$ $b=\ 1.267510-0.153739I$	$2.34073-0.56455I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.070570+0.439629I$ $a=-0.837100+0.640723I$ $b=\ \ 1.57879+0.30911I$	$-7.50583-3.64030I$	0
$u=-1.070570-0.439629I$ $a=-0.837100-0.640723I$ $b=\ \ 1.57879-0.30911I$	$-7.50583+3.64030I$	0
$u=\ \ 1.091050+0.401626I$ $a=-1.36685-0.72485I$ $b=\ \ 1.80488+0.99224I$	$-2.64462+6.21193I$	0
$u=\ \ 1.091050-0.401626I$ $a=-1.36685+0.72485I$ $b=\ \ 1.80488-0.99224I$	$-2.64462-6.21193I$	0
$u=-1.119800+0.348384I$ $a=-1.041310+0.452175I$ $b=\ \ 1.57156-0.50425I$	$3.04119-3.80641I$	0
$u=-1.119800-0.348384I$ $a=-1.041310-0.452175I$ $b=\ \ 1.57156+0.50425I$	$3.04119+3.80641I$	0
$u=-0.241783+1.214210I$ $a=\ \ 0.825895-0.665293I$ $b=\ \ 0.430280+0.214201I$	$-19.1675+9.4172I$	0
$u=-0.241783-1.214210I$ $a=\ \ 0.825895+0.665293I$ $b=\ \ 0.430280-0.214201I$	$-19.1675-9.4172I$	0
$u=-1.223720+0.476158I$ $a=\ \ 1.47552-0.75900I$ $b=-1.98062+1.83619I$	$-9.63548-7.89806I$	0
$u=-1.223720-0.476158I$ $a=\ \ 1.47552+0.75900I$ $b=-1.98062-1.83619I$	$-9.63548+7.89806I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.215040 + 0.509623I$ $a = 1.187300 + 0.462341I$ $b = -1.72380 - 1.37434I$	$-2.12528 + 6.47250I$	0
$u = 1.215040 - 0.509623I$ $a = 1.187300 - 0.462341I$ $b = -1.72380 + 1.37434I$	$-2.12528 - 6.47250I$	0
$u = -1.206440 + 0.592739I$ $a = 0.711590 - 0.108206I$ $b = -1.32604 + 0.87962I$	$-1.89580 - 4.00758I$	0
$u = -1.206440 - 0.592739I$ $a = 0.711590 + 0.108206I$ $b = -1.32604 - 0.87962I$	$-1.89580 + 4.00758I$	0
$u = 1.227470 + 0.552497I$ $a = 1.011470 + 0.494428I$ $b = -1.93617 - 0.69444I$	$-7.92021 + 10.93230I$	0
$u = 1.227470 - 0.552497I$ $a = 1.011470 - 0.494428I$ $b = -1.93617 + 0.69444I$	$-7.92021 - 10.93230I$	0
$u = -1.220070 + 0.568868I$ $a = 0.876785 - 0.353910I$ $b = -1.53903 + 0.54048I$	$-0.23668 - 8.23782I$	0
$u = -1.220070 - 0.568868I$ $a = 0.876785 + 0.353910I$ $b = -1.53903 - 0.54048I$	$-0.23668 + 8.23782I$	0
$u = 1.230280 + 0.643158I$ $a = 0.604167 + 0.210222I$ $b = -0.894349 - 0.399361I$	$0.72894 + 3.81668I$	0
$u = 1.230280 - 0.643158I$ $a = 0.604167 - 0.210222I$ $b = -0.894349 + 0.399361I$	$0.72894 - 3.81668I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.297120 + 0.515464I$ $a = 0.116731 + 0.317673I$ $b = -0.62017 - 1.29481I$	$-9.53768 + 1.73075I$	0
$u = 1.297120 - 0.515464I$ $a = 0.116731 - 0.317673I$ $b = -0.62017 + 1.29481I$	$-9.53768 - 1.73075I$	0
$u = 0.573690$ $a = 3.04400$ $b = -2.22304$	-9.39043	-12.3580
$u = -0.543911$ $a = 1.70271$ $b = -1.62590$	-2.29548	-12.9570
$u = -1.29610 + 0.66766I$ $a = -1.121490 + 0.461809I$ $b = 1.84156 - 1.37463I$	$-15.8625 - 15.9656I$	0
$u = -1.29610 - 0.66766I$ $a = -1.121490 - 0.461809I$ $b = 1.84156 + 1.37463I$	$-15.8625 + 15.9656I$	0
$u = 0.254593 + 0.472326I$ $a = 1.18965 + 1.73170I$ $b = -0.131607 - 0.743334I$	$-5.04166 - 2.62453I$	$-6.24106 + 4.53514I$
$u = 0.254593 - 0.472326I$ $a = 1.18965 - 1.73170I$ $b = -0.131607 + 0.743334I$	$-5.04166 + 2.62453I$	$-6.24106 - 4.53514I$
$u = 1.29025 + 0.74378I$ $a = -0.974417 - 0.227827I$ $b = 1.62364 + 1.07684I$	$-7.51825 + 11.52590I$	0
$u = 1.29025 - 0.74378I$ $a = -0.974417 + 0.227827I$ $b = 1.62364 - 1.07684I$	$-7.51825 - 11.52590I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.34130 + 1.50681I$ $a = 0.418952 + 0.350787I$ $b = 0.551077 - 0.072182I$	$-10.54830 - 4.13683I$	0
$u = 0.34130 - 1.50681I$ $a = 0.418952 - 0.350787I$ $b = 0.551077 + 0.072182I$	$-10.54830 + 4.13683I$	0
$u = -1.51516 + 0.44607I$ $a = -0.120687 - 0.395757I$ $b = 0.340696 + 0.691225I$	$-6.24520 + 0.56086I$	0
$u = -1.51516 - 0.44607I$ $a = -0.120687 + 0.395757I$ $b = 0.340696 - 0.691225I$	$-6.24520 - 0.56086I$	0
$u = 0.411501$ $a = -0.200853$ $b = -1.42998$	-2.38672	-9.62140
$u = -0.270452 + 0.276054I$ $a = -0.72038 - 1.80958I$ $b = -1.46735 + 0.22463I$	$-9.67797 + 0.04826I$	$-9.15222 + 0.88435I$
$u = -0.270452 - 0.276054I$ $a = -0.72038 + 1.80958I$ $b = -1.46735 - 0.22463I$	$-9.67797 - 0.04826I$	$-9.15222 - 0.88435I$
$u = -1.34711 + 0.90872I$ $a = -0.634846 + 0.018768I$ $b = 1.19483 - 0.78052I$	$-5.98449 - 4.85348I$	0
$u = -1.34711 - 0.90872I$ $a = -0.634846 - 0.018768I$ $b = 1.19483 + 0.78052I$	$-5.98449 + 4.85348I$	0
$u = 0.030793 + 0.350452I$ $a = 1.22740 - 0.81407I$ $b = -0.115966 + 0.287445I$	$0.013893 + 0.880561I$	$0.34073 - 7.72057I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.030793 - 0.350452I$ $a = 1.22740 + 0.81407I$ $b = -0.115966 - 0.287445I$	$0.013893 - 0.880561I$	$0.34073 + 7.72057I$
$u = 0.0693703$ $a = -5.36682$ $b = -1.15626$	-2.40955	-6.14340
$u = 1.96261 + 0.71543I$ $a = -0.106540 - 0.181324I$ $b = 0.303451 + 0.885409I$	$-12.62750 - 2.49656I$	0
$u = 1.96261 - 0.71543I$ $a = -0.106540 + 0.181324I$ $b = 0.303451 - 0.885409I$	$-12.62750 + 2.49656I$	0

II. $I_2^u = \langle 309u^{20} - 434u^{19} + \cdots + 151b + 4415,\ -1708u^{20} + 524u^{19} + \cdots + 453a - 8666,\ u^{21} + u^{20} + \cdots - u + 3\rangle$

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 3.77042u^{20} - 1.15673u^{19} + \cdots - 30.4812u + 19.1302 \\ -2.04636u^{20} + 2.87417u^{19} + \cdots + 28.0331u - 29.2384 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} -0.697572u^{20} - 3.98234u^{19} + \cdots + 16.0574u + 11.3532 \\ -2.78808u^{20} + 0.947020u^{19} + \cdots + 7.24503u - 18.6623 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 5.23400u^{20} + 3.75717u^{19} + \cdots - 3.54084u - 6.04857 \\ -9.61589u^{20} - 5.94702u^{19} + \cdots + 43.8411u - 9.35099 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 3.32009u^{20} - 0.0905077u^{19} + \cdots - 18.6865u + 4.67329 \\ -1.97351u^{20} + 2.83444u^{19} + \cdots + 25.1656u - 24.6887 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -4.79029u^{20} - 1.35320u^{19} + \cdots + 20.2561u - 0.203091 \\ 3.06623u^{20} + 0.635762u^{19} + \cdots - 16.8079u + 6.31126 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0794702u^{20} + 2u^{19} + \cdots - 10.2781u + 8.73510 \\ 3.06623u^{20} - 4.36424u^{19} + \cdots - 22.8079u + 25.3113 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 4.55188u^{20} - 1.53422u^{19} + \cdots - 35.6600u + 19.1501 \\ -2.82781u^{20} + 3.25166u^{19} + \cdots + 33.2119u - 29.2583 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 8.29360u^{20} + 6.87638u^{19} + \cdots - 48.9647u + 13.2296 \\ -0.397351u^{20} - 0.953642u^{19} + \cdots + 14.6689u + 4.03974 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{2196}{151}u^{20} - u^{19} + \cdots - \frac{21155}{151}u + \frac{13662}{151}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21}+3u^{20}+\cdots-3u-1$
c_2	$u^{21}-u^{20}+\cdots+3u^2+1$
c_3, c_4	$u^{21}+12u^{19}+\cdots-u+1$
c_5	$u^{21}-3u^{20}+\cdots-3u+1$
c_6	$u^{21}+u^{20}+\cdots-u+3$
c_7, c_8	$u^{21}-14u^{19}+\cdots-u+1$
c_9	$u^{21}+12u^{19}+\cdots-u-1$
c_{10}	$u^{21}-u^{20}+\cdots-u-3$
c_{11}	$u^{21}+2u^{19}+\cdots-4u-1$
c_{12}	$u^{21}-14u^{19}+\cdots-u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{21} - 21y^{20} + \cdots + 11y - 1$
c_2	$y^{21} - 5y^{20} + \cdots - 6y - 1$
c_3, c_4, c_9	$y^{21} + 24y^{20} + \cdots - 9y - 1$
c_6, c_{10}	$y^{21} - 17y^{20} + \cdots + 121y - 9$
c_7, c_8, c_{12}	$y^{21} - 28y^{20} + \cdots + 5y - 1$
c_{11}	$y^{21} + 4y^{20} + \cdots + 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.382628+0.960881I$ $a=-0.783937+0.776879I$ $b=-0.342890-0.330936I$	$-7.03803+1.17985I$	$-10.53416-1.53522I$
$u=-0.382628-0.960881I$ $a=-0.783937-0.776879I$ $b=-0.342890+0.330936I$	$-7.03803-1.17985I$	$-10.53416+1.53522I$
$u=\ \ 0.982940+0.353291I$ $a=-1.012910-0.905800I$ $b=\ \ 1.132380+0.090306I$	$-3.28251+4.29159I$	$-3.63277-6.11599I$
$u=\ \ 0.982940-0.353291I$ $a=-1.012910+0.905800I$ $b=\ \ 1.132380-0.090306I$	$-3.28251-4.29159I$	$-3.63277+6.11599I$
$u=\ \ 0.708556+0.509046I$ $a=\ \ 0.135333+0.600310I$ $b=-0.535697-0.942644I$	$-4.06743-0.95196I$	$-8.79489+1.18736I$
$u=\ \ 0.708556-0.509046I$ $a=\ \ 0.135333-0.600310I$ $b=-0.535697+0.942644I$	$-4.06743+0.95196I$	$-8.79489-1.18736I$
$u=-1.091610+0.413227I$ $a=-0.493026+0.465252I$ $b=\ \ 0.640827+0.099354I$	$0.79785-2.50319I$	$1.96461+1.44745I$
$u=-1.091610-0.413227I$ $a=-0.493026-0.465252I$ $b=\ \ 0.640827-0.099354I$	$0.79785+2.50319I$	$1.96461-1.44745I$
$u=\ \ 0.806800$ $a=\ \ 1.75194$ $b=-2.80464$	-8.65759	0.238680
$u=-0.772407+0.123670I$ $a=-1.33115-2.13554I$ $b=\ \ 1.95627+0.09675I$	$-14.9717-4.2446I$	$-5.10156+0.43387I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.772407-0.123670I$ $a=-1.33115+2.13554I$ $b=\ \ 1.95627-0.09675I$	$-14.9717+4.2446I$	$-5.10156-0.43387I$
$u=-1.117340+0.561366I$ $a=\ \ 1.280040-0.423786I$ $b=-1.84009+1.17636I$	$-4.80473-6.53656I$	$-6.84617+5.55680I$
$u=-1.117340-0.561366I$ $a=\ \ 1.280040+0.423786I$ $b=-1.84009-1.17636I$	$-4.80473+6.53656I$	$-6.84617-5.55680I$
$u=\ \ 0.659193+0.335624I$ $a=-0.38753+1.68500I$ $b=\ \ 1.45988+0.17681I$	$-8.29821+2.26290I$	$-6.15426-0.05048I$
$u=\ \ 0.659193-0.335624I$ $a=-0.38753-1.68500I$ $b=\ \ 1.45988-0.17681I$	$-8.29821-2.26290I$	$-6.15426+0.05048I$
$u=-0.667437$ $a=\ \ 1.11576$ $b=-1.90707$	-1.90443	10.3540
$u=\ \ 1.30830+0.61182I$ $a=\ \ 0.687983+0.277223I$ $b=-1.18054-1.00060I$	$-1.78016+4.71282I$	$-3.94550-7.91328I$
$u=\ \ 1.30830-0.61182I$ $a=\ \ 0.687983-0.277223I$ $b=-1.18054+1.00060I$	$-1.78016-4.71282I$	$-3.94550+7.91328I$
$u=\ \ 1.48798$ $a=\ \ 0.230450$ $b=\ \ 0.129677$	-6.38748	-10.5940
$u=-1.60867+0.49513I$ $a=-0.310534+0.058407I$ $b=\ \ 0.500870-0.950951I$	$-12.23280+2.44430I$	$-1.45463+0.34882I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.60867-0.49513I$		
$a=-0.310534-0.058407I$	$-12.23280-2.44430I$	$-1.45463-0.34882I$
$b=\ \ 0.500870+0.950951I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{21}+3u^{20}+\cdots-3u-1)(u^{84}-2u^{83}+\cdots+19519u+2263)$
c_2	$(u^{21}-u^{20}+\cdots+3u^2+1)(u^{84}-2u^{83}+\cdots+160u+47)$
c_3, c_4	$(u^{21}+12u^{19}+\cdots-u+1)(u^{84}+u^{83}+\cdots-657u-23)$
c_5	$(u^{21}-3u^{20}+\cdots-3u+1)(u^{84}-2u^{83}+\cdots+19519u+2263)$
c_6	$(u^{21}+u^{20}+\cdots-u+3)(u^{84}-25u^{82}+\cdots+13u-1)$
c_7, c_8	$(u^{21}-14u^{19}+\cdots-u+1)(u^{84}-3u^{83}+\cdots-1131u-419)$
c_9	$(u^{21}+12u^{19}+\cdots-u-1)(u^{84}+u^{83}+\cdots-657u-23)$
c_{10}	$(u^{21}-u^{20}+\cdots-u-3)(u^{84}-25u^{82}+\cdots+13u-1)$
c_{11}	$(u^{21}+2u^{19}+\cdots-4u-1)(u^{84}-7u^{83}+\cdots-210u-17)$
c_{12}	$(u^{21}-14u^{19}+\cdots-u-1)(u^{84}-3u^{83}+\cdots-1131u-419)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{21} - 21y^{20} + \cdots + 11y - 1)$ $\cdot (y^{84} - 82y^{83} + \cdots - 175479279y + 5121169)$
c_2	$(y^{21} - 5y^{20} + \cdots - 6y - 1)(y^{84} - 14y^{83} + \cdots - 96570y + 2209)$
c_3, c_4, c_9	$(y^{21} + 24y^{20} + \cdots - 9y - 1)(y^{84} + 95y^{83} + \cdots - 296271y + 529)$
c_6, c_{10}	$(y^{21} - 17y^{20} + \cdots + 121y - 9)(y^{84} - 50y^{83} + \cdots - 225y + 1)$
c_7, c_8, c_{12}	$(y^{21} - 28y^{20} + \cdots + 5y - 1)$ $\cdot (y^{84} - 101y^{83} + \cdots - 6461353y + 175561)$
c_{11}	$(y^{21} + 4y^{20} + \cdots + 6y - 1)(y^{84} + 15y^{83} + \cdots - 33050y + 289)$