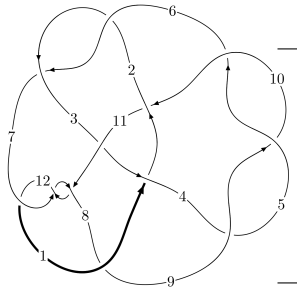
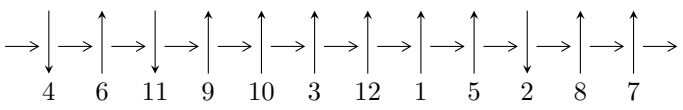
$12a_{0985}$ $(K12a_{0985})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 3.10359 \times 10^{88} u^{95} + 3.33640 \times 10^{87} u^{94} + \cdots + 3.88345 \times 10^{88} b - 3.40630 \times 10^{88}, \\ & - 5.44087 \times 10^{88} u^{95} - 1.88768 \times 10^{87} u^{94} + \cdots + 3.88345 \times 10^{88} a + 4.18452 \times 10^{89}, \\ & u^{96} + 41 u^{94} + \cdots + 16u + 1 \rangle \\ I_2^u = \langle & -2u^{17} + 2u^{16} + \cdots + b - 1,\ 3u^{17} - 4u^{16} + \cdots + a - 4,\ u^{18} - u^{17} + \cdots - 5u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 114 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. $\boldsymbol{I_1^u = \langle 3.10 \times 10^{88} u^{95} + 3.34 \times 10^{87} u^{94} + \cdots + 3.88 \times 10^{88} b - 3.41 \times 10^{88},\ -5.44 \times 10^{88} u^{95} - 1.89 \times 10^{87} u^{94} + \cdots + 3.88 \times 10^{88} a + 4.18 \times 10^{89},\ u^{96} + 41 u^{94} + \cdots + 16u + 1 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_4 = \begin{pmatrix} 1.40104u^{95} + 0.0486083u^{94} + \cdots + 15.5984u - 10.7753 \\ -0.799184u^{95} - 0.0859132u^{94} + \cdots - 9.66228u + 0.877133 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.45412u^{95} - 0.730520u^{94} + \cdots - 292.918u - 9.93176 \\ 0.823168u^{95} + 1.17208u^{94} + \cdots + 49.4581u + 2.23074 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4 - u^2 + 1 \\ -u^6 - 2u^4 - u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.876886u^{95} + 0.163384u^{94} + \cdots + 4.35080u - 9.99737 \\ -0.645493u^{95} - 0.124145u^{94} + \cdots - 9.62974u + 0.878777 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 0.923446u^{95} + 0.0258408u^{94} + \cdots + 15.5935u - 10.7380 \\ -0.321589u^{95} - 0.0631457u^{94} + \cdots - 9.65730u + 0.839828 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.16220u^{95} + 0.906974u^{94} + \cdots + 142.246u - 6.51295 \\ -0.638445u^{95} - 1.57608u^{94} + \cdots - 40.4967u - 0.642127 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.695459u^{95} - 0.921443u^{94} + \cdots - 55.8505u + 13.2455 \\ 0.286079u^{95} + 0.128400u^{94} + \cdots + 21.7409u - 0.837753 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.146890u^{95} - 0.453328u^{94} + \cdots - 34.2315u + 11.0354$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{96} - 16u^{95} + \cdots + 1153236u - 36731$
c_2, c_6	$u^{96} + 2u^{95} + \cdots - 1833u + 109$
c_3	$u^{96} - 2u^{95} + \cdots - 64086u - 9679$
c_4, c_5, c_9	$u^{96} + 2u^{95} + \cdots + 210u - 31$
c_7, c_{11}, c_{12}	$u^{96} + 41u^{94} + \cdots - 16u + 1$
c_8	$u^{96} - 27u^{94} + \cdots - 2362u + 185$
c_{10}	$u^{96} + 6u^{95} + \cdots + 575784u - 818513$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{96} + 32y^{95} + \cdots - 717572790842y + 1349166361$
c_2, c_6	$y^{96} - 84y^{95} + \cdots - 46507y + 11881$
c_3	$y^{96} + 24y^{95} + \cdots + 1167091062y + 93683041$
c_4, c_5, c_9	$y^{96} - 104y^{95} + \cdots - 67226y + 961$
c_7, c_{11}, c_{12}	$y^{96} + 82y^{95} + \cdots + 134y + 1$
c_8	$y^{96} - 54y^{95} + \cdots + 4960036y + 34225$
c_{10}	$y^{96} + 44y^{95} + \cdots + 6891789440382y + 669963531169$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.297798 + 0.927894I$ $a = 1.42481 + 0.33774I$ $b = -1.048500 + 0.528138I$	$5.33002 + 2.05817I$	0
$u = 0.297798 - 0.927894I$ $a = 1.42481 - 0.33774I$ $b = -1.048500 - 0.528138I$	$5.33002 - 2.05817I$	0
$u = -0.242954 + 0.935876I$ $a = 1.67582 + 1.00350I$ $b = -0.922321 - 0.576315I$	$5.33582 + 2.30326I$	0
$u = -0.242954 - 0.935876I$ $a = 1.67582 - 1.00350I$ $b = -0.922321 + 0.576315I$	$5.33582 - 2.30326I$	0
$u = -0.468863 + 0.815205I$ $a = 0.884133 - 0.393898I$ $b = -0.149099 - 0.185872I$	$2.77482 - 3.30617I$	0
$u = -0.468863 - 0.815205I$ $a = 0.884133 + 0.393898I$ $b = -0.149099 + 0.185872I$	$2.77482 + 3.30617I$	0
$u = 0.368372 + 0.999484I$ $a = 1.32514 - 1.17194I$ $b = 0.063016 + 1.038760I$	$3.41807 - 4.04230I$	0
$u = 0.368372 - 0.999484I$ $a = 1.32514 + 1.17194I$ $b = 0.063016 - 1.038760I$	$3.41807 + 4.04230I$	0
$u = 1.028350 + 0.284393I$ $a = -0.0242050 + 0.0238082I$ $b = 0.202927 - 0.715178I$	$11.15810 + 1.10966I$	0
$u = 1.028350 - 0.284393I$ $a = -0.0242050 - 0.0238082I$ $b = 0.202927 + 0.715178I$	$11.15810 - 1.10966I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.876854+0.192713I$ $a=\ \ 0.0135335-0.0501523I$ $b=\ \ 0.75480+1.70626I$	$13.6016-12.2540I$	$13.3299+6.6530I$
$u=-0.876854-0.192713I$ $a=\ \ 0.0135335+0.0501523I$ $b=\ \ 0.75480-1.70626I$	$13.6016+12.2540I$	$13.3299-6.6530I$
$u=-0.858239+0.247052I$ $a=-0.135607-0.107341I$ $b=-0.049923-0.793801I$	$4.65285-1.38450I$	$21.4925+3.3160I$
$u=-0.858239-0.247052I$ $a=-0.135607+0.107341I$ $b=-0.049923+0.793801I$	$4.65285+1.38450I$	$21.4925-3.3160I$
$u=\ \ 0.754888+0.867470I$ $a=-0.579279-0.114684I$ $b=\ \ 0.177260-0.377626I$	$9.34632+4.89597I$	0
$u=\ \ 0.754888-0.867470I$ $a=-0.579279+0.114684I$ $b=\ \ 0.177260+0.377626I$	$9.34632-4.89597I$	0
$u=-0.037077+1.150490I$ $a=\ \ 2.41494+0.68901I$ $b=-2.26468-0.22862I$	$5.51141+2.29478I$	0
$u=-0.037077-1.150490I$ $a=\ \ 2.41494-0.68901I$ $b=-2.26468+0.22862I$	$5.51141-2.29478I$	0
$u=-0.506526+1.045940I$ $a=-1.10492-1.20836I$ $b=-0.137683+1.058590I$	$10.99120+7.36565I$	0
$u=-0.506526-1.045940I$ $a=-1.10492+1.20836I$ $b=-0.137683-1.058590I$	$10.99120-7.36565I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.803111 + 0.179218I$ $a = -0.066784 + 0.203569I$ $b = -0.72208 + 1.76413I$	$5.96033 + 8.31880I$	$11.72121 - 7.68923I$
$u = 0.803111 - 0.179218I$ $a = -0.066784 - 0.203569I$ $b = -0.72208 - 1.76413I$	$5.96033 - 8.31880I$	$11.72121 + 7.68923I$
$u = 0.799970 + 0.191989I$ $a = 0.402602 - 0.223941I$ $b = 0.393651 + 0.967532I$	$7.69465 + 2.08742I$	$12.33446 + 0.I$
$u = 0.799970 - 0.191989I$ $a = 0.402602 + 0.223941I$ $b = 0.393651 - 0.967532I$	$7.69465 - 2.08742I$	$12.33446 + 0.I$
$u = -0.765641 + 0.177569I$ $a = 0.058867 + 0.521809I$ $b = -0.49997 - 1.70099I$	$7.76985 - 6.20036I$	$12.5527 + 7.0916I$
$u = -0.765641 - 0.177569I$ $a = 0.058867 - 0.521809I$ $b = -0.49997 + 1.70099I$	$7.76985 + 6.20036I$	$12.5527 - 7.0916I$
$u = 0.174399 + 1.204260I$ $a = -1.41191 + 1.18471I$ $b = 0.94890 - 1.10675I$	$-1.78673 - 0.55616I$	0
$u = 0.174399 - 1.204260I$ $a = -1.41191 - 1.18471I$ $b = 0.94890 + 1.10675I$	$-1.78673 + 0.55616I$	0
$u = -0.260942 + 1.195980I$ $a = -1.60099 - 1.89265I$ $b = -0.13554 + 1.56039I$	$1.76493 - 1.30510I$	0
$u = -0.260942 - 1.195980I$ $a = -1.60099 + 1.89265I$ $b = -0.13554 - 1.56039I$	$1.76493 + 1.30510I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.248016 + 1.217990I$ $a = -2.02802 + 0.13854I$ $b = 1.116670 - 0.085813I$	$1.48638 + 1.59400I$	0
$u = 0.248016 - 1.217990I$ $a = -2.02802 - 0.13854I$ $b = 1.116670 + 0.085813I$	$1.48638 - 1.59400I$	0
$u = 0.751595 + 0.016937I$ $a = -1.059530 - 0.071636I$ $b = -1.02361 - 1.53401I$	$12.26790 + 3.03497I$	$16.1617 - 2.7279I$
$u = 0.751595 - 0.016937I$ $a = -1.059530 + 0.071636I$ $b = -1.02361 + 1.53401I$	$12.26790 - 3.03497I$	$16.1617 + 2.7279I$
$u = -0.021473 + 1.257070I$ $a = 2.41435 - 0.48914I$ $b = -1.28386 + 0.71695I$	$4.59269 - 2.78319I$	0
$u = -0.021473 - 1.257070I$ $a = 2.41435 + 0.48914I$ $b = -1.28386 - 0.71695I$	$4.59269 + 2.78319I$	0
$u = -0.732032 + 0.098973I$ $a = 0.483559 + 0.553909I$ $b = 0.89041 + 1.93513I$	$5.04928 - 2.30450I$	$15.6170 + 4.0427I$
$u = -0.732032 - 0.098973I$ $a = 0.483559 - 0.553909I$ $b = 0.89041 - 1.93513I$	$5.04928 + 2.30450I$	$15.6170 - 4.0427I$
$u = -0.731589 + 0.019018I$ $a = -1.205440 - 0.361661I$ $b = 0.61819 + 1.51176I$	$11.74330 + 2.07260I$	$17.0633 - 3.3447I$
$u = -0.731589 - 0.019018I$ $a = -1.205440 + 0.361661I$ $b = 0.61819 - 1.51176I$	$11.74330 - 2.07260I$	$17.0633 + 3.3447I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.703785 + 0.084147I$ $a = 0.813100 - 0.049463I$ $b = -0.379016 - 1.165570I$	$4.89946 + 1.84798I$	$17.8296 - 4.2620I$
$u = 0.703785 - 0.084147I$ $a = 0.813100 + 0.049463I$ $b = -0.379016 + 1.165570I$	$4.89946 - 1.84798I$	$17.8296 + 4.2620I$
$u = 0.695883 + 0.132592I$ $a = -0.033172 + 0.207088I$ $b = 0.58544 - 1.43059I$	$1.24016 + 3.72681I$	$8.54039 - 7.95601I$
$u = 0.695883 - 0.132592I$ $a = -0.033172 - 0.207088I$ $b = 0.58544 + 1.43059I$	$1.24016 - 3.72681I$	$8.54039 + 7.95601I$
$u = -0.295356 + 1.258260I$ $a = -0.82981 - 2.24049I$ $b = 0.46143 + 2.69377I$	$7.91422 - 5.77924I$	0
$u = -0.295356 - 1.258260I$ $a = -0.82981 + 2.24049I$ $b = 0.46143 - 2.69377I$	$7.91422 + 5.77924I$	0
$u = 0.310058 + 1.254940I$ $a = -2.05810 + 0.49235I$ $b = 1.67334 - 1.92790I$	$8.44313 + 0.79707I$	0
$u = 0.310058 - 1.254940I$ $a = -2.05810 - 0.49235I$ $b = 1.67334 + 1.92790I$	$8.44313 - 0.79707I$	0
$u = -0.136050 + 1.299620I$ $a = 0.328660 - 0.105995I$ $b = -0.612886 - 1.001880I$	$-4.03722 - 1.90716I$	0
$u = -0.136050 - 1.299620I$ $a = 0.328660 + 0.105995I$ $b = -0.612886 + 1.001880I$	$-4.03722 + 1.90716I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.252390+1.285990I$ $a=-2.21302-0.29107I$ $b=\ \ 1.70487+1.10185I$	$-2.67540-3.29908I$	0
$u=-0.252390-1.285990I$ $a=-2.21302+0.29107I$ $b=\ \ 1.70487-1.10185I$	$-2.67540+3.29908I$	0
$u=\ \ 0.316404+1.278790I$ $a=\ \ 0.79569-1.82844I$ $b=\ \ 0.599041+1.059650I$	$8.23786+6.89090I$	0
$u=\ \ 0.316404-1.278790I$ $a=\ \ 0.79569+1.82844I$ $b=\ \ 0.599041-1.059650I$	$8.23786-6.89090I$	0
$u=-0.303533+1.283320I$ $a=\ \ 2.23154+0.38372I$ $b=-1.361510-0.277434I$	$7.68745-1.66728I$	0
$u=-0.303533-1.283320I$ $a=\ \ 2.23154-0.38372I$ $b=-1.361510+0.277434I$	$7.68745+1.66728I$	0
$u=-0.248832+1.313700I$ $a=\ \ 1.09035+0.97321I$ $b=-0.486336-1.022820I$	$-2.86852-3.08123I$	0
$u=-0.248832-1.313700I$ $a=\ \ 1.09035-0.97321I$ $b=-0.486336+1.022820I$	$-2.86852+3.08123I$	0
$u=-0.025099+1.349610I$ $a=-1.092790+0.441049I$ $b=\ \ 1.385700+0.275464I$	$-3.10973-0.12051I$	0
$u=-0.025099-1.349610I$ $a=-1.092790-0.441049I$ $b=\ \ 1.385700-0.275464I$	$-3.10973+0.12051I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.289627 + 1.322520I$ $a = 0.77601 - 1.37242I$ $b = -0.42944 + 1.89136I$	$0.47824 + 5.45167I$	0
$u = 0.289627 - 1.322520I$ $a = 0.77601 + 1.37242I$ $b = -0.42944 - 1.89136I$	$0.47824 - 5.45167I$	0
$u = -0.309892 + 1.329500I$ $a = 2.44045 + 0.85201I$ $b = -1.61454 - 2.21245I$	$0.55606 - 6.08308I$	0
$u = -0.309892 - 1.329500I$ $a = 2.44045 - 0.85201I$ $b = -1.61454 + 2.21245I$	$0.55606 + 6.08308I$	0
$u = -0.633892 + 0.010730I$ $a = -0.253223 + 0.050010I$ $b = -0.579715 + 1.054560I$	$1.320770 + 0.084987I$	$9.06513 + 0.40515I$
$u = -0.633892 - 0.010730I$ $a = -0.253223 - 0.050010I$ $b = -0.579715 - 1.054560I$	$1.320770 - 0.084987I$	$9.06513 - 0.40515I$
$u = 0.042448 + 1.371830I$ $a = 0.271221 + 0.211770I$ $b = -0.006035 - 0.968999I$	$-6.65383 - 0.57803I$	0
$u = 0.042448 - 1.371830I$ $a = 0.271221 - 0.211770I$ $b = -0.006035 + 0.968999I$	$-6.65383 + 0.57803I$	0
$u = 0.292775 + 1.342320I$ $a = 2.23024 - 0.79047I$ $b = -1.68849 + 1.44385I$	$-3.40813 + 7.33110I$	0
$u = 0.292775 - 1.342320I$ $a = 2.23024 + 0.79047I$ $b = -1.68849 - 1.44385I$	$-3.40813 - 7.33110I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.323456+1.367720I$ $a=-2.30956-1.11094I$ $b=\ 1.76574+1.68744I$	$2.89024-10.14720I$	0
$u=-0.323456-1.367720I$ $a=-2.30956+1.11094I$ $b=\ 1.76574-1.68744I$	$2.89024+10.14720I$	0
$u=\ 0.340364+1.372580I$ $a=-2.20860+0.96212I$ $b=\ 1.44293-2.03466I$	$1.05989+12.44780I$	0
$u=\ 0.340364-1.372580I$ $a=-2.20860-0.96212I$ $b=\ 1.44293+2.03466I$	$1.05989-12.44780I$	0
$u=\ 0.34803+1.37485I$ $a=-0.841132+0.773121I$ $b=\ 0.246506-0.764832I$	$2.74864+6.24845I$	0
$u=\ 0.34803-1.37485I$ $a=-0.841132-0.773121I$ $b=\ 0.246506+0.764832I$	$2.74864-6.24845I$	0
$u=\ 0.01952+1.43460I$ $a=-0.769120+0.379387I$ $b=\ 0.366518-0.959554I$	$-1.73042+2.38839I$	0
$u=\ 0.01952-1.43460I$ $a=-0.769120-0.379387I$ $b=\ 0.366518+0.959554I$	$-1.73042-2.38839I$	0
$u=-0.37037+1.38955I$ $a=-1.021020-0.479373I$ $b=\ 0.727865+1.081280I$	$-0.48481-5.83061I$	0
$u=-0.37037-1.38955I$ $a=-1.021020+0.479373I$ $b=\ 0.727865-1.081280I$	$-0.48481+5.83061I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.37493+1.39120I$ $a=\ \ 2.15442+0.91869I$ $b=-1.49224-1.92312I$	$8.5959-16.7526I$	0
$u=-0.37493-1.39120I$ $a=\ \ 2.15442-0.91869I$ $b=-1.49224+1.92312I$	$8.5959+16.7526I$	0
$u=-0.06176+1.44236I$ $a=\ \ 0.357987+0.072523I$ $b=-0.678987+0.482610I$	$-4.37466-4.58299I$	0
$u=-0.06176-1.44236I$ $a=\ \ 0.357987-0.072523I$ $b=-0.678987-0.482610I$	$-4.37466+4.58299I$	0
$u=\ \ 0.44659+1.42474I$ $a=\ \ 1.058410-0.220352I$ $b=-0.815660+0.839339I$	$5.83952+6.37389I$	0
$u=\ \ 0.44659-1.42474I$ $a=\ \ 1.058410+0.220352I$ $b=-0.815660-0.839339I$	$5.83952-6.37389I$	0
$u=\ \ 0.14770+1.52007I$ $a=\ \ 0.1206530-0.0140937I$ $b=\ \ 0.173827+0.526717I$	$1.35845+7.82129I$	0
$u=\ \ 0.14770-1.52007I$ $a=\ \ 0.1206530+0.0140937I$ $b=\ \ 0.173827-0.526717I$	$1.35845-7.82129I$	0
$u=\ \ 0.063242+0.460274I$ $a=-1.01721+1.43677I$ $b=\ \ 0.217139-0.090660I$	$-1.07044-1.08420I$	$-0.68210+4.04350I$
$u=\ \ 0.063242-0.460274I$ $a=-1.01721-1.43677I$ $b=\ \ 0.217139+0.090660I$	$-1.07044+1.08420I$	$-0.68210-4.04350I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.397596$ $a=\ \ 2.82934$ $b=\ \ 0.458866$	0.0845739	18.2460
$u=-0.000356+0.380130I$ $a=-2.06727-1.43639I$ $b=-0.552662+0.376486I$	$2.15307+0.06425I$	$7.44822+0.31372I$
$u=-0.000356-0.380130I$ $a=-2.06727+1.43639I$ $b=-0.552662-0.376486I$	$2.15307-0.06425I$	$7.44822-0.31372I$
$u=-0.324906$ $a=-0.610878$ $b=-0.545493$	0.732805	14.8840
$u=-0.0435603+0.0807855I$ $a=-11.94500-0.14459I$ $b=\ \ 1.46191-0.25011I$	$8.63682-2.55248I$	$12.96184-1.53720I$
$u=-0.0435603-0.0807855I$ $a=-11.94500+0.14459I$ $b=\ \ 1.46191+0.25011I$	$8.63682+2.55248I$	$12.96184+1.53720I$

II.

$\boldsymbol{I_2^u = \langle -2u^{17}+2u^{16}+\cdots+b-1,\ 3u^{17}-4u^{16}+\cdots+a-4,\ u^{18}-u^{17}+\cdots-5u-1\rangle}$

(i) Arc colorings

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

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

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

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

$$a_4 = \begin{pmatrix} -3u^{17}+4u^{16}+\cdots-9u+4 \\ 2u^{17}-2u^{16}+\cdots-11u^2+1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{17}+2u^{16}+\cdots-13u+3 \\ -u^{17}-2u^{16}+\cdots+9u+2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4-u^2+1 \\ -u^6-2u^4-u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -3u^{17}+2u^{16}+\cdots-3u+6 \\ 2u^{17}-u^{16}+\cdots-5u^2-5u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -3u^{17}+3u^{16}+\cdots-5u+5 \\ 2u^{17}-u^{16}+\cdots-5u^2-4u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2u^{17}+13u^{15}+\cdots-7u+2 \\ -2u^{17}-14u^{15}+\cdots+6u+1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 3u^{17}-4u^{16}+\cdots+7u-3 \\ -2u^{17}+2u^{16}+\cdots-u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 6u^{17}-6u^{16}+48u^{15}-41u^{14}+153u^{13}-111u^{12}+230u^{11}-136u^{10}+127u^9-50u^8-53u^7+32u^6-66u^5+12u^4+7u^3-17u^2+8u$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18}+3u^{17}+\cdots-3u-1$
c_2	$u^{18}-3u^{17}+\cdots-12u-3$
c_3	$u^{18}+u^{17}+\cdots-u-1$
c_4, c_5	$u^{18}+u^{17}+\cdots+u+1$
c_6	$u^{18}+3u^{17}+\cdots+12u-3$
c_7	$u^{18}-u^{17}+\cdots-5u-1$
c_8	$u^{18}+u^{17}+\cdots-7u-1$
c_9	$u^{18}-u^{17}+\cdots-u+1$
c_{10}	$u^{18}-u^{17}+\cdots+u-1$
c_{11}, c_{12}	$u^{18}+u^{17}+\cdots+5u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18}+3y^{17}+\cdots+3y+1$
c_2, c_6	$y^{18}-21y^{17}+\cdots-138y+9$
c_3	$y^{18}+3y^{17}+\cdots+3y+1$
c_4, c_5, c_9	$y^{18}-21y^{17}+\cdots+3y+1$
c_7, c_{11}, c_{12}	$y^{18}+17y^{17}+\cdots-37y+1$
c_8	$y^{18}-11y^{17}+\cdots-39y+1$
c_{10}	$y^{18}+3y^{17}+\cdots+3y+1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.891733$ $a = 0.613108$ $b = 0.0601484$	10.9451	15.2260
$u = 0.153770 + 1.203160I$ $a = -3.26790 + 0.32259I$ $b = 2.51579 - 0.78066I$	$6.19502 - 1.26786I$	$11.31087 - 1.11382I$
$u = 0.153770 - 1.203160I$ $a = -3.26790 - 0.32259I$ $b = 2.51579 + 0.78066I$	$6.19502 + 1.26786I$	$11.31087 + 1.11382I$
$u = 0.316243 + 1.197540I$ $a = 0.042230 - 0.407049I$ $b = -0.553086 + 0.893947I$	$7.47150 + 4.37140I$	$10.37534 - 2.87392I$
$u = 0.316243 - 1.197540I$ $a = 0.042230 + 0.407049I$ $b = -0.553086 - 0.893947I$	$7.47150 - 4.37140I$	$10.37534 + 2.87392I$
$u = -0.218112 + 1.220430I$ $a = 1.91376 + 0.65281I$ $b = -0.699779 - 0.561675I$	$0.71211 - 1.85426I$	$3.44363 + 4.30956I$
$u = -0.218112 - 1.220430I$ $a = 1.91376 - 0.65281I$ $b = -0.699779 + 0.561675I$	$0.71211 + 1.85426I$	$3.44363 - 4.30956I$
$u = 0.624359 + 0.357134I$ $a = 0.124757 + 0.173546I$ $b = -0.790923 - 0.901272I$	$8.72151 + 3.68733I$	$14.1228 - 4.5533I$
$u = 0.624359 - 0.357134I$ $a = 0.124757 - 0.173546I$ $b = -0.790923 + 0.901272I$	$8.72151 - 3.68733I$	$14.1228 + 4.5533I$
$u = -0.699815 + 0.162416I$ $a = -0.392511 - 0.444039I$ $b = -0.037318 - 1.083100I$	$3.84819 - 1.31696I$	$9.24417 + 0.83643I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.699815-0.162416I$ $a=-0.392511+0.444039I$ $b=-0.037318+1.083100I$	$3.84819+1.31696I$	$9.24417-0.83643I$
$u=-0.054710+1.326330I$ $a=\ \ 0.838356-0.034430I$ $b=-0.847999-0.876875I$	$-4.68101-0.78696I$	$2.03327-0.03899I$
$u=-0.054710-1.326330I$ $a=\ \ 0.838356+0.034430I$ $b=-0.847999+0.876875I$	$-4.68101+0.78696I$	$2.03327+0.03899I$
$u=-0.313788+1.347220I$ $a=-1.30037-0.65424I$ $b=\ \ 0.89313+1.44864I$	$-0.91278-5.07377I$	$4.59837+2.00791I$
$u=-0.313788-1.347220I$ $a=-1.30037+0.65424I$ $b=\ \ 0.89313-1.44864I$	$-0.91278+5.07377I$	$4.59837-2.00791I$
$u=\ \ 0.32853+1.43950I$ $a=\ \ 0.765269-0.983894I$ $b=-0.345030+1.239790I$	$2.94732+7.44527I$	$10.65448-7.39173I$
$u=\ \ 0.32853-1.43950I$ $a=\ \ 0.765269+0.983894I$ $b=-0.345030-1.239790I$	$2.94732-7.44527I$	$10.65448+7.39173I$
$u=-0.164690$ $a=\ \ 5.93970$ $b=\ \ 0.670278$	-0.331160	-1.79230

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{18}+3u^{17}+\cdots-3u-1)(u^{96}-16u^{95}+\cdots+1153236u-36731)$
c_2	$(u^{18}-3u^{17}+\cdots-12u-3)(u^{96}+2u^{95}+\cdots-1833u+109)$
c_3	$(u^{18}+u^{17}+\cdots-u-1)(u^{96}-2u^{95}+\cdots-64086u-9679)$
c_4, c_5	$(u^{18}+u^{17}+\cdots+u+1)(u^{96}+2u^{95}+\cdots+210u-31)$
c_6	$(u^{18}+3u^{17}+\cdots+12u-3)(u^{96}+2u^{95}+\cdots-1833u+109)$
c_7	$(u^{18}-u^{17}+\cdots-5u-1)(u^{96}+41u^{94}+\cdots-16u+1)$
c_8	$(u^{18}+u^{17}+\cdots-7u-1)(u^{96}-27u^{94}+\cdots-2362u+185)$
c_9	$(u^{18}-u^{17}+\cdots-u+1)(u^{96}+2u^{95}+\cdots+210u-31)$
c_{10}	$(u^{18}-u^{17}+\cdots+u-1)(u^{96}+6u^{95}+\cdots+575784u-818513)$
c_{11}, c_{12}	$(u^{18}+u^{17}+\cdots+5u-1)(u^{96}+41u^{94}+\cdots-16u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{18}+3y^{17}+\cdots+3y+1)$ $\cdot(y^{96}+32y^{95}+\cdots-717572790842y+1349166361)$
c_2, c_6	$(y^{18}-21y^{17}+\cdots-138y+9)(y^{96}-84y^{95}+\cdots-46507y+11881)$
c_3	$(y^{18}+3y^{17}+\cdots+3y+1)$ $\cdot(y^{96}+24y^{95}+\cdots+1167091062y+93683041)$
c_4, c_5, c_9	$(y^{18}-21y^{17}+\cdots+3y+1)(y^{96}-104y^{95}+\cdots-67226y+961)$
c_7, c_{11}, c_{12}	$(y^{18}+17y^{17}+\cdots-37y+1)(y^{96}+82y^{95}+\cdots+134y+1)$
c_8	$(y^{18}-11y^{17}+\cdots-39y+1)(y^{96}-54y^{95}+\cdots+4960036y+34225)$
c_{10}	$(y^{18}+3y^{17}+\cdots+3y+1)$ $\cdot(y^{96}+44y^{95}+\cdots+6891789440382y+669963531169)$