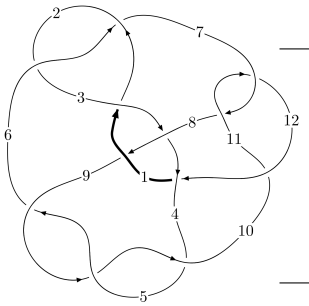
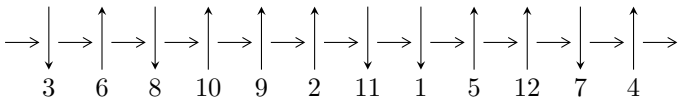
$12a_{0308}$ $(K12a_{0308})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -6.76624 \times 10^{219} u^{125} - 7.53327 \times 10^{220} u^{124} + \cdots + 1.14785 \times 10^{220} b - 1.35671 \times 10^{222}, \\ & 5.17876 \times 10^{220} u^{125} + 9.23238 \times 10^{220} u^{124} + \cdots + 1.14785 \times 10^{220} a + 4.07465 \times 10^{219}, \\ & u^{126} + u^{125} + \cdots + 34u + 14 \rangle \\ I_2^u = \langle & 6u^{25} + 6u^{24} + \cdots + b - 1,\ u^{25} + 18u^{24} + \cdots + 2a + 13,\ u^{26} + 2u^{25} + \cdots - u + 2 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 152 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. $\boldsymbol{I_1^u = \langle -6.77 \times 10^{219} u^{125} - 7.53 \times 10^{220} u^{124} + \cdots + 1.15 \times 10^{220} b - 1.36 \times 10^{222},\ 5.18 \times 10^{220} u^{125} + 9.23 \times 10^{220} u^{124} + \cdots + 1.15 \times 10^{220} a + 4.07 \times 10^{219},\ u^{126} + u^{125} + \cdots + 34u + 14 \rangle}$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -4.51170u^{125} - 8.04318u^{124} + \cdots - 101.412u - 0.354980 \\ 0.589470u^{125} + 6.56293u^{124} + \cdots + 423.567u + 118.196 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3.92223u^{125} - 1.48025u^{124} + \cdots + 322.156u + 117.841 \\ 0.589470u^{125} + 6.56293u^{124} + \cdots + 423.567u + 118.196 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 7.01915u^{125} + 19.5025u^{124} + \cdots + 898.354u + 202.158 \\ 8.43261u^{125} + 15.8836u^{124} + \cdots + 368.196u + 47.8751 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2.62980u^{125} + 4.50769u^{124} + \cdots + 787.361u + 248.392 \\ 3.00244u^{125} + 4.62029u^{124} + \cdots + 102.275u - 1.00353 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.644228u^{125} + 10.4261u^{124} + \cdots + 960.436u + 252.392 \\ 9.68437u^{125} + 16.5822u^{124} + \cdots + 165.488u - 14.2616 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 13.8031u^{125} + 19.2938u^{124} + \cdots + 47.9164u - 83.2406 \\ 1.57376u^{125} - 3.66048u^{124} + \cdots - 575.216u - 172.232 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -6.91614u^{125} - 4.39988u^{124} + \cdots + 460.066u + 175.560 \\ 11.6019u^{125} + 20.7193u^{124} + \cdots + 386.020u + 26.6522 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 15.9613u^{125} + 42.3387u^{124} + \cdots + 2087.62u + 494.323$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{126} + 59u^{125} + \cdots + 3632u + 196$
c_2, c_6	$u^{126} + u^{125} + \cdots + 34u + 14$
c_3	$u^{126} - u^{125} + \cdots + 6u + 1$
c_4, c_5, c_9	$u^{126} - u^{125} + \cdots + 34u + 1$
c_7, c_{11}	$u^{126} - u^{125} + \cdots - 210u + 25$
c_8	$u^{126} + 5u^{125} + \cdots + 5198u + 1187$
c_{10}	$u^{126} - 49u^{125} + \cdots - 9850u + 625$
c_{12}	$u^{126} + 11u^{125} + \cdots + 13400628u + 1597649$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{126} + 27y^{125} + \cdots + 566600y + 38416$
c_2, c_6	$y^{126} + 59y^{125} + \cdots + 3632y + 196$
c_3	$y^{126} + 5y^{125} + \cdots - 28y + 1$
c_4, c_5, c_9	$y^{126} + 131y^{125} + \cdots - 88y + 1$
c_7, c_{11}	$y^{126} + 49y^{125} + \cdots + 9850y + 625$
c_8	$y^{126} - 13y^{125} + \cdots - 64950976y + 1408969$
c_{10}	$y^{126} + 69y^{125} + \cdots + 767141250y + 390625$
c_{12}	$y^{126} + 35y^{125} + \cdots + 85429733377584y + 2552482327201$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.304196 + 0.959223I$ $a = 2.28081 + 1.15437I$ $b = -0.686197 - 0.904816I$	$-2.73498 - 1.55888I$	0
$u = 0.304196 - 0.959223I$ $a = 2.28081 - 1.15437I$ $b = -0.686197 + 0.904816I$	$-2.73498 + 1.55888I$	0
$u = 0.835395 + 0.525075I$ $a = 0.437355 + 0.524666I$ $b = 0.054811 + 1.345080I$	$0.15817 - 4.07041I$	0
$u = 0.835395 - 0.525075I$ $a = 0.437355 - 0.524666I$ $b = 0.054811 - 1.345080I$	$0.15817 + 4.07041I$	0
$u = 0.905705 + 0.352784I$ $a = 0.762337 - 0.007198I$ $b = -0.953667 + 0.521074I$	$-6.99810 - 6.61558I$	0
$u = 0.905705 - 0.352784I$ $a = 0.762337 + 0.007198I$ $b = -0.953667 - 0.521074I$	$-6.99810 + 6.61558I$	0
$u = 0.969208 + 0.360630I$ $a = 0.913373 - 0.340051I$ $b = -0.707578 - 1.128780I$	$-5.12736 - 12.68230I$	0
$u = 0.969208 - 0.360630I$ $a = 0.913373 + 0.340051I$ $b = -0.707578 + 1.128780I$	$-5.12736 + 12.68230I$	0
$u = -0.848700 + 0.435657I$ $a = -0.800966 - 0.689324I$ $b = 0.636397 - 1.061860I$	$1.42651 + 8.48211I$	0
$u = -0.848700 - 0.435657I$ $a = -0.800966 + 0.689324I$ $b = 0.636397 + 1.061860I$	$1.42651 - 8.48211I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.050120+0.037194I$ $a=\ \ 1.173120+0.083746I$ $b=-0.567799+0.859104I$	$-1.59844+2.26243I$	0
$u=-1.050120-0.037194I$ $a=\ \ 1.173120-0.083746I$ $b=-0.567799-0.859104I$	$-1.59844-2.26243I$	0
$u=\ \ 0.340011+0.995050I$ $a=-0.81522-1.56936I$ $b=\ \ 1.147330+0.260847I$	$-10.22130+1.04149I$	0
$u=\ \ 0.340011-0.995050I$ $a=-0.81522+1.56936I$ $b=\ \ 1.147330-0.260847I$	$-10.22130-1.04149I$	0
$u=\ \ 0.901643+0.279369I$ $a=-0.839003+0.471236I$ $b=\ \ 0.354250+0.969985I$	$3.37819-1.16988I$	0
$u=\ \ 0.901643-0.279369I$ $a=-0.839003-0.471236I$ $b=\ \ 0.354250-0.969985I$	$3.37819+1.16988I$	0
$u=\ \ 0.344085+1.003400I$ $a=\ \ 2.15546-1.37714I$ $b=-0.691262+0.806098I$	$-3.03452+3.74633I$	0
$u=\ \ 0.344085-1.003400I$ $a=\ \ 2.15546+1.37714I$ $b=-0.691262-0.806098I$	$-3.03452-3.74633I$	0
$u=\ \ 0.526490+0.922044I$ $a=-0.63637-1.38200I$ $b=-0.167355-1.003850I$	$1.94319+2.02809I$	0
$u=\ \ 0.526490-0.922044I$ $a=-0.63637+1.38200I$ $b=-0.167355+1.003850I$	$1.94319-2.02809I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.424964+0.974873I$ $a=\ \ 0.748390-0.889163I$ $b=-0.828851+0.240308I$	$-2.91148-1.45412I$	0
$u=-0.424964-0.974873I$ $a=\ \ 0.748390+0.889163I$ $b=-0.828851-0.240308I$	$-2.91148+1.45412I$	0
$u=-0.314358+0.878335I$ $a=\ \ 0.71504-1.30889I$ $b=-0.810491+0.942201I$	$-2.16981+1.68101I$	0
$u=-0.314358-0.878335I$ $a=\ \ 0.71504+1.30889I$ $b=-0.810491-0.942201I$	$-2.16981-1.68101I$	0
$u=\ \ 0.851989+0.652954I$ $a=-1.006300-0.748571I$ $b=\ \ 0.493176-0.973939I$	$2.47505+4.56930I$	0
$u=\ \ 0.851989-0.652954I$ $a=-1.006300+0.748571I$ $b=\ \ 0.493176+0.973939I$	$2.47505-4.56930I$	0
$u=-0.706857+0.589361I$ $a=-0.736621+1.130370I$ $b=\ \ 0.067933+1.153670I$	$5.12221+1.40859I$	0
$u=-0.706857-0.589361I$ $a=-0.736621-1.130370I$ $b=\ \ 0.067933-1.153670I$	$5.12221-1.40859I$	0
$u=-0.423882+0.993862I$ $a=\ \ 1.70686-0.16242I$ $b=-0.892735-0.675362I$	$-2.92658-4.55745I$	0
$u=-0.423882-0.993862I$ $a=\ \ 1.70686+0.16242I$ $b=-0.892735+0.675362I$	$-2.92658+4.55745I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.533387 + 0.733395I$ $a = 1.97686 + 1.93477I$ $b = -0.274635 + 0.962055I$	$2.53888 + 2.26690I$	0
$u = 0.533387 - 0.733395I$ $a = 1.97686 - 1.93477I$ $b = -0.274635 - 0.962055I$	$2.53888 - 2.26690I$	0
$u = -0.425119 + 1.008190I$ $a = -3.68859 + 1.35003I$ $b = 0.608252 + 0.809673I$	$-9.49093 - 2.85656I$	0
$u = -0.425119 - 1.008190I$ $a = -3.68859 - 1.35003I$ $b = 0.608252 - 0.809673I$	$-9.49093 + 2.85656I$	0
$u = 0.458143 + 1.005260I$ $a = -2.57796 - 0.68475I$ $b = 0.79730 - 1.24790I$	$-7.35715 + 7.96493I$	0
$u = 0.458143 - 1.005260I$ $a = -2.57796 + 0.68475I$ $b = 0.79730 + 1.24790I$	$-7.35715 - 7.96493I$	0
$u = 0.453612 + 1.013820I$ $a = -0.69279 - 1.39501I$ $b = 0.87394 + 1.12724I$	$-7.36705 - 1.88885I$	0
$u = 0.453612 - 1.013820I$ $a = -0.69279 + 1.39501I$ $b = 0.87394 - 1.12724I$	$-7.36705 + 1.88885I$	0
$u = -0.772036 + 0.805400I$ $a = 1.017510 - 0.300048I$ $b = -0.722220 + 0.162618I$	$-4.18688 - 2.83461I$	0
$u = -0.772036 - 0.805400I$ $a = 1.017510 + 0.300048I$ $b = -0.722220 - 0.162618I$	$-4.18688 + 2.83461I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.775339+0.391438I$ $a=-0.440764+0.060943I$ $b=\ \ 0.745303+0.499574I$	$-0.20476+3.21443I$	0
$u=-0.775339-0.391438I$ $a=-0.440764-0.060943I$ $b=\ \ 0.745303-0.499574I$	$-0.20476-3.21443I$	0
$u=-0.582289+0.975879I$ $a=\ \ 1.96224-0.61659I$ $b=-0.619094-1.159990I$	$-0.25292-6.81367I$	0
$u=-0.582289-0.975879I$ $a=\ \ 1.96224+0.61659I$ $b=-0.619094+1.159990I$	$-0.25292+6.81367I$	0
$u=-0.474415+1.041910I$ $a=-1.72373+1.55779I$ $b=\ \ 0.773142-0.805714I$	$-9.07944-3.46227I$	0
$u=-0.474415-1.041910I$ $a=-1.72373-1.55779I$ $b=\ \ 0.773142+0.805714I$	$-9.07944+3.46227I$	0
$u=-1.013480+0.533271I$ $a=\ \ 0.341574+0.204784I$ $b=-0.289449+1.112600I$	$-0.213684+0.352415I$	0
$u=-1.013480-0.533271I$ $a=\ \ 0.341574-0.204784I$ $b=-0.289449-1.112600I$	$-0.213684-0.352415I$	0
$u=\ \ 0.484142+1.041240I$ $a=-0.564084-0.414274I$ $b=\ \ 0.137177+0.113148I$	$-0.58867+3.12037I$	0
$u=\ \ 0.484142-1.041240I$ $a=-0.564084+0.414274I$ $b=\ \ 0.137177-0.113148I$	$-0.58867-3.12037I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.707695 + 0.906471I$ $a = -0.121184 + 0.196638I$ $b = 0.362119 + 0.903655I$	$1.70584 + 1.20788I$	0
$u = 0.707695 - 0.906471I$ $a = -0.121184 - 0.196638I$ $b = 0.362119 - 0.903655I$	$1.70584 - 1.20788I$	0
$u = -0.131365 + 1.147900I$ $a = -1.66961 - 0.67260I$ $b = 0.732817 + 0.682786I$	$-5.24479 + 0.80749I$	0
$u = -0.131365 - 1.147900I$ $a = -1.66961 + 0.67260I$ $b = 0.732817 - 0.682786I$	$-5.24479 - 0.80749I$	0
$u = -0.399143 + 1.087450I$ $a = -0.29038 + 2.41435I$ $b = 0.622390 - 0.900391I$	$-9.19545 + 1.98580I$	0
$u = -0.399143 - 1.087450I$ $a = -0.29038 - 2.41435I$ $b = 0.622390 + 0.900391I$	$-9.19545 - 1.98580I$	0
$u = 0.519304 + 1.043880I$ $a = -1.91361 - 0.37497I$ $b = 1.163260 - 0.594506I$	$-8.97936 + 5.29000I$	0
$u = 0.519304 - 1.043880I$ $a = -1.91361 + 0.37497I$ $b = 1.163260 + 0.594506I$	$-8.97936 - 5.29000I$	0
$u = -0.525237 + 0.640775I$ $a = -0.214135 + 0.364457I$ $b = -0.491152 + 1.068160I$	$0.72408 + 2.24593I$	0
$u = -0.525237 - 0.640775I$ $a = -0.214135 - 0.364457I$ $b = -0.491152 - 1.068160I$	$0.72408 - 2.24593I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.821774+0.096755I$ $a=\ \ 0.239620-0.704210I$ $b=-0.373706-0.774922I$	$-0.50789-1.40777I$	0
$u=-0.821774-0.096755I$ $a=\ \ 0.239620+0.704210I$ $b=-0.373706+0.774922I$	$-0.50789+1.40777I$	0
$u=-0.269837+0.777842I$ $a=-0.23956-3.56077I$ $b=\ \ 0.433067-0.667520I$	$-8.37304-0.20240I$	0
$u=-0.269837-0.777842I$ $a=-0.23956+3.56077I$ $b=\ \ 0.433067+0.667520I$	$-8.37304+0.20240I$	0
$u=\ \ 0.520987+1.057250I$ $a=-0.19299+1.66603I$ $b=-0.614214-0.677469I$	$-1.77476+2.74434I$	0
$u=\ \ 0.520987-1.057250I$ $a=-0.19299-1.66603I$ $b=-0.614214+0.677469I$	$-1.77476-2.74434I$	0
$u=-0.611604+1.009500I$ $a=\ \ 1.020410-0.503159I$ $b=-0.014759-1.212880I$	$3.86311-6.47822I$	0
$u=-0.611604-1.009500I$ $a=\ \ 1.020410+0.503159I$ $b=-0.014759+1.212880I$	$3.86311+6.47822I$	0
$u=-0.471025+1.084340I$ $a=-2.58576-0.79138I$ $b=\ \ 0.735297+0.925885I$	$-8.70606-9.15996I$	0
$u=-0.471025-1.084340I$ $a=-2.58576+0.79138I$ $b=\ \ 0.735297-0.925885I$	$-8.70606+9.15996I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.636890 + 0.511863I$ $a = 0.74959 - 1.47990I$ $b = -0.573979 - 0.942697I$	$0.74250 - 2.88378I$	0
$u = 0.636890 - 0.511863I$ $a = 0.74959 + 1.47990I$ $b = -0.573979 + 0.942697I$	$0.74250 + 2.88378I$	0
$u = 0.567044 + 1.042860I$ $a = 2.64752 + 1.24214I$ $b = -0.616376 + 0.981556I$	$-0.83584 + 7.62976I$	0
$u = 0.567044 - 1.042860I$ $a = 2.64752 - 1.24214I$ $b = -0.616376 - 0.981556I$	$-0.83584 - 7.62976I$	0
$u = -0.036002 + 1.195090I$ $a = -1.63505 + 0.76040I$ $b = 0.670385 - 0.971002I$	$-4.38425 + 6.16299I$	0
$u = -0.036002 - 1.195090I$ $a = -1.63505 - 0.76040I$ $b = 0.670385 + 0.971002I$	$-4.38425 - 6.16299I$	0
$u = -0.131478 + 1.205920I$ $a = 0.177343 - 1.128170I$ $b = 0.083717 + 1.014730I$	$-6.34893 - 2.68074I$	0
$u = -0.131478 - 1.205920I$ $a = 0.177343 + 1.128170I$ $b = 0.083717 - 1.014730I$	$-6.34893 + 2.68074I$	0
$u = 0.557839 + 0.554982I$ $a = -0.556401 + 0.145950I$ $b = 0.299730 + 0.189693I$	$0.95342 + 1.08564I$	0
$u = 0.557839 - 0.554982I$ $a = -0.556401 - 0.145950I$ $b = 0.299730 - 0.189693I$	$0.95342 - 1.08564I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.280401 + 0.708667I$ $a = -0.12271 + 2.58036I$ $b = -0.217797 - 0.658045I$	$1.263390 + 0.011603I$	0
$u = 0.280401 - 0.708667I$ $a = -0.12271 - 2.58036I$ $b = -0.217797 + 0.658045I$	$1.263390 - 0.011603I$	0
$u = 0.487908 + 1.144920I$ $a = -0.666693 - 0.826521I$ $b = 0.373759 + 0.584029I$	$-0.64550 + 2.94420I$	0
$u = 0.487908 - 1.144920I$ $a = -0.666693 + 0.826521I$ $b = 0.373759 - 0.584029I$	$-0.64550 - 2.94420I$	0
$u = -0.594137 + 1.106220I$ $a = -0.478963 + 1.203270I$ $b = 0.831555 - 0.515269I$	$-2.30659 - 8.36936I$	0
$u = -0.594137 - 1.106220I$ $a = -0.478963 - 1.203270I$ $b = 0.831555 + 0.515269I$	$-2.30659 + 8.36936I$	0
$u = 0.651493 + 1.073880I$ $a = -1.248870 + 0.019696I$ $b = 0.14468 - 1.41085I$	$-1.50580 + 9.60697I$	0
$u = 0.651493 - 1.073880I$ $a = -1.248870 - 0.019696I$ $b = 0.14468 + 1.41085I$	$-1.50580 - 9.60697I$	0
$u = 0.291352 + 0.669817I$ $a = 0.884379 + 0.348991I$ $b = 0.659985 + 1.207210I$	$-6.07876 - 4.48676I$	0
$u = 0.291352 - 0.669817I$ $a = 0.884379 - 0.348991I$ $b = 0.659985 - 1.207210I$	$-6.07876 + 4.48676I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.629631+1.116680I$ $a=-2.33694+0.68964I$ $b=\ \ 0.668433+1.081720I$	$-0.62430-13.96600I$	0
$u=-0.629631-1.116680I$ $a=-2.33694-0.68964I$ $b=\ \ 0.668433-1.081720I$	$-0.62430+13.96600I$	0
$u=-0.542063+1.174470I$ $a=\ \ 0.959436+0.167740I$ $b=-0.177783-0.689107I$	$-3.71958-6.22307I$	0
$u=-0.542063-1.174470I$ $a=\ \ 0.959436-0.167740I$ $b=-0.177783+0.689107I$	$-3.71958+6.22307I$	0
$u=\ \ 0.079711+0.681310I$ $a=-0.301740-0.241630I$ $b=-0.212829+0.854997I$	$0.52498+1.77054I$	$0.-5.80320I$
$u=\ \ 0.079711-0.681310I$ $a=-0.301740+0.241630I$ $b=-0.212829-0.854997I$	$0.52498-1.77054I$	$0.+5.80320I$
$u=\ \ 0.156654+1.305020I$ $a=\ \ 1.94065-0.39633I$ $b=-0.849380+0.603867I$	$-12.69900-3.25347I$	0
$u=\ \ 0.156654-1.305020I$ $a=\ \ 1.94065+0.39633I$ $b=-0.849380-0.603867I$	$-12.69900+3.25347I$	0
$u=\ \ 0.622854+1.165200I$ $a=\ \ 0.83578+1.29620I$ $b=-1.002120-0.560547I$	$-9.4523+12.2086I$	0
$u=\ \ 0.622854-1.165200I$ $a=\ \ 0.83578-1.29620I$ $b=-1.002120+0.560547I$	$-9.4523-12.2086I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.535144 + 0.378549I$ $a = -0.235413 - 0.308562I$ $b = -0.528077 + 0.759982I$	$0.11385 + 1.59214I$	$0. - 2.55317I$
$u = 0.535144 - 0.378549I$ $a = -0.235413 + 0.308562I$ $b = -0.528077 - 0.759982I$	$0.11385 - 1.59214I$	$0. + 2.55317I$
$u = 0.660437 + 1.171900I$ $a = -1.86787 - 0.29289I$ $b = 0.501676 - 1.015110I$	$0.77594 + 6.92005I$	0
$u = 0.660437 - 1.171900I$ $a = -1.86787 + 0.29289I$ $b = 0.501676 + 1.015110I$	$0.77594 - 6.92005I$	0
$u = 0.504091 + 0.411221I$ $a = -0.372730 - 1.037780I$ $b = 0.993826 + 0.604779I$	$-7.20638 - 1.02009I$	$-3.78196 + 1.33795I$
$u = 0.504091 - 0.411221I$ $a = -0.372730 + 1.037780I$ $b = 0.993826 - 0.604779I$	$-7.20638 + 1.02009I$	$-3.78196 - 1.33795I$
$u = 0.644273 + 1.186310I$ $a = 2.35727 + 0.33796I$ $b = -0.739089 + 1.135070I$	$-7.6558 + 18.5267I$	0
$u = 0.644273 - 1.186310I$ $a = 2.35727 - 0.33796I$ $b = -0.739089 - 1.135070I$	$-7.6558 - 18.5267I$	0
$u = -0.941667 + 0.995385I$ $a = 1.318860 - 0.260251I$ $b = -0.499825 - 1.102660I$	$-1.53422 - 7.22718I$	0
$u = -0.941667 - 0.995385I$ $a = 1.318860 + 0.260251I$ $b = -0.499825 + 1.102660I$	$-1.53422 + 7.22718I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.683019+1.196580I$ $a=\ \ 0.247859+0.205266I$ $b=-0.300909+0.800064I$	$-3.57489-4.29690I$	0
$u=-0.683019-1.196580I$ $a=\ \ 0.247859-0.205266I$ $b=-0.300909-0.800064I$	$-3.57489+4.29690I$	0
$u=\ \ 0.271330+0.559407I$ $a=-2.23515-0.14009I$ $b=\ \ 0.792809-1.049630I$	$-5.87626+5.39033I$	$-2.10230-5.90723I$
$u=\ \ 0.271330-0.559407I$ $a=-2.23515+0.14009I$ $b=\ \ 0.792809+1.049630I$	$-5.87626-5.39033I$	$-2.10230+5.90723I$
$u=\ \ 0.128595+1.378630I$ $a=\ \ 1.45318+0.96911I$ $b=-0.692080-1.060420I$	$-11.2967-9.0005I$	0
$u=\ \ 0.128595-1.378630I$ $a=\ \ 1.45318-0.96911I$ $b=-0.692080+1.060420I$	$-11.2967+9.0005I$	0
$u=-0.57287+1.30084I$ $a=\ \ 0.866018-1.041620I$ $b=-0.610847+0.819014I$	$-5.61110-3.39745I$	0
$u=-0.57287-1.30084I$ $a=\ \ 0.866018+1.041620I$ $b=-0.610847-0.819014I$	$-5.61110+3.39745I$	0
$u=-0.417130+0.378694I$ $a=-2.06822-0.98502I$ $b=\ \ 0.808920+0.701599I$	$-7.22150-0.41680I$	$-1.77411+1.64915I$
$u=-0.417130-0.378694I$ $a=-2.06822+0.98502I$ $b=\ \ 0.808920-0.701599I$	$-7.22150+0.41680I$	$-1.77411-1.64915I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.555168+0.048198I$ $a=-0.207751+0.542664I$ $b=-0.435086+0.585368I$	$-0.53927+1.51210I$	$-0.49571-4.96444I$
$u=-0.555168-0.048198I$ $a=-0.207751-0.542664I$ $b=-0.435086-0.585368I$	$-0.53927-1.51210I$	$-0.49571+4.96444I$
$u=-0.61987+1.30527I$ $a=\ \ 2.09542-0.12149I$ $b=-0.605488-0.890439I$	$-5.38226-8.18906I$	0
$u=-0.61987-1.30527I$ $a=\ \ 2.09542+0.12149I$ $b=-0.605488+0.890439I$	$-5.38226+8.18906I$	0
$u=-0.467426+0.127639I$ $a=-1.04294+1.28363I$ $b=\ \ 0.699402-0.994643I$	$-6.29152+5.26183I$	$-0.82354-4.38830I$
$u=-0.467426-0.127639I$ $a=-1.04294-1.28363I$ $b=\ \ 0.699402+0.994643I$	$-6.29152-5.26183I$	$-0.82354+4.38830I$

II.

$\boldsymbol{I_2^u = \langle 6u^{25}+6u^{24}+\cdots+b-1,\ u^{25}+18u^{24}+\cdots+2a+13,\ u^{26}+2u^{25}+\cdots-u+2\rangle}$

(i) Arc colorings

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

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

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

$$a_3 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5+u^3+u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -\frac{1}{2}u^{25} - 9u^{24} + \cdots + 17u - \frac{13}{2} \\ -6u^{25} - 6u^{24} + \cdots - 22u + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -\frac{13}{2}u^{25} - 15u^{24} + \cdots - 5u - \frac{11}{2} \\ -6u^{25} - 6u^{24} + \cdots - 22u + 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{9}{2}u^{25} + 3u^{24} + \cdots + 15u + \frac{3}{2} \\ 15u^{25} + 24u^{24} + \cdots + 31u - 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{9}{2}u^{25} - 13u^{24} + \cdots - 9u - \frac{35}{2} \\ 5u^{25} + 15u^{24} + \cdots + 3u + 19 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{5}{2}u^{25} - 14u^{24} + \cdots + 23u - \frac{29}{2} \\ 17u^{25} + 31u^{24} + \cdots + 21u + 9 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{7}{2}u^{25} + 5u^{24} + \cdots + 7u - \frac{11}{2} \\ -4u^{25} - 7u^{24} + \cdots - 10u + 3 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u^{25} - 12u^{23} + \cdots - 21u + 18 \\ -15u^{25} - 24u^{24} + \cdots - 22u - 18 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 20u^{25} + 38u^{24} + 159u^{23} + 239u^{22} + 606u^{21} + 821u^{20} + 1469u^{19} + 1842u^{18} + 2477u^{17} + 2968u^{16} + 3088u^{15} + 3502u^{14} + 3037u^{13} + 3039u^{12} + 2611u^{11} + 1896u^{10} + 2067u^9 + 879u^8 + 1367u^7 + 377u^6 + 608u^5 + 217u^4 + 125u^3 + 104u^2 - 5u + 26$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 14u^{25} + \cdots - 55u + 4$
c_2	$u^{26} - 2u^{25} + \cdots + u + 2$
c_3	$u^{26} + 2u^{24} + \cdots + 3u^2 + 1$
c_4, c_5	$u^{26} + 15u^{24} + \cdots + 3u^2 + 1$
c_6	$u^{26} + 2u^{25} + \cdots - u + 2$
c_7	$u^{26} + 2u^{25} + \cdots + 2u + 1$
c_8	$u^{26} - u^{24} + \cdots + 3u^2 + 1$
c_9	$u^{26} + 15u^{24} + \cdots + 3u^2 + 1$
c_{10}	$u^{26} + 12u^{25} + \cdots + 12u + 1$
c_{11}	$u^{26} - 2u^{25} + \cdots - 2u + 1$
c_{12}	$u^{26} - 2u^{25} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} + 6y^{25} + \cdots + 15y + 16$
c_2, c_6	$y^{26} + 14y^{25} + \cdots + 55y + 4$
c_3	$y^{26} + 4y^{25} + \cdots + 6y + 1$
c_4, c_5, c_9	$y^{26} + 30y^{25} + \cdots + 6y + 1$
c_7, c_{11}	$y^{26} + 12y^{25} + \cdots + 12y + 1$
c_8	$y^{26} - 2y^{25} + \cdots + 6y + 1$
c_{10}	$y^{26} + 16y^{25} + \cdots + 8y + 1$
c_{12}	$y^{26} - 6y^{25} + \cdots + 2y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.311363+0.971289I$ $a=\ \ 0.93024-2.57231I$ $b=-0.745520+0.534570I$	$-9.17363-0.88936I$	$-4.93601+1.60159I$
$u=-0.311363-0.971289I$ $a=\ \ 0.93024+2.57231I$ $b=-0.745520-0.534570I$	$-9.17363+0.88936I$	$-4.93601-1.60159I$
$u=\ \ 0.375794+0.954475I$ $a=-1.67639+0.56906I$ $b=\ \ 0.719884-0.780166I$	$-2.11427+4.30092I$	$2.41287-7.32267I$
$u=\ \ 0.375794-0.954475I$ $a=-1.67639-0.56906I$ $b=\ \ 0.719884+0.780166I$	$-2.11427-4.30092I$	$2.41287+7.32267I$
$u=-0.272339+0.899544I$ $a=-0.913395-0.477071I$ $b=-0.604124-0.459331I$	$-8.85848-1.51225I$	$-4.02718+3.79819I$
$u=-0.272339-0.899544I$ $a=-0.913395+0.477071I$ $b=-0.604124+0.459331I$	$-8.85848+1.51225I$	$-4.02718-3.79819I$
$u=\ \ 0.347205+0.859675I$ $a=-1.23638-1.35564I$ $b=\ \ 0.742168+0.901627I$	$-1.73422-1.30806I$	$4.15272-3.08898I$
$u=\ \ 0.347205-0.859675I$ $a=-1.23638+1.35564I$ $b=\ \ 0.742168-0.901627I$	$-1.73422+1.30806I$	$4.15272+3.08898I$
$u=-1.105820+0.219089I$ $a=\ \ 0.542514+0.442281I$ $b=-0.251337+0.961536I$	$0.351589+1.005860I$	$10.59379-1.99592I$
$u=-1.105820-0.219089I$ $a=\ \ 0.542514-0.442281I$ $b=-0.251337-0.961536I$	$0.351589-1.005860I$	$10.59379+1.99592I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.392891+1.058220I$ $a=\ \ 2.62373+0.01042I$ $b=-0.811857-1.019200I$	$-7.74983-6.96656I$	$-4.83921+5.14449I$
$u=-0.392891-1.058220I$ $a=\ \ 2.62373-0.01042I$ $b=-0.811857+1.019200I$	$-7.74983+6.96656I$	$-4.83921-5.14449I$
$u=-0.289219+0.785918I$ $a=\ \ 0.222056-0.107860I$ $b=-0.763366+1.156230I$	$-6.61413+4.14195I$	$-7.67026-0.14275I$
$u=-0.289219-0.785918I$ $a=\ \ 0.222056+0.107860I$ $b=-0.763366-1.156230I$	$-6.61413-4.14195I$	$-7.67026+0.14275I$
$u=\ \ 0.680588+0.469144I$ $a=-0.649317+1.086000I$ $b=\ \ 0.304944+0.994889I$	$2.55820-0.90955I$	$4.89733+0.42106I$
$u=\ \ 0.680588-0.469144I$ $a=-0.649317-1.086000I$ $b=\ \ 0.304944-0.994889I$	$2.55820+0.90955I$	$4.89733-0.42106I$
$u=\ \ 0.481364+1.092720I$ $a=-0.310521-1.317850I$ $b=\ \ 0.401811+0.674449I$	$-0.59446+2.29256I$	$2.00284+3.27741I$
$u=\ \ 0.481364-1.092720I$ $a=-0.310521+1.317850I$ $b=\ \ 0.401811-0.674449I$	$-0.59446-2.29256I$	$2.00284-3.27741I$
$u=\ \ 0.630042+1.048530I$ $a=-1.94868-0.60778I$ $b=\ \ 0.495091-1.058770I$	$0.85668+6.06573I$	$4.11993-3.89880I$
$u=\ \ 0.630042-1.048530I$ $a=-1.94868+0.60778I$ $b=\ \ 0.495091+1.058770I$	$0.85668-6.06573I$	$4.11993+3.89880I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.235477 + 0.562989I$ $a = 0.48637 + 2.25669I$ $b = 0.187849 - 0.722521I$	$1.52018 + 1.18551I$	$4.64794 - 3.74193I$
$u = 0.235477 - 0.562989I$ $a = 0.48637 - 2.25669I$ $b = 0.187849 + 0.722521I$	$1.52018 - 1.18551I$	$4.64794 + 3.74193I$
$u = -0.773189 + 1.158700I$ $a = 1.362920 - 0.154630I$ $b = -0.407507 - 1.120730I$	$-2.29395 - 7.62574I$	$-1.44841 + 9.42563I$
$u = -0.773189 - 1.158700I$ $a = 1.362920 + 0.154630I$ $b = -0.407507 + 1.120730I$	$-2.29395 + 7.62574I$	$-1.44841 - 9.42563I$
$u = -0.60565 + 1.28237I$ $a = 0.316861 - 0.188890I$ $b = -0.268038 + 0.710837I$	$-3.98716 - 4.77328I$	$-2.40635 + 7.58295I$
$u = -0.60565 - 1.28237I$ $a = 0.316861 + 0.188890I$ $b = -0.268038 - 0.710837I$	$-3.98716 + 4.77328I$	$-2.40635 - 7.58295I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26}-14u^{25}+\cdots-55u+4)(u^{126}+59u^{125}+\cdots+3632u+196)$
c_2	$(u^{26}-2u^{25}+\cdots+u+2)(u^{126}+u^{125}+\cdots+34u+14)$
c_3	$(u^{26}+2u^{24}+\cdots+3u^2+1)(u^{126}-u^{125}+\cdots+6u+1)$
c_4, c_5	$(u^{26}+15u^{24}+\cdots+3u^2+1)(u^{126}-u^{125}+\cdots+34u+1)$
c_6	$(u^{26}+2u^{25}+\cdots-u+2)(u^{126}+u^{125}+\cdots+34u+14)$
c_7	$(u^{26}+2u^{25}+\cdots+2u+1)(u^{126}-u^{125}+\cdots-210u+25)$
c_8	$(u^{26}-u^{24}+\cdots+3u^2+1)(u^{126}+5u^{125}+\cdots+5198u+1187)$
c_9	$(u^{26}+15u^{24}+\cdots+3u^2+1)(u^{126}-u^{125}+\cdots+34u+1)$
c_{10}	$(u^{26}+12u^{25}+\cdots+12u+1)(u^{126}-49u^{125}+\cdots-9850u+625)$
c_{11}	$(u^{26}-2u^{25}+\cdots-2u+1)(u^{126}-u^{125}+\cdots-210u+25)$
c_{12}	$(u^{26}-2u^{25}+\cdots-2u+1)$ $\cdot(u^{126}+11u^{125}+\cdots+13400628u+1597649)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{26}+6y^{25}+\cdots+15y+16)(y^{126}+27y^{125}+\cdots+566600y+38416)$
c_2, c_6	$(y^{26}+14y^{25}+\cdots+55y+4)(y^{126}+59y^{125}+\cdots+3632y+196)$
c_3	$(y^{26}+4y^{25}+\cdots+6y+1)(y^{126}+5y^{125}+\cdots-28y+1)$
c_4, c_5, c_9	$(y^{26}+30y^{25}+\cdots+6y+1)(y^{126}+131y^{125}+\cdots-88y+1)$
c_7, c_{11}	$(y^{26}+12y^{25}+\cdots+12y+1)(y^{126}+49y^{125}+\cdots+9850y+625)$
c_8	$(y^{26}-2y^{25}+\cdots+6y+1)$ $\cdot(y^{126}-13y^{125}+\cdots-64950976y+1408969)$
c_{10}	$(y^{26}+16y^{25}+\cdots+8y+1)$ $\cdot(y^{126}+69y^{125}+\cdots+767141250y+390625)$
c_{12}	$(y^{26}-6y^{25}+\cdots+2y+1)$ $\cdot(y^{126}+35y^{125}+\cdots+85429733377584y+2552482327201)$