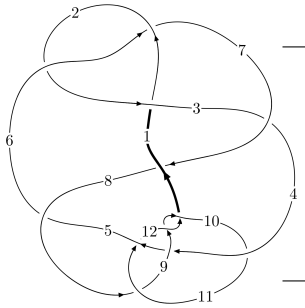
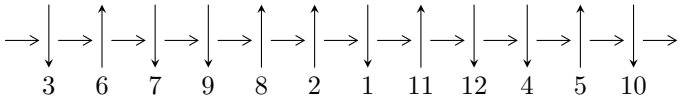
$12a_{0213}$ $(K12a_{0213})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle -2.64097 \times 10^{40} u^{124} + 4.69661 \times 10^{39} u^{123} + \cdots + 3.19533 \times 10^{40} b - 5.54363 \times 10^{39},$
$9.07447 \times 10^{40} u^{124} + 6.60265 \times 10^{40} u^{123} + \cdots + 3.19533 \times 10^{40} a - 5.09071 \times 10^{40},\ u^{125} + 2u^{124} + \cdots + u -$
$I_2^u = \langle b - 1,\ a + 2u - 1,\ u^2 - u + 1 \rangle$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 127 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. $\boldsymbol{I_1^u = \langle -2.64 \times 10^{40} u^{124} + 4.70 \times 10^{39} u^{123} + \cdots + 3.20 \times 10^{40} b - 5.54 \times 10^{39},\ 9.07 \times 10^{40} u^{124} + 6.60 \times 10^{40} u^{123} + \cdots + 3.20 \times 10^{40} a - 5.09 \times 10^{40},\ u^{125} + 2u^{124} + \cdots + u - 1 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_4 = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2.83992u^{124} - 2.06634u^{123} + \cdots + 4.13510u + 1.59317 \\ 0.826508u^{124} - 0.146984u^{123} + \cdots + 1.45976u + 0.173492 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.24000u^{124} - 0.706679u^{123} + \cdots + 2.85485u + 1.83334 \\ 0.266675u^{124} + 0.333348u^{123} + \cdots + 1.70001u - 0.0666735 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} u^8 + u^6 + u^4 + 1 \\ u^{10} + 2u^8 + 3u^6 + 2u^4 + u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^{16} + 3u^{14} + 5u^{12} + 4u^{10} + 3u^8 + 2u^6 + 2u^4 + 1 \\ u^{18} + 4u^{16} + 9u^{14} + 12u^{12} + 11u^{10} + 6u^8 + 2u^6 + u^2 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -2.64004u^{124} - 1.56683u^{123} + \cdots + 5.84349u + 1.44341 \\ 0.726745u^{124} - 0.346510u^{123} + \cdots + 2.01012u + 0.273255 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.599959u^{124} - 1.83317u^{123} + \cdots - 3.19932u + 0.516585 \\ 0.833251u^{124} + 1.66650u^{123} + \cdots + 0.949878u - 0.833252 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 10.6193u^{124} + 2.39865u^{123} + \cdots - 23.1870u + 3.66068$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{125}+60u^{124}+\cdots+u-1$
c_2, c_6	$u^{125}-2u^{124}+\cdots+u+1$
c_3	$u^{125}+2u^{124}+\cdots-16983u+4113$
c_4	$u^{125}+4u^{124}+\cdots-u-1$
c_5	$u^{125}+12u^{124}+\cdots+5527915u+76501$
c_7	$u^{125}-5u^{124}+\cdots-1824u+576$
c_8	$u^{125}+21u^{124}+\cdots-4u+4$
c_9, c_{12}	$u^{125}-3u^{124}+\cdots+4u+1$
c_{10}	$u^{125}+40u^{123}+\cdots+797687u+83807$
c_{11}	$u^{125}+2u^{124}+\cdots-94633u+20921$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{125} + 12y^{124} + \cdots + 93y - 1$
c_2, c_6	$y^{125} + 60y^{124} + \cdots + y - 1$
c_3	$y^{125} - 36y^{124} + \cdots + 355661613y - 16916769$
c_4	$y^{125} - 20y^{124} + \cdots + y - 1$
c_5	$y^{125} + 72y^{124} + \cdots + 18972461202289y - 5852403001$
c_7	$y^{125} + 7y^{124} + \cdots - 23886720y - 331776$
c_8	$y^{125} + 15y^{124} + \cdots - 312y - 16$
c_9, c_{12}	$y^{125} - 91y^{124} + \cdots - 80y - 1$
c_{10}	$y^{125} + 80y^{124} + \cdots - 960105157739y - 7023613249$
c_{11}	$y^{125} + 152y^{124} + \cdots - 25666758211y - 437688241$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.679728+0.699024I$ $a=\ 0.120952+0.299129I$ $b=\ 1.057920-0.438992I$	$-1.66051-3.41079I$	0
$u=-0.679728-0.699024I$ $a=\ 0.120952-0.299129I$ $b=\ 1.057920+0.438992I$	$-1.66051+3.41079I$	0
$u=\ 0.417169+0.960639I$ $a=\ 0.06438-2.91642I$ $b=\ 1.48058+1.21311I$	$-3.43724+0.22308I$	0
$u=\ 0.417169-0.960639I$ $a=\ 0.06438+2.91642I$ $b=\ 1.48058-1.21311I$	$-3.43724-0.22308I$	0
$u=\ 0.042794+1.048360I$ $a=-0.93427+1.89066I$ $b=\ 0.499129-0.925280I$	$-3.55440-4.88679I$	0
$u=\ 0.042794-1.048360I$ $a=-0.93427-1.89066I$ $b=\ 0.499129+0.925280I$	$-3.55440+4.88679I$	0
$u=\ 0.527401+0.911523I$ $a=\ 0.83347-1.82848I$ $b=\ 0.323242+1.049860I$	$0.87667-1.63345I$	0
$u=\ 0.527401-0.911523I$ $a=\ 0.83347+1.82848I$ $b=\ 0.323242-1.049860I$	$0.87667+1.63345I$	0
$u=\ 0.654295+0.680316I$ $a=-0.249155+0.077471I$ $b=-1.84244-0.49259I$	$-2.79139+11.94370I$	0
$u=\ 0.654295-0.680316I$ $a=-0.249155-0.077471I$ $b=-1.84244+0.49259I$	$-2.79139-11.94370I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.588695 + 0.882150I$ $a = 0.62229 + 2.26840I$ $b = -1.382160 + 0.020555I$	$-3.39116 - 7.10514I$	0
$u = 0.588695 - 0.882150I$ $a = 0.62229 - 2.26840I$ $b = -1.382160 - 0.020555I$	$-3.39116 + 7.10514I$	0
$u = -0.302084 + 0.884500I$ $a = 1.315450 + 0.128898I$ $b = -0.350582 - 0.042146I$	$-0.17063 - 1.54245I$	0
$u = -0.302084 - 0.884500I$ $a = 1.315450 - 0.128898I$ $b = -0.350582 + 0.042146I$	$-0.17063 + 1.54245I$	0
$u = -0.632357 + 0.885540I$ $a = -0.657986 + 0.942609I$ $b = 0.893003 + 0.248469I$	$-2.20410 - 1.63394I$	0
$u = -0.632357 - 0.885540I$ $a = -0.657986 - 0.942609I$ $b = 0.893003 - 0.248469I$	$-2.20410 + 1.63394I$	0
$u = -0.481245 + 0.989878I$ $a = -2.15411 - 5.32330I$ $b = -1.79483 + 1.92968I$	$-1.99408 - 2.49462I$	0
$u = -0.481245 - 0.989878I$ $a = -2.15411 + 5.32330I$ $b = -1.79483 - 1.92968I$	$-1.99408 + 2.49462I$	0
$u = 0.614840 + 0.651355I$ $a = -0.202010 + 0.487116I$ $b = 1.083140 - 0.651367I$	$1.63436 + 6.18286I$	0
$u = 0.614840 - 0.651355I$ $a = -0.202010 - 0.487116I$ $b = 1.083140 + 0.651367I$	$1.63436 - 6.18286I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.523488+0.974857I$ $a=\ 0.535106-0.492195I$ $b=-0.180160-0.006470I$	$0.13723-2.50988I$	0
$u=-0.523488-0.974857I$ $a=\ 0.535106+0.492195I$ $b=-0.180160+0.006470I$	$0.13723+2.50988I$	0
$u=-0.714997+0.510109I$ $a=\ 0.136421+0.179960I$ $b=\ 1.06493-0.99596I$	$1.69136-3.90937I$	0
$u=-0.714997-0.510109I$ $a=\ 0.136421-0.179960I$ $b=\ 1.06493+0.99596I$	$1.69136+3.90937I$	0
$u=\ 0.560497+0.671639I$ $a=-0.212247-0.432133I$ $b=\ 1.86870+0.04556I$	$-2.79087+3.80135I$	0
$u=\ 0.560497-0.671639I$ $a=-0.212247+0.432133I$ $b=\ 1.86870-0.04556I$	$-2.79087-3.80135I$	0
$u=\ 0.455975+1.040590I$ $a=-0.820468-0.637657I$ $b=\ 1.48309-0.44923I$	$-4.48448+3.27623I$	0
$u=\ 0.455975-1.040590I$ $a=-0.820468+0.637657I$ $b=\ 1.48309+0.44923I$	$-4.48448-3.27623I$	0
$u=\ 0.730308+0.453581I$ $a=\ 0.061004+0.200975I$ $b=\ 0.70357-1.47380I$	$1.41787-6.41870I$	$0.+6.69453I$
$u=\ 0.730308-0.453581I$ $a=\ 0.061004-0.200975I$ $b=\ 0.70357+1.47380I$	$1.41787+6.41870I$	$0.-6.69453I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.799477 + 0.308689I$ $a = 0.020614 + 0.223738I$ $b = 1.24228 - 1.00231I$	$-3.69917 - 5.73455I$	$-6.85671 + 7.09378I$
$u = 0.799477 - 0.308689I$ $a = 0.020614 - 0.223738I$ $b = 1.24228 + 1.00231I$	$-3.69917 + 5.73455I$	$-6.85671 - 7.09378I$
$u = -0.506487 + 1.025740I$ $a = 3.00969 + 3.23214I$ $b = 0.07486 - 2.30546I$	$-1.62403 - 3.30259I$	0
$u = -0.506487 - 1.025740I$ $a = 3.00969 - 3.23214I$ $b = 0.07486 + 2.30546I$	$-1.62403 + 3.30259I$	0
$u = -0.597525 + 0.607423I$ $a = 0.216601 + 0.430183I$ $b = -0.316208 + 0.286686I$	$1.21505 - 1.94918I$	$0. + 2.49347I$
$u = -0.597525 - 0.607423I$ $a = 0.216601 - 0.430183I$ $b = -0.316208 - 0.286686I$	$1.21505 + 1.94918I$	$0. - 2.49347I$
$u = 0.262991 + 1.120360I$ $a = 0.663394 - 1.183930I$ $b = -0.044368 + 1.250050I$	$-4.46336 - 0.92541I$	0
$u = 0.262991 - 1.120360I$ $a = 0.663394 + 1.183930I$ $b = -0.044368 - 1.250050I$	$-4.46336 + 0.92541I$	0
$u = -0.785970 + 0.311936I$ $a = -0.141515 + 0.120432I$ $b = -2.20613 - 1.49290I$	$-4.6627 + 14.1117I$	$-2.00000 - 7.82782I$
$u = -0.785970 - 0.311936I$ $a = -0.141515 - 0.120432I$ $b = -2.20613 + 1.49290I$	$-4.6627 - 14.1117I$	$-2.00000 + 7.82782I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.308513 + 1.114810I$ $a = -1.68383 - 0.24557I$ $b = 1.46021 - 0.59103I$	$-4.94453 + 0.88598I$	0
$u = 0.308513 - 1.114810I$ $a = -1.68383 + 0.24557I$ $b = 1.46021 + 0.59103I$	$-4.94453 - 0.88598I$	0
$u = 0.285561 + 1.125560I$ $a = 4.55270 + 1.54514I$ $b = -3.76181 - 0.48262I$	$-6.48680 - 0.11053I$	0
$u = 0.285561 - 1.125560I$ $a = 4.55270 - 1.54514I$ $b = -3.76181 + 0.48262I$	$-6.48680 + 0.11053I$	0
$u = -0.256396 + 1.138060I$ $a = -2.30114 + 0.08256I$ $b = 1.43263 + 0.94921I$	$-4.43460 + 5.17173I$	0
$u = -0.256396 - 1.138060I$ $a = -2.30114 - 0.08256I$ $b = 1.43263 - 0.94921I$	$-4.43460 - 5.17173I$	0
$u = 0.458197 + 0.695142I$ $a = 0.27253 - 1.95867I$ $b = 0.965335 + 0.595467I$	$-3.15790 + 0.22084I$	$-8.49031 - 0.86101I$
$u = 0.458197 - 0.695142I$ $a = 0.27253 + 1.95867I$ $b = 0.965335 - 0.595467I$	$-3.15790 - 0.22084I$	$-8.49031 + 0.86101I$
$u = -0.278408 + 1.139920I$ $a = -2.84647 - 1.31941I$ $b = 1.15327 + 1.56068I$	$-8.80406 + 2.32103I$	0
$u = -0.278408 - 1.139920I$ $a = -2.84647 + 1.31941I$ $b = 1.15327 - 1.56068I$	$-8.80406 - 2.32103I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.507293 + 1.059410I$ $a = -2.35206 + 1.55375I$ $b = 0.37284 - 2.22618I$	$-2.52029 + 6.06447I$	0
$u = 0.507293 - 1.059410I$ $a = -2.35206 - 1.55375I$ $b = 0.37284 + 2.22618I$	$-2.52029 - 6.06447I$	0
$u = -0.297301 + 1.138330I$ $a = -0.456658 - 0.640099I$ $b = -0.259830 - 0.236853I$	$-9.01723 - 1.79866I$	0
$u = -0.297301 - 1.138330I$ $a = -0.456658 + 0.640099I$ $b = -0.259830 + 0.236853I$	$-9.01723 + 1.79866I$	0
$u = -0.322370 + 1.131930I$ $a = 1.349850 - 0.187015I$ $b = -0.795345 - 0.943236I$	$-5.16933 - 4.76940I$	0
$u = -0.322370 - 1.131930I$ $a = 1.349850 + 0.187015I$ $b = -0.795345 + 0.943236I$	$-5.16933 + 4.76940I$	0
$u = -0.757754 + 0.311437I$ $a = 0.054965 + 0.391931I$ $b = 1.99098 + 0.29231I$	$0.00638 + 8.05941I$	$-1.16635 - 7.77341I$
$u = -0.757754 - 0.311437I$ $a = 0.054965 - 0.391931I$ $b = 1.99098 - 0.29231I$	$0.00638 - 8.05941I$	$-1.16635 + 7.77341I$
$u = 0.556429 + 1.041740I$ $a = -0.34386 + 2.59385I$ $b = -1.61019 - 1.15977I$	$2.38931 + 6.68336I$	0
$u = 0.556429 - 1.041740I$ $a = -0.34386 - 2.59385I$ $b = -1.61019 + 1.15977I$	$2.38931 - 6.68336I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.538815+0.616206I$ $a=-2.15717-0.62315I$ $b=-2.66750-1.24723I$	$-0.88644-1.62714I$	$17.6831-19.5128I$
$u=-0.538815-0.616206I$ $a=-2.15717+0.62315I$ $b=-2.66750+1.24723I$	$-0.88644+1.62714I$	$17.6831+19.5128I$
$u=-0.242591+1.161340I$ $a=\ \ 2.94505+1.49559I$ $b=-1.60809-1.71649I$	$-9.2942+11.1311I$	0
$u=-0.242591-1.161340I$ $a=\ \ 2.94505-1.49559I$ $b=-1.60809+1.71649I$	$-9.2942-11.1311I$	0
$u=\ \ 0.653640+0.479882I$ $a=-0.174699+0.330105I$ $b=-1.61922+0.67646I$	$4.03606-1.95840I$	$5.40020+2.12576I$
$u=\ \ 0.653640-0.479882I$ $a=-0.174699-0.330105I$ $b=-1.61922-0.67646I$	$4.03606+1.95840I$	$5.40020-2.12576I$
$u=-0.596610+1.032710I$ $a=-1.54569+0.73226I$ $b=\ \ 1.158340+0.743651I$	$0.152957-1.109810I$	0
$u=-0.596610-1.032710I$ $a=-1.54569-0.73226I$ $b=\ \ 1.158340-0.743651I$	$0.152957+1.109810I$	0
$u=\ \ 0.738104+0.319751I$ $a=-0.062585+0.404238I$ $b=-0.547597+0.963150I$	$-0.13708-3.70904I$	$-0.37034+1.40434I$
$u=\ \ 0.738104-0.319751I$ $a=-0.062585-0.404238I$ $b=-0.547597-0.963150I$	$-0.13708+3.70904I$	$-0.37034-1.40434I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.238691 + 1.173180I$ $a = -1.74345 + 1.16783I$ $b = 0.869383 - 1.084780I$	$-8.40775 - 2.68887I$	0
$u = 0.238691 - 1.173180I$ $a = -1.74345 - 1.16783I$ $b = 0.869383 + 1.084780I$	$-8.40775 + 2.68887I$	0
$u = -0.676930 + 0.423743I$ $a = 0.021492 + 0.350755I$ $b = -1.51090 - 0.16761I$	$3.78834 - 0.01819I$	$5.34389 + 0.31518I$
$u = -0.676930 - 0.423743I$ $a = 0.021492 - 0.350755I$ $b = -1.51090 + 0.16761I$	$3.78834 + 0.01819I$	$5.34389 - 0.31518I$
$u = -0.743871 + 0.288769I$ $a = -0.243464 - 0.168390I$ $b = 1.94501 + 1.38998I$	$-4.51308 + 5.31615I$	$-7.83628 - 6.20055I$
$u = -0.743871 - 0.288769I$ $a = -0.243464 + 0.168390I$ $b = 1.94501 - 1.38998I$	$-4.51308 - 5.31615I$	$-7.83628 + 6.20055I$
$u = -0.558215 + 1.072220I$ $a = 0.55939 - 2.37919I$ $b = -1.44362 + 0.58926I$	$1.89272 - 4.76849I$	0
$u = -0.558215 - 1.072220I$ $a = 0.55939 + 2.37919I$ $b = -1.44362 - 0.58926I$	$1.89272 + 4.76849I$	0
$u = -0.340644 + 1.163610I$ $a = 0.237640 - 0.493467I$ $b = 0.034493 + 1.011380I$	$-10.4687 - 10.1396I$	0
$u = -0.340644 - 1.163610I$ $a = 0.237640 + 0.493467I$ $b = 0.034493 - 1.011380I$	$-10.4687 + 10.1396I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.587202 + 1.067570I$ $a = 1.61895 - 1.96051I$ $b = 0.47226 + 1.69869I$	$-0.39121 + 11.44140I$	0
$u = 0.587202 - 1.067570I$ $a = 1.61895 + 1.96051I$ $b = 0.47226 - 1.69869I$	$-0.39121 - 11.44140I$	0
$u = 0.723221 + 0.295010I$ $a = -0.64670 - 1.32341I$ $b = -3.66740 - 0.92458I$	$-2.31097 - 3.02394I$	$15.4166 - 6.5863I$
$u = 0.723221 - 0.295010I$ $a = -0.64670 + 1.32341I$ $b = -3.66740 + 0.92458I$	$-2.31097 + 3.02394I$	$15.4166 + 6.5863I$
$u = 0.350810 + 1.173570I$ $a = -0.563732 - 0.198462I$ $b = 0.020877 + 0.351961I$	$-9.79515 + 1.43995I$	0
$u = 0.350810 - 1.173570I$ $a = -0.563732 + 0.198462I$ $b = 0.020877 - 0.351961I$	$-9.79515 - 1.43995I$	0
$u = -0.724995 + 0.268071I$ $a = -0.558292 - 0.965632I$ $b = -0.079967 + 0.440838I$	$-4.88103 + 1.27243I$	$-8.99250 + 0.12894I$
$u = -0.724995 - 0.268071I$ $a = -0.558292 + 0.965632I$ $b = -0.079967 - 0.440838I$	$-4.88103 - 1.27243I$	$-8.99250 - 0.12894I$
$u = 0.753049 + 0.147045I$ $a = -0.752425 + 0.367568I$ $b = 0.173370 + 0.028941I$	$-5.85796 - 2.23562I$	$-10.68167 + 2.74645I$
$u = 0.753049 - 0.147045I$ $a = -0.752425 - 0.367568I$ $b = 0.173370 - 0.028941I$	$-5.85796 + 2.23562I$	$-10.68167 - 2.74645I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.536312 + 1.117790I$ $a = -1.40779 - 1.95839I$ $b = 2.14740 - 0.18715I$	$-3.39435 + 6.72398I$	0
$u = 0.536312 - 1.117790I$ $a = -1.40779 + 1.95839I$ $b = 2.14740 + 0.18715I$	$-3.39435 - 6.72398I$	0
$u = -0.739162 + 0.175015I$ $a = 0.771899 + 0.922373I$ $b = 0.067243 + 0.437011I$	$-6.51335 - 6.60957I$	$-5.62101 + 4.12467I$
$u = -0.739162 - 0.175015I$ $a = 0.771899 - 0.922373I$ $b = 0.067243 - 0.437011I$	$-6.51335 + 6.60957I$	$-5.62101 - 4.12467I$
$u = -0.524578 + 1.125060I$ $a = 1.08312 - 1.35457I$ $b = -1.69848 + 0.30164I$	$-3.80007 - 3.00363I$	0
$u = -0.524578 - 1.125060I$ $a = 1.08312 + 1.35457I$ $b = -1.69848 - 0.30164I$	$-3.80007 + 3.00363I$	0
$u = 0.546770 + 1.125950I$ $a = 3.64704 + 4.31957I$ $b = -3.93131 + 0.93753I$	$-4.71854 + 7.85425I$	0
$u = 0.546770 - 1.125950I$ $a = 3.64704 - 4.31957I$ $b = -3.93131 - 0.93753I$	$-4.71854 - 7.85425I$	0
$u = -0.539702 + 1.131940I$ $a = 0.464154 + 0.756708I$ $b = -0.478007 - 0.590823I$	$-7.37528 - 6.06661I$	0
$u = -0.539702 - 1.131940I$ $a = 0.464154 - 0.756708I$ $b = -0.478007 + 0.590823I$	$-7.37528 + 6.06661I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.557323 + 1.123800I$ $a = -0.75957 + 1.33123I$ $b = -0.73436 - 1.21005I$	$-2.48314 + 8.62396I$	0
$u = 0.557323 - 1.123800I$ $a = -0.75957 - 1.33123I$ $b = -0.73436 + 1.21005I$	$-2.48314 - 8.62396I$	0
$u = -0.508559 + 1.151200I$ $a = 0.612855 + 0.045245I$ $b = 0.467583 - 0.421339I$	$-9.32943 + 1.96630I$	0
$u = -0.508559 - 1.151200I$ $a = 0.612855 - 0.045245I$ $b = 0.467583 + 0.421339I$	$-9.32943 - 1.96630I$	0
$u = -0.549823 + 1.133070I$ $a = -0.00851 + 3.64990I$ $b = 2.09455 - 1.85308I$	$-6.97130 - 10.20430I$	0
$u = -0.549823 - 1.133070I$ $a = -0.00851 - 3.64990I$ $b = 2.09455 + 1.85308I$	$-6.97130 + 10.20430I$	0
$u = 0.681358 + 0.286026I$ $a = 0.643069 - 0.107415I$ $b = 1.57186 + 0.33127I$	$-1.01732 - 2.03022I$	$-3.09406 + 4.57319I$
$u = 0.681358 - 0.286026I$ $a = 0.643069 + 0.107415I$ $b = 1.57186 - 0.33127I$	$-1.01732 + 2.03022I$	$-3.09406 - 4.57319I$
$u = 0.499047 + 1.158250I$ $a = -0.487226 - 0.417308I$ $b = -0.0464337 + 0.1279410I$	$-8.78961 + 6.84987I$	0
$u = 0.499047 - 1.158250I$ $a = -0.487226 + 0.417308I$ $b = -0.0464337 - 0.1279410I$	$-8.78961 - 6.84987I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.560115+1.131450I$ $a=-1.19225+2.47759I$ $b=\ \ 2.39723-0.55290I$	$-2.39559-13.02930I$	0
$u=-0.560115-1.131450I$ $a=-1.19225-2.47759I$ $b=\ \ 2.39723+0.55290I$	$-2.39559+13.02930I$	0
$u=-0.530131+0.510836I$ $a=\ \ 0.772832-0.714498I$ $b=\ \ 0.53127+1.62919I$	$-0.099793-0.946670I$	$-4.33653+4.47517I$
$u=-0.530131-0.510836I$ $a=\ \ 0.772832+0.714498I$ $b=\ \ 0.53127-1.62919I$	$-0.099793+0.946670I$	$-4.33653-4.47517I$
$u=-0.568330+1.140120I$ $a=-0.11986-3.80079I$ $b=-2.38820+1.80200I$	$-7.1053-19.1835I$	0
$u=-0.568330-1.140120I$ $a=-0.11986+3.80079I$ $b=-2.38820-1.80200I$	$-7.1053+19.1835I$	0
$u=-0.683738+0.235270I$ $a=\ \ 0.016220-0.779945I$ $b=-1.108470-0.100376I$	$-1.28643-1.61583I$	$-3.37728+3.87828I$
$u=-0.683738-0.235270I$ $a=\ \ 0.016220+0.779945I$ $b=-1.108470+0.100376I$	$-1.28643+1.61583I$	$-3.37728-3.87828I$
$u=\ \ 0.570742+1.145300I$ $a=\ \ 0.19435-2.38956I$ $b=\ \ 1.34157+1.20026I$	$-6.17469+10.84830I$	0
$u=\ \ 0.570742-1.145300I$ $a=\ \ 0.19435+2.38956I$ $b=\ \ 1.34157-1.20026I$	$-6.17469-10.84830I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.122967+0.694323I$ $a=\ \ 1.248320-0.464863I$ $b=-0.377367+0.449759I$	$-0.15596-1.46517I$	$-2.11111+4.06907I$
$u=-0.122967-0.694323I$ $a=\ \ 1.248320+0.464863I$ $b=-0.377367-0.449759I$	$-0.15596+1.46517I$	$-2.11111-4.06907I$
$u=\ \ 0.529500+0.371661I$ $a=\ \ 0.750806-0.075379I$ $b=\ \ 0.14713+1.53695I$	$-0.59609-1.80402I$	$-2.50103+5.03505I$
$u=\ \ 0.529500-0.371661I$ $a=\ \ 0.750806+0.075379I$ $b=\ \ 0.14713-1.53695I$	$-0.59609+1.80402I$	$-2.50103-5.03505I$
$u=\ \ 0.299372$ $a=\ \ 3.72513$ $b=\ \ 0.723367$	-2.39057	-2.96710

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4u - 1$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.500000+0.866025I$		
$a=$	$-1.73205I$	$-1.64493+2.02988I$	$-3.00000-3.46410I$
$b=$	1.00000		
$u=$	$0.500000-0.866025I$		
$a=$	$1.73205I$	$-1.64493-2.02988I$	$-3.00000+3.46410I$
$b=$	1.00000		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^2-u+1)(u^{125}+60u^{124}+\cdots+u-1)$
c_2	$(u^2+u+1)(u^{125}-2u^{124}+\cdots+u+1)$
c_3	$(u^2-u+1)(u^{125}+2u^{124}+\cdots-16983u+4113)$
c_4	$(u^2-u+1)(u^{125}+4u^{124}+\cdots-u-1)$
c_5	$(u^2-u+1)(u^{125}+12u^{124}+\cdots+5527915u+76501)$
c_6	$(u^2-u+1)(u^{125}-2u^{124}+\cdots+u+1)$
c_7	$u^2(u^{125}-5u^{124}+\cdots-1824u+576)$
c_8	$u^2(u^{125}+21u^{124}+\cdots-4u+4)$
c_9	$((u-1)^2)(u^{125}-3u^{124}+\cdots+4u+1)$
c_{10}	$(u^2-u+1)(u^{125}+40u^{123}+\cdots+797687u+83807)$
c_{11}	$(u^2-u+1)(u^{125}+2u^{124}+\cdots-94633u+20921)$
c_{12}	$((u+1)^2)(u^{125}-3u^{124}+\cdots+4u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2+y+1)(y^{125}+12y^{124}+\cdots+93y-1)$
c_2, c_6	$(y^2+y+1)(y^{125}+60y^{124}+\cdots+y-1)$
c_3	$(y^2+y+1)(y^{125}-36y^{124}+\cdots+3.55662\times10^8y-1.69168\times10^7)$
c_4	$(y^2+y+1)(y^{125}-20y^{124}+\cdots+y-1)$
c_5	$(y^2+y+1)(y^{125}+72y^{124}+\cdots+1.89725\times10^{13}y-5.85240\times10^9)$
c_7	$y^2(y^{125}+7y^{124}+\cdots-2.38867\times10^7y-331776)$
c_8	$y^2(y^{125}+15y^{124}+\cdots-312y-16)$
c_9, c_{12}	$((y-1)^2)(y^{125}-91y^{124}+\cdots-80y-1)$
c_{10}	$(y^2+y+1)(y^{125}+80y^{124}+\cdots-9.60105\times10^{11}y-7.02361\times10^9)$
c_{11}	$(y^2+y+1)(y^{125}+152y^{124}+\cdots-2.56668\times10^{10}y-4.37688\times10^8)$