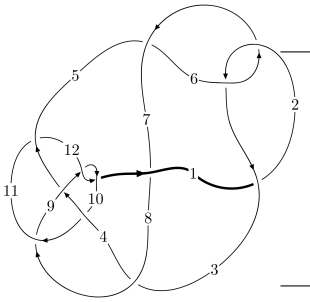
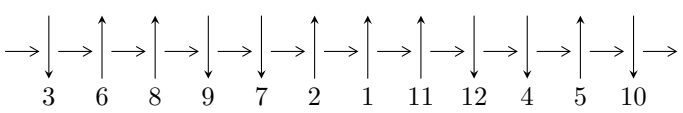
$12a_{0282}$ $(K12a_{0282})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.07020 \times 10^{371} u^{117} - 5.81468 \times 10^{371} u^{116} + \cdots + 7.49849 \times 10^{370} b - 3.68350 \times 10^{371},$$
$$- 3.72284 \times 10^{371} u^{117} - 7.75129 \times 10^{371} u^{116} + \cdots + 7.49849 \times 10^{370} a - 1.71965 \times 10^{371},$$
$$u^{118} + 3u^{117} + \cdots + 4u + 1 \rangle$$
$$I_2^u = \langle b + a + 1,\ a^2 + a + 1,\ u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 120 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. $\boldsymbol{I_1^u = \langle -2.07 \times 10^{371} u^{117} - 5.81 \times 10^{371} u^{116} + \cdots + 7.50 \times 10^{370} b - 3.68 \times 10^{371},\ -3.72 \times 10^{371} u^{117} - 7.75 \times 10^{371} u^{116} + \cdots + 7.50 \times 10^{370} a - 1.72 \times 10^{371},\ u^{118} + 3u^{117} + \cdots + 4u + 1 \rangle}$

(i) Arc colorings

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 4.96478u^{117} + 10.3371u^{116} + \cdots + 2.65024u + 2.29333 \\ 2.76083u^{117} + 7.75447u^{116} + \cdots + 14.8380u + 4.91232 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 7.72561u^{117} + 18.0916u^{116} + \cdots + 17.4882u + 7.20565 \\ 2.76083u^{117} + 7.75447u^{116} + \cdots + 14.8380u + 4.91232 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1.65243u^{117} + 3.67747u^{116} + \cdots + 1.68852u + 5.62501 \\ 1.61665u^{117} + 3.65263u^{116} + \cdots + 5.67056u + 2.51293 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.838669u^{117} + 1.50372u^{116} + \cdots + 3.43379u + 3.79256 \\ u^3 - u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0861580u^{117} + 0.291059u^{116} + \cdots - 11.6079u + 0.298903 \\ -0.314122u^{117} + 0.483276u^{116} + \cdots + 2.84214u + 1.06374 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.581121u^{117} + 1.03808u^{116} + \cdots + 2.43549u + 3.53318 \\ -0.0304212u^{117} - 0.114438u^{116} + \cdots - 0.972145u - 0.0476170 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 5.57154u^{117} + 11.8712u^{116} + \cdots + 6.86687u + 2.11380 \\ 0.588302u^{117} + 2.34943u^{116} + \cdots + 6.13446u + 1.92637 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0709175u^{117} + 0.593978u^{116} + \cdots + 14.3627u + 4.59643 \\ -4.77232u^{117} - 9.31946u^{116} + \cdots - 14.1163u - 3.92537 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -26.8874u^{117} - 59.6880u^{116} + \cdots - 86.8976u - 21.2813$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{118} + 38u^{117} + \cdots - u + 1$
c_2, c_6	$u^{118} - 2u^{117} + \cdots + u + 1$
c_3	$u^{118} - 25u^{116} + \cdots + 7258365u + 2866753$
c_4	$u^{118} + 4u^{117} + \cdots + u + 1$
c_7	$u^{118} + 5u^{117} + \cdots + 2784u + 576$
c_8	$u^{118} + 19u^{117} + \cdots - 4u + 4$
c_9, c_{12}	$u^{118} - 3u^{117} + \cdots - 4u + 1$
c_{10}	$u^{118} + 55u^{116} + \cdots - 27u + 1$
c_{11}	$u^{118} + 2u^{117} + \cdots + 125u + 71$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{118} + 86y^{117} + \cdots + 19y + 1$
c_2, c_6	$y^{118} + 38y^{117} + \cdots - y + 1$
c_3	$y^{118} - 50y^{117} + \cdots - 1041900568014 33y + 8218272763009$
c_4	$y^{118} - 18y^{117} + \cdots - y + 1$
c_7	$y^{118} - 7y^{117} + \cdots - 885888y + 331776$
c_8	$y^{118} - 15y^{117} + \cdots - 328y + 16$
c_9, c_{12}	$y^{118} - 73y^{117} + \cdots - 56y + 1$
c_{10}	$y^{118} + 110y^{117} + \cdots + 111y + 1$
c_{11}	$y^{118} + 118y^{117} + \cdots + 457235y + 5041$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.015810 + 0.157426I$ $a = 0.38768 + 2.73647I$ $b = 0.200813 - 0.493241I$	$2.51659 - 1.87258I$	0
$u = 1.015810 - 0.157426I$ $a = 0.38768 - 2.73647I$ $b = 0.200813 + 0.493241I$	$2.51659 + 1.87258I$	0
$u = 1.029710 + 0.100243I$ $a = -0.41457 - 2.87329I$ $b = -0.156824 + 0.454000I$	$-3.63938 - 2.44452I$	0
$u = 1.029710 - 0.100243I$ $a = -0.41457 + 2.87329I$ $b = -0.156824 - 0.454000I$	$-3.63938 + 2.44452I$	0
$u = -1.005490 + 0.266284I$ $a = -0.135677 - 0.432659I$ $b = 0.79726 + 1.47486I$	$-3.26106 + 5.02325I$	0
$u = -1.005490 - 0.266284I$ $a = -0.135677 + 0.432659I$ $b = 0.79726 - 1.47486I$	$-3.26106 - 5.02325I$	0
$u = 0.952019 + 0.096599I$ $a = 0.59537 + 2.68269I$ $b = 0.238554 - 0.415806I$	$-0.414651 - 0.426041I$	0
$u = 0.952019 - 0.096599I$ $a = 0.59537 - 2.68269I$ $b = 0.238554 + 0.415806I$	$-0.414651 + 0.426041I$	0
$u = 1.032140 + 0.155438I$ $a = -0.36475 - 2.75274I$ $b = -0.188107 + 0.499728I$	$1.69795 - 7.60447I$	0
$u = 1.032140 - 0.155438I$ $a = -0.36475 + 2.75274I$ $b = -0.188107 - 0.499728I$	$1.69795 + 7.60447I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.269115 + 0.917004I$ $a = 0.690481 + 0.821341I$ $b = -0.687950 - 0.610525I$	$0.02840 - 6.52273I$	0
$u = 0.269115 - 0.917004I$ $a = 0.690481 - 0.821341I$ $b = -0.687950 + 0.610525I$	$0.02840 + 6.52273I$	0
$u = 1.054010 + 0.019013I$ $a = -0.14652 - 3.21044I$ $b = -0.035898 + 0.412481I$	$-1.29395 + 2.39044I$	0
$u = 1.054010 - 0.019013I$ $a = -0.14652 + 3.21044I$ $b = -0.035898 - 0.412481I$	$-1.29395 - 2.39044I$	0
$u = -0.901424 + 0.275075I$ $a = 0.180834 + 0.360431I$ $b = -0.63849 - 1.44278I$	$0.87326 + 2.58349I$	0
$u = -0.901424 - 0.275075I$ $a = 0.180834 - 0.360431I$ $b = -0.63849 + 1.44278I$	$0.87326 - 2.58349I$	0
$u = -1.011000 + 0.354373I$ $a = 0.195062 + 0.464782I$ $b = -0.79451 - 1.36116I$	$3.39364 + 5.11487I$	0
$u = -1.011000 - 0.354373I$ $a = 0.195062 - 0.464782I$ $b = -0.79451 + 1.36116I$	$3.39364 - 5.11487I$	0
$u = -0.915659 + 0.139482I$ $a = -0.074285 - 0.316118I$ $b = 0.55915 + 1.72946I$	$-1.30357 - 1.42343I$	0
$u = -0.915659 - 0.139482I$ $a = -0.074285 + 0.316118I$ $b = 0.55915 - 1.72946I$	$-1.30357 + 1.42343I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.081212+0.914425I$ $a=-0.736305-0.669805I$ $b=\ \ 0.676105+0.737768I$	$0.71208-1.59697I$	0
$u=-0.081212-0.914425I$ $a=-0.736305+0.669805I$ $b=\ \ 0.676105-0.737768I$	$0.71208+1.59697I$	0
$u=-0.307163+1.040230I$ $a=-0.652511-0.627322I$ $b=\ \ 0.735642+0.814176I$	$6.57483+2.25127I$	0
$u=-0.307163-1.040230I$ $a=-0.652511+0.627322I$ $b=\ \ 0.735642-0.814176I$	$6.57483-2.25127I$	0
$u=-1.037390+0.348408I$ $a=-0.183158-0.480234I$ $b=\ \ 0.82330+1.36488I$	$2.36107+10.94710I$	0
$u=-1.037390-0.348408I$ $a=-0.183158+0.480234I$ $b=\ \ 0.82330-1.36488I$	$2.36107-10.94710I$	0
$u=-0.281028+1.065350I$ $a=\ \ 0.654000+0.637762I$ $b=-0.741922-0.802911I$	$7.13113-3.56996I$	0
$u=-0.281028-1.065350I$ $a=\ \ 0.654000-0.637762I$ $b=-0.741922+0.802911I$	$7.13113+3.56996I$	0
$u=-0.136691+1.096460I$ $a=\ \ 0.670860+0.673006I$ $b=-0.743314-0.752149I$	$2.97882-4.69027I$	0
$u=-0.136691-1.096460I$ $a=\ \ 0.670860-0.673006I$ $b=-0.743314+0.752149I$	$2.97882+4.69027I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.091158 + 0.881469I$ $a = -0.752633 - 0.753611I$ $b = 0.665671 + 0.671736I$	$0.70380 - 1.66733I$	0
$u = 0.091158 - 0.881469I$ $a = -0.752633 + 0.753611I$ $b = 0.665671 - 0.671736I$	$0.70380 + 1.66733I$	0
$u = 0.861211 + 0.189114I$ $a = 0.40154 + 2.54454I$ $b = 0.315865 - 0.482426I$	$2.88518 + 0.60480I$	0
$u = 0.861211 - 0.189114I$ $a = 0.40154 - 2.54454I$ $b = 0.315865 + 0.482426I$	$2.88518 - 0.60480I$	0
$u = -0.721420 + 0.496127I$ $a = 0.410786 + 0.364333I$ $b = -0.601352 - 1.139610I$	$5.78853 + 2.01291I$	0
$u = -0.721420 - 0.496127I$ $a = 0.410786 - 0.364333I$ $b = -0.601352 + 1.139610I$	$5.78853 - 2.01291I$	0
$u = 0.506278 + 0.705306I$ $a = 0.592748 + 1.015280I$ $b = -0.640262 - 0.510338I$	$-3.48678 - 1.44357I$	0
$u = 0.506278 - 0.705306I$ $a = 0.592748 - 1.015280I$ $b = -0.640262 + 0.510338I$	$-3.48678 + 1.44357I$	0
$u = -0.667796 + 0.538503I$ $a = -0.463899 - 0.369387I$ $b = 0.597684 + 1.088240I$	$5.43264 - 3.77865I$	0
$u = -0.667796 - 0.538503I$ $a = -0.463899 + 0.369387I$ $b = 0.597684 - 1.088240I$	$5.43264 + 3.77865I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.832730 + 0.200752I$ $a = -0.37783 - 2.53219I$ $b = -0.332435 + 0.487767I$	$2.16607 + 6.31020I$	0
$u = 0.832730 - 0.200752I$ $a = -0.37783 + 2.53219I$ $b = -0.332435 - 0.487767I$	$2.16607 - 6.31020I$	0
$u = -0.071467 + 1.153040I$ $a = -0.663318 - 0.691443I$ $b = 0.759544 + 0.728954I$	$-0.63375 - 7.11494I$	0
$u = -0.071467 - 1.153040I$ $a = -0.663318 + 0.691443I$ $b = 0.759544 - 0.728954I$	$-0.63375 + 7.11494I$	0
$u = -0.739717 + 0.402979I$ $a = 1.04982 + 0.97694I$ $b = 1.209050 - 0.555868I$	$5.26103 + 7.71157I$	0
$u = -0.739717 - 0.402979I$ $a = 1.04982 - 0.97694I$ $b = 1.209050 + 0.555868I$	$5.26103 - 7.71157I$	0
$u = -0.819019 + 0.155283I$ $a = 0.971974 + 0.428416I$ $b = 1.54179 - 0.38616I$	$-1.21527 + 3.13767I$	0
$u = -0.819019 - 0.155283I$ $a = 0.971974 - 0.428416I$ $b = 1.54179 + 0.38616I$	$-1.21527 - 3.13767I$	0
$u = 0.869091 + 0.814784I$ $a = 0.361592 + 0.843929I$ $b = -0.723955 - 0.412630I$	$1.08187 + 3.26532I$	0
$u = 0.869091 - 0.814784I$ $a = 0.361592 - 0.843929I$ $b = -0.723955 + 0.412630I$	$1.08187 - 3.26532I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.134497+1.199770I$ $a=\ \ 0.650884+0.682691I$ $b=-0.776333-0.747087I$	$5.92086-6.76139I$	0
$u=-0.134497-1.199770I$ $a=\ \ 0.650884-0.682691I$ $b=-0.776333+0.747087I$	$5.92086+6.76139I$	0
$u=-0.691973+0.382009I$ $a=-1.15011-0.97644I$ $b=-1.188440+0.509019I$	$5.89343+1.77910I$	0
$u=-0.691973-0.382009I$ $a=-1.15011+0.97644I$ $b=-1.188440-0.509019I$	$5.89343-1.77910I$	0
$u=-1.177530+0.289452I$ $a=\ \ 0.406875+0.810978I$ $b=\ \ 1.35862-0.97721I$	$-2.97221+3.73297I$	0
$u=-1.177530-0.289452I$ $a=\ \ 0.406875-0.810978I$ $b=\ \ 1.35862+0.97721I$	$-2.97221-3.73297I$	0
$u=-0.118706+1.215020I$ $a=-0.649535-0.686282I$ $b=\ \ 0.780365+0.741648I$	$5.01785-12.58190I$	0
$u=-0.118706-1.215020I$ $a=-0.649535+0.686282I$ $b=\ \ 0.780365-0.741648I$	$5.01785+12.58190I$	0
$u=\ \ 0.939468+0.789903I$ $a=-0.317332-0.818773I$ $b=\ \ 0.728384+0.388427I$	$1.72076-2.34932I$	0
$u=\ \ 0.939468-0.789903I$ $a=-0.317332+0.818773I$ $b=\ \ 0.728384-0.388427I$	$1.72076+2.34932I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.209170+0.245411I$ $a=-0.352875-0.784326I$ $b=-1.36271+1.02924I$	$-4.28002-1.46660I$	0
$u=-1.209170-0.245411I$ $a=-0.352875+0.784326I$ $b=-1.36271-1.02924I$	$-4.28002+1.46660I$	0
$u=0.757637+0.057261I$ $a=-0.32575-2.30952I$ $b=-0.385386+0.423671I$	$-2.99620+1.54111I$	0
$u=0.757637-0.057261I$ $a=-0.32575+2.30952I$ $b=-0.385386-0.423671I$	$-2.99620-1.54111I$	0
$u=-1.263400+0.317800I$ $a=-0.339565-0.874731I$ $b=-1.29247+1.00765I$	$-8.36346+4.71709I$	0
$u=-1.263400-0.317800I$ $a=-0.339565+0.874731I$ $b=-1.29247-1.00765I$	$-8.36346-4.71709I$	0
$u=-1.246670+0.399816I$ $a=0.381212+0.939591I$ $b=1.26177-0.96422I$	$-3.32751+5.96754I$	0
$u=-1.246670-0.399816I$ $a=0.381212-0.939591I$ $b=1.26177+0.96422I$	$-3.32751-5.96754I$	0
$u=1.308010+0.236023I$ $a=-0.240272+0.391280I$ $b=-0.675237-0.124696I$	$-2.69361-0.24186I$	0
$u=1.308010-0.236023I$ $a=-0.240272-0.391280I$ $b=-0.675237+0.124696I$	$-2.69361+0.24186I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.209850+0.589213I$ $a=\ \ 0.436095+1.095500I$ $b=\ \ 1.17962-0.90925I$	$3.70942+3.52040I$	0
$u=-1.209850-0.589213I$ $a=\ \ 0.436095-1.095500I$ $b=\ \ 1.17962+0.90925I$	$3.70942-3.52040I$	0
$u=-1.298860+0.391525I$ $a=-0.335725-0.947097I$ $b=-1.24676+0.98990I$	$-4.69083+10.88950I$	0
$u=-1.298860-0.391525I$ $a=-0.335725+0.947097I$ $b=-1.24676-0.98990I$	$-4.69083-10.88950I$	0
$u=\ \ 1.190500+0.662977I$ $a=-0.165168-0.676017I$ $b=\ \ 0.744528+0.294187I$	$-1.86135-2.86516I$	0
$u=\ \ 1.190500-0.662977I$ $a=-0.165168+0.676017I$ $b=\ \ 0.744528-0.294187I$	$-1.86135+2.86516I$	0
$u=-1.229850+0.596223I$ $a=-0.420179-1.101220I$ $b=-1.17496+0.91728I$	$4.12415+9.43760I$	0
$u=-1.229850-0.596223I$ $a=-0.420179+1.101220I$ $b=-1.17496-0.91728I$	$4.12415-9.43760I$	0
$u=-1.298800+0.524744I$ $a=\ \ 0.362203+1.050490I$ $b=\ \ 1.19470-0.95471I$	$-3.09034+6.91109I$	0
$u=-1.298800-0.524744I$ $a=\ \ 0.362203-1.050490I$ $b=\ \ 1.19470+0.95471I$	$-3.09034-6.91109I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.30319+0.57277I$ $a=-0.363552-1.086580I$ $b=-1.17601+0.94880I$	$-0.68664+10.56830I$	0
$u=-1.30319-0.57277I$ $a=-0.363552+1.086580I$ $b=-1.17601-0.94880I$	$-0.68664-10.56830I$	0
$u=-0.547763$ $a=-1.82067$ $b=-1.17013$	1.89297	8.36850
$u=-1.33836+0.57259I$ $a=0.338441+1.089300I$ $b=1.17117-0.96117I$	$-4.60882+13.13770I$	0
$u=-1.33836-0.57259I$ $a=0.338441-1.089300I$ $b=1.17117+0.96117I$	$-4.60882-13.13770I$	0
$u=-1.33512+0.60665I$ $a=-0.343160-1.112640I$ $b=-1.16021+0.95569I$	$2.12710+13.04790I$	0
$u=-1.33512-0.60665I$ $a=-0.343160+1.112640I$ $b=-1.16021-0.95569I$	$2.12710-13.04790I$	0
$u=1.36618+0.55025I$ $a=0.094893+0.523038I$ $b=-0.763644-0.223319I$	$-3.28110+0.44586I$	0
$u=1.36618-0.55025I$ $a=0.094893-0.523038I$ $b=-0.763644+0.223319I$	$-3.28110-0.44586I$	0
$u=-1.34560+0.60651I$ $a=0.335999+1.113160I$ $b=1.15904-0.95914I$	$1.1409+18.9106I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.34560-0.60651I$ $a=\ \ 0.335999-1.113160I$ $b=\ \ 1.15904+0.95914I$	$1.1409-18.9106I$	0
$u=\ \ 1.30477+0.71525I$ $a=\ \ 0.203861+0.593646I$ $b=-0.783863-0.279163I$	$-5.45211-4.88189I$	0
$u=\ \ 1.30477-0.71525I$ $a=\ \ 0.203861-0.593646I$ $b=-0.783863+0.279163I$	$-5.45211+4.88189I$	0
$u=\ \ 1.25456+0.80041I$ $a=-0.256727-0.626353I$ $b=\ \ 0.791903+0.309346I$	$0.76439-4.56010I$	0
$u=\ \ 1.25456-0.80041I$ $a=-0.256727+0.626353I$ $b=\ \ 0.791903-0.309346I$	$0.76439+4.56010I$	0
$u=\ \ 1.44617+0.44415I$ $a=-0.046547-0.422137I$ $b=\ \ 0.766830+0.175809I$	$-3.50011-4.05313I$	0
$u=\ \ 1.44617-0.44415I$ $a=-0.046547+0.422137I$ $b=\ \ 0.766830-0.175809I$	$-3.50011+4.05313I$	0
$u=\ \ 1.28308+0.80664I$ $a=\ \ 0.259937+0.609495I$ $b=-0.799316-0.304270I$	$-0.12251-10.28450I$	0
$u=\ \ 1.28308-0.80664I$ $a=\ \ 0.259937-0.609495I$ $b=-0.799316+0.304270I$	$-0.12251+10.28450I$	0
$u=-0.283331+0.365958I$ $a=-1.89931-1.77238I$ $b=-0.856366+0.377788I$	$5.29542-1.89909I$	$5.77474-1.14352I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.283331-0.365958I$ $a=-1.89931+1.77238I$ $b=-0.856366-0.377788I$	$5.29542+1.89909I$	$5.77474+1.14352I$
$u=-0.242525+0.384233I$ $a=\ \ 1.86328+1.93677I$ $b=\ \ 0.824641-0.392540I$	$4.46807-7.74602I$	$4.03411+3.90401I$
$u=-0.242525-0.384233I$ $a=\ \ 1.86328-1.93677I$ $b=\ \ 0.824641+0.392540I$	$4.46807+7.74602I$	$4.03411-3.90401I$
$u=\ \ 1.52175+0.29164I$ $a=\ \ 0.002981-0.278462I$ $b=\ \ 0.768917+0.113049I$	$-6.23740+1.19915I$	0
$u=\ \ 1.52175-0.29164I$ $a=\ \ 0.002981+0.278462I$ $b=\ \ 0.768917-0.113049I$	$-6.23740-1.19915I$	0
$u=\ \ 1.58291+0.16873I$ $a=-0.005354+0.153580I$ $b=-0.779064-0.062993I$	$-0.396545+0.829721I$	0
$u=\ \ 1.58291-0.16873I$ $a=-0.005354-0.153580I$ $b=-0.779064+0.062993I$	$-0.396545-0.829721I$	0
$u=-0.400507$ $a=-2.48892$ $b=-0.983507$	1.89645	7.34120
$u=\ \ 1.60558+0.20241I$ $a=-0.023615-0.173894I$ $b=\ \ 0.789565+0.073334I$	$-1.22456+6.46109I$	0
$u=\ \ 1.60558-0.20241I$ $a=-0.023615+0.173894I$ $b=\ \ 0.789565-0.073334I$	$-1.22456-6.46109I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.049857+0.375700I$ $a=-1.42763-0.44078I$ $b=\ \ 0.412152+0.687938I$	$0.236053-1.263220I$	$2.77957+4.87921I$
$u=-0.049857-0.375700I$ $a=-1.42763+0.44078I$ $b=\ \ 0.412152-0.687938I$	$0.236053+1.263220I$	$2.77957-4.87921I$
$u=\ \ 0.344749+0.071658I$ $a=\ \ 0.37116-3.05567I$ $b=-0.460452+0.450709I$	$0.10228-2.99479I$	$-1.46599+2.14432I$
$u=\ \ 0.344749-0.071658I$ $a=\ \ 0.37116+3.05567I$ $b=-0.460452-0.450709I$	$0.10228+2.99479I$	$-1.46599-2.14432I$
$u=-0.150353+0.230107I$ $a=\ \ 2.76365+2.39774I$ $b=\ \ 0.727149-0.276598I$	$-1.28119-2.58393I$	$-1.57512+2.81813I$
$u=-0.150353-0.230107I$ $a=\ \ 2.76365-2.39774I$ $b=\ \ 0.727149+0.276598I$	$-1.28119+2.58393I$	$-1.57512-2.81813I$
$u=\ \ 0.179612+0.093018I$ $a=-0.35158+4.28461I$ $b=\ \ 0.463286-0.401306I$	$0.40695+1.93439I$	$-0.33283-3.61891I$
$u=\ \ 0.179612-0.093018I$ $a=-0.35158-4.28461I$ $b=\ \ 0.463286+0.401306I$	$0.40695-1.93439I$	$-0.33283+3.61891I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

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

(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
$u = \quad 1.00000$ $a = -0.500000 + 0.866025I$ $b = -0.500000 - 0.866025I$	$-1.64493 - 2.02988I$	$-3.00000 + 3.46410I$
$u = \quad 1.00000$ $a = -0.500000 - 0.866025I$ $b = -0.500000 + 0.866025I$	$-1.64493 + 2.02988I$	$-3.00000 - 3.46410I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^2-u+1)(u^{118}+38u^{117}+\cdots-u+1)$
c_2	$(u^2+u+1)(u^{118}-2u^{117}+\cdots+u+1)$
c_3	$(u^2-u+1)(u^{118}-25u^{116}+\cdots+7258365u+2866753)$
c_4	$(u^2-u+1)(u^{118}+4u^{117}+\cdots+u+1)$
c_6	$(u^2-u+1)(u^{118}-2u^{117}+\cdots+u+1)$
c_7	$u^2(u^{118}+5u^{117}+\cdots+2784u+576)$
c_8	$u^2(u^{118}+19u^{117}+\cdots-4u+4)$
c_9	$((u-1)^2)(u^{118}-3u^{117}+\cdots-4u+1)$
c_{10}	$(u^2-u+1)(u^{118}+55u^{116}+\cdots-27u+1)$
c_{11}	$(u^2-u+1)(u^{118}+2u^{117}+\cdots+125u+71)$
c_{12}	$((u+1)^2)(u^{118}-3u^{117}+\cdots-4u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^2+y+1)(y^{118}+86y^{117}+\cdots+19y+1)$
c_2, c_6	$(y^2+y+1)(y^{118}+38y^{117}+\cdots-y+1)$
c_3	(y^2+y+1) $\cdot(y^{118}-50y^{117}+\cdots-104190056801433y+8218272763009)$
c_4	$(y^2+y+1)(y^{118}-18y^{117}+\cdots-y+1)$
c_7	$y^2(y^{118}-7y^{117}+\cdots-885888y+331776)$
c_8	$y^2(y^{118}-15y^{117}+\cdots-328y+16)$
c_9, c_{12}	$((y-1)^2)(y^{118}-73y^{117}+\cdots-56y+1)$
c_{10}	$(y^2+y+1)(y^{118}+110y^{117}+\cdots+111y+1)$
c_{11}	$(y^2+y+1)(y^{118}+118y^{117}+\cdots+457235y+5041)$