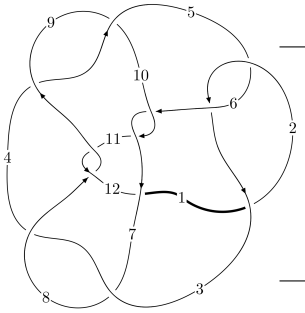
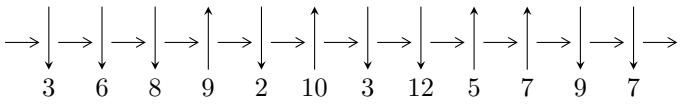
$12n_{0376}$ $(K12n_{0376})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.29866 \times 10^{170} u^{65} - 1.30524 \times 10^{169} u^{64} + \cdots + 2.37368 \times 10^{172} b + 1.61064 \times 10^{172},$$
$$- 1.42092 \times 10^{172} u^{65} - 6.96969 \times 10^{171} u^{64} + \cdots + 1.40047 \times 10^{174} a - 5.29249 \times 10^{174},$$
$$u^{66} - u^{65} + \cdots - 283u - 59 \rangle$$
$$I_2^u = \langle -547107839 u^{20} + 650340830 u^{19} + \cdots + 16127515 b + 671904942,$$
$$1292670203 u^{20} - 1531668600 u^{19} + \cdots + 16127515 a - 1597251904,\ u^{21} - 2u^{20} + \cdots - 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 87 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. $\boldsymbol{I_1^u = \langle -1.30 \times 10^{170} u^{65} - 1.31 \times 10^{169} u^{64} + \cdots + 2.37 \times 10^{172} b + 1.61 \times 10^{172},\ -1.42 \times 10^{172} u^{65} - 6.97 \times 10^{171} u^{64} + \cdots + 1.40 \times 10^{174} a - 5.29 \times 10^{174},\ u^{66} - u^{65} + \cdots - 283u - 59 \rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0101460u^{65} + 0.00497667u^{64} + \cdots - 6.90436u + 3.77907 \\ 0.00547109u^{65} + 0.000549881u^{64} + \cdots + 0.213003u - 0.678540 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -0.0371999u^{65} + 0.000132037u^{64} + \cdots - 10.9635u - 4.32444 \\ 0.00558096u^{65} - 0.00149963u^{64} + \cdots + 2.52802u + 0.980850 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0156171u^{65} + 0.00552655u^{64} + \cdots - 6.69135u + 3.10053 \\ 0.00547109u^{65} + 0.000549881u^{64} + \cdots + 0.213003u - 0.678540 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0130843u^{65} - 0.00173031u^{64} + \cdots + 1.28588u + 1.21472 \\ -0.00482668u^{65} - 0.00301544u^{64} + \cdots + 1.23112u - 0.215116 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.00412372u^{65} + 0.0123233u^{64} + \cdots - 10.8977u + 2.49609 \\ -0.0176584u^{65} + 0.00749844u^{64} + \cdots - 8.52232u - 2.06406 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0252026u^{65} + 0.00297306u^{64} + \cdots + 2.79443u + 2.86901 \\ -0.00121735u^{65} + 0.00691108u^{64} + \cdots - 4.53204u - 1.11595 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0725476u^{65} + 0.0237047u^{64} + \cdots - 35.1307u - 2.94708 \\ -0.0312738u^{65} + 0.00209774u^{64} + \cdots - 8.36009u - 1.96671 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0148679u^{65} - 0.00641855u^{64} + \cdots + 6.50217u + 1.66949 \\ -0.000909781u^{65} - 0.00295631u^{64} + \cdots + 1.94792u - 0.0437386 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0549937u^{65} + 0.0239803u^{64} + \cdots - 1.32112u - 6.19761$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{66} + 38u^{65} + \cdots - 20u + 1$
c_2, c_5	$u^{66} + 2u^{65} + \cdots + 10u^2 + 1$
c_3, c_7	$u^{66} - u^{65} + \cdots - 599u - 59$
c_4, c_9	$u^{66} + u^{65} + \cdots + 1920u - 1088$
c_6, c_{10}	$u^{66} - u^{65} + \cdots - 283u - 59$
c_8, c_{11}	$u^{66} - 2u^{65} + \cdots - 13u + 1$
c_{12}	$u^{66} + 2u^{65} + \cdots + 2893677u + 899893$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{66} - 6y^{65} + \cdots + 88y + 1$
c_2, c_5	$y^{66} - 38y^{65} + \cdots + 20y + 1$
c_3, c_7	$y^{66} - 71y^{65} + \cdots - 683301y + 3481$
c_4, c_9	$y^{66} - 27y^{65} + \cdots - 23148544y + 1183744$
c_6, c_{10}	$y^{66} - 29y^{65} + \cdots - 212367y + 3481$
c_8, c_{11}	$y^{66} + 18y^{65} + \cdots - 11y + 1$
c_{12}	$y^{66} - 78y^{65} + \cdots - 13342381349441y + 809807411449$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.009630+0.086875I$ $a=-0.865155+0.695569I$ $b=\ \ 0.646730-0.858274I$	$6.63058+2.08531I$	$4.22354-2.28056I$
$u=-1.009630-0.086875I$ $a=-0.865155-0.695569I$ $b=\ \ 0.646730+0.858274I$	$6.63058-2.08531I$	$4.22354+2.28056I$
$u=-0.630698+0.819545I$ $a=-1.08564+1.29025I$ $b=-0.145705-0.660230I$	$-5.32397-3.61939I$	$-3.35802+3.00391I$
$u=-0.630698-0.819545I$ $a=-1.08564-1.29025I$ $b=-0.145705+0.660230I$	$-5.32397+3.61939I$	$-3.35802-3.00391I$
$u=\ \ 0.855944+0.373732I$ $a=\ \ 0.776245+1.037920I$ $b=-0.979060-0.922126I$	$3.16003-1.29810I$	$-3.61685-1.27981I$
$u=\ \ 0.855944-0.373732I$ $a=\ \ 0.776245-1.037920I$ $b=-0.979060+0.922126I$	$3.16003+1.29810I$	$-3.61685+1.27981I$
$u=\ \ 0.919240+0.154057I$ $a=-0.06475-2.48944I$ $b=-0.959746+0.202331I$	$-0.086654+0.709749I$	$14.6199+25.0798I$
$u=\ \ 0.919240-0.154057I$ $a=-0.06475+2.48944I$ $b=-0.959746-0.202331I$	$-0.086654-0.709749I$	$14.6199-25.0798I$
$u=\ \ 0.916029+0.574839I$ $a=\ \ 0.02130-1.84018I$ $b=-0.915687+0.841121I$	$3.26731+5.19167I$	$-4.00000-5.91453I$
$u=\ \ 0.916029-0.574839I$ $a=\ \ 0.02130+1.84018I$ $b=-0.915687-0.841121I$	$3.26731-5.19167I$	$-4.00000+5.91453I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.173418+1.076000I$ $a=\ 0.606519+0.088557I$ $b=\ 0.974893-0.350221I$	$-2.26147+3.75022I$	$-5.56446-6.85194I$
$u=-0.173418-1.076000I$ $a=\ 0.606519-0.088557I$ $b=\ 0.974893+0.350221I$	$-2.26147-3.75022I$	$-5.56446+6.85194I$
$u=-0.519698+0.732621I$ $a=-0.109977+0.297576I$ $b=\ 1.47718-0.21621I$	$-10.75900+2.41313I$	$-9.03127+1.73650I$
$u=-0.519698-0.732621I$ $a=-0.109977-0.297576I$ $b=\ 1.47718+0.21621I$	$-10.75900-2.41313I$	$-9.03127-1.73650I$
$u=-0.749346+0.349951I$ $a=\ 0.55197-1.77976I$ $b=\ 1.059490+0.777077I$	$5.42275-4.01479I$	$2.47646+2.55070I$
$u=-0.749346-0.349951I$ $a=\ 0.55197+1.77976I$ $b=\ 1.059490-0.777077I$	$5.42275+4.01479I$	$2.47646-2.55070I$
$u=\ 1.067390+0.520714I$ $a=-0.98150+1.66983I$ $b=\ 1.164360-0.472130I$	$-8.03045+0.12830I$	0
$u=\ 1.067390-0.520714I$ $a=-0.98150-1.66983I$ $b=\ 1.164360+0.472130I$	$-8.03045-0.12830I$	0
$u=-0.969229+0.691515I$ $a=\ 0.445965-1.042750I$ $b=-0.375558+1.052890I$	$-4.37518-1.96161I$	0
$u=-0.969229-0.691515I$ $a=\ 0.445965+1.042750I$ $b=-0.375558-1.052890I$	$-4.37518+1.96161I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.702254 + 0.396363I$ $a = -0.370907 - 0.419474I$ $b = 1.64825 + 0.27071I$	$-9.41079 + 3.73475I$	$-1.97764 - 7.57060I$
$u = 0.702254 - 0.396363I$ $a = -0.370907 + 0.419474I$ $b = 1.64825 - 0.27071I$	$-9.41079 - 3.73475I$	$-1.97764 + 7.57060I$
$u = 0.189571 + 0.774061I$ $a = -2.16201 - 0.76177I$ $b = -0.048717 + 0.448000I$	$-5.12953 - 3.97226I$	$-2.53620 + 0.67549I$
$u = 0.189571 - 0.774061I$ $a = -2.16201 + 0.76177I$ $b = -0.048717 - 0.448000I$	$-5.12953 + 3.97226I$	$-2.53620 - 0.67549I$
$u = -1.199090 + 0.103811I$ $a = 0.026151 + 0.873772I$ $b = -1.145820 - 0.448707I$	$0.701365 + 0.560290I$	0
$u = -1.199090 - 0.103811I$ $a = 0.026151 - 0.873772I$ $b = -1.145820 + 0.448707I$	$0.701365 - 0.560290I$	0
$u = -0.855896 + 0.851844I$ $a = -0.377073 + 0.226573I$ $b = -1.193960 - 0.293229I$	$1.14814 - 4.23169I$	0
$u = -0.855896 - 0.851844I$ $a = -0.377073 - 0.226573I$ $b = -1.193960 + 0.293229I$	$1.14814 + 4.23169I$	0
$u = -0.588541 + 0.473255I$ $a = 0.03657 + 2.05711I$ $b = -0.918831 - 0.419709I$	$-1.84865 - 1.55160I$	$-9.86951 + 3.77741I$
$u = -0.588541 - 0.473255I$ $a = 0.03657 - 2.05711I$ $b = -0.918831 + 0.419709I$	$-1.84865 + 1.55160I$	$-9.86951 - 3.77741I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.583231 + 1.105720I$ $a = 0.365461 + 0.166066I$ $b = 0.875973 + 0.156748I$	$-1.25973 + 1.60946I$	0
$u = 0.583231 - 1.105720I$ $a = 0.365461 - 0.166066I$ $b = 0.875973 - 0.156748I$	$-1.25973 - 1.60946I$	0
$u = 1.26247$ $a = 1.73937$ $b = -0.819691$	0.936733	0
$u = 0.678975 + 0.254457I$ $a = -1.38925 - 0.87609I$ $b = -1.140560 + 0.239727I$	$-0.962746 + 1.013270I$	$-8.93256 + 2.66135I$
$u = 0.678975 - 0.254457I$ $a = -1.38925 + 0.87609I$ $b = -1.140560 - 0.239727I$	$-0.962746 - 1.013270I$	$-8.93256 - 2.66135I$
$u = 1.198670 + 0.480794I$ $a = -0.123627 - 0.483725I$ $b = 0.438626 + 0.674148I$	$3.38567 + 1.03176I$	0
$u = 1.198670 - 0.480794I$ $a = -0.123627 + 0.483725I$ $b = 0.438626 - 0.674148I$	$3.38567 - 1.03176I$	0
$u = -1.140890 + 0.605827I$ $a = -0.62705 - 1.69841I$ $b = 1.184480 + 0.438695I$	$-8.77795 - 7.59235I$	0
$u = -1.140890 - 0.605827I$ $a = -0.62705 + 1.69841I$ $b = 1.184480 - 0.438695I$	$-8.77795 + 7.59235I$	0
$u = 1.147170 + 0.619204I$ $a = 0.319998 + 1.132160I$ $b = -0.308780 - 1.182400I$	$-2.68437 + 9.27943I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.147170 - 0.619204I$ $a = 0.319998 - 1.132160I$ $b = -0.308780 + 1.182400I$	$-2.68437 - 9.27943I$	0
$u = 1.297790 + 0.269866I$ $a = -0.049488 - 0.712548I$ $b = 0.375452 + 0.619653I$	$3.28651 + 0.70632I$	0
$u = 1.297790 - 0.269866I$ $a = -0.049488 + 0.712548I$ $b = 0.375452 - 0.619653I$	$3.28651 - 0.70632I$	0
$u = -1.306810 + 0.303581I$ $a = -0.254876 + 0.950359I$ $b = 0.155440 - 0.803337I$	$4.37101 - 4.54876I$	0
$u = -1.306810 - 0.303581I$ $a = -0.254876 - 0.950359I$ $b = 0.155440 + 0.803337I$	$4.37101 + 4.54876I$	0
$u = -0.792328 + 1.127230I$ $a = 0.245968 - 0.148562I$ $b = -1.193740 + 0.508031I$	$-8.28883 + 1.02130I$	0
$u = -0.792328 - 1.127230I$ $a = 0.245968 + 0.148562I$ $b = -1.193740 - 0.508031I$	$-8.28883 - 1.02130I$	0
$u = -1.269320 + 0.570574I$ $a = 0.100258 - 1.297270I$ $b = 1.217640 + 0.524719I$	$1.20353 - 9.50394I$	0
$u = -1.269320 - 0.570574I$ $a = 0.100258 + 1.297270I$ $b = 1.217640 - 0.524719I$	$1.20353 + 9.50394I$	0
$u = 0.98914 + 1.01218I$ $a = 0.405389 + 0.898557I$ $b = 1.065930 - 0.564917I$	$1.55388 + 5.84749I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.98914 - 1.01218I$ $a = 0.405389 - 0.898557I$ $b = 1.065930 + 0.564917I$	$1.55388 - 5.84749I$	0
$u = -1.14794 + 0.86562I$ $a = -0.01851 + 1.44202I$ $b = -1.23555 - 0.69019I$	$-7.02539 - 8.25526I$	0
$u = -1.14794 - 0.86562I$ $a = -0.01851 - 1.44202I$ $b = -1.23555 + 0.69019I$	$-7.02539 + 8.25526I$	0
$u = 0.137966 + 0.528220I$ $a = 0.796178 - 0.216051I$ $b = -0.031272 + 0.313358I$	$-0.101260 + 1.177890I$	$-1.60509 - 5.48121I$
$u = 0.137966 - 0.528220I$ $a = 0.796178 + 0.216051I$ $b = -0.031272 - 0.313358I$	$-0.101260 - 1.177890I$	$-1.60509 + 5.48121I$
$u = 0.020560 + 0.528328I$ $a = -4.29255 - 0.39915I$ $b = 0.176919 + 0.209119I$	$-5.14008 - 3.94973I$	$0.643204 - 0.090602I$
$u = 0.020560 - 0.528328I$ $a = -4.29255 + 0.39915I$ $b = 0.176919 - 0.209119I$	$-5.14008 + 3.94973I$	$0.643204 + 0.090602I$
$u = 1.27921 + 0.73272I$ $a = 0.076111 + 1.032910I$ $b = 1.118870 - 0.498354I$	$1.06224 + 5.14116I$	0
$u = 1.27921 - 0.73272I$ $a = 0.076111 - 1.032910I$ $b = 1.118870 + 0.498354I$	$1.06224 - 5.14116I$	0
$u = 0.64925 + 1.38410I$ $a = 0.118590 + 0.092801I$ $b = -1.156150 - 0.470421I$	$-8.02803 - 8.05910I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.64925 - 1.38410I$ $a = \quad 0.118590 - 0.092801I$ $b = -1.156150 + 0.470421I$	$-8.02803 + 8.05910I$	0
$u = \quad 1.28691 + 0.85432I$ $a = \quad 0.034457 - 1.326560I$ $b = -1.29162 + 0.68757I$	$-5.7819 + 15.8817I$	0
$u = \quad 1.28691 - 0.85432I$ $a = \quad 0.034457 + 1.326560I$ $b = -1.29162 - 0.68757I$	$-5.7819 - 15.8817I$	0
$u = -1.63204 + 0.55209I$ $a = \quad 0.385181 + 0.448101I$ $b = -0.729629 + 0.000860I$	$3.55115 - 2.82787I$	0
$u = -1.63204 - 0.55209I$ $a = \quad 0.385181 - 0.448101I$ $b = -0.729629 - 0.000860I$	$3.55115 + 2.82787I$	0
$u = -0.131285$ $a = \quad 4.53665$ $b = -0.799964$	-1.37349	-6.68870

II.

$\boldsymbol{I_2^u = \langle -5.47\times 10^8 u^{20} + 6.50\times 10^8 u^{19} + \cdots + 1.61\times 10^7 b + 6.72\times 10^8,\ 1.29\times 10^9 u^{20} - 1.53\times 10^9 u^{19} + \cdots + 1.61\times 10^7 a - 1.60\times 10^9,\ u^{21} - 2u^{20} + \cdots - 2u + 1\rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -80.1531u^{20} + 94.9724u^{19} + \cdots - 77.1772u + 99.0389 \\ 33.9239u^{20} - 40.3249u^{19} + \cdots + 33.3984u - 41.6620 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 89.2432u^{20} - 106.092u^{19} + \cdots + 85.7475u - 114.343 \\ -17.4567u^{20} + 21.6317u^{19} + \cdots - 15.1161u + 23.6718 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -46.2292u^{20} + 54.6475u^{19} + \cdots - 43.7787u + 57.3769 \\ 33.9239u^{20} - 40.3249u^{19} + \cdots + 33.3984u - 41.6620 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 26.1717u^{20} - 31.1465u^{19} + \cdots + 27.5071u - 29.6074 \\ -89.8576u^{20} + 107.426u^{19} + \cdots - 86.4020u + 110.656 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -17.4567u^{20} + 20.6317u^{19} + \cdots - 17.1161u + 23.6718 \\ 80.1961u^{20} - 95.9634u^{19} + \cdots + 74.8843u - 102.382 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -33.2945u^{20} + 41.0318u^{19} + \cdots - 30.7499u + 39.7364 \\ 62.0383u^{20} - 74.4291u^{19} + \cdots + 62.2499u - 77.2800 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 24.4461u^{20} - 28.8789u^{19} + \cdots + 22.7417u - 29.0227 \\ 31.8485u^{20} - 37.6738u^{19} + \cdots + 32.8621u - 43.6846 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -46.8592u^{20} + 56.0635u^{19} + \cdots - 42.6727u + 59.8518 \\ -42.9984u^{20} + 51.3621u^{19} + \cdots - 41.7293u + 51.8043 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1978262081}{16127515}u^{20} + \frac{486999773}{3225503}u^{19} + \cdots - \frac{1665299122}{16127515}u + \frac{2329754158}{16127515}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21} - 13u^{20} + \cdots + 17u - 1$
c_2	$u^{21} + 3u^{20} + \cdots - 3u - 1$
c_3	$u^{21} - 9u^{19} + \cdots - 6u + 1$
c_4	$u^{21} - 7u^{19} + \cdots + 9u^2 + 1$
c_5	$u^{21} - 3u^{20} + \cdots - 3u + 1$
c_6	$u^{21} - 2u^{20} + \cdots - 2u + 1$
c_7	$u^{21} - 9u^{19} + \cdots - 6u - 1$
c_8	$u^{21} - 3u^{20} + \cdots - 4u + 1$
c_9	$u^{21} - 7u^{19} + \cdots - 9u^2 - 1$
c_{10}	$u^{21} + 2u^{20} + \cdots - 2u - 1$
c_{11}	$u^{21} + 3u^{20} + \cdots - 4u - 1$
c_{12}	$u^{21} - u^{20} + \cdots + 12u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{21} + 3y^{20} + \cdots + 17y - 1$
c_2, c_5	$y^{21} - 13y^{20} + \cdots + 17y - 1$
c_3, c_7	$y^{21} - 18y^{20} + \cdots + 22y - 1$
c_4, c_9	$y^{21} - 14y^{20} + \cdots - 18y - 1$
c_6, c_{10}	$y^{21} - 12y^{20} + \cdots - 4y - 1$
c_8, c_{11}	$y^{21} + 15y^{20} + \cdots - 8y - 1$
c_{12}	$y^{21} + 3y^{20} + \cdots + 26y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.497705+0.914980I$ $a=-0.500009+0.376999I$ $b=-0.883156-0.078797I$	$-1.39865-2.19121I$	$-5.26683+7.34066I$
$u=-0.497705-0.914980I$ $a=-0.500009-0.376999I$ $b=-0.883156+0.078797I$	$-1.39865+2.19121I$	$-5.26683-7.34066I$
$u=-0.906547+0.120990I$ $a=-0.37152+1.92475I$ $b=-1.049690-0.261917I$	$-0.291019-0.766881I$	$-12.9784-7.1305I$
$u=-0.906547-0.120990I$ $a=-0.37152-1.92475I$ $b=-1.049690+0.261917I$	$-0.291019+0.766881I$	$-12.9784+7.1305I$
$u=-0.952688+0.665934I$ $a=0.31948-1.54539I$ $b=0.968691+0.804354I$	$4.83291-5.48153I$	$0.61562+6.66233I$
$u=-0.952688-0.665934I$ $a=0.31948+1.54539I$ $b=0.968691-0.804354I$	$4.83291+5.48153I$	$0.61562-6.66233I$
$u=-1.063450+0.512232I$ $a=-0.589209+0.637928I$ $b=0.810459-0.843136I$	$5.31654+0.66491I$	$0.415399-0.133048I$
$u=-1.063450-0.512232I$ $a=-0.589209-0.637928I$ $b=0.810459+0.843136I$	$5.31654-0.66491I$	$0.415399+0.133048I$
$u=0.801649+0.001085I$ $a=0.07947-1.82807I$ $b=-1.18975+0.76944I$	$3.72958+2.65022I$	$-0.33689-2.74170I$
$u=0.801649-0.001085I$ $a=0.07947+1.82807I$ $b=-1.18975-0.76944I$	$3.72958-2.65022I$	$-0.33689+2.74170I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.19930$ $a=\ \ 1.40578$ $b=-0.550979$	1.39967	-0.347370
$u=\ \ 1.194170+0.163422I$ $a=\ \ 0.829774-1.015350I$ $b=-0.605623+0.779316I$	$5.50035+3.30026I$	$1.09093-4.73816I$
$u=\ \ 1.194170-0.163422I$ $a=\ \ 0.829774+1.015350I$ $b=-0.605623-0.779316I$	$5.50035-3.30026I$	$1.09093+4.73816I$
$u=\ \ 0.151730+0.674872I$ $a=\ \ 3.81452+0.99293I$ $b=\ \ 0.512186-0.147355I$	$-5.43869+4.12896I$	$-19.9561-11.5234I$
$u=\ \ 0.151730-0.674872I$ $a=\ \ 3.81452-0.99293I$ $b=\ \ 0.512186+0.147355I$	$-5.43869-4.12896I$	$-19.9561+11.5234I$
$u=\ \ 1.14383+1.06714I$ $a=\ \ 0.308798+0.748318I$ $b=\ \ 1.099210-0.485659I$	$2.33435+5.94594I$	$3.05578-7.68621I$
$u=\ \ 1.14383-1.06714I$ $a=\ \ 0.308798-0.748318I$ $b=\ \ 1.099210+0.485659I$	$2.33435-5.94594I$	$3.05578+7.68621I$
$u=\ \ 0.159929+0.360867I$ $a=-1.98062+0.02408I$ $b=\ \ 1.51366+0.09512I$	$-9.61177+2.97996I$	$-4.78121+1.02692I$
$u=\ \ 0.159929-0.360867I$ $a=-1.98062-0.02408I$ $b=\ \ 1.51366-0.09512I$	$-9.61177-2.97996I$	$-4.78121-1.02692I$
$u=\ \ 1.56873+0.63635I$ $a=-0.113575-0.201644I$ $b=\ \ 0.599496+0.365497I$	$4.19616+2.23780I$	$2.81535-0.97091I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.56873 - 0.63635I$		
$a = -0.113575 + 0.201644I$	$4.19616 - 2.23780I$	$2.81535 + 0.97091I$
$b = \quad 0.599496 - 0.365497I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{21}-13u^{20}+\cdots+17u-1)(u^{66}+38u^{65}+\cdots-20u+1)$
c_2	$(u^{21}+3u^{20}+\cdots-3u-1)(u^{66}+2u^{65}+\cdots+10u^2+1)$
c_3	$(u^{21}-9u^{19}+\cdots-6u+1)(u^{66}-u^{65}+\cdots-599u-59)$
c_4	$(u^{21}-7u^{19}+\cdots+9u^2+1)(u^{66}+u^{65}+\cdots+1920u-1088)$
c_5	$(u^{21}-3u^{20}+\cdots-3u+1)(u^{66}+2u^{65}+\cdots+10u^2+1)$
c_6	$(u^{21}-2u^{20}+\cdots-2u+1)(u^{66}-u^{65}+\cdots-283u-59)$
c_7	$(u^{21}-9u^{19}+\cdots-6u-1)(u^{66}-u^{65}+\cdots-599u-59)$
c_8	$(u^{21}-3u^{20}+\cdots-4u+1)(u^{66}-2u^{65}+\cdots-13u+1)$
c_9	$(u^{21}-7u^{19}+\cdots-9u^2-1)(u^{66}+u^{65}+\cdots+1920u-1088)$
c_{10}	$(u^{21}+2u^{20}+\cdots-2u-1)(u^{66}-u^{65}+\cdots-283u-59)$
c_{11}	$(u^{21}+3u^{20}+\cdots-4u-1)(u^{66}-2u^{65}+\cdots-13u+1)$
c_{12}	$(u^{21}-u^{20}+\cdots+12u+1)(u^{66}+2u^{65}+\cdots+2893677u+899893)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{21}+3y^{20}+\cdots+17y-1)(y^{66}-6y^{65}+\cdots+88y+1)$
c_2, c_5	$(y^{21}-13y^{20}+\cdots+17y-1)(y^{66}-38y^{65}+\cdots+20y+1)$
c_3, c_7	$(y^{21}-18y^{20}+\cdots+22y-1)(y^{66}-71y^{65}+\cdots-683301y+3481)$
c_4, c_9	$(y^{21}-14y^{20}+\cdots-18y-1)$ $\cdot(y^{66}-27y^{65}+\cdots-23148544y+1183744)$
c_6, c_{10}	$(y^{21}-12y^{20}+\cdots-4y-1)(y^{66}-29y^{65}+\cdots-212367y+3481)$
c_8, c_{11}	$(y^{21}+15y^{20}+\cdots-8y-1)(y^{66}+18y^{65}+\cdots-11y+1)$
c_{12}	$(y^{21}+3y^{20}+\cdots+26y-1)$ $\cdot(y^{66}-78y^{65}+\cdots-13342381349441y+809807411449)$