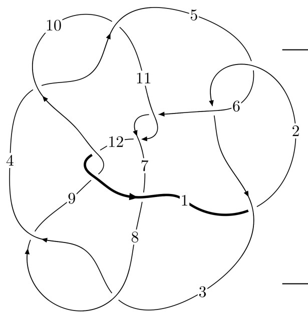
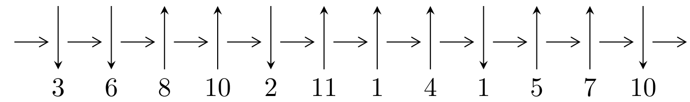
$12n_{0378}$ ($K12n_{0378}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 2.40269 \times 10^{62} u^{72} - 1.72408 \times 10^{63} u^{71} + \cdots + 1.82435 \times 10^{64} b - 1.38356 \times 10^{64},$$
$$2.34275 \times 10^{62} u^{72} + 1.14118 \times 10^{62} u^{71} + \cdots + 4.44964 \times 10^{62} a + 4.68732 \times 10^{63},\ u^{73} - u^{72} + \cdots + 6u - 1\rangle$$
$$I_2^u = \langle u^{19} - u^{18} + \cdots + b - 2,\ u^{19} + u^{18} + \cdots + a - 6,\ u^{20} - 4u^{18} + \cdots - u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 93 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.
$\boldsymbol{I_1^u = \langle 2.40 \times 10^{62} u^{72} - 1.72 \times 10^{63} u^{71} + \cdots + 1.82 \times 10^{64} b - 1.38 \times 10^{64},\ 2.34 \times 10^{62} u^{72} + 1.14 \times 10^{62} u^{71} + \cdots + 4.45 \times 10^{62} a + 4.69 \times 10^{63},\ u^{73} - u^{72} + \cdots + 6u - 1 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.526502u^{72} - 0.256466u^{71} + \cdots + 31.1936u - 10.5341 \\ -0.0131701u^{72} + 0.0945035u^{71} + \cdots - 9.10210u + 0.758385 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.429075u^{72} - 0.253130u^{71} + \cdots + 5.78589u - 1.70210 \\ 0.0237826u^{72} + 0.0747905u^{71} + \cdots - 4.64228u + 2.61862 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.354692u^{72} - 0.179230u^{71} + \cdots + 1.83197u + 0.794479 \\ -0.134146u^{72} + 0.126424u^{71} + \cdots - 4.09974u + 2.52946 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.273639u^{72} - 0.495448u^{71} + \cdots + 35.8660u - 11.3984 \\ 0.239693u^{72} - 0.144479u^{71} + \cdots - 4.42963u - 0.105916 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.141530u^{72} + 0.130114u^{71} + \cdots - 13.1139u + 4.72440 \\ 0.122092u^{72} - 0.537187u^{71} + \cdots + 8.50726u - 3.27538 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.0361754u^{72} + 0.773102u^{71} + \cdots - 31.3454u + 11.5188 \\ -0.219504u^{72} + 0.183374u^{71} + \cdots + 4.64947u + 0.0703768 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -3.01500u^{72} + 3.21861u^{71} + \cdots - 11.8184u - 9.35261 \\ 0.189418u^{72} - 0.0254143u^{71} + \cdots - 9.37084u + 1.71468 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4.91581u^{72} + 6.79732u^{71} + \cdots - 94.4807u + 6.97585$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{73} + 25u^{72} + \cdots + 84u + 1$
c_2, c_5	$u^{73} + u^{72} + \cdots + 6u + 1$
c_3, c_8	$u^{73} + u^{72} + \cdots - 72u - 29$
c_4, c_{10}	$u^{73} - u^{72} + \cdots - 602u - 2285$
c_6, c_{11}	$u^{73} - u^{72} + \cdots + 6589u + 2209$
c_7	$u^{73} - 3u^{72} + \cdots + 30630u - 13801$
c_9, c_{12}	$u^{73} - 9u^{72} + \cdots + 42u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{73} + 55y^{72} + \cdots + 1088y - 1$
c_2, c_5	$y^{73} - 25y^{72} + \cdots + 84y - 1$
c_3, c_8	$y^{73} - 29y^{72} + \cdots + 20264y - 841$
c_4, c_{10}	$y^{73} - 37y^{72} + \cdots + 153119224y - 5221225$
c_6, c_{11}	$y^{73} - 45y^{72} + \cdots + 119152695y - 4879681$
c_7	$y^{73} + 11y^{72} + \cdots - 1310013602y - 190467601$
c_9, c_{12}	$y^{73} - 53y^{72} + \cdots + 502y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.996222+0.079970I$ $a=-0.640369+0.961224I$ $b=\ \ 0.02392+1.95649I$	$-5.68162+3.39874I$	0
$u=-0.996222-0.079970I$ $a=-0.640369-0.961224I$ $b=\ \ 0.02392-1.95649I$	$-5.68162-3.39874I$	0
$u=-0.758602+0.638058I$ $a=-0.372335+1.210930I$ $b=\ \ 0.34583+1.63890I$	$-0.54896+3.17316I$	0
$u=-0.758602-0.638058I$ $a=-0.372335-1.210930I$ $b=\ \ 0.34583-1.63890I$	$-0.54896-3.17316I$	0
$u=-0.618315+0.821119I$ $a=-0.94140-1.06158I$ $b=\ \ 0.088422-0.498715I$	$7.38525-1.46732I$	0
$u=-0.618315-0.821119I$ $a=-0.94140+1.06158I$ $b=\ \ 0.088422+0.498715I$	$7.38525+1.46732I$	0
$u=-0.969221$ $a=-0.747368$ $b=-2.30513$	4.41153	-5.41240
$u=\ \ 0.751264+0.736846I$ $a=\ \ 1.058580-0.390102I$ $b=-0.228660+0.735522I$	$9.38761-0.55526I$	0
$u=\ \ 0.751264-0.736846I$ $a=\ \ 1.058580+0.390102I$ $b=-0.228660-0.735522I$	$9.38761+0.55526I$	0
$u=\ \ 0.733170+0.756165I$ $a=-0.851966-1.016840I$ $b=-0.109081-1.382330I$	$-0.08676+2.96078I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.733170 - 0.756165I$ $a = -0.851966 + 1.016840I$ $b = -0.109081 + 1.382330I$	$-0.08676 - 2.96078I$	0
$u = -0.861502 + 0.388627I$ $a = \quad 0.165858 + 1.013930I$ $b = \quad 0.55739 + 1.55978I$	$-0.44770 + 3.61771I$	$3.83289 - 9.05008I$
$u = -0.861502 - 0.388627I$ $a = \quad 0.165858 - 1.013930I$ $b = \quad 0.55739 - 1.55978I$	$-0.44770 - 3.61771I$	$3.83289 + 9.05008I$
$u = \quad 0.943914 + 0.043003I$ $a = -0.918576 + 0.881953I$ $b = \quad 0.02090 + 1.95760I$	$-4.65821 - 2.86626I$	$-1.66244 + 2.85840I$
$u = \quad 0.943914 - 0.043003I$ $a = -0.918576 - 0.881953I$ $b = \quad 0.02090 - 1.95760I$	$-4.65821 + 2.86626I$	$-1.66244 - 2.85840I$
$u = -0.631153 + 0.853761I$ $a = \quad 1.204560 + 0.578291I$ $b = -0.010140 - 0.154408I$	$2.19037 - 3.39728I$	0
$u = -0.631153 - 0.853761I$ $a = \quad 1.204560 - 0.578291I$ $b = -0.010140 + 0.154408I$	$2.19037 + 3.39728I$	0
$u = \quad 0.892873 + 0.267184I$ $a = \quad 0.173653 - 0.505706I$ $b = -0.190432 - 0.912777I$	$-1.50577 - 0.99916I$	$-2.39776 + 0.I$
$u = \quad 0.892873 - 0.267184I$ $a = \quad 0.173653 + 0.505706I$ $b = -0.190432 + 0.912777I$	$-1.50577 + 0.99916I$	$-2.39776 + 0.I$
$u = -0.767998 + 0.745094I$ $a = \quad 0.746725 + 0.494096I$ $b = -0.01556 + 1.80761I$	$0.46877 - 1.97857I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.767998 - 0.745094I$ $a = 0.746725 - 0.494096I$ $b = -0.01556 - 1.80761I$	$0.46877 + 1.97857I$	0
$u = 0.143541 + 0.896389I$ $a = -0.216547 - 1.280260I$ $b = 0.0239252 - 0.0949787I$	$0.81734 - 5.65289I$	$7.40959 + 5.97302I$
$u = 0.143541 - 0.896389I$ $a = -0.216547 + 1.280260I$ $b = 0.0239252 + 0.0949787I$	$0.81734 + 5.65289I$	$7.40959 - 5.97302I$
$u = 0.824608 + 0.727987I$ $a = -1.29265 + 0.82770I$ $b = -0.231633 + 0.608811I$	$6.55692 - 1.93707I$	0
$u = 0.824608 - 0.727987I$ $a = -1.29265 - 0.82770I$ $b = -0.231633 - 0.608811I$	$6.55692 + 1.93707I$	0
$u = 0.946156 + 0.586430I$ $a = 0.432541 - 0.667921I$ $b = -0.43463 - 1.49029I$	$-2.76173 - 2.00615I$	0
$u = 0.946156 - 0.586430I$ $a = 0.432541 + 0.667921I$ $b = -0.43463 + 1.49029I$	$-2.76173 + 2.00615I$	0
$u = -0.343909 + 0.787868I$ $a = 0.127670 + 1.043220I$ $b = 0.084955 - 0.115660I$	$0.479750 - 0.044976I$	$6.90143 - 1.13729I$
$u = -0.343909 - 0.787868I$ $a = 0.127670 - 1.043220I$ $b = 0.084955 + 0.115660I$	$0.479750 + 0.044976I$	$6.90143 + 1.13729I$
$u = -0.937251 + 0.657162I$ $a = 1.099920 - 0.537869I$ $b = 0.49874 - 1.35415I$	$-1.09504 + 1.90890I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.937251 - 0.657162I$ $a = 1.099920 + 0.537869I$ $b = 0.49874 + 1.35415I$	$-1.09504 - 1.90890I$	0
$u = 0.683384 + 0.923655I$ $a = 1.180580 - 0.657252I$ $b = -0.0799028 - 0.0563581I$	$4.09129 + 9.93504I$	0
$u = 0.683384 - 0.923655I$ $a = 1.180580 + 0.657252I$ $b = -0.0799028 + 0.0563581I$	$4.09129 - 9.93504I$	0
$u = 0.908958 + 0.710659I$ $a = -0.890867 + 1.087230I$ $b = -1.09856 + 2.00903I$	$6.29427 - 3.55581I$	0
$u = 0.908958 - 0.710659I$ $a = -0.890867 - 1.087230I$ $b = -1.09856 - 2.00903I$	$6.29427 + 3.55581I$	0
$u = 1.158780 + 0.119477I$ $a = -0.690279 + 0.608358I$ $b = -1.51845 + 1.26660I$	$-4.61256 - 2.51615I$	0
$u = 1.158780 - 0.119477I$ $a = -0.690279 - 0.608358I$ $b = -1.51845 - 1.26660I$	$-4.61256 + 2.51615I$	0
$u = -0.809794$ $a = 1.59121$ $b = 2.15213$	2.28647	3.88350
$u = -0.956447 + 0.710795I$ $a = 0.599846 + 0.745235I$ $b = -0.60555 + 1.54716I$	$-0.11113 + 7.52904I$	0
$u = -0.956447 - 0.710795I$ $a = 0.599846 - 0.745235I$ $b = -0.60555 - 1.54716I$	$-0.11113 - 7.52904I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.964639 + 0.701087I$ $a = 0.340557 - 0.829485I$ $b = 1.41277 - 1.84680I$	$8.73288 - 4.94035I$	0
$u = 0.964639 - 0.701087I$ $a = 0.340557 + 0.829485I$ $b = 1.41277 + 1.84680I$	$8.73288 + 4.94035I$	0
$u = 0.853639 + 0.855312I$ $a = -1.151840 + 0.283826I$ $b = -0.300491 + 0.019376I$	$7.09864 + 0.53230I$	0
$u = 0.853639 - 0.855312I$ $a = -1.151840 - 0.283826I$ $b = -0.300491 - 0.019376I$	$7.09864 - 0.53230I$	0
$u = 0.978323 + 0.710764I$ $a = 0.911240 + 0.831323I$ $b = 0.43175 + 1.60287I$	$-0.83249 - 8.54524I$	0
$u = 0.978323 - 0.710764I$ $a = 0.911240 - 0.831323I$ $b = 0.43175 - 1.60287I$	$-0.83249 + 8.54524I$	0
$u = -1.189080 + 0.229032I$ $a = -0.808750 - 0.686874I$ $b = -1.52953 - 1.44010I$	$-3.81596 + 9.32233I$	0
$u = -1.189080 - 0.229032I$ $a = -0.808750 + 0.686874I$ $b = -1.52953 + 1.44010I$	$-3.81596 - 9.32233I$	0
$u = 1.22912$ $a = 1.00223$ $b = 1.54563$	0.994441	0
$u = 0.557309 + 0.526306I$ $a = 0.544371 - 0.023747I$ $b = -0.148793 - 1.306520I$	$-1.71887 - 2.44461I$	$5.05962 + 1.77262I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.557309 - 0.526306I$ $a = 0.544371 + 0.023747I$ $b = -0.148793 + 1.306520I$	$-1.71887 + 2.44461I$	$5.05962 - 1.77262I$
$u = -0.846572 + 0.914565I$ $a = -0.655447 - 0.508702I$ $b = 0.167328 - 0.162277I$	$7.36439 + 2.36950I$	0
$u = -0.846572 - 0.914565I$ $a = -0.655447 + 0.508702I$ $b = 0.167328 + 0.162277I$	$7.36439 - 2.36950I$	0
$u = -1.106920 + 0.577507I$ $a = 0.548477 + 0.039525I$ $b = 1.248990 + 0.006219I$	$-1.75051 + 5.10682I$	0
$u = -1.106920 - 0.577507I$ $a = 0.548477 - 0.039525I$ $b = 1.248990 - 0.006219I$	$-1.75051 - 5.10682I$	0
$u = 0.948038 + 0.819646I$ $a = -0.268358 + 1.134470I$ $b = -0.50120 + 1.94706I$	$6.80244 - 6.76181I$	0
$u = 0.948038 - 0.819646I$ $a = -0.268358 - 1.134470I$ $b = -0.50120 - 1.94706I$	$6.80244 + 6.76181I$	0
$u = 1.183950 + 0.434407I$ $a = 0.750592 - 0.018384I$ $b = 1.351730 + 0.004092I$	$-2.58515 + 0.91174I$	0
$u = 1.183950 - 0.434407I$ $a = 0.750592 + 0.018384I$ $b = 1.351730 - 0.004092I$	$-2.58515 - 0.91174I$	0
$u = -1.047120 + 0.715765I$ $a = -0.832244 - 0.806720I$ $b = -1.12523 - 1.67057I$	$6.11341 + 7.23773I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.047120 - 0.715765I$ $a = -0.832244 + 0.806720I$ $b = -1.12523 + 1.67057I$	$6.11341 - 7.23773I$	0
$u = -1.051990 + 0.719300I$ $a = 0.446861 + 1.074860I$ $b = 1.06139 + 2.17386I$	$0.91326 + 9.25948I$	0
$u = -1.051990 - 0.719300I$ $a = 0.446861 - 1.074860I$ $b = 1.06139 - 2.17386I$	$0.91326 - 9.25948I$	0
$u = -0.977624 + 0.850736I$ $a = -0.417028 - 0.618249I$ $b = -0.65490 - 1.45884I$	$6.94563 + 4.12886I$	0
$u = -0.977624 - 0.850736I$ $a = -0.417028 + 0.618249I$ $b = -0.65490 + 1.45884I$	$6.94563 - 4.12886I$	0
$u = 1.062780 + 0.766541I$ $a = 0.558144 - 1.091810I$ $b = 1.05492 - 2.27168I$	$2.9062 - 16.1647I$	0
$u = 1.062780 - 0.766541I$ $a = 0.558144 + 1.091810I$ $b = 1.05492 + 2.27168I$	$2.9062 + 16.1647I$	0
$u = -0.624370$ $a = 2.54662$ $b = 0.805344$	3.04322	-5.86610
$u = -0.362561 + 0.439077I$ $a = 0.900518 + 0.463831I$ $b = 0.193003 - 0.160197I$	$1.059400 - 0.337570I$	$9.21872 + 1.59251I$
$u = -0.362561 - 0.439077I$ $a = 0.900518 - 0.463831I$ $b = 0.193003 + 0.160197I$	$1.059400 + 0.337570I$	$9.21872 - 1.59251I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.318447$ $a=-3.97650$ $b=0.921377$	6.81257	17.0470
$u=0.164283+0.047310I$ $a=-0.05014+4.02701I$ $b=-1.34290-0.64628I$	$-2.12942-2.53807I$	$-0.97059+1.61971I$
$u=0.164283-0.047310I$ $a=-0.05014-4.02701I$ $b=-1.34290+0.64628I$	$-2.12942+2.53807I$	$-0.97059-1.61971I$

II.

$$\boldsymbol{I_2^u = \langle u^{19} - u^{18} + \cdots + b - 2,\ u^{19} + u^{18} + \cdots + a - 6,\ u^{20} - 4u^{18} + \cdots - u + 1 \rangle}$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -u^{19} - u^{18} + \cdots + u + 6 \\ -u^{19} + u^{18} + \cdots + 4u + 2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -5u^{19} - u^{18} + \cdots + 12u + 6 \\ -2u^{19} - u^{18} + \cdots + 2u + 5 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -6u^{19} - 2u^{18} + \cdots + 13u + 9 \\ -2u^{19} - u^{18} + \cdots + u + 5 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^{19} - 2u^{18} + \cdots - u + 8 \\ -u^{19} + 4u^{17} + \cdots + 2u + 4 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 4u^{19} - 15u^{17} + \cdots - 14u - 1 \\ u^{15} - 3u^{13} + \cdots - 3u - 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -2u^{19} - 3u^{18} + \cdots - 43u^2 + 11 \\ -u^{19} + 4u^{17} + \cdots + 2u + 4 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 4u^{19} + 3u^{18} + \cdots - 4u - 8 \\ 3u^{19} + 2u^{18} + \cdots - 3u - 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= -20u^{19} - 8u^{18} + 71u^{17} + 50u^{16} - 199u^{15} - 141u^{14} + 362u^{13} + 309u^{12} - 520u^{11} - 465u^{10} + 557u^9 + 555u^8 - 458u^7 - 481u^6 + 268u^5 + 302u^4 - 86u^3 - 110u^2 + 29u + 24$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 8u^{19} + \cdots - 13u + 1$
c_2	$u^{20} - 4u^{18} + \cdots - u + 1$
c_3	$u^{20} - 8u^{18} + \cdots + u + 1$
c_4	$u^{20} - 6u^{18} + \cdots - u + 1$
c_5	$u^{20} - 4u^{18} + \cdots + u + 1$
c_6	$u^{20} + 4u^{19} + \cdots + 4u + 1$
c_7	$u^{20} - 2u^{18} + \cdots - 343u + 37$
c_8	$u^{20} - 8u^{18} + \cdots - u + 1$
c_9	$u^{20} - 4u^{19} + \cdots + 11u - 1$
c_{10}	$u^{20} - 6u^{18} + \cdots + u + 1$
c_{11}	$u^{20} - 4u^{19} + \cdots - 4u + 1$
c_{12}	$u^{20} + 4u^{19} + \cdots - 11u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} + 16y^{19} + \cdots - 13y + 1$
c_2, c_5	$y^{20} - 8y^{19} + \cdots - 13y + 1$
c_3, c_8	$y^{20} - 16y^{19} + \cdots - 21y + 1$
c_4, c_{10}	$y^{20} - 12y^{19} + \cdots + 3y + 1$
c_6, c_{11}	$y^{20} - 16y^{19} + \cdots + 4y + 1$
c_7	$y^{20} - 4y^{19} + \cdots - 48311y + 1369$
c_9, c_{12}	$y^{20} - 8y^{19} + \cdots - 139y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.942703$ $a=\ \ 1.01394$ $b=\ \ 2.46434$	4.96957	9.67670
$u=\ \ 1.021990+0.401552I$ $a=\ \ 0.490770+0.256167I$ $b=\ \ 0.324519-0.338569I$	$-3.43274-0.00501I$	$-0.269919+0.886126I$
$u=\ \ 1.021990-0.401552I$ $a=\ \ 0.490770-0.256167I$ $b=\ \ 0.324519+0.338569I$	$-3.43274+0.00501I$	$-0.269919-0.886126I$
$u=-0.676743+0.574335I$ $a=-0.665466+0.475040I$ $b=-1.05039+1.39641I$	$-1.31380-1.46689I$	$1.93443-1.03956I$
$u=-0.676743-0.574335I$ $a=-0.665466-0.475040I$ $b=-1.05039-1.39641I$	$-1.31380+1.46689I$	$1.93443+1.03956I$
$u=\ \ 0.811874+0.794873I$ $a=-0.956293+0.516230I$ $b=\ \ 0.278281-0.253589I$	$10.29410-1.34128I$	$11.37265+3.04262I$
$u=\ \ 0.811874-0.794873I$ $a=-0.956293-0.516230I$ $b=\ \ 0.278281+0.253589I$	$10.29410+1.34128I$	$11.37265-3.04262I$
$u=\ \ 1.14495$ $a=\ \ 1.07374$ $b=\ \ 1.53754$	0.705306	-7.89590
$u=-1.011460+0.552332I$ $a=\ \ 0.125011-0.483876I$ $b=-0.386024-0.055826I$	$-2.42227+5.99613I$	$1.25444-6.99994I$
$u=-1.011460-0.552332I$ $a=\ \ 0.125011+0.483876I$ $b=-0.386024+0.055826I$	$-2.42227-5.99613I$	$1.25444+6.99994I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.808558+0.852100I$ $a=-1.110280-0.654219I$ $b=-0.324330-0.410095I$	$7.38412+0.35956I$	$10.74792-1.94607I$
$u=-0.808558-0.852100I$ $a=-1.110280+0.654219I$ $b=-0.324330+0.410095I$	$7.38412-0.35956I$	$10.74792+1.94607I$
$u=\ \ 0.958262+0.756351I$ $a=-0.497932+0.796929I$ $b=-1.25854+1.82161I$	$9.83772-4.51280I$	$11.07027+3.02713I$
$u=\ \ 0.958262-0.756351I$ $a=-0.497932-0.796929I$ $b=-1.25854-1.82161I$	$9.83772+4.51280I$	$11.07027-3.02713I$
$u=\ \ 0.632431+0.395728I$ $a=\ \ 0.029010-1.115310I$ $b=-0.61602-2.06351I$	$-2.02985-3.37926I$	$-0.02656+9.44485I$
$u=\ \ 0.632431-0.395728I$ $a=\ \ 0.029010+1.115310I$ $b=-0.61602+2.06351I$	$-2.02985+3.37926I$	$-0.02656-9.44485I$
$u=-0.981912+0.806314I$ $a=-0.565494-0.975827I$ $b=-0.72422-1.69291I$	$6.85419+5.82262I$	$8.97131-3.20438I$
$u=-0.981912-0.806314I$ $a=-0.565494+0.975827I$ $b=-0.72422+1.69291I$	$6.85419-5.82262I$	$8.97131+3.20438I$
$u=-0.603876$ $a=\ \ 2.10690$ $b=-0.708769$	6.39267	-2.87160
$u=\ \ 0.509858$ $a=\ \ 3.10678$ $b=\ \ 1.22034$	3.38690	18.9820

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{20} - 8u^{19} + \cdots - 13u + 1)(u^{73} + 25u^{72} + \cdots + 84u + 1)$
c_2	$(u^{20} - 4u^{18} + \cdots - u + 1)(u^{73} + u^{72} + \cdots + 6u + 1)$
c_3	$(u^{20} - 8u^{18} + \cdots + u + 1)(u^{73} + u^{72} + \cdots - 72u - 29)$
c_4	$(u^{20} - 6u^{18} + \cdots - u + 1)(u^{73} - u^{72} + \cdots - 602u - 2285)$
c_5	$(u^{20} - 4u^{18} + \cdots + u + 1)(u^{73} + u^{72} + \cdots + 6u + 1)$
c_6	$(u^{20} + 4u^{19} + \cdots + 4u + 1)(u^{73} - u^{72} + \cdots + 6589u + 2209)$
c_7	$(u^{20} - 2u^{18} + \cdots - 343u + 37)(u^{73} - 3u^{72} + \cdots + 30630u - 13801)$
c_8	$(u^{20} - 8u^{18} + \cdots - u + 1)(u^{73} + u^{72} + \cdots - 72u - 29)$
c_9	$(u^{20} - 4u^{19} + \cdots + 11u - 1)(u^{73} - 9u^{72} + \cdots + 42u - 1)$
c_{10}	$(u^{20} - 6u^{18} + \cdots + u + 1)(u^{73} - u^{72} + \cdots - 602u - 2285)$
c_{11}	$(u^{20} - 4u^{19} + \cdots - 4u + 1)(u^{73} - u^{72} + \cdots + 6589u + 2209)$
c_{12}	$(u^{20} + 4u^{19} + \cdots - 11u - 1)(u^{73} - 9u^{72} + \cdots + 42u - 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{20}+16y^{19}+\cdots-13y+1)(y^{73}+55y^{72}+\cdots+1088y-1)$
c_2, c_5	$(y^{20}-8y^{19}+\cdots-13y+1)(y^{73}-25y^{72}+\cdots+84y-1)$
c_3, c_8	$(y^{20}-16y^{19}+\cdots-21y+1)(y^{73}-29y^{72}+\cdots+20264y-841)$
c_4, c_{10}	$(y^{20}-12y^{19}+\cdots+3y+1)$ $\cdot(y^{73}-37y^{72}+\cdots+153119224y-5221225)$
c_6, c_{11}	$(y^{20}-16y^{19}+\cdots+4y+1)$ $\cdot(y^{73}-45y^{72}+\cdots+119152695y-4879681)$
c_7	$(y^{20}-4y^{19}+\cdots-48311y+1369)$ $\cdot(y^{73}+11y^{72}+\cdots-1310013602y-190467601)$
c_9, c_{12}	$(y^{20}-8y^{19}+\cdots-139y+1)(y^{73}-53y^{72}+\cdots+502y-1)$