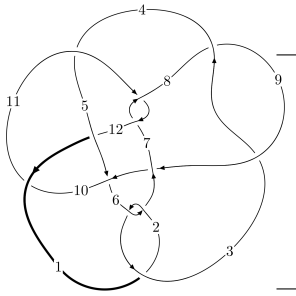
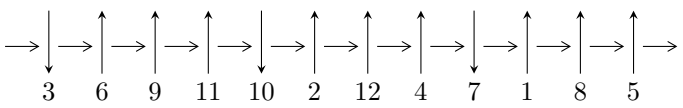
$12a_{0407}$ $(K12a_{0407})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 7.29009 \times 10^{364} u^{160} + 5.02475 \times 10^{364} u^{159} + \cdots + 1.34269 \times 10^{365} b + 1.27656 \times 10^{366},$$
$$1.16613 \times 10^{365} u^{160} + 5.58206 \times 10^{365} u^{159} + \cdots + 1.34269 \times 10^{365} a + 3.05746 \times 10^{366},\ u^{161} + u^{160} + \cdots - 1$$
$$I_2^u = \langle -273942 u^{35} + 8823771 u^{34} + \cdots + 3079049 b + 13356427,$$
$$24459491 u^{35} + 69731434 u^{34} + \cdots + 9237147 a + 438577488,\ u^{36} + 2u^{35} + \cdots + 22u^2 + 3 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 197 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. $\boldsymbol{I_1^u = \langle 7.29 \times 10^{364} u^{160} + 5.02 \times 10^{364} u^{159} + \cdots + 1.34 \times 10^{365} b + 1.28 \times 10^{366},\ 1.17 \times 10^{365} u^{160} + 5.58 \times 10^{365} u^{159} + \cdots + 1.34 \times 10^{365} a + 3.06 \times 10^{366},\ u^{161} + u^{160} + \cdots - 17u - 1 \rangle}$

(i) Arc colorings

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

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

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

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

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

$$a_{10} = \begin{pmatrix} -0.868503u^{160} - 4.15736u^{159} + \cdots - 244.015u - 22.7711 \\ -0.542945u^{160} - 0.374229u^{159} + \cdots - 120.551u - 9.50743 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -6.83002u^{160} - 10.0892u^{159} + \cdots - 334.168u - 28.0262 \\ 0.493273u^{160} + 3.42162u^{159} + \cdots - 154.528u - 11.2426 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -3.32957u^{160} - 11.0086u^{159} + \cdots + 264.354u + 24.6671 \\ 0.172703u^{160} + 0.694748u^{159} + \cdots + 58.0416u + 7.08239 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.41145u^{160} - 4.53159u^{159} + \cdots - 364.565u - 32.2785 \\ -0.542945u^{160} - 0.374229u^{159} + \cdots - 120.551u - 9.50743 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.59253u^{160} + 1.09474u^{159} + \cdots + 68.7446u + 6.82380 \\ 6.15262u^{160} + 11.1489u^{159} + \cdots + 25.3152u + 2.66973 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 49.0445u^{160} + 47.6382u^{159} + \cdots + 457.132u + 19.3973 \\ 2.26467u^{160} + 2.11722u^{159} + \cdots - 30.9504u - 4.04200 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -73.2349u^{160} - 125.571u^{159} + \cdots - 55.2086u + 1.05695 \\ 0.935533u^{160} + 3.82850u^{159} + \cdots + 24.5975u + 4.26703 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 69.0866u^{160} + 87.1460u^{159} + \cdots + 242.322u + 5.30831$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{161} + 77u^{160} + \cdots + 87u - 1$
c_2, c_6	$u^{161} + u^{160} + \cdots - 17u - 1$
c_3, c_8	$u^{161} - 3u^{160} + \cdots + 4109148u - 232661$
c_4	$u^{161} + 31u^{159} + \cdots - 835953597u - 981193891$
c_5	$u^{161} - 2u^{160} + \cdots + 54544u - 4861$
c_7, c_{11}	$u^{161} + u^{160} + \cdots - 57047u - 4381$
c_9	$u^{161} - 16u^{160} + \cdots + 9283u - 167$
c_{10}	$u^{161} + 17u^{160} + \cdots - 158166u - 7087$
c_{12}	$u^{161} - u^{160} + \cdots - 31u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{161} + 29y^{160} + \cdots + 4223y - 1$
c_2, c_6	$y^{161} + 77y^{160} + \cdots + 87y - 1$
c_3, c_8	$y^{161} + 123y^{160} + \cdots + 6872989493074y - 54131140921$
c_4	$y^{161} + 62y^{160} + \cdots - 1.81 \times 10^{19}y - 9.63 \times 10^{17}$
c_5	$y^{161} + 14y^{160} + \cdots + 3371540262y - 23629321$
c_7, c_{11}	$y^{161} + 107y^{160} + \cdots - 1600208367y - 19193161$
c_9	$y^{161} - 18y^{160} + \cdots + 18773891y - 27889$
c_{10}	$y^{161} - 5y^{160} + \cdots - 2043156540y - 50225569$
c_{12}	$y^{161} + 9y^{160} + \cdots - 771y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.920183 + 0.388318I$ $a = -0.120462 + 0.084381I$ $b = -1.05456 - 1.26768I$	$-4.4461 - 14.5339I$	0
$u = 0.920183 - 0.388318I$ $a = -0.120462 - 0.084381I$ $b = -1.05456 + 1.26768I$	$-4.4461 + 14.5339I$	0
$u = -0.213299 + 0.981898I$ $a = -2.11606 + 0.57496I$ $b = 1.096950 + 0.767795I$	$-6.02097 + 1.05255I$	0
$u = -0.213299 - 0.981898I$ $a = -2.11606 - 0.57496I$ $b = 1.096950 - 0.767795I$	$-6.02097 - 1.05255I$	0
$u = 0.454047 + 0.897536I$ $a = -0.67035 - 4.19204I$ $b = 0.058120 - 0.276135I$	$-3.55839 + 2.02593I$	0
$u = 0.454047 - 0.897536I$ $a = -0.67035 + 4.19204I$ $b = 0.058120 + 0.276135I$	$-3.55839 - 2.02593I$	0
$u = 0.845975 + 0.508794I$ $a = -0.216335 - 0.188527I$ $b = 0.230433 - 1.024480I$	$1.08505 + 4.55793I$	0
$u = 0.845975 - 0.508794I$ $a = -0.216335 + 0.188527I$ $b = 0.230433 + 1.024480I$	$1.08505 - 4.55793I$	0
$u = 0.945442 + 0.374725I$ $a = 0.094914 - 0.140949I$ $b = 0.88374 + 1.12672I$	$-0.05495 - 8.13209I$	0
$u = 0.945442 - 0.374725I$ $a = 0.094914 + 0.140949I$ $b = 0.88374 - 1.12672I$	$-0.05495 + 8.13209I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.958076+0.375052I$ $a=-0.098903+0.183045I$ $b=-0.686984+0.840107I$	$-5.70126+5.21462I$	0
$u=-0.958076-0.375052I$ $a=-0.098903-0.183045I$ $b=-0.686984-0.840107I$	$-5.70126-5.21462I$	0
$u=0.833540+0.496681I$ $a=0.301725-0.066206I$ $b=0.212629+0.949219I$	$3.67030+0.52176I$	0
$u=0.833540-0.496681I$ $a=0.301725+0.066206I$ $b=0.212629-0.949219I$	$3.67030-0.52176I$	0
$u=-0.668799+0.800513I$ $a=-0.034869-0.588872I$ $b=-0.604844+1.024080I$	$3.44165-3.73728I$	0
$u=-0.668799-0.800513I$ $a=-0.034869+0.588872I$ $b=-0.604844-1.024080I$	$3.44165+3.73728I$	0
$u=-0.820253+0.484921I$ $a=-0.279343-0.086009I$ $b=0.683991-1.110330I$	$1.00094+8.18407I$	0
$u=-0.820253-0.484921I$ $a=-0.279343+0.086009I$ $b=0.683991+1.110330I$	$1.00094-8.18407I$	0
$u=0.727501+0.609302I$ $a=-0.990778+0.746863I$ $b=-1.15372-1.43135I$	$-3.32970-4.99273I$	0
$u=0.727501-0.609302I$ $a=-0.990778-0.746863I$ $b=-1.15372+1.43135I$	$-3.32970+4.99273I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.963107 + 0.424520I$ $a = -0.149902 + 0.212500I$ $b = -0.907983 - 0.762420I$	$-5.54447 - 1.52207I$	0
$u = 0.963107 - 0.424520I$ $a = -0.149902 - 0.212500I$ $b = -0.907983 + 0.762420I$	$-5.54447 + 1.52207I$	0
$u = 0.340748 + 0.999082I$ $a = 0.509882 + 0.655330I$ $b = -0.0504512 - 0.0033752I$	$-1.59342 + 2.36136I$	0
$u = 0.340748 - 0.999082I$ $a = 0.509882 - 0.655330I$ $b = -0.0504512 + 0.0033752I$	$-1.59342 - 2.36136I$	0
$u = -0.799449 + 0.493939I$ $a = 0.315757 - 0.152492I$ $b = -0.634390 + 0.871272I$	$3.76059 + 3.96773I$	0
$u = -0.799449 - 0.493939I$ $a = 0.315757 + 0.152492I$ $b = -0.634390 - 0.871272I$	$3.76059 - 3.96773I$	0
$u = 0.067008 + 1.060220I$ $a = 1.045540 - 0.545214I$ $b = -0.234224 + 0.328954I$	$-1.92600 + 2.56246I$	0
$u = 0.067008 - 1.060220I$ $a = 1.045540 + 0.545214I$ $b = -0.234224 - 0.328954I$	$-1.92600 - 2.56246I$	0
$u = 0.342362 + 1.007690I$ $a = -0.79847 - 1.86499I$ $b = 0.720110 + 0.260212I$	$-1.65949 - 0.39084I$	0
$u = 0.342362 - 1.007690I$ $a = -0.79847 + 1.86499I$ $b = 0.720110 - 0.260212I$	$-1.65949 + 0.39084I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.614430+0.879462I$ $a=\ \ 1.47712-0.43521I$ $b=-0.870635-0.785991I$	$3.17480-1.25302I$	0
$u=-0.614430-0.879462I$ $a=\ \ 1.47712+0.43521I$ $b=-0.870635+0.785991I$	$3.17480+1.25302I$	0
$u=\ \ 0.443962+0.813598I$ $a=\ \ 4.33094+0.46212I$ $b=-0.284704+0.108242I$	$-3.28452+1.71613I$	0
$u=\ \ 0.443962-0.813598I$ $a=\ \ 4.33094-0.46212I$ $b=-0.284704-0.108242I$	$-3.28452-1.71613I$	0
$u=\ \ 0.433408+0.984644I$ $a=\ \ 1.52700+2.49417I$ $b=-2.67886-1.06701I$	$-8.28472+8.49362I$	0
$u=\ \ 0.433408-0.984644I$ $a=\ \ 1.52700-2.49417I$ $b=-2.67886+1.06701I$	$-8.28472-8.49362I$	0
$u=\ \ 0.452110+0.976335I$ $a=-1.033830-0.905090I$ $b=\ \ 0.498613-1.173200I$	$-3.29335+0.98120I$	0
$u=\ \ 0.452110-0.976335I$ $a=-1.033830+0.905090I$ $b=\ \ 0.498613+1.173200I$	$-3.29335-0.98120I$	0
$u=-0.163706+1.066740I$ $a=\ \ 1.84657-1.56397I$ $b=-1.62161+0.34813I$	$-5.28626+2.79651I$	0
$u=-0.163706-1.066740I$ $a=\ \ 1.84657+1.56397I$ $b=-1.62161-0.34813I$	$-5.28626-2.79651I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.470825 + 0.974416I$ $a = -0.93705 - 1.11121I$ $b = 1.36138 + 1.04253I$	$-3.18853 + 4.62134I$	0
$u = 0.470825 - 0.974416I$ $a = -0.93705 + 1.11121I$ $b = 1.36138 - 1.04253I$	$-3.18853 - 4.62134I$	0
$u = -0.353673 + 1.026800I$ $a = 2.23706 - 0.71877I$ $b = -1.50962 + 0.29934I$	$-9.58794 + 4.21103I$	0
$u = -0.353673 - 1.026800I$ $a = 2.23706 + 0.71877I$ $b = -1.50962 - 0.29934I$	$-9.58794 - 4.21103I$	0
$u = -0.352033 + 1.049390I$ $a = -1.52263 + 0.67098I$ $b = 1.326070 - 0.412994I$	$-5.68100 - 0.60486I$	0
$u = -0.352033 - 1.049390I$ $a = -1.52263 - 0.67098I$ $b = 1.326070 + 0.412994I$	$-5.68100 + 0.60486I$	0
$u = 0.558008 + 0.957291I$ $a = -1.91089 - 1.19952I$ $b = 0.572053 - 0.174648I$	$-2.65541 + 2.58053I$	0
$u = 0.558008 - 0.957291I$ $a = -1.91089 + 1.19952I$ $b = 0.572053 + 0.174648I$	$-2.65541 - 2.58053I$	0
$u = -0.292041 + 1.069730I$ $a = 1.358080 + 0.297040I$ $b = -1.139240 + 0.087669I$	$-9.11076 - 5.64486I$	0
$u = -0.292041 - 1.069730I$ $a = 1.358080 - 0.297040I$ $b = -1.139240 - 0.087669I$	$-9.11076 + 5.64486I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.539798 + 0.703833I$ $a = -0.455954 + 0.973518I$ $b = 0.362346 + 0.198550I$	$-1.82386 + 1.92463I$	0
$u = 0.539798 - 0.703833I$ $a = -0.455954 - 0.973518I$ $b = 0.362346 - 0.198550I$	$-1.82386 - 1.92463I$	0
$u = -0.563232 + 0.965023I$ $a = -2.05641 + 0.26959I$ $b = 0.93834 + 1.39542I$	$0.41749 - 6.60848I$	0
$u = -0.563232 - 0.965023I$ $a = -2.05641 - 0.26959I$ $b = 0.93834 - 1.39542I$	$0.41749 + 6.60848I$	0
$u = 0.474321 + 1.015760I$ $a = 2.24625 + 0.92224I$ $b = -1.52829 + 1.73485I$	$-7.93688 - 2.52368I$	0
$u = 0.474321 - 1.015760I$ $a = 2.24625 - 0.92224I$ $b = -1.52829 - 1.73485I$	$-7.93688 + 2.52368I$	0
$u = -0.172278 + 1.117900I$ $a = -1.19207 + 1.27159I$ $b = 1.108050 - 0.579662I$	$-4.01990 + 1.17968I$	0
$u = -0.172278 - 1.117900I$ $a = -1.19207 - 1.27159I$ $b = 1.108050 + 0.579662I$	$-4.01990 - 1.17968I$	0
$u = 0.668655 + 0.548525I$ $a = 0.347140 + 0.009131I$ $b = -0.080388 - 0.848571I$	$1.67282 + 1.18336I$	0
$u = 0.668655 - 0.548525I$ $a = 0.347140 - 0.009131I$ $b = -0.080388 + 0.848571I$	$1.67282 - 1.18336I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.304888 + 0.802879I$ $a = 2.32480 + 2.05839I$ $b = -2.54195 - 0.02928I$	$-7.39278 - 5.30678I$	0
$u = 0.304888 - 0.802879I$ $a = 2.32480 - 2.05839I$ $b = -2.54195 + 0.02928I$	$-7.39278 + 5.30678I$	0
$u = -0.764040 + 0.391991I$ $a = 0.223589 - 0.039141I$ $b = 0.88888 - 1.28525I$	$0.79779 + 3.54630I$	0
$u = -0.764040 - 0.391991I$ $a = 0.223589 + 0.039141I$ $b = 0.88888 + 1.28525I$	$0.79779 - 3.54630I$	0
$u = 0.015813 + 1.141970I$ $a = -1.14203 + 1.10548I$ $b = 0.479146 - 0.877561I$	$-4.83516 + 6.43812I$	0
$u = 0.015813 - 1.141970I$ $a = -1.14203 - 1.10548I$ $b = 0.479146 + 0.877561I$	$-4.83516 - 6.43812I$	0
$u = -0.746733 + 0.414279I$ $a = -0.398507 - 0.220503I$ $b = -1.37522 + 1.25564I$	$-0.56354 + 4.87266I$	0
$u = -0.746733 - 0.414279I$ $a = -0.398507 + 0.220503I$ $b = -1.37522 - 1.25564I$	$-0.56354 - 4.87266I$	0
$u = 0.671603 + 0.522356I$ $a = -0.311479 - 0.443718I$ $b = -0.433453 + 0.751213I$	$0.01428 + 2.52092I$	0
$u = 0.671603 - 0.522356I$ $a = -0.311479 + 0.443718I$ $b = -0.433453 - 0.751213I$	$0.01428 - 2.52092I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.523616 + 1.023740I$ $a = -0.451838 + 0.769470I$ $b = 0.022800 - 0.287948I$	$-1.47135 + 2.18018I$	0
$u = 0.523616 - 1.023740I$ $a = -0.451838 - 0.769470I$ $b = 0.022800 + 0.287948I$	$-1.47135 - 2.18018I$	0
$u = -0.421265 + 1.073750I$ $a = 1.28205 + 0.65629I$ $b = 0.00833 - 1.76181I$	$-7.72121 - 2.90646I$	0
$u = -0.421265 - 1.073750I$ $a = 1.28205 - 0.65629I$ $b = 0.00833 + 1.76181I$	$-7.72121 + 2.90646I$	0
$u = -0.883194 + 0.744299I$ $a = -0.207356 + 0.094147I$ $b = -0.233222 - 0.633268I$	$-2.31537 - 10.03430I$	0
$u = -0.883194 - 0.744299I$ $a = -0.207356 - 0.094147I$ $b = -0.233222 + 0.633268I$	$-2.31537 + 10.03430I$	0
$u = -0.528965 + 0.646369I$ $a = 0.765690 + 0.178414I$ $b = 0.49398 - 1.46583I$	$1.39400 + 2.12080I$	0
$u = -0.528965 - 0.646369I$ $a = 0.765690 - 0.178414I$ $b = 0.49398 + 1.46583I$	$1.39400 - 2.12080I$	0
$u = -0.487589 + 1.058840I$ $a = -1.16102 + 1.01325I$ $b = 0.700120 + 0.808782I$	$-4.80513 - 6.17689I$	0
$u = -0.487589 - 1.058840I$ $a = -1.16102 - 1.01325I$ $b = 0.700120 - 0.808782I$	$-4.80513 + 6.17689I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.429668+1.084450I$ $a=-0.284911-1.342230I$ $b=-1.03324+1.55189I$	$-7.65428-4.22413I$	0
$u=-0.429668-1.084450I$ $a=-0.284911+1.342230I$ $b=-1.03324-1.55189I$	$-7.65428+4.22413I$	0
$u=-0.503277+1.052460I$ $a=\ \ 1.06773-1.69356I$ $b=-0.912139-0.512714I$	$-8.56842-10.78630I$	0
$u=-0.503277-1.052460I$ $a=\ \ 1.06773+1.69356I$ $b=-0.912139+0.512714I$	$-8.56842+10.78630I$	0
$u=\ \ 0.523287+1.045050I$ $a=-2.52851-0.28979I$ $b=\ \ 1.27717-0.91760I$	$-0.42986+6.78772I$	0
$u=\ \ 0.523287-1.045050I$ $a=-2.52851+0.28979I$ $b=\ \ 1.27717+0.91760I$	$-0.42986-6.78772I$	0
$u=\ \ 0.577350+1.026680I$ $a=\ \ 1.49184+0.09660I$ $b=-0.529922+0.601456I$	$0.24834+3.65479I$	0
$u=\ \ 0.577350-1.026680I$ $a=\ \ 1.49184-0.09660I$ $b=-0.529922-0.601456I$	$0.24834-3.65479I$	0
$u=\ \ 0.645528+0.501164I$ $a=\ \ 0.450722+0.089944I$ $b=-0.189579-1.104270I$	$1.72552+1.29384I$	0
$u=\ \ 0.645528-0.501164I$ $a=\ \ 0.450722-0.089944I$ $b=-0.189579+1.104270I$	$1.72552-1.29384I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.372475 + 0.722416I$ $a = -2.49630 - 0.70039I$ $b = 1.40964 - 0.46282I$	$-2.24882 - 0.96597I$	0
$u = 0.372475 - 0.722416I$ $a = -2.49630 + 0.70039I$ $b = 1.40964 + 0.46282I$	$-2.24882 + 0.96597I$	0
$u = 0.567997 + 1.043690I$ $a = 1.86973 - 0.31465I$ $b = -0.518217 + 0.921647I$	$0.12411 + 3.47539I$	0
$u = 0.567997 - 1.043690I$ $a = 1.86973 + 0.31465I$ $b = -0.518217 - 0.921647I$	$0.12411 - 3.47539I$	0
$u = 0.794081 + 0.885202I$ $a = -0.460364 - 1.145470I$ $b = 1.63918 + 0.15378I$	$1.61981 + 2.97722I$	0
$u = 0.794081 - 0.885202I$ $a = -0.460364 + 1.145470I$ $b = 1.63918 - 0.15378I$	$1.61981 - 2.97722I$	0
$u = -0.583976 + 1.035980I$ $a = -1.34987 + 1.11548I$ $b = 1.59571 + 0.09368I$	$-3.65071 - 7.26272I$	0
$u = -0.583976 - 1.035980I$ $a = -1.34987 - 1.11548I$ $b = 1.59571 - 0.09368I$	$-3.65071 + 7.26272I$	0
$u = 0.627265 + 1.015700I$ $a = 2.03259 + 0.62732I$ $b = -1.69241 + 1.67030I$	$-4.56146 + 10.18510I$	0
$u = 0.627265 - 1.015700I$ $a = 2.03259 - 0.62732I$ $b = -1.69241 - 1.67030I$	$-4.56146 - 10.18510I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.586748+0.521256I$ $a=-0.279406+0.950011I$ $b=\ \ 1.120020-0.146739I$	$-2.16459+2.50983I$	0
$u=-0.586748-0.521256I$ $a=-0.279406-0.950011I$ $b=\ \ 1.120020+0.146739I$	$-2.16459-2.50983I$	0
$u=-0.497123+1.119690I$ $a=\ \ 0.025159-0.639605I$ $b=-0.072326-0.387958I$	$-7.76044-1.78334I$	0
$u=-0.497123-1.119690I$ $a=\ \ 0.025159+0.639605I$ $b=-0.072326+0.387958I$	$-7.76044+1.78334I$	0
$u=-0.727917+0.238018I$ $a=-0.530709+1.033550I$ $b=-0.302965-0.245522I$	$-5.14916-2.78172I$	0
$u=-0.727917-0.238018I$ $a=-0.530709-1.033550I$ $b=-0.302965+0.245522I$	$-5.14916+2.78172I$	0
$u=-0.745964+0.164770I$ $a=\ \ 0.118410-0.296590I$ $b=\ \ 0.336770-1.363730I$	$0.79072+2.67359I$	0
$u=-0.745964-0.164770I$ $a=\ \ 0.118410+0.296590I$ $b=\ \ 0.336770+1.363730I$	$0.79072-2.67359I$	0
$u=-0.860389+0.894174I$ $a=-0.577859-0.086101I$ $b=-0.033838+0.158962I$	$-2.76048+3.77491I$	0
$u=-0.860389-0.894174I$ $a=-0.577859+0.086101I$ $b=-0.033838-0.158962I$	$-2.76048-3.77491I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.588407+1.094670I$ $a=\ \ 2.45378-0.75173I$ $b=-1.79175-1.44150I$	$-2.56727-9.94580I$	0
$u=-0.588407-1.094670I$ $a=\ \ 2.45378+0.75173I$ $b=-1.79175+1.44150I$	$-2.56727+9.94580I$	0
$u=-0.909475+0.849114I$ $a=\ \ 0.367873-0.166562I$ $b=-0.117220+0.295460I$	$2.85837-3.27342I$	0
$u=-0.909475-0.849114I$ $a=\ \ 0.367873+0.166562I$ $b=-0.117220-0.295460I$	$2.85837+3.27342I$	0
$u=-0.630238+1.078940I$ $a=\ \ 1.72550-0.34518I$ $b=-0.915967-0.764878I$	$2.00596-9.33621I$	0
$u=-0.630238-1.078940I$ $a=\ \ 1.72550+0.34518I$ $b=-0.915967+0.764878I$	$2.00596+9.33621I$	0
$u=-0.589103+1.106950I$ $a=-2.21603+0.32002I$ $b=\ \ 1.24653+1.44635I$	$-1.30820-8.66085I$	0
$u=-0.589103-1.106950I$ $a=-2.21603-0.32002I$ $b=\ \ 1.24653-1.44635I$	$-1.30820+8.66085I$	0
$u=\ \ 0.658686+1.074320I$ $a=-1.137500-0.116592I$ $b=\ \ 0.651713-0.960686I$	$1.95014+5.03109I$	0
$u=\ \ 0.658686-1.074320I$ $a=-1.137500+0.116592I$ $b=\ \ 0.651713+0.960686I$	$1.95014-5.03109I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.637002+1.089020I$ $a=-1.97119+0.33647I$ $b=\ \ 0.862171+1.050450I$	$-0.81446-13.63000I$	0
$u=-0.637002-1.089020I$ $a=-1.97119-0.33647I$ $b=\ \ 0.862171-1.050450I$	$-0.81446+13.63000I$	0
$u=\ \ 0.251041+0.677405I$ $a=\ \ 2.19008-0.14679I$ $b=\ \ 0.245597+0.429775I$	$-2.21578+2.42347I$	0
$u=\ \ 0.251041-0.677405I$ $a=\ \ 2.19008+0.14679I$ $b=\ \ 0.245597-0.429775I$	$-2.21578-2.42347I$	0
$u=\ \ 0.694124+1.088710I$ $a=\ \ 0.689255-0.211587I$ $b=\ \ 0.005034+0.822763I$	$-0.637996+1.139050I$	0
$u=\ \ 0.694124-1.088710I$ $a=\ \ 0.689255+0.211587I$ $b=\ \ 0.005034-0.822763I$	$-0.637996-1.139050I$	0
$u=\ \ 0.047761+0.692037I$ $a=-0.48457+1.54702I$ $b=\ \ 0.538281-0.369837I$	$-2.06410+2.07968I$	0
$u=\ \ 0.047761-0.692037I$ $a=-0.48457-1.54702I$ $b=\ \ 0.538281+0.369837I$	$-2.06410-2.07968I$	0
$u=\ \ 0.118146+1.303960I$ $a=\ \ 1.00722+1.14028I$ $b=-1.124220-0.732935I$	$-10.4134-11.3385I$	0
$u=\ \ 0.118146-1.303960I$ $a=\ \ 1.00722-1.14028I$ $b=-1.124220+0.732935I$	$-10.4134+11.3385I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.562254+1.185940I$ $a=-1.56821-0.37587I$ $b=\ 0.56250+1.40878I$	$-2.09331-7.65950I$	0
$u=-0.562254-1.185940I$ $a=-1.56821+0.37587I$ $b=\ 0.56250-1.40878I$	$-2.09331+7.65950I$	0
$u=\ 0.640272+1.161150I$ $a=\ 2.02906+0.31372I$ $b=-1.29769+1.40569I$	$-6.7947+20.2416I$	0
$u=\ 0.640272-1.161150I$ $a=\ 2.02906-0.31372I$ $b=-1.29769-1.40569I$	$-6.7947-20.2416I$	0
$u=\ 0.488051+0.455353I$ $a=-0.660190-0.334802I$ $b=\ 0.85045+1.15228I$	$1.28651-2.50406I$	0
$u=\ 0.488051-0.455353I$ $a=-0.660190+0.334802I$ $b=\ 0.85045-1.15228I$	$1.28651+2.50406I$	0
$u=-0.647143+1.170200I$ $a=\ 1.39516-0.40041I$ $b=-0.890752-1.032550I$	$-8.12393-11.02800I$	0
$u=-0.647143-1.170200I$ $a=\ 1.39516+0.40041I$ $b=-0.890752+1.032550I$	$-8.12393+11.02800I$	0
$u=\ 0.644203+1.172780I$ $a=-1.79245-0.20694I$ $b=\ 1.15490-1.25220I$	$-2.48618+13.91520I$	0
$u=\ 0.644203-1.172780I$ $a=-1.79245+0.20694I$ $b=\ 1.15490+1.25220I$	$-2.48618-13.91520I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.476042+1.253450I$ $a=\ \ 0.767654+0.982557I$ $b=\ \ 0.118953-1.273140I$	$-3.03300-1.67807I$	0
$u=-0.476042-1.253450I$ $a=\ \ 0.767654-0.982557I$ $b=\ \ 0.118953+1.273140I$	$-3.03300+1.67807I$	0
$u=\ \ 0.668020+1.162970I$ $a=\ \ 1.43723+0.44957I$ $b=-1.22373+0.90401I$	$-7.80886+7.44969I$	0
$u=\ \ 0.668020-1.162970I$ $a=\ \ 1.43723-0.44957I$ $b=-1.22373-0.90401I$	$-7.80886-7.44969I$	0
$u=\ \ 0.126270+1.354470I$ $a=-0.719731-0.868441I$ $b=\ \ 0.891685+0.551190I$	$-6.15020-4.65066I$	0
$u=\ \ 0.126270-1.354470I$ $a=-0.719731+0.868441I$ $b=\ \ 0.891685-0.551190I$	$-6.15020+4.65066I$	0
$u=\ \ 0.000473+1.369210I$ $a=\ \ 0.896106+0.084947I$ $b=-0.945924+0.059529I$	$-12.22080+1.70336I$	0
$u=\ \ 0.000473-1.369210I$ $a=\ \ 0.896106-0.084947I$ $b=-0.945924-0.059529I$	$-12.22080-1.70336I$	0
$u=\ \ 0.359633+0.473165I$ $a=-2.38433+0.40404I$ $b=-1.104890-0.868179I$	$-6.36818+6.30013I$	$1.93697-5.53240I$
$u=\ \ 0.359633-0.473165I$ $a=-2.38433-0.40404I$ $b=-1.104890+0.868179I$	$-6.36818-6.30013I$	$1.93697+5.53240I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.467824+0.330553I$ $a=-0.89423+1.69100I$ $b=-0.977860-0.023372I$	$-6.62905+6.66692I$	$2.14653-5.53860I$
$u=-0.467824-0.330553I$ $a=-0.89423-1.69100I$ $b=-0.977860+0.023372I$	$-6.62905-6.66692I$	$2.14653+5.53860I$
$u=-0.539397+0.036460I$ $a=-0.11717-1.94068I$ $b=-0.413536-1.085250I$	$-4.92314+0.56628I$	$1.80420+0.22948I$
$u=-0.539397-0.036460I$ $a=-0.11717+1.94068I$ $b=-0.413536+1.085250I$	$-4.92314-0.56628I$	$1.80420-0.22948I$
$u=-0.463328+0.197279I$ $a=\ \ 0.62065-1.70777I$ $b=\ \ 0.726297-0.235177I$	$-2.65574+2.21678I$	$4.57837-3.22394I$
$u=-0.463328-0.197279I$ $a=\ \ 0.62065+1.70777I$ $b=\ \ 0.726297+0.235177I$	$-2.65574-2.21678I$	$4.57837+3.22394I$
$u=-0.08554+1.58780I$ $a=\ \ 0.268697-0.093947I$ $b=-0.438910+0.180398I$	$-12.32900+1.54184I$	0
$u=-0.08554-1.58780I$ $a=\ \ 0.268697+0.093947I$ $b=-0.438910-0.180398I$	$-12.32900-1.54184I$	0
$u=\ \ 0.328598$ $a=\ \ 1.18737$ $b=-0.238997$	0.768218	13.3120
$u=-0.1320090+0.0271147I$ $a=\ \ 0.47780-3.42508I$ $b=\ \ 0.392252-1.205860I$	$0.91673+2.35515I$	$2.29213-5.21832I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.1320090-0.0271147I$		
$a=\ \ 0.47780+3.42508I$	$0.91673-2.35515I$	$2.29213+5.21832I$
$b=\ \ 0.392252+1.205860I$		

II.

$\boldsymbol{I_2^u = \langle -2.74\times 10^5 u^{35} + 8.82\times 10^6 u^{34} + \cdots + 3.08\times 10^6 b + 1.34\times 10^7,\ 2.45\times 10^7 u^{35} + 6.97\times 10^7 u^{34} + \cdots + 9.24\times 10^6 a + 4.39\times 10^8,\ u^{36} + 2u^{35} + \cdots + 22u^2 + 3\rangle}$

(i) Arc colorings

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

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

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

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

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

$$a_{10} = \begin{pmatrix} -2.64795u^{35} - 7.54902u^{34} + \cdots - 3.16921u - 47.4798 \\ 0.0889697u^{35} - 2.86575u^{34} + \cdots + 0.420458u - 4.33784 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0743336u^{35} - 7.99853u^{34} + \cdots + 7.41759u - 58.5981 \\ -0.192023u^{35} - 1.60078u^{34} + \cdots - 5.34451u - 6.20682 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 19.1869u^{35} + 47.1453u^{34} + \cdots + 60.5547u + 56.9804 \\ -13.6982u^{35} - 23.8281u^{34} + \cdots - 31.4578u - 23.6076 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -2.55898u^{35} - 10.4148u^{34} + \cdots - 2.74876u - 51.8176 \\ 0.0889697u^{35} - 2.86575u^{34} + \cdots + 0.420458u - 4.33784 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -6.98698u^{35} + 3.35134u^{34} + \cdots + 10.7427u + 34.7553 \\ -u^{34} - u^{33} + \cdots + 3u - 2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -8.33089u^{35} - 6.43174u^{34} + \cdots - 18.0880u + 63.2520 \\ -3.34423u^{35} - 17.8273u^{34} + \cdots + 5.69385u - 34.6095 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 23.0671u^{35} + 57.2282u^{34} + \cdots + 147.394u + 18.9144 \\ 0.0790312u^{35} + 10.1966u^{34} + \cdots - 15.9003u + 40.7090 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{6986395}{3079049}u^{35} - \frac{115112190}{3079049}u^{34} + \cdots + \frac{264804481}{3079049}u - \frac{156421356}{3079049}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{36} - 22u^{35} + \cdots - 132u + 9$
c_2	$u^{36} - 2u^{35} + \cdots + 22u^2 + 3$
c_3	$u^{36} - 4u^{35} + \cdots + 3u + 1$
c_4	$u^{36} + u^{35} + \cdots - 2u + 1$
c_5	$u^{36} - 3u^{35} + \cdots - u + 1$
c_6	$u^{36} + 2u^{35} + \cdots + 22u^2 + 3$
c_7	$u^{36} - 2u^{35} + \cdots + 2u + 1$
c_8	$u^{36} + 4u^{35} + \cdots - 3u + 1$
c_9	$u^{36} + 3u^{35} + \cdots + 4u + 1$
c_{10}	$u^{36} + 4u^{35} + \cdots + u + 1$
c_{11}	$u^{36} + 2u^{35} + \cdots - 2u + 1$
c_{12}	$u^{36} - 4u^{35} + \cdots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{36} - 2y^{35} + \cdots + 792y + 81$
c_2, c_6	$y^{36} + 22y^{35} + \cdots + 132y + 9$
c_3, c_8	$y^{36} + 24y^{35} + \cdots + 5y + 1$
c_4	$y^{36} + 3y^{35} + \cdots + 36y + 1$
c_5	$y^{36} - 9y^{35} + \cdots + 65y + 1$
c_7, c_{11}	$y^{36} + 20y^{35} + \cdots + 38y + 1$
c_9	$y^{36} - 21y^{35} + \cdots + 32y + 1$
c_{10}	$y^{36} - 24y^{35} + \cdots - 21y + 1$
c_{12}	$y^{36} + 10y^{35} + \cdots + 6y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.427633 + 0.892512I$ $a = 1.34404 + 3.29332I$ $b = -0.023543 + 0.179093I$	$-3.60845 + 1.96750I$	$-10.5027 + 25.1781I$
$u = 0.427633 - 0.892512I$ $a = 1.34404 - 3.29332I$ $b = -0.023543 - 0.179093I$	$-3.60845 - 1.96750I$	$-10.5027 - 25.1781I$
$u = -0.311562 + 0.932514I$ $a = 0.682349 - 1.015160I$ $b = -1.79745 + 0.79765I$	$-7.94658 - 7.39898I$	$0.39204 + 6.51446I$
$u = -0.311562 - 0.932514I$ $a = 0.682349 + 1.015160I$ $b = -1.79745 - 0.79765I$	$-7.94658 + 7.39898I$	$0.39204 - 6.51446I$
$u = -0.820885 + 0.603070I$ $a = -0.445746 - 0.326966I$ $b = -0.969508 + 0.735023I$	$-4.14637 + 4.39788I$	$2.02046 - 3.27056I$
$u = -0.820885 - 0.603070I$ $a = -0.445746 + 0.326966I$ $b = -0.969508 - 0.735023I$	$-4.14637 - 4.39788I$	$2.02046 + 3.27056I$
$u = -0.329319 + 0.900303I$ $a = 3.02260 - 1.82845I$ $b = -2.26465 - 0.27346I$	$-7.86231 + 4.72596I$	$-2.62567 - 1.01563I$
$u = -0.329319 - 0.900303I$ $a = 3.02260 + 1.82845I$ $b = -2.26465 + 0.27346I$	$-7.86231 - 4.72596I$	$-2.62567 + 1.01563I$
$u = -0.183526 + 1.086600I$ $a = -1.50994 + 1.41586I$ $b = 1.289140 - 0.363314I$	$-3.54641 + 2.10833I$	$2.24260 - 3.90159I$
$u = -0.183526 - 1.086600I$ $a = -1.50994 - 1.41586I$ $b = 1.289140 + 0.363314I$	$-3.54641 - 2.10833I$	$2.24260 + 3.90159I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.232343+1.124590I$ $a=-0.020224+0.635581I$ $b=\ \ 0.868133-0.649405I$	$-4.62123-2.81611I$	$1.68435+3.28262I$
$u=-0.232343-1.124590I$ $a=-0.020224-0.635581I$ $b=\ \ 0.868133+0.649405I$	$-4.62123+2.81611I$	$1.68435-3.28262I$
$u=\ \ 0.498732+1.047570I$ $a=-2.00973+0.05423I$ $b=\ \ 0.863465-1.064110I$	$-0.58444+5.51559I$	$3.76244-4.78669I$
$u=\ \ 0.498732-1.047570I$ $a=-2.00973-0.05423I$ $b=\ \ 0.863465+1.064110I$	$-0.58444-5.51559I$	$3.76244+4.78669I$
$u=\ \ 0.406955+0.731762I$ $a=-3.05083-0.19270I$ $b=\ \ 0.241241+0.107345I$	$-3.20536+1.59773I$	$14.2628+4.7208I$
$u=\ \ 0.406955-0.731762I$ $a=-3.05083+0.19270I$ $b=\ \ 0.241241-0.107345I$	$-3.20536-1.59773I$	$14.2628-4.7208I$
$u=\ \ 0.787652+0.860862I$ $a=\ \ 0.484953+0.321118I$ $b=-0.409829-0.296903I$	$3.38085+2.95515I$	$14.6942+0.7830I$
$u=\ \ 0.787652-0.860862I$ $a=\ \ 0.484953-0.321118I$ $b=-0.409829+0.296903I$	$3.38085-2.95515I$	$14.6942-0.7830I$
$u=-0.735264+0.386817I$ $a=\ \ 0.178595+0.120005I$ $b=\ \ 1.10696-1.25658I$	$1.06544+4.41503I$	$9.17473-7.03836I$
$u=-0.735264-0.386817I$ $a=\ \ 0.178595-0.120005I$ $b=\ \ 1.10696+1.25658I$	$1.06544-4.41503I$	$9.17473+7.03836I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.820007+0.877730I$ $a=-0.322360+1.035620I$ $b=\ 1.45475-0.22491I$	$1.48343-3.05390I$	$-16.4875+15.2002I$
$u=-0.820007-0.877730I$ $a=-0.322360-1.035620I$ $b=\ 1.45475+0.22491I$	$1.48343+3.05390I$	$-16.4875-15.2002I$
$u=-0.638467+1.026220I$ $a=\ 1.52174-1.10047I$ $b=-1.60981-0.91718I$	$-5.43897-9.83227I$	$0.+8.35305I$
$u=-0.638467-1.026220I$ $a=\ 1.52174+1.10047I$ $b=-1.60981+0.91718I$	$-5.43897+9.83227I$	$0.-8.35305I$
$u=\ 0.082636+0.755082I$ $a=-2.65874+0.05945I$ $b=\ 0.715192+0.306531I$	$-3.09846+1.75879I$	$1.66196-2.29003I$
$u=\ 0.082636-0.755082I$ $a=-2.65874-0.05945I$ $b=\ 0.715192-0.306531I$	$-3.09846-1.75879I$	$1.66196+2.29003I$
$u=-0.579723+1.100540I$ $a=-2.40699+0.50773I$ $b=\ 1.51634+1.39481I$	$-1.01955-9.42472I$	$6.00000+11.11090I$
$u=-0.579723-1.100540I$ $a=-2.40699-0.50773I$ $b=\ 1.51634-1.39481I$	$-1.01955+9.42472I$	$6.00000-11.11090I$
$u=\ 0.387885+0.640352I$ $a=\ 0.233142-0.086990I$ $b=\ 0.48386+1.34785I$	$0.91377-1.67707I$	$2.04498-5.40963I$
$u=\ 0.387885-0.640352I$ $a=\ 0.233142+0.086990I$ $b=\ 0.48386-1.34785I$	$0.91377+1.67707I$	$2.04498+5.40963I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.562779 + 1.142520I$ $a = 0.821416 - 0.614192I$ $b = 0.028591 + 0.801812I$	$-0.53791 + 1.99663I$	$10.25177 - 2.40040I$
$u = 0.562779 - 1.142520I$ $a = 0.821416 + 0.614192I$ $b = 0.028591 - 0.801812I$	$-0.53791 - 1.99663I$	$10.25177 + 2.40040I$
$u = 0.580154 + 0.421847I$ $a = 0.0292708 + 0.0990432I$ $b = 0.324682 - 1.134260I$	$1.66459 + 2.60861I$	$12.4217 - 6.9824I$
$u = 0.580154 - 0.421847I$ $a = 0.0292708 - 0.0990432I$ $b = 0.324682 + 1.134260I$	$1.66459 - 2.60861I$	$12.4217 + 6.9824I$
$u = -0.08333 + 1.62828I$ $a = 0.106451 - 0.158694I$ $b = -0.317566 + 0.216529I$	$-12.24010 + 1.55523I$	0
$u = -0.08333 - 1.62828I$ $a = 0.106451 + 0.158694I$ $b = -0.317566 - 0.216529I$	$-12.24010 - 1.55523I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{36}-22u^{35}+\cdots-132u+9)(u^{161}+77u^{160}+\cdots+87u-1)$
c_2	$(u^{36}-2u^{35}+\cdots+22u^2+3)(u^{161}+u^{160}+\cdots-17u-1)$
c_3	$(u^{36}-4u^{35}+\cdots+3u+1)(u^{161}-3u^{160}+\cdots+4109148u-232661)$
c_4	$(u^{36}+u^{35}+\cdots-2u+1)$ $\cdot(u^{161}+31u^{159}+\cdots-835953597u-981193891)$
c_5	$(u^{36}-3u^{35}+\cdots-u+1)(u^{161}-2u^{160}+\cdots+54544u-4861)$
c_6	$(u^{36}+2u^{35}+\cdots+22u^2+3)(u^{161}+u^{160}+\cdots-17u-1)$
c_7	$(u^{36}-2u^{35}+\cdots+2u+1)(u^{161}+u^{160}+\cdots-57047u-4381)$
c_8	$(u^{36}+4u^{35}+\cdots-3u+1)(u^{161}-3u^{160}+\cdots+4109148u-232661)$
c_9	$(u^{36}+3u^{35}+\cdots+4u+1)(u^{161}-16u^{160}+\cdots+9283u-167)$
c_{10}	$(u^{36}+4u^{35}+\cdots+u+1)(u^{161}+17u^{160}+\cdots-158166u-7087)$
c_{11}	$(u^{36}+2u^{35}+\cdots-2u+1)(u^{161}+u^{160}+\cdots-57047u-4381)$
c_{12}	$(u^{36}-4u^{35}+\cdots-2u+1)(u^{161}-u^{160}+\cdots-31u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{36}-2y^{35}+\cdots+792y+81)(y^{161}+29y^{160}+\cdots+4223y-1)$
c_2, c_6	$(y^{36}+22y^{35}+\cdots+132y+9)(y^{161}+77y^{160}+\cdots+87y-1)$
c_3, c_8	$(y^{36}+24y^{35}+\cdots+5y+1)$ $\cdot(y^{161}+123y^{160}+\cdots+6872989493074y-54131140921)$
c_4	$(y^{36}+3y^{35}+\cdots+36y+1)$ $\cdot(y^{161}+62y^{160}+\cdots-1.81\times10^{19}y-9.63\times10^{17})$
c_5	$(y^{36}-9y^{35}+\cdots+65y+1)$ $\cdot(y^{161}+14y^{160}+\cdots+3371540262y-23629321)$
c_7, c_{11}	$(y^{36}+20y^{35}+\cdots+38y+1)$ $\cdot(y^{161}+107y^{160}+\cdots-1600208367y-19193161)$
c_9	$(y^{36}-21y^{35}+\cdots+32y+1)$ $\cdot(y^{161}-18y^{160}+\cdots+18773891y-27889)$
c_{10}	$(y^{36}-24y^{35}+\cdots-21y+1)$ $\cdot(y^{161}-5y^{160}+\cdots-2043156540y-50225569)$
c_{12}	$(y^{36}+10y^{35}+\cdots+6y+1)(y^{161}+9y^{160}+\cdots-771y-1)$