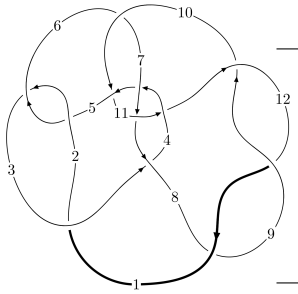
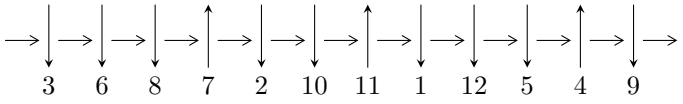
$12a_{0267}$ $(K12a_{0267})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle 2.48175 \times 10^{423} u^{145} + 6.47417 \times 10^{423} u^{144} + \cdots + 2.60431 \times 10^{425} b - 4.75085 \times 10^{426}, \\
&\quad 1.32031 \times 10^{428} u^{145} + 5.69757 \times 10^{428} u^{144} + \cdots + 7.55251 \times 10^{427} a - 5.42178 \times 10^{430}, \\
&\quad u^{146} + 4u^{145} + \cdots - 333u + 145 \rangle \\
I_2^u &= \langle -22u^{28} + 63u^{27} + \cdots + b + 40,\ 23u^{28} - 38u^{27} + \cdots + a - 9,\ u^{29} - 3u^{28} + \cdots - 3u + 1 \rangle \\
I_3^u &= \langle -8a^5 + 5a^4 + 4a^3 - 31a^2 + 69b - 64a + 78,\ a^6 - 2a^5 + 6a^3 - 2a^2 - 15a + 17,\ u + 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 181 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. $\boldsymbol{I_1^u = \langle 2.48 \times 10^{423} u^{145} + 6.47 \times 10^{423} u^{144} + \cdots + 2.60 \times 10^{425} b - 4.75 \times 10^{426},\ 1.32 \times 10^{428} u^{145} + 5.70 \times 10^{428} u^{144} + \cdots + 7.55 \times 10^{427} a - 5.42 \times 10^{430},\ u^{146} + 4u^{145} + \cdots - 333u + 145 \rangle}$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_{10} = \begin{pmatrix} -1.74818u^{145} - 7.54395u^{144} + \cdots + 409.136u + 717.878 \\ -0.00952937u^{145} - 0.0248594u^{144} + \cdots + 17.2071u + 18.2422 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.435446u^{145} - 1.88667u^{144} + \cdots + 130.906u + 250.926 \\ 0.114455u^{145} + 0.546935u^{144} + \cdots + 7.79061u - 52.6943 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.73865u^{145} - 7.51909u^{144} + \cdots + 391.929u + 699.635 \\ -0.00952937u^{145} - 0.0248594u^{144} + \cdots + 17.2071u + 18.2422 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1.22486u^{145} + 5.37461u^{144} + \cdots - 224.823u - 480.791 \\ 0.0428686u^{145} + 0.227799u^{144} + \cdots + 11.5021u - 11.9860 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 0.391087u^{145} + 1.84118u^{144} + \cdots - 36.1350u - 159.522 \\ 0.223870u^{145} + 0.982120u^{144} + \cdots - 18.3317u - 65.0821 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.120587u^{145} + 0.503240u^{144} + \cdots - 24.4200u - 68.1190 \\ 0.120621u^{145} + 0.526531u^{144} + \cdots - 34.8729u - 61.0393 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.24939u^{145} + 5.50261u^{144} + \cdots - 217.275u - 493.079 \\ 0.194473u^{145} + 0.884878u^{144} + \cdots - 14.3452u - 60.1351 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.772054u^{145} - 3.28462u^{144} + \cdots - 30.4527u + 140.299$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{146} + 56u^{145} + \cdots + 723369u + 21025$
c_2, c_5	$u^{146} + 4u^{145} + \cdots - 333u + 145$
c_3	$u^{146} + 4u^{145} + \cdots + 2468988890u + 899654983$
c_4	$u^{146} + 12u^{145} + \cdots + 18u + 1$
c_6	$u^{146} - u^{145} + \cdots + 13382u - 2117$
c_7	$u^{146} - 4u^{144} + \cdots + 672u + 320$
c_8, c_9, c_{12}	$u^{146} + 5u^{145} + \cdots + 24u - 1$
c_{10}	$u^{146} - u^{145} + \cdots + 1200u + 145$
c_{11}	$u^{146} - 5u^{145} + \cdots - 1206u + 145$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{146} + 76y^{145} + \cdots - 56026237661y + 442050625$
c_2, c_5	$y^{146} - 56y^{145} + \cdots - 723369y + 21025$
c_3	$y^{146} + 48y^{145} + \cdots - 8.05 \times 10^{19}y + 8.09 \times 10^{17}$
c_4	$y^{146} + 4y^{145} + \cdots + 274y + 1$
c_6	$y^{146} + 31y^{145} + \cdots + 165806780y + 4481689$
c_7	$y^{146} - 8y^{145} + \cdots - 3339264y + 102400$
c_8, c_9, c_{12}	$y^{146} + 147y^{145} + \cdots + 14y + 1$
c_{10}	$y^{146} + 17y^{145} + \cdots + 1475950y + 21025$
c_{11}	$y^{146} - 7y^{145} + \cdots - 324306y + 21025$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.717312+0.699409I$ $a=-2.34714-1.26596I$ $b=-0.079322+0.544577I$	$9.86898-3.45452I$	0
$u=-0.717312-0.699409I$ $a=-2.34714+1.26596I$ $b=-0.079322-0.544577I$	$9.86898+3.45452I$	0
$u=\ \ 0.751663+0.666797I$ $a=-0.724199-0.469522I$ $b=-0.572940+1.018600I$	$4.66153+3.56872I$	0
$u=\ \ 0.751663-0.666797I$ $a=-0.724199+0.469522I$ $b=-0.572940-1.018600I$	$4.66153-3.56872I$	0
$u=\ \ 1.002600+0.195131I$ $a=\ \ 2.13983+0.28539I$ $b=\ \ 0.482851+0.453150I$	$0.85295-5.12362I$	0
$u=\ \ 1.002600-0.195131I$ $a=\ \ 2.13983-0.28539I$ $b=\ \ 0.482851-0.453150I$	$0.85295+5.12362I$	0
$u=\ \ 0.783873+0.582905I$ $a=-0.71241+2.00247I$ $b=-1.98372+0.05552I$	$-0.191919+0.970948I$	0
$u=\ \ 0.783873-0.582905I$ $a=-0.71241-2.00247I$ $b=-1.98372-0.05552I$	$-0.191919-0.970948I$	0
$u=-0.723954+0.736563I$ $a=-0.170958+0.108878I$ $b=\ \ 0.89695+1.32014I$	$3.10050-3.62856I$	0
$u=-0.723954-0.736563I$ $a=-0.170958-0.108878I$ $b=\ \ 0.89695-1.32014I$	$3.10050+3.62856I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.797875+0.656098I$ $a=\ 1.167590+0.442098I$ $b=\ 0.972968+0.380891I$	$0.107696-0.580505I$	0
$u=-0.797875-0.656098I$ $a=\ 1.167590-0.442098I$ $b=\ 0.972968-0.380891I$	$0.107696+0.580505I$	0
$u=\ 0.583336+0.856509I$ $a=\ 0.174856+0.109704I$ $b=\ 0.083596-0.849372I$	$4.28577+1.52049I$	0
$u=\ 0.583336-0.856509I$ $a=\ 0.174856-0.109704I$ $b=\ 0.083596+0.849372I$	$4.28577-1.52049I$	0
$u=-1.027870+0.186062I$ $a=\ 2.17640-0.35403I$ $b=\ 1.40942-1.24508I$	$-3.22736-0.23964I$	0
$u=-1.027870-0.186062I$ $a=\ 2.17640+0.35403I$ $b=\ 1.40942+1.24508I$	$-3.22736+0.23964I$	0
$u=\ 0.955093+0.003365I$ $a=-1.72619+1.44767I$ $b=-1.036130+0.751399I$	$-1.92739+4.08568I$	0
$u=\ 0.955093-0.003365I$ $a=-1.72619-1.44767I$ $b=-1.036130-0.751399I$	$-1.92739-4.08568I$	0
$u=-0.351932+0.984589I$ $a=\ 0.092783-0.200915I$ $b=-0.545899+0.665342I$	$1.45577+4.86741I$	0
$u=-0.351932-0.984589I$ $a=\ 0.092783+0.200915I$ $b=-0.545899-0.665342I$	$1.45577-4.86741I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.545918 + 0.782116I$ $a = 0.43363 - 1.50600I$ $b = 1.52469 + 0.52897I$	$7.78027 + 5.16500I$	0
$u = 0.545918 - 0.782116I$ $a = 0.43363 + 1.50600I$ $b = 1.52469 - 0.52897I$	$7.78027 - 5.16500I$	0
$u = 0.866478 + 0.591952I$ $a = -1.77016 + 0.59900I$ $b = -0.19223 - 1.69763I$	$-0.48155 - 2.33988I$	0
$u = 0.866478 - 0.591952I$ $a = -1.77016 - 0.59900I$ $b = -0.19223 + 1.69763I$	$-0.48155 + 2.33988I$	0
$u = 0.943710 + 0.103188I$ $a = -0.738796 - 0.840429I$ $b = -0.400481 + 0.993970I$	$5.60767 + 3.55011I$	0
$u = 0.943710 - 0.103188I$ $a = -0.738796 + 0.840429I$ $b = -0.400481 - 0.993970I$	$5.60767 - 3.55011I$	0
$u = -1.039070 + 0.180991I$ $a = 0.52614 + 1.82921I$ $b = 0.323777 + 0.640515I$	$0.96939 - 3.33538I$	0
$u = -1.039070 - 0.180991I$ $a = 0.52614 - 1.82921I$ $b = 0.323777 - 0.640515I$	$0.96939 + 3.33538I$	0
$u = -0.876289 + 0.351593I$ $a = -0.69058 - 1.43780I$ $b = -0.765163 - 0.920942I$	$-1.81241 + 1.71386I$	0
$u = -0.876289 - 0.351593I$ $a = -0.69058 + 1.43780I$ $b = -0.765163 + 0.920942I$	$-1.81241 - 1.71386I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.850854+0.402864I$ $a=-2.64553-0.68802I$ $b=-1.44440+0.94266I$	$-0.82398+4.32637I$	0
$u=-0.850854-0.402864I$ $a=-2.64553+0.68802I$ $b=-1.44440-0.94266I$	$-0.82398-4.32637I$	0
$u=0.930828+0.018677I$ $a=-2.12552+1.00341I$ $b=-0.630981+0.098833I$	$-4.02304+1.06856I$	0
$u=0.930828-0.018677I$ $a=-2.12552-1.00341I$ $b=-0.630981-0.098833I$	$-4.02304-1.06856I$	0
$u=-0.616483+0.873993I$ $a=0.072867+0.126550I$ $b=-0.86988-1.25529I$	$3.03814-9.09734I$	0
$u=-0.616483-0.873993I$ $a=0.072867-0.126550I$ $b=-0.86988+1.25529I$	$3.03814+9.09734I$	0
$u=0.680944+0.828876I$ $a=-0.86122+1.39805I$ $b=0.164437-0.912029I$	$8.81877-2.41807I$	0
$u=0.680944-0.828876I$ $a=-0.86122-1.39805I$ $b=0.164437+0.912029I$	$8.81877+2.41807I$	0
$u=-0.852601+0.652615I$ $a=1.64036+0.74160I$ $b=0.071893-0.436529I$	$2.32733-0.87919I$	0
$u=-0.852601-0.652615I$ $a=1.64036-0.74160I$ $b=0.071893+0.436529I$	$2.32733+0.87919I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.780971 + 0.742856I$ $a = 0.232829 - 0.157510I$ $b = -0.094111 + 1.009100I$	$3.52936 - 2.28901I$	0
$u = 0.780971 - 0.742856I$ $a = 0.232829 + 0.157510I$ $b = -0.094111 - 1.009100I$	$3.52936 + 2.28901I$	0
$u = -0.689959 + 0.608093I$ $a = 0.032715 + 1.229640I$ $b = 0.484351 + 0.845214I$	$3.81022 + 3.81839I$	0
$u = -0.689959 - 0.608093I$ $a = 0.032715 - 1.229640I$ $b = 0.484351 - 0.845214I$	$3.81022 - 3.81839I$	0
$u = -0.859691 + 0.657191I$ $a = -0.512576 + 0.995728I$ $b = 0.032009 - 0.682643I$	$2.30507 + 5.97578I$	0
$u = -0.859691 - 0.657191I$ $a = -0.512576 - 0.995728I$ $b = 0.032009 + 0.682643I$	$2.30507 - 5.97578I$	0
$u = -0.815653 + 0.734411I$ $a = 2.03170 + 1.16713I$ $b = 1.11060 - 1.14783I$	$10.83000 + 5.19918I$	0
$u = -0.815653 - 0.734411I$ $a = 2.03170 - 1.16713I$ $b = 1.11060 + 1.14783I$	$10.83000 - 5.19918I$	0
$u = -0.724535 + 0.830904I$ $a = -0.794990 + 0.278518I$ $b = -0.703464 - 0.616085I$	$7.60813 - 4.48816I$	0
$u = -0.724535 - 0.830904I$ $a = -0.794990 - 0.278518I$ $b = -0.703464 + 0.616085I$	$7.60813 + 4.48816I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.944102+0.608604I$		
$a=$	$0.68731-1.69640I$	$-0.73934-5.69919I$	0
$b=$	$2.06292-0.40586I$		
$u=$	$0.944102-0.608604I$		
$a=$	$0.68731+1.69640I$	$-0.73934+5.69919I$	0
$b=$	$2.06292+0.40586I$		
$u=$	$-1.100140+0.236992I$		
$a=$	$-0.654771-1.247530I$	$-3.40640-0.64916I$	0
$b=$	$-0.496947-0.600281I$		
$u=$	$-1.100140-0.236992I$		
$a=$	$-0.654771+1.247530I$	$-3.40640+0.64916I$	0
$b=$	$-0.496947+0.600281I$		
$u=$	$0.865788+0.728011I$		
$a=$	$0.791746-0.828220I$	$2.99302-2.77400I$	0
$b=$	$0.015922+0.987668I$		
$u=$	$0.865788-0.728011I$		
$a=$	$0.791746+0.828220I$	$2.99302+2.77400I$	0
$b=$	$0.015922-0.987668I$		
$u=$	$0.448442+0.732258I$		
$a=$	$0.269708-0.445502I$	$3.42380+1.90527I$	0
$b=$	$-0.570422+1.153250I$		
$u=$	$0.448442-0.732258I$		
$a=$	$0.269708+0.445502I$	$3.42380-1.90527I$	0
$b=$	$-0.570422-1.153250I$		
$u=$	$-0.929973+0.667074I$		
$a=$	$-1.79299-0.78709I$	$-0.32097+5.73154I$	0
$b=$	$-0.949166+0.276522I$		
$u=$	$-0.929973-0.667074I$		
$a=$	$-1.79299+0.78709I$	$-0.32097-5.73154I$	0
$b=$	$-0.949166-0.276522I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.925352 + 0.696312I$ $a = 1.180240 - 0.330252I$ $b = 0.248804 + 0.874632I$	$3.08550 - 3.19478I$	0
$u = 0.925352 - 0.696312I$ $a = 1.180240 + 0.330252I$ $b = 0.248804 - 0.874632I$	$3.08550 + 3.19478I$	0
$u = 0.958288 + 0.653774I$ $a = 2.30704 - 0.58891I$ $b = 0.672339 + 0.916215I$	$4.01195 - 8.70770I$	0
$u = 0.958288 - 0.653774I$ $a = 2.30704 + 0.58891I$ $b = 0.672339 - 0.916215I$	$4.01195 + 8.70770I$	0
$u = -0.911350 + 0.724923I$ $a = -0.096637 - 0.263627I$ $b = -0.95510 - 1.29492I$	$10.54000 + 0.35533I$	0
$u = -0.911350 - 0.724923I$ $a = -0.096637 + 0.263627I$ $b = -0.95510 + 1.29492I$	$10.54000 - 0.35533I$	0
$u = 1.036340 + 0.539959I$ $a = -2.17866 + 0.23890I$ $b = -0.732179 - 0.945162I$	$-1.54255 - 7.41509I$	0
$u = 1.036340 - 0.539959I$ $a = -2.17866 - 0.23890I$ $b = -0.732179 + 0.945162I$	$-1.54255 + 7.41509I$	0
$u = 0.804131 + 0.196781I$ $a = 1.63599 - 1.35164I$ $b = 0.861544 + 0.425394I$	$-1.84482 - 3.79193I$	0
$u = 0.804131 - 0.196781I$ $a = 1.63599 + 1.35164I$ $b = 0.861544 - 0.425394I$	$-1.84482 + 3.79193I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.977193+0.662468I$ $a=\ \ 0.651879-1.038750I$ $b=\ \ 0.117675+0.764877I$	$9.06594+8.71802I$	0
$u=-0.977193-0.662468I$ $a=\ \ 0.651879+1.038750I$ $b=\ \ 0.117675-0.764877I$	$9.06594-8.71802I$	0
$u=\ \ 0.841321+0.839641I$ $a=-0.974740+0.296884I$ $b=-0.431739-0.975195I$	$9.07418-0.01157I$	0
$u=\ \ 0.841321-0.839641I$ $a=-0.974740-0.296884I$ $b=-0.431739+0.975195I$	$9.07418+0.01157I$	0
$u=-0.627394+1.009860I$ $a=\ \ 0.057245-0.154601I$ $b=\ \ 0.89466+1.22131I$	$9.8836-13.0615I$	0
$u=-0.627394-1.009860I$ $a=\ \ 0.057245+0.154601I$ $b=\ \ 0.89466-1.22131I$	$9.8836+13.0615I$	0
$u=\ \ 0.604209+0.540416I$ $a=\ \ 0.821630-0.997718I$ $b=-0.274803+1.293460I$	$3.36586+2.04358I$	0
$u=\ \ 0.604209-0.540416I$ $a=\ \ 0.821630+0.997718I$ $b=-0.274803-1.293460I$	$3.36586-2.04358I$	0
$u=-0.974105+0.690922I$ $a=-2.01905-0.78783I$ $b=-1.07905+1.30600I$	$2.33836+9.08534I$	0
$u=-0.974105-0.690922I$ $a=-2.01905+0.78783I$ $b=-1.07905-1.30600I$	$2.33836-9.08534I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.141470+0.355948I$ $a=\ \ 0.652636+0.431142I$ $b=\ \ 0.796747+0.083578I$	$-2.15783+0.47274I$	0
$u=-1.141470-0.355948I$ $a=\ \ 0.652636-0.431142I$ $b=\ \ 0.796747-0.083578I$	$-2.15783-0.47274I$	0
$u=-1.19608$ $a=-0.117728$ $b=\ \ 0.106639$	-2.16845	0
$u=\ \ 1.188120+0.138968I$ $a=\ \ 1.57314+0.69630I$ $b=\ \ 0.996363+0.874980I$	$-3.98425-8.00183I$	0
$u=\ \ 1.188120-0.138968I$ $a=\ \ 1.57314-0.69630I$ $b=\ \ 0.996363-0.874980I$	$-3.98425+8.00183I$	0
$u=\ \ 0.573498+1.052730I$ $a=-0.208464+0.063402I$ $b=-0.126410+0.761614I$	$10.84240+4.19994I$	0
$u=\ \ 0.573498-1.052730I$ $a=-0.208464-0.063402I$ $b=-0.126410-0.761614I$	$10.84240-4.19994I$	0
$u=-1.20457$ $a=\ \ 1.25998$ $b=\ \ 1.28139$	-2.29042	0
$u=-0.924917+0.772626I$ $a=-0.510780-0.815666I$ $b=-0.136400+0.394155I$	$0.39823+2.97064I$	0
$u=-0.924917-0.772626I$ $a=-0.510780+0.815666I$ $b=-0.136400-0.394155I$	$0.39823-2.97064I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.211270+0.065690I$ $a=-1.39811+0.41631I$ $b=-1.12136+1.38456I$	$2.01877-3.27988I$	0
$u=-1.211270-0.065690I$ $a=-1.39811-0.41631I$ $b=-1.12136-1.38456I$	$2.01877+3.27988I$	0
$u=-1.018490+0.661123I$ $a=-0.607336-0.209676I$ $b=-0.786040+0.277425I$	$2.70677+1.18376I$	0
$u=-1.018490-0.661123I$ $a=-0.607336+0.209676I$ $b=-0.786040-0.277425I$	$2.70677-1.18376I$	0
$u=0.626628+1.043640I$ $a=-0.244716-0.109112I$ $b=0.98256-1.14932I$	$11.28110+3.15961I$	0
$u=0.626628-1.043640I$ $a=-0.244716+0.109112I$ $b=0.98256+1.14932I$	$11.28110-3.15961I$	0
$u=1.104500+0.515664I$ $a=1.97248-0.25552I$ $b=0.662522+1.080330I$	$1.40489-6.40274I$	0
$u=1.104500-0.515664I$ $a=1.97248+0.25552I$ $b=0.662522-1.080330I$	$1.40489+6.40274I$	0
$u=0.917205+0.806471I$ $a=-0.202384-0.247972I$ $b=0.315295-1.057050I$	$8.83751-6.09791I$	0
$u=0.917205-0.806471I$ $a=-0.202384+0.247972I$ $b=0.315295+1.057050I$	$8.83751+6.09791I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.179720+0.318102I$ $a=\ \ 0.820981+0.995675I$ $b=\ \ 0.652857+0.704724I$	$0.20487+1.42751I$	0
$u=-1.179720-0.318102I$ $a=\ \ 0.820981-0.995675I$ $b=\ \ 0.652857-0.704724I$	$0.20487-1.42751I$	0
$u=\ \ 1.036700+0.650543I$ $a=\ \ 1.79157-0.52989I$ $b=\ \ 0.84396+1.50469I$	$1.90387-7.08754I$	0
$u=\ \ 1.036700-0.650543I$ $a=\ \ 1.79157+0.52989I$ $b=\ \ 0.84396-1.50469I$	$1.90387+7.08754I$	0
$u=-0.654689+0.392271I$ $a=\ \ 0.298988+0.601962I$ $b=\ \ 0.762877+0.836639I$	$-0.307473-0.908053I$	0
$u=-0.654689-0.392271I$ $a=\ \ 0.298988-0.601962I$ $b=\ \ 0.762877-0.836639I$	$-0.307473+0.908053I$	0
$u=-1.002750+0.742942I$ $a=\ \ 1.75731+0.93699I$ $b=\ \ 0.732421-0.570435I$	$6.75352+10.37920I$	0
$u=-1.002750-0.742942I$ $a=\ \ 1.75731-0.93699I$ $b=\ \ 0.732421+0.570435I$	$6.75352-10.37920I$	0
$u=\ \ 1.064050+0.676398I$ $a=-0.494160+1.258780I$ $b=-1.80412+0.71872I$	$6.26797-10.69380I$	0
$u=\ \ 1.064050-0.676398I$ $a=-0.494160-1.258780I$ $b=-1.80412-0.71872I$	$6.26797+10.69380I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.020640 + 0.741876I$ $a = -0.528153 + 0.894894I$ $b = -0.014774 - 1.081540I$	$7.80410 - 3.46305I$	0
$u = 1.020640 - 0.741876I$ $a = -0.528153 - 0.894894I$ $b = -0.014774 + 1.081540I$	$7.80410 + 3.46305I$	0
$u = 0.015470 + 0.719101I$ $a = -0.739835 - 0.441853I$ $b = -0.554711 + 0.786758I$	$4.01829 + 2.28197I$	0
$u = 0.015470 - 0.719101I$ $a = -0.739835 + 0.441853I$ $b = -0.554711 - 0.786758I$	$4.01829 - 2.28197I$	0
$u = 1.072250 + 0.704229I$ $a = -1.203790 + 0.050774I$ $b = -0.316168 - 0.789491I$	$2.81137 - 7.33191I$	0
$u = 1.072250 - 0.704229I$ $a = -1.203790 - 0.050774I$ $b = -0.316168 + 0.789491I$	$2.81137 + 7.33191I$	0
$u = -1.064020 + 0.720248I$ $a = 1.86456 + 0.66153I$ $b = 0.99984 - 1.30916I$	$1.6749 + 15.0128I$	0
$u = -1.064020 - 0.720248I$ $a = 1.86456 - 0.66153I$ $b = 0.99984 + 1.30916I$	$1.6749 - 15.0128I$	0
$u = 0.619429 + 0.355417I$ $a = 0.976203 + 0.498064I$ $b = 0.529728 - 0.970025I$	$0.05861 + 3.28511I$	0
$u = 0.619429 - 0.355417I$ $a = 0.976203 - 0.498064I$ $b = 0.529728 + 0.970025I$	$0.05861 - 3.28511I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.211348+1.273640I$ $a=\ \ 0.017221+0.147212I$ $b=\ \ 0.727165-0.627290I$	$7.20516+6.10676I$	0
$u=-0.211348-1.273640I$ $a=\ \ 0.017221-0.147212I$ $b=\ \ 0.727165+0.627290I$	$7.20516-6.10676I$	0
$u=-1.118810+0.770554I$ $a=-1.73652-0.63855I$ $b=-0.96940+1.28485I$	$8.3272+19.5300I$	0
$u=-1.118810-0.770554I$ $a=-1.73652+0.63855I$ $b=-0.96940-1.28485I$	$8.3272-19.5300I$	0
$u=-0.852842+1.063010I$ $a=\ \ 0.135865+0.407023I$ $b=\ \ 0.372485-0.363029I$	$4.42543+5.17117I$	0
$u=-0.852842-1.063010I$ $a=\ \ 0.135865-0.407023I$ $b=\ \ 0.372485+0.363029I$	$4.42543-5.17117I$	0
$u=\ \ 1.123240+0.789966I$ $a=-1.48344+0.58122I$ $b=-1.16989-1.34831I$	$9.71395-9.76955I$	0
$u=\ \ 1.123240-0.789966I$ $a=-1.48344-0.58122I$ $b=-1.16989+1.34831I$	$9.71395+9.76955I$	0
$u=\ \ 1.352670+0.237321I$ $a=-1.40255-0.38503I$ $b=-1.021460-0.929167I$	$1.34036-11.09600I$	0
$u=\ \ 1.352670-0.237321I$ $a=-1.40255+0.38503I$ $b=-1.021460+0.929167I$	$1.34036+11.09600I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.150560 + 0.763047I$ $a = 1.089060 + 0.045709I$ $b = 0.346968 + 0.761374I$	$9.02146 - 10.73960I$	0
$u = 1.150560 - 0.763047I$ $a = 1.089060 - 0.045709I$ $b = 0.346968 - 0.761374I$	$9.02146 + 10.73960I$	0
$u = -1.339970 + 0.352179I$ $a = 0.312800 - 0.071554I$ $b = -0.0361016 - 0.1163310I$	$1.99227 + 1.49520I$	0
$u = -1.339970 - 0.352179I$ $a = 0.312800 + 0.071554I$ $b = -0.0361016 + 0.1163310I$	$1.99227 - 1.49520I$	0
$u = -0.529964 + 0.262897I$ $a = 1.254970 - 0.280525I$ $b = -0.296314 + 0.993222I$	$2.93103 + 5.26061I$	$-3.71177 - 8.49168I$
$u = -0.529964 - 0.262897I$ $a = 1.254970 + 0.280525I$ $b = -0.296314 - 0.993222I$	$2.93103 - 5.26061I$	$-3.71177 + 8.49168I$
$u = 0.164122 + 0.493858I$ $a = 0.530993 - 0.239220I$ $b = 0.541150 - 0.939625I$	$0.28061 + 3.26037I$	$-8.37838 - 3.30675I$
$u = 0.164122 - 0.493858I$ $a = 0.530993 + 0.239220I$ $b = 0.541150 + 0.939625I$	$0.28061 - 3.26037I$	$-8.37838 + 3.30675I$
$u = -1.48761 + 0.30426I$ $a = -0.783072 - 0.156790I$ $b = -1.086000 + 0.037885I$	$2.14579 + 0.41787I$	0
$u = -1.48761 - 0.30426I$ $a = -0.783072 + 0.156790I$ $b = -1.086000 - 0.037885I$	$2.14579 - 0.41787I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.314789+0.222246I$ $a=\ 1.161900-0.410180I$ $b=\ 0.424500-0.553519I$	$-0.821941+0.839879I$	$-7.00670-5.24574I$
$u=-0.314789-0.222246I$ $a=\ 1.161900+0.410180I$ $b=\ 0.424500+0.553519I$	$-0.821941-0.839879I$	$-7.00670+5.24574I$
$u=\ 0.355411+0.003002I$ $a=\ 1.72894-7.95506I$ $b=\ 0.744773-0.245230I$	$7.70434+4.10760I$	$-12.27056-1.05216I$
$u=\ 0.355411-0.003002I$ $a=\ 1.72894+7.95506I$ $b=\ 0.744773+0.245230I$	$7.70434-4.10760I$	$-12.27056+1.05216I$
$u=\ 0.079327+0.315653I$ $a=\ 2.24173+0.75887I$ $b=-0.810366-0.262073I$	$-0.21366+2.11606I$	$-6.00885-3.78588I$
$u=\ 0.079327-0.315653I$ $a=\ 2.24173-0.75887I$ $b=-0.810366+0.262073I$	$-0.21366-2.11606I$	$-6.00885+3.78588I$

II. $I_2^u =$
$\langle -22u^{28}+63u^{27}+\cdots+b+40,\ 23u^{28}-38u^{27}+\cdots+a-9,\ u^{29}-3u^{28}+\cdots-3u+1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3+u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -23u^{28}+38u^{27}+\cdots-41u+9 \\ 22u^{28}-63u^{27}+\cdots+72u-40 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{28}+5u^{27}+\cdots-4u+17 \\ -u^{28}+2u^{27}+\cdots-u^2-3u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -45u^{28}+101u^{27}+\cdots-113u+49 \\ 22u^{28}-63u^{27}+\cdots+72u-40 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 39u^{28}-80u^{27}+\cdots+85u-28 \\ -16u^{28}+21u^{27}+\cdots-18u+1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5-u^3+u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -47u^{28}+95u^{27}+\cdots-104u+33 \\ 11u^{28}-23u^{27}+\cdots+25u-11 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 34u^{28}-89u^{27}+\cdots+92u-57 \\ 4u^{28}-3u^{27}+\cdots+3u+10 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 32u^{28}-78u^{27}+\cdots+87u-37 \\ -8u^{28}+4u^{27}+\cdots+27u^2-7 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -30u^{27}+30u^{26}+157u^{25}-234u^{24}-386u^{23}+713u^{22}+611u^{21}-1352u^{20}-986u^{19}+2153u^{18}+1363u^{17}-3142u^{16}-1303u^{15}+3621u^{14}+840u^{13}-3346u^{12}-504u^{11}+2575u^{10}+261u^9-1854u^8+38u^7+934u^6-106u^5-373u^4+37u^3+78u^2+18u-38$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{29} - 13u^{28} + \cdots + 7u - 1$
c_2	$u^{29} + 3u^{28} + \cdots - 3u - 1$
c_3	$u^{29} - 5u^{27} + \cdots + 12u - 1$
c_4	$u^{29} - u^{27} + \cdots - 4u^2 - 1$
c_5	$u^{29} - 3u^{28} + \cdots - 3u + 1$
c_6	$u^{29} + 2u^{28} + \cdots + 8u^2 - 1$
c_7	$u^{29} - u^{28} + \cdots - 30u + 35$
c_8, c_9	$u^{29} - 6u^{28} + \cdots + 4u - 1$
c_{10}	$u^{29} - 5u^{27} + \cdots + 3u^2 - 1$
c_{11}	$u^{29} - 3u^{27} + \cdots + 5u^2 - 1$
c_{12}	$u^{29} + 6u^{28} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{29} + 7y^{28} + \cdots - 25y - 1$
c_2, c_5	$y^{29} - 13y^{28} + \cdots + 7y - 1$
c_3	$y^{29} - 10y^{28} + \cdots + 24y - 1$
c_4	$y^{29} - 2y^{28} + \cdots - 8y - 1$
c_6	$y^{29} + 22y^{28} + \cdots + 16y - 1$
c_7	$y^{29} + 13y^{28} + \cdots + 10350y - 1225$
c_8, c_9, c_{12}	$y^{29} + 30y^{28} + \cdots - 26y - 1$
c_{10}	$y^{29} - 10y^{28} + \cdots + 6y - 1$
c_{11}	$y^{29} - 6y^{28} + \cdots + 10y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.603979 + 0.758503I$ $a = -0.853063 + 0.992538I$ $b = -0.742925 + 0.396876I$	$8.88525 + 3.99076I$	$0.14446 - 2.94436I$
$u = 0.603979 - 0.758503I$ $a = -0.853063 - 0.992538I$ $b = -0.742925 - 0.396876I$	$8.88525 - 3.99076I$	$0.14446 + 2.94436I$
$u = 0.809799 + 0.645934I$ $a = 1.06316 - 1.04956I$ $b = 1.270230 - 0.277462I$	$0.560298 + 0.654606I$	$2.63934 - 2.40355I$
$u = 0.809799 - 0.645934I$ $a = 1.06316 + 1.04956I$ $b = 1.270230 + 0.277462I$	$0.560298 - 0.654606I$	$2.63934 + 2.40355I$
$u = -0.990375 + 0.369439I$ $a = -0.88962 - 1.19823I$ $b = -1.257750 - 0.409646I$	$-1.94545 - 0.59072I$	$-11.29662 + 3.04823I$
$u = -0.990375 - 0.369439I$ $a = -0.88962 + 1.19823I$ $b = -1.257750 + 0.409646I$	$-1.94545 + 0.59072I$	$-11.29662 - 3.04823I$
$u = -0.540273 + 0.748686I$ $a = -0.232531 + 0.556382I$ $b = 0.431449 - 0.681053I$	$1.26086 + 4.36994I$	$-7.81233 - 4.10632I$
$u = -0.540273 - 0.748686I$ $a = -0.232531 - 0.556382I$ $b = 0.431449 + 0.681053I$	$1.26086 - 4.36994I$	$-7.81233 + 4.10632I$
$u = 0.923343 + 0.645596I$ $a = -1.46577 + 0.82768I$ $b = -1.259210 - 0.245149I$	$0.19514 - 5.69192I$	$-0.11025 + 8.57297I$
$u = 0.923343 - 0.645596I$ $a = -1.46577 - 0.82768I$ $b = -1.259210 + 0.245149I$	$0.19514 + 5.69192I$	$-0.11025 - 8.57297I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.030400 + 0.511587I$ $a = -2.10531 + 0.22494I$ $b = -0.888420 - 0.939075I$	$-0.83926 - 7.04364I$	$-4.54902 + 6.58787I$
$u = 1.030400 - 0.511587I$ $a = -2.10531 - 0.22494I$ $b = -0.888420 + 0.939075I$	$-0.83926 + 7.04364I$	$-4.54902 - 6.58787I$
$u = 1.071310 + 0.449170I$ $a = 2.24231 + 0.08581I$ $b = 0.631284 + 0.976916I$	$1.36154 - 7.41260I$	$-5.66969 + 10.49828I$
$u = 1.071310 - 0.449170I$ $a = 2.24231 - 0.08581I$ $b = 0.631284 - 0.976916I$	$1.36154 + 7.41260I$	$-5.66969 - 10.49828I$
$u = -0.761627 + 0.334872I$ $a = 1.75452 + 1.63145I$ $b = 1.263110 - 0.309630I$	$-1.10598 + 3.57442I$	$-7.61817 - 2.46604I$
$u = -0.761627 - 0.334872I$ $a = 1.75452 - 1.63145I$ $b = 1.263110 + 0.309630I$	$-1.10598 - 3.57442I$	$-7.61817 + 2.46604I$
$u = -0.658517 + 0.969435I$ $a = 0.0936036 - 0.0082906I$ $b = -0.214901 + 0.639805I$	$5.02914 + 5.15670I$	$3.74856 - 7.07707I$
$u = -0.658517 - 0.969435I$ $a = 0.0936036 + 0.0082906I$ $b = -0.214901 - 0.639805I$	$5.02914 - 5.15670I$	$3.74856 + 7.07707I$
$u = 0.651359 + 0.447890I$ $a = 0.812864 - 0.001307I$ $b = 0.651736 - 0.964731I$	$0.49961 + 3.00268I$	$-0.177166 + 0.645446I$
$u = 0.651359 - 0.447890I$ $a = 0.812864 + 0.001307I$ $b = 0.651736 + 0.964731I$	$0.49961 - 3.00268I$	$-0.177166 - 0.645446I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.22387$ $a=-0.917542$ $b=-0.837300$	-2.55545	-22.7140
$u=\ 0.670037+0.328739I$ $a=-0.50275-1.37469I$ $b=-0.379319+1.050880I$	$2.93642+4.03665I$	$-4.98365-3.48684I$
$u=\ 0.670037-0.328739I$ $a=-0.50275+1.37469I$ $b=-0.379319-1.050880I$	$2.93642-4.03665I$	$-4.98365+3.48684I$
$u=\ 1.048350+0.709611I$ $a=\ 1.351230-0.360180I$ $b=\ 0.853412+0.354777I$	$7.58140-9.62710I$	$-1.49140+6.93719I$
$u=\ 1.048350-0.709611I$ $a=\ 1.351230+0.360180I$ $b=\ 0.853412-0.354777I$	$7.58140+9.62710I$	$-1.49140-6.93719I$
$u=-0.299203+0.481809I$ $a=\ 2.70786-2.40692I$ $b=-0.551224+0.439249I$	$8.13165+4.30275I$	$4.34905-7.80104I$
$u=-0.299203-0.481809I$ $a=\ 2.70786+2.40692I$ $b=-0.551224-0.439249I$	$8.13165-4.30275I$	$4.34905+7.80104I$
$u=-1.44665+0.32614I$ $a=\ 0.482265+0.274236I$ $b=\ 0.611179+0.227807I$	$1.62579+1.29613I$	$-12.31614+1.51557I$
$u=-1.44665-0.32614I$ $a=\ 0.482265-0.274236I$ $b=\ 0.611179-0.227807I$	$1.62579-1.29613I$	$-12.31614-1.51557I$

III. $I_3^u =$
$\langle -8a^5+5a^4+4a^3-31a^2+69b-64a+78,\ a^6-2a^5+6a^3-2a^2-15a+17,\ u+1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} a \\ 0.115942a^5 - 0.0724638a^4 + \cdots + 0.927536a - 1.13043 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.159420a^5 - 0.0579710a^4 + \cdots + 0.608696a - 0.971014 \\ 0.00483092a^5 - 0.0724638a^4 + \cdots - 0.183575a + 0.314010 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.115942a^5 + 0.0724638a^4 + \cdots + 0.0724638a + 1.13043 \\ 0.115942a^5 - 0.0724638a^4 + \cdots + 0.927536a - 1.13043 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.159420a^5 - 0.0579710a^4 + \cdots + 0.608696a - 0.971014 \\ 0.00483092a^5 - 0.0724638a^4 + \cdots - 0.183575a + 0.314010 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0289855a^5 + 0.231884a^4 + \cdots + 0.231884a + 2.21739 \\ 0.159420a^5 - 0.0579710a^4 + \cdots + 0.608696a - 0.971014 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.207729a^5 - 0.115942a^4 + \cdots + 2.10628a - 1.49758 \\ 0.169082a^5 - 0.202899a^4 + \cdots + 1.24155a - 2.34300 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.314010a^5 - 0.0434783a^4 + \cdots + 1.40097a - 2.25604 \\ 0.159420a^5 - 0.0579710a^4 + \cdots + 0.608696a - 0.971014 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{25}{207}a^5 - \frac{13}{69}a^4 - \frac{38}{69}a^3 - \frac{13}{23}a^2 + \frac{122}{207}a - \frac{1832}{207}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^6$
c_3, c_4	$u^6 - 3u^5 + 4u^4 - 3u^3 + 3u^2 - 2u + 1$
c_5	$(u+1)^6$
c_6	$(u^3 + u^2 - 1)^2$
c_7	u^6
c_8, c_9	$(u^3 - u^2 + 2u - 1)^2$
c_{10}, c_{11}	$u^6 + 2u^4 - u^3 + 2u^2 + 1$
c_{12}	$(u^3 + u^2 + 2u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y-1)^6$
c_3, c_4	$y^6 - y^5 + 4y^4 + 5y^3 + 5y^2 + 2y + 1$
c_6	$(y^3 - y^2 + 2y - 1)^2$
c_7	y^6
c_8, c_9, c_{12}	$(y^3 + 3y^2 + 2y - 1)^2$
c_{10}, c_{11}	$y^6 + 4y^5 + 8y^4 + 9y^3 + 8y^2 + 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00000$ $a=\ \ 1.302760+0.525329I$ $b=\ \ 0.425318+1.270190I$	$1.37919+2.82812I$	$-9.31314-3.21164I$
$u=-1.00000$ $a=\ \ 1.302760-0.525329I$ $b=\ \ 0.425318-1.270190I$	$1.37919-2.82812I$	$-9.31314+3.21164I$
$u=-1.00000$ $a=-1.41724+0.74919I$ $b=-0.662359+0.749187I$	-2.75839	$-10.76463-0.28829I$
$u=-1.00000$ $a=-1.41724-0.74919I$ $b=-0.662359-0.749187I$	-2.75839	$-10.76463+0.28829I$
$u=-1.00000$ $a=\ \ 1.11448+1.45277I$ $b=\ \ 0.237041+0.707911I$	$1.37919-2.82812I$	$-2.42222+1.25753I$
$u=-1.00000$ $a=\ \ 1.11448-1.45277I$ $b=\ \ 0.237041-0.707911I$	$1.37919+2.82812I$	$-2.42222-1.25753I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^6)(u^{29}-13u^{28}+\cdots+7u-1)$ $\cdot(u^{146}+56u^{145}+\cdots+723369u+21025)$
c_2	$((u-1)^6)(u^{29}+3u^{28}+\cdots-3u-1)(u^{146}+4u^{145}+\cdots-333u+145)$
c_3	$(u^6-3u^5+\cdots-2u+1)(u^{29}-5u^{27}+\cdots+12u-1)$ $\cdot(u^{146}+4u^{145}+\cdots+2468988890u+899654983)$
c_4	$(u^6-3u^5+\cdots-2u+1)(u^{29}-u^{27}+\cdots-4u^2-1)$ $\cdot(u^{146}+12u^{145}+\cdots+18u+1)$
c_5	$((u+1)^6)(u^{29}-3u^{28}+\cdots-3u+1)(u^{146}+4u^{145}+\cdots-333u+145)$
c_6	$((u^3+u^2-1)^2)(u^{29}+2u^{28}+\cdots+8u^2-1)$ $\cdot(u^{146}-u^{145}+\cdots+13382u-2117)$
c_7	$u^6(u^{29}-u^{28}+\cdots-30u+35)(u^{146}-4u^{144}+\cdots+672u+320)$
c_8, c_9	$((u^3-u^2+2u-1)^2)(u^{29}-6u^{28}+\cdots+4u-1)$ $\cdot(u^{146}+5u^{145}+\cdots+24u-1)$
c_{10}	$(u^6+2u^4-u^3+2u^2+1)(u^{29}-5u^{27}+\cdots+3u^2-1)$ $\cdot(u^{146}-u^{145}+\cdots+1200u+145)$
c_{11}	$(u^6+2u^4-u^3+2u^2+1)(u^{29}-3u^{27}+\cdots+5u^2-1)$ $\cdot(u^{146}-5u^{145}+\cdots-1206u+145)$
c_{12}	$((u^3+u^2+2u+1)^2)(u^{29}+6u^{28}+\cdots+4u+1)$ $\cdot(u^{146}+5u^{145}+\cdots+24u-1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^6)(y^{29}+7y^{28}+\cdots-25y-1)$ $\cdot(y^{146}+76y^{145}+\cdots-56026237661y+442050625)$
c_2, c_5	$((y-1)^6)(y^{29}-13y^{28}+\cdots+7y-1)$ $\cdot(y^{146}-56y^{145}+\cdots-723369y+21025)$
c_3	$(y^6-y^5+4y^4+5y^3+5y^2+2y+1)(y^{29}-10y^{28}+\cdots+24y-1)$ $\cdot(y^{146}+48y^{145}+\cdots-8.05\times10^{19}y+8.09\times10^{17})$
c_4	$(y^6-y^5+4y^4+5y^3+5y^2+2y+1)(y^{29}-2y^{28}+\cdots-8y-1)$ $\cdot(y^{146}+4y^{145}+\cdots+274y+1)$
c_6	$((y^3-y^2+2y-1)^2)(y^{29}+22y^{28}+\cdots+16y-1)$ $\cdot(y^{146}+31y^{145}+\cdots+165806780y+4481689)$
c_7	$y^6(y^{29}+13y^{28}+\cdots+10350y-1225)$ $\cdot(y^{146}-8y^{145}+\cdots-3339264y+102400)$
c_8, c_9, c_{12}	$((y^3+3y^2+2y-1)^2)(y^{29}+30y^{28}+\cdots-26y-1)$ $\cdot(y^{146}+147y^{145}+\cdots+14y+1)$
c_{10}	$(y^6+4y^5+\cdots+4y+1)(y^{29}-10y^{28}+\cdots+6y-1)$ $\cdot(y^{146}+17y^{145}+\cdots+1475950y+21025)$
c_{11}	$(y^6+4y^5+\cdots+4y+1)(y^{29}-6y^{28}+\cdots+10y-1)$ $\cdot(y^{146}-7y^{145}+\cdots-324306y+21025)$